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Presidential Progress On Climate Change: Will The Courts Interfere With What Needs To Be Done To Save Our Planet?

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Joseph R. Biden, Jr. ran with the strongest climate change platform of any major party presidential nominee. He called for a 100% carbon-free electricity grid by 2035 and net zero greenhouse gas emissions by 2050. However, he takes office with the most conservative Supreme Court in generations, with six of the nine justices nominated by Republican presidents (including three by President Trump). Are the new president and the Supreme Court on a collision course when it comes to climate change?

None of the six conservative justices are known as passionate environmentalists, and Amy Coney Barrett caused considerable heartburn when she refused to express a view on climate change at her Supreme Court confirmation hearing, calling it a "very contentious matter of public debate." Most importantly, however, most or all of them (we're not yet sure about Justice Barrett) have some hostility to the administrative state, and to opening the courthouse doors to plaintiffs who are complaining about problems like climate change.

I. Congressional (In)Action

As shown below, most of the legal theories that could be used to attack expected Biden administration actions on climate change stem from the current absence of comprehensive congressional legislation. Congress has not enacted significant environmental legislation since 1990, with two exceptions (discussed below). Therefore, the Environmental Protection Agency (EPA) and other agencies have needed to craft solutions to new problems from statutes that date back to the 1970s.

The two exceptions are instructive. The first is the Frank R. Lautenberg Chemical Safety for the 21st Century Act of 2016, a thorough rewrite of the Toxic Substances Control Act of

1976.¹ It was passed with the support of not only environmental groups but also the most affected industry, chemical manufacturing, which preferred national uniformity to a patchwork of state laws. The second exception is tucked into the 5,600-page 2021 Consolidated Appropriations Act, popularly called the COVID relief bill, which President Trump reluctantly signed into law on December 27, 2020.² Lurking on pages 2759-2803 of the House print was a new law phasing out the use of hydrofluorocarbons, a powerful greenhouse gas used mostly as a refrigerant. It, too, had the support of the key affected industries (those that make refrigerants and the devices that use them, like air conditioners and freezers), which were also weary of a hodgepodge of state laws. The COVID relief bill also provides help for renewable energy, carbon dioxide removal, and other climate-friendly actions. It is the most important climate change law ever passed by Congress (though that in itself is not saying much).

The fact that such provisions could be passed in Mitch McConnell's Senate may mean that not all hope is lost for climate bills that don't gore too many oxen and have strong support from business. Of course, legislation that is up to the task of seriously fighting climate change will gore a lot of oxen and be opposed by some powerful interest groups. Such a new law is unlikely during the next two years. Although Democrats won both Georgia runoff elections on January 4, giving their party (with a tiebreaking vote by Vice President Kamala Harris) control of the Senate, there does not seem to be the necessary unanimous support in the Democratic caucus to revoke the filibuster and allow legislation to pass with fewer than 60 votes. The "reconciliation" procedure allows tax and budget legislation to pass with a simple majority, so in theory, the Senate could enact bills imposing a carbon tax and revoking fossil fuel subsidies without any Republican votes, but the appetite for these, too, is uncertain. More likely may be the use of the Congressional Review Act, an oversight tool that Congress may use to overturn rules issued by federal agencies, to revoke some of the Trump administration's last-minute weakening of environmental regulations, and greater appropriations for clean energy.

If Congress does enact a strong climate law, any challenges to it will likely take a few years to work their way through the lower courts before coming to the Supreme Court. At least that is the usual course for important cases. However, in recent years, we have seen the growth of the "shadow docket," where the Supreme Court rather abruptly stays executive actions or (especially under Trump) lower court decisions blocking implementation of executive actions. The Court's shadow docket decisions are issued without oral arguments or time for amicus briefs, and often without the Court giving its reasons. That is what happened in 2016 when, by an unsigned 5-4 order, the Court stayed implementation of the Clean Power Plan, the Obama administration's signature regulation to reduce power plant emissions. The Roberts Court has

¹ Frank R. Lautenberg Chemical Safety for the 21st Century Act, Pub. L. No. 114-182, 130 Stat. 447 (2016).

² Consolidated Appropriations Act of 2021, H.R. 133, 116th Cong. (2021).

lately used some version of this hasty procedure numerous times in cases concerning voting rights, immigration, and other important matters.³

II. Dangerous Doctrines

Just about all important federal actions on climate change are challenged in court as soon as they become ripe. That happened under Presidents G.W. Bush, Obama, and Trump, and will surely continue under President Biden. These are the legal doctrines that are most likely to be used to challenge environmental actions.

A. Administrative Law Doctrines

There are three administrative law doctrines whose applications to challenges to environmental legislation are in particular flux: the major questions doctrine, *Chevron* deference, and the nondelegation doctrine. Although each of these raises potential legal hurdles for environmental legislation, Congress can avoid the major questions and *Chevron* deference problems by enacting statutes that unambiguously authorize EPA or other agencies to take certain actions against climate change. The nondelegation doctrine is harder to get around, and if the courts use it aggressively, they could strike down any number of regulations that they deem involve improperly delegated powers. As Professor Ann Carlson and colleagues have written, "It is impossible for Congress to specify every policy detail within a law, and this expectation is particularly unrealistic for environmental laws that require scientific expertise, technological judgment, and risk assessment, all of which change over time based on new developments and understanding." Despite these difficulties, climate policymakers and regulators can use certain tactics to reduce potential nondelegation and major question risks, including being as specific and unambiguous as possible; staying as close as possible to existing structures and authorities; and making them severable.

1. The Major Questions Doctrine

The major questions doctrine holds that agency decisions that have "vast 'economic and political significance'" are subject to heightened scrutiny, requiring clear congressional authorization before courts will defer to agency determinations.⁵ The doctrine favors the status quo, because if the courts say that agencies may not act on a big problem without specific congressional authorization, and Congress is paralyzed (as it has been with climate change for decades), everything is frozen.

The doctrine stems in part from *Food & Drug Administration v. Brown & Williamson*, in which the Court held that the FDA cannot regulate tobacco products because Congress has not explicitly authorized it to do so, even though smoking is the nation's leading cause of

³ David Gans, *The Roberts Court, The Shadow Docket, and the Unraveling of Voting Rights Remedies*, ACS ISSUE BRIEF (Oct. 2020); Stephen I. Vladeck, *The Solicitor General and the Shadow Docket*, 133 HARV. L. REV. 123 (2019).

⁴ Ann Carlson et al., Climate Policymaking in the Shadow of the Supreme Court, LEGAL PLANET, (Oct. 27, 2020).

⁵ Util. Air Regulatory Grp. v. EPA, 573 U.S. 302, 324 (2014).

premature death (at least until COVID-19).⁶ It has subsequently been relied upon in a number of environmental law cases, including a 2014 opinion written by Justice Antonin Scalia where the Court applied the doctrine to find that EPA may not apply certain restrictions on greenhouse gas emissions to stationary sources that were not already regulated under the Clean Air Act.⁷ In an earlier Clean Air Act case, Justice Scalia wrote that "Congress … does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes."⁸

The major questions doctrine may have been narrowed in a 2020 decision in an entirely different area of law. In *Bostock v. Clayton County,* the Supreme Court held that Title VII of the Civil Rights Act bars employers from firing workers because of their LGBTQ status.⁹ The statute prohibits "discrimination … because of … sex." Justice Neil Gorsuch's opinion for the 6-3 majority stated, "We can't deny that today's holding … is an elephant. But where's the mousehole? Title VII's prohibition of sex discrimination in employment … is written in starkly broad terms…. Congress's key drafting choices … virtually guaranteed that unexpected applications would emerge over time. This elephant has never hidden in a mousehole; it has been standing before us all along."

This same reasoning can be applied to the Clean Air Act and greenhouse gases. The statute defines "air pollutant" in starkly broad terms. Moreover, it establishes a procedure to regulate additional air pollutants based on "the latest scientific knowledge," and it includes "effects on ... climate" in the list of adverse impacts to be considered. As Professor Richard Revesz recently demonstrated, the legislative materials surrounding the passage of the Clean Air Act of 1970 are replete with references to climate change. In short, the elephant of climate change has been standing in the Clean Air Act for fifty years. There should be no question that the Clean Air Act applies to the principal cause of anthropogenic climate change, greenhouse gas emissions.

⁶ Food & Drug Admin. v. Brown & Williamson Tobacco Corp. , 529 U.S. 120 (2000).

⁷ *Util. Air Regulatory Grp.*, 573 U.S. at 324 (2014). The G.W. Bush EPA unsuccessfully tried to use this doctrine in defending its refusal to regulate greenhouse gases in the landmark 2007 case of *Massachusetts v. EPA*.

⁸ Whitman v. Am. Trucking Assns., 531 U.S. 457, 468 (2001).

⁹ Bostock v. Clayton Cty., Georgia, 140 S. Ct. 1731 (2020).

^{10 42} U.S.C. §7602(g).

^{11 42} U.S.C. §7408(a)(2).

^{12 42} U.S.C. §7602(h).

¹³ Richard L. Revesz, *Bostock and the End of the Climate Change Double Standard*, COLUM. J. ENVTL. L. (2021 forthcoming).

2. Chevron Deference

The *Chevron* doctrine is an administrative law principle under which courts defer to an implementing agency's reasonable interpretation of an ambiguous or unclear statute.¹⁴ This deference is helpful to an agency that is trying to act in an area, such as climate change, where the details of its authority or the procedures it must follow are unclear. For example, it may be clear that the Clean Air Act authorizes EPA to regulate greenhouse gases, but it may not be clear exactly what types or sizes of stationary sources it may regulate for these pollutants.

For decades, conservative scholars have argued that *Chevron* deference gives too much discretion to agencies and offends (among other things) the appropriate separation of powers among the branches of government. It now appears possible that at least five votes may be found on the current Supreme Court to narrow *Chevron* deference.¹⁵ If that happens, it could be harder for agencies to use existing statutes to tackle climate change because, without new congressional legislation, they could be limited to the explicit applications that existed when the statutes were passed in the 1970s.

3. Nondelegation Doctrine

The nondelegation doctrine has the thinnest basis in precedent but may pose the greatest danger to climate actions by the Biden administration. Derived from the clause in Article I Section 1 of the Constitution that vests all legislative power in Congress, the nondelegation doctrine, its proponents claim, bars Congress from delegating its legislative powers to administrative agencies. The Supreme Court has used this doctrine to strike down regulations only twice; both were in 1935 concerning New Deal rules. For the next 84 years, the doctrine had little traction in the Supreme Court. But in 2019 the Court decided *Gundy v. United States*, a challenge to use of the Sex Offender Registration and Notification Act (SORNA). Before SORNA was enacted, Herman Gundy was convicted of sexually assaulting a minor in Maryland. He later moved to New York but failed to register there as a sex offender, as rules under SORNA then required. He was convicted of not registering. Gundy argued that Congress unconstitutionally delegated legislative power when it authorized the Attorney General to issue rules for who had to register under SORNA. The majority opinion by Justice Kagan rejected this claim, but Justice Gorsuch wrote a dissent, joined by Chief Justice John Roberts and Justice Clarence Thomas. Justice Samuel Alito did not join the dissent, but said he

¹⁴ Chevron U.S.A. Inc. v. Natural Resources Defense Council, 467 U.S. 837 (1984). Use of the major questions doctrine to limit agency authority can be seen as an exception to *Chevron* deference.

¹⁵ See Kristen E. Hickman & Aaron L. Nielson, Narrowing Chevron's Domain, 70 DUKE L.J. 931 (2021); James Goodwin, Will Confirming Judge Barrett be the Death of Chevron Deference?, UNION OF CONCERNED SCIENTISTS (Oct. 15, 2020).

¹⁶ Schechter Poultry v. United States, 295 U.S. 495 (1935); Panama Refining Co. v. Ryan, 293 U.S. 388 (1935).

¹⁷ Gundy v. United States, 139 S. Ct. 2116 (2019).

was willing to reconsider the issue in an appropriate case. Although Justice Brett Kavanaugh was not on the Court when the case was argued, he later indicated in a statement denying certiorari in a similar case that he was favorably disposed to Justice Gorsuch's view.¹⁸

Although we do not know Justice Barrett's views on this issue, we now have at least five justices who seem inclined to deploy the nondelegation doctrine against a statute that they believe leaves too many important decisions to an agency.

B. Other Constitutional Law Doctrines

1. Standing

The standing doctrine, derived primarily from the Constitution's requirement that the federal courts may adjudicate only "cases or controversies," limits who can sue. In recent years the Supreme Court has set forth three constitutional requirements that a plaintiff must meet to establish standing: (1) the challenged action will cause plaintiff some actual or threatened injury-in-fact; (2) the injury is fairly traceable to the challenged action; and (3) the injury is redressable by judicial action. In 2007, the Supreme Court held in *Massachusetts v. EPA* that the state of Massachusetts had standing to challenge EPA's refusal to regulate greenhouse gases from motor vehicles. In particular, the Court found that Massachusetts had satisfied the third standing requirement – that the injury is redressable by judicial action. Although no one court decision can solve the global problem of climate change, the Court found that states receive "special solicitude" in a standing analysis to protect their own citizens. In the years since *Massachusetts*, states have been among the named plaintiffs in many of the suits challenging government action, or inaction, on climate change.

Massachusetts was a 5-4 decision. Three of the dissenters are still on the bench – Chief Justice Roberts and Justices Thomas and Alito. The fourth, Justice Scalia, has been replaced by Justice Gorsuch. Of the five in the majority that ruled for the plaintiffs, Justice Kennedy has been replaced by Justice Kavanaugh, and Justice Ruth Bader Ginsburg has been replaced by Justice Barrett (who clerked for Justice Scalia and who while on the U.S. Court of Appeals for the Seventh Circuit wrote a decision denying standing to an environmental group challenging construction in a park²⁰). Thus, there are now only three members of the Court who one could confidently say would reaffirm Massachusetts' standing holding – Justices Stephen Breyer, Sonia

¹⁸ United States v. Paul, No. 17-5329 (6th Cir. 2017), cert. denied 589 U.S. ___ (2019) (J. Kavanaugh, concurring in denial of certiorari).

¹⁹ ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY 1156 (8th ed. 2018). A fourth requirement, that the injury is to an interest within the zone of interests to be protected by the statute alleged to have been violated, is prudential and thus could be overturned by Congress.

²⁰ Protect Our Parks, Inc. v. Chicago Park Dist., No. 19-3333 (7th Cir. 2020).

Sotomayor and Elena Kagan. This has made many commentators believe that the current Court might overturn or dial back the standing portion of the *Massachusetts* decision.²¹

The standing doctrine is asymmetric in the climate context. Environmental plaintiffs may have trouble establishing redressability, and sometimes it is difficult for them to show that their injury is caused by climate change and, in particular, by the specific action they are challenging. On the other hand, industry plaintiffs can readily show that the regulation they are fighting will hurt them economically, and that if the regulation goes away, so will their pain.²² In short, industry can usually sue; environmentalists often cannot.

If the standing of environmental plaintiffs is restricted, that would not impede the Biden administration from acting on climate change. However, it could greatly impair the ability of citizens and perhaps even states to challenge climate actions by this or a subsequent administration that they feel are too weak. Even if Congress passes a strong climate law, a later President who wants to disregard it might be able to do so without fear of judicial interference if no one has standing to sue.

2. The Commerce Clause

The Constitution's Commerce Clause, which authorizes Congress to regulate activity substantially affecting interstate commerce, is the basis for most environmental statutes. Beginning with the New Deal, the Clause has been upheld as the source of congressional authority to enact the Fair Labor Standards Act, the Civil Rights Act, the Controlled Substances Act, and much more. As Professor Patrick Parenteau has written, "[l]imiting Congress's Commerce Clause power is a high priority for conservative groups like the Federalist Society, Cato Institute and the Chamber of Commerce" because a diminished Commerce Clause means more limited government and, thus, less regulation of industry.²³

Justice Barrett has previously taken a narrow view of the Commerce Clause. When she was a professor at Notre Dame Law School, she wrote a law review article arguing that the Affordable Care Act is an unconstitutional exercise of Congress's authority under the Commerce Clause.²⁴ Some of the other conservative justices have skirted the issue of whether some environmental laws exceed this authority.²⁵

²¹ There is some worry, but less so, that the Court will overturn the portions of the decision that found that the Clean Air Act obligates EPA to regulate greenhouse gases if it finds that they endanger public health and welfare.

²² See Lisa Heinzerling, The Rule of Five Guys, 119 U. MICH. L. REV. (forthcoming 2021).

²³ Patrick Parenteau, *The Trump Court and the Erosion of Environmental Law*, HILL, November 1, 2020. Commerce Clause arguments are often raised against *state* environmental laws that arguably regulate extraterritorially or burden interstate commerce, but that is beyond the scope of this paper.

²⁴ Amy Coney Barrett, Countering the Majoritarian Difficulty, 32 CONST. COMMENT. 61 (2017).

²⁵ See Solid Waste Agency of N. Cook Cty. v. U.S. Army Corps of Eng'rs., 531 U.S. 159 (2001).

Federal climate change regulation does not seem especially vulnerable to a Commerce Clause challenge, as climate change is such an intrinsically interstate (indeed, international) problem, and greenhouse gases cross state and national borders. Other areas of environmental law are potentially more susceptible to this argument, such as the issue of whether isolated waters can be regulated under the Clean Water Act²⁶, and whether species that never cross state lines and are not in commerce can be protected under the Endangered Species Act.

III. Application of Doctrines to Climate Regulation

The Trump administration systematically worked to rescind the climate and other regulations adopted by the Obama administration. Many of their efforts have been struck down in court, mostly for procedural irregularities, but some have eventually succeeded.²⁷ These repeal efforts have been tracked by Columbia Law School's Sabin Center for Climate Change Law, Harvard Law School's Environmental & Energy Law Program, and most recently the University of California, Berkeley Law School's Center for Law, Energy & the Environment, and the litigation challenging these repeals has been tracked by the Sabin Center and by New York University's Institute for Policy Integrity. Reversing these rollbacks is high on the agenda of the Biden administration, and several academic centers and advocacy organizations have laid out in considerable detail what can be done.²⁸ The procedural requirements for accomplishing these reversals are well established in administrative law, such as setting forth a detailed explanation of the reasons for the policy changes and backing them up with a factual record and legal justifications. Some reversals can be done with the stroke of a pen (or a few pens); others will have to go through a formal notice and comment rulemaking process. But almost nothing the Trump administration did in the environmental and energy realms is legally irrevocable (except perhaps for some long-term leases of federal land for resource extraction). The Biden administration will no doubt take care to follow the necessary procedures, and if it does, it will likely prevail against any challenges, and such cases are unlikely to be taken up by the Supreme Court.

In addition to substantive rollbacks, the Trump administration planted several administrative land mines to make it more difficult for successors to impose stronger climate

²⁶ There is a longstanding controversy over the Waters of the United States rule, and in particular whether the existing definitions in the Clean Water Act apply to isolated or intermittent waters, and whether the Commerce Clause of the Constitution empowers Congress to regulate such waters. Successive administrations have adopted regulations that expand or contract the Act's coverage, and the Supreme Court has left much confusion. *See* Rapanos v. United States, 547 U.S. 715 (2006).

²⁷ JESSICA WENTZ & MICHAEL B. GERRARD, SABIN CTR. FOR CLIMATE CHANGE L., COLUM. L. SCH., PERSISTENT REGULATIONS: A DETAILED ASSESSMENT OF THE TRUMP ADMINISTRATION'S EFFORTS TO REPEAL FEDERAL CLIMATE PROTECTIONS (2019).

²⁸ E.g., Sabin Ctr. for Climate Change L., Colum. L. Sch., Climate Reregulation in a Biden Administration (2020); Bethany Davis Noll & Natalie Jacewicz, N.Y.U. Sch. of L. Inst. for Pol'y Integrity, A Roadmap to Regulatory Strategy in an Era of Hyper-Partisanship (2020); Resetting the Course of EPA, Envil. Prot. Network (Aug. 12, 2020).

regulations. These included lowering the "social cost of carbon" (the dollar estimation of the economic damage from emitting more carbon), adopting procedures that lower costs and disregard benefits, and making other mischief in the use of cost-benefit analysis; and under the guise of "transparency," barring the use of important medical evidence in setting air quality standards.²⁹ These need to be cleared away using the necessary procedures.

But it is not enough to rescind the rollbacks and defuse the land mines. That is merely the start. It would take us back to where we were in January 2017, which is a much better place than where we are now, but nowhere near the trajectory needed to achieve the clean energy and net zero emissions targets set by President Biden³⁰ – targets that scientists tell us need to be met if the U.S. is to play its part in avoiding catastrophic climate change.³¹

Set forth below are some of the most important things the Biden administration can do to meet the President's targets.

A. Motor Vehicles

Transportation has become the largest source of U.S. greenhouse gas emissions.³² Of this transportation contribution, passenger cars account for 41 percent; freight trucks, 23 percent; and light-duty trucks including sport utility vehicles, pickup trucks and minivans, 17 percent.³³ Passenger cars and light-duty trucks tend to be regulated together, so they deserve especially close attention.

Two federal agencies regulate these vehicles, and each does so with explicit statutory authority. The first is EPA, which sets air pollution emission standards under the Clean Air Act.³⁴ Under the Supreme Court's ruling in *Massachusetts v. EPA*, EPA must include greenhouse gases as "air pollutants" if it issues a formal "endangerment finding", concluding that atmospheric concentrations of greenhouse gases threaten the public health and public welfare of current and future generations, which EPA did in 2009. For most pollutants, these standards must "reflect the greatest degree of emission reduction achievable through an application of

²⁹ See generally, MICHAEL A. LIVERMORE & RICHARD L. REVESZ, REVIVING RATIONALITY: SAVING COST-BENEFIT ANALYSIS FOR THE SAKE OF THE ENVIRONMENT AND OUR HEALTH (2020); 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). See also Environmental Defense Fund v. EPA, No. 4:21-cv-00003-BMM (Dist. Montana, February 1, 2021) (vacating EPA's misnamed "science transparency" rule).

 $^{^{30}}$ John Larsen et al, Rhodium Group, Taking Stock 2016: Progress Toward Meeting US Climate Goals (2016).

³¹ E.g., Intergovernmental Panel on Climate Change, Global warming of 1.5°C (2018).

³² EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS, 1990-2018, 2-25 (2020).

³³ *Id.* at 2-32.

^{34 42} U.S.C. §7521.

technology which [EPA] determines will be available for the model year to which such standards apply, giving appropriate consideration to cost, energy, and safety factors."³⁵

The second federal agency to regulate vehicles is the National Highway Traffic Safety Administration (NHTSA), which sets fuel economy standards under the Energy Policy and Conservation Act (EPCA). Since no one has invented a device that can filter carbon dioxide before it exits the tailpipe, the only ways to reduce carbon dioxide emissions from vehicles per mile traveled are to burn less fuel and to reduce the lifecycle carbon intensity of the fuel (such as by adding ethanol or by reducing reliance on heavy crude oil as a feedstock in refineries). By statute, emissions standards should be set by the NHTSA at "the maximum feasible average fuel economy level that the Secretary [of Transportation] decides the manufacturers can achieve in that model year."³⁶

In addition to EPA and NHTSA, the state of California also plays a key role in regulating motor vehicles. The Clean Air Act allows California to set more stringent greenhouse gas standards if EPA provides a federal preemption waiver; other states may then adopt the California standards.³⁷ Thus, the automobile industry has three regulators – EPA, NHTSA, and California – sometimes imposing inconsistent requirements. This led to thirty years of litigation and congressional action concerning such matters as stringency, pacing, preemption, and feasible technologies. In 2010, when the automobile industry was facing a financial crisis and several of the automakers were on the brink of bankruptcy, the White House brokered an elaborate deal to bail out the industry and achieve a unified set of fuel economy and emissions standards through model year 2025 cars. These standards included dramatically more stringent greenhouse gas standards coordinated with California and a corresponding expected doubling of the fuel economy standards, subject to a "mid-term review" of the standards for model years 2022-2025, to be completed by 2018. Although automobile manufacturers agreed not to challenge the deal in court, several non-automobile trade associations did sue, largely because greenhouse gas standards for motor vehicles triggered rules for stationary sources. The D.C. Circuit consolidated and then handily dismissed the more than 100 lawsuits filed.³⁸ The Obama administration and California each accelerated the mid-term review shortly before Trump's inauguration, affirming the standards through model year 2025. The deal to eventually double fuel economy standards was the Obama administration's greatest achievement in quantifiably reducing greenhouse gas emissions.

When Donald Trump took office, he blew up the deal, immediately moving to reconsider the mid-term review, ultimately rolling back the rate of emissions reductions by

³⁵ 42 U.S.C. §7521(a)(3)(A)(i).

^{36 49} U.S.C. §32902(a).

^{37 42} U.S.C. §7543.

³⁸ Coalition for Responsible Regulation v. EPA, 684 F.3d 102 (DC. Cir. 2012), aff'd in part, rev'd in part on other grounds, Utility Air Regulatory Group v. EPA, 573 U.S. 302 (2014).

about two-thirds for model years 2021 forward, revoking the California waiver, and interpreting the fuel economy law to bar all state greenhouse gas regulations. When four of the major automakers cut a side deal with California to improve their fuel economy anyway, Trump threatened to have the Department of Justice sue them for antitrust violations (though it never did). As Trump left office, several lawsuits against EPA and NHTSA over these actions were pending, brought by several states, cities, and environmental groups. An early task of the Biden administration is to try to put this all back together again. Then, it will have to go far beyond the Obama deal.

All scenarios for achieving net zero greenhouse gas emissions by 2050 involve all new cars and light trucks being zero emission vehicles. EPA and NHTSA could progressively tighten emissions standards and move the fleet increasingly toward electric vehicles. They can also act to restore California's authority to encourage this shift. Unless automakers go along with this shift, however, they can be expected to challenge the new rules as not "achievable" or "feasible" or as not meeting the various criteria set forth in the governing statutes. Moving to an all-electric system is a massively disruptive but absolutely necessary undertaking that will require a comprehensive national network of electric vehicle charging stations, a massive increase in electricity generation, and a reconfiguration of the electricity grid. It will also displace hundreds of thousands of gasoline station workers.³⁹ Similar legal processes will be needed for medium- and heavy-duty engines and vehicles, but unless battery technology improves considerably some may need other methods to have both zero emissions and long ranges, introducing other complications.⁴⁰

Even if the automakers are amenable, many other parties have a stake in what happens and possibly divergent interests – auto dealers, parts suppliers, labor unions, fleet owners, consumers, the oil and power industries, and others. Thus, it will be essential for EPA and NHTSA to be scrupulous in building up a record showing that they appropriately considered and balanced the factors required by the relevant statutes. The degree of deference that the courts afford the agencies may help determine the outcomes, but at least here EPA and NHTSA have clear statutory authority.

B. Coal

After motor vehicles, coal-fired power plants are the second largest source of U.S. greenhouse gas emissions.⁴¹ The scenarios for achieving net zero emissions all call for the

³⁹ Amy L. Stein & Joshua P. Fershee, Light-Duty Vehicles, in LEGAL PATHWAYS TO DEEP DECARBONIZATION IN THE UNITED STATES, 353-383 (Michael B. Gerrard & John C. Dernbach, eds., 2019).

⁴⁰ Andrea Hudson Campbell et al., Heavy-Duty Vehicles and Freight, in LEGAL PATHWAYS supra note 39 at 384-423.

⁴¹ EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS, 1990-2018, ES-29 (2020).

elimination of the use of coal to generate electricity.⁴² The Clean Air Act gives EPA ample authority to impose stricter regulations on new coal-fired power plants,⁴³ but existing regulations, competition from cheap natural gas and renewables, and other factors mean almost no new coal plants are being built in the United States anymore.

The big problem is the approximately 240 coal plants that still operate.⁴⁴ Several plants retire every year, but not at the rate necessary to meet climate goals. When the Clean Air Act was enacted in 1970, it was assumed that most of the coal plants would retire on their own soon enough. Thus, these old plants were mostly grandfathered (i.e. exempted) from the new regulations. The principal regulatory programs apply only to new or significantly modified sources of coal-fired power.⁴⁵ In an effort to get at these long-lived plants, EPA has used several programs under the Clean Air Act (those controlling acid rain, cross-state pollution, regional haze, hazardous pollutants like mercury, and others), the Clean Water Act (for thermal discharges), and the Resource Conservation and Recovery Act (for coal ash impoundments), but many coal plants still spew out air pollution.⁴⁶

In 2011, the Supreme Court rejected an effort by several states to enjoin greenhouse gas emissions from coal plants as a federal common law nuisance, concluding that EPA can regulate these plants under section 111(d) of the Clean Air Act, thereby displacing the federal common law.⁴⁷ So, EPA decided to use Section 111(d)⁴⁸ as the centerpiece of its efforts to control coal plants through President Obama's Clean Power Plan. Unfortunately, Section 111(d) is fraught with difficulty. To begin with, it does not allow EPA to regulate the plants directly. Instead, EPA needs to tell the states to submit and enforce plans, which would take years. Additionally, there is a question as to whether the section allows EPA to impose requirements "outside the fenceline" of power plants, such as by effectively requiring that they build new renewable generation or improve customers' energy efficiency or if such efforts intruded on the turf of the Federal Energy Regulatory Commission (FERC).

The Clean Power Plan was met with a ferocious legal battle, led by West Virginia and Texas. On February 9, 2016, while the case was still being litigated in the D.C. Circuit, the Supreme Court issued, by a vote of 5-4, a one-paragraph order staying implementation of the Clean Power Plan until the litigation over it was completed, without stating its reasons. Four

⁴² E.g., Sustainable Development Solutions Network, America's Zero Carbon Action Plan (2020); High Meadows Envil. Inst., Princeton University, Net-Zero America: Potential Pathways, Infrastructure, and Impacts (2020). Some coal will still be needed for metallurgical purposes.

⁴³ E.g., 42 U.S.C. §7411(b).

⁴⁴ 50 US coal power plants shut under Trump, PHYS.ORG, (May 9, 2019).

^{45 42} U.S.C. §§7411(a), 7575(a).

 $^{^{46}}$ Richard L. Revesz & Jack Lienke, Struggling for Air: Power Plants and the "War on Coal" (2016).

⁴⁷ Am. Elec. Power v. Connecticut, 564 U.S. 410 (2011).

^{48 42} U.S.C. §7411(d).

days later, Justice Scalia died. Had the sequence been different, a 4-4 vote would have left standing the D.C. Circuit's denial of a stay. The Supreme Court's stay stunned just about everyone and profoundly demoralized the many EPA employees who had spent years developing the plan. The D.C. Circuit heard oral argument in the case in September 2016 but never issued a decision. Donald Trump promised during his presidential campaign to repeal the Clean Power Plan. His EPA fulfilled that promise and replaced the plan with a toothless new rule, which was struck down by the D.C. Circuit on January 19, 2021.⁴⁹

The Supreme Court's stay was a bad omen for the future of the Clean Power Plan, and the presence of three new justices appointed by President Trump makes the outlook even bleaker for an effort by the Biden administration to restore the Clean Power Plan. As a result, few expect the Biden administration to do so. Rather, there will probably be an effort to modify it and also to use various other tools under the Clean Air Act and other laws to tackle the problem of emissions from old coal plants. For example, EPA could (1) increase costs for these plants by further controlling non-greenhouse gas emissions; (2) lower national ambient air quality standards for fine particulate matter and ozone; (3) impose stricter emissions controls on mercury (a natural contaminant in much coal); (4) require coal plants to meet the same emission standards as natural gas plants; and (5) strengthen measures against cross-state air pollution and regional haze. EPA might also pursue a modified approach to regulating greenhouse gas emissions from these plants, such as by imposing some form of requirements for carbon capture and sequestration. Every one of these efforts would be litigated, and as shown above, today's Supreme Court may not be the friendliest of venues for environmental advocates.

Another potential tool the Biden administration might consider using is Section 115 of the Clean Air Act,⁵¹ which EPA can invoke if air pollution from the U.S. is endangering public health or welfare in another country (which it is) and the impacted foreign country provides the United States with reciprocal rights. EPA can then require the states where the pollution originates to control those emissions.⁵² The language in Section 115 is cleaner than that in Section 111(d) and it thus has fewer legal vulnerabilities, but the major questions doctrine and the nondelegation doctrine could still cause problems if EPA were to invoke it.

C. Natural Gas

Carbon dioxide emissions from burning natural gas (not only in power plants but also in heating buildings and other energy uses) in the U.S. first exceeded those from coal plants

⁴⁹ Am. Lung Assn. v. EPA, No. 19-1140 (D.C. Cir. January 19, 2021).

⁵⁰ Carbon capture and sequestration is a set of technologies that can greatly reduce carbon dioxide emissions by capturing and transporting carbon dioxide and then injecting it into depleted oil wells or deep underground rock formations where it can be stored.

^{51 42} U.S.C. §7415.

 $^{^{52}}$ Michael Burger, ed., Combating Climate Change with Section 115 of the Clean Air Act: Law and Policy Rationales (2020).

around 2015,⁵³ and more natural gas infrastructure is being built every year. Natural gas was long regarded as a clean fuel, and its emissions of particulate matter and other conventional air pollutants are very low. The chief reason U.S. greenhouse gas emissions have been gradually declining for several years is that many coal plants have been replaced by natural gas plants. But natural gas is still a fossil fuel. When it is burned it generates carbon dioxide, and its chief component, methane, is an even more powerful greenhouse gas if released unburned, such as through leaks in pipes. It has become abundant and cheap because of hydraulic fracturing, but that has its own environmental problems. During his campaign, Biden repeatedly vowed not to ban fracking,⁵⁴ but meeting his clean electricity and net zero emissions targets will mean phasing out most natural gas as well as coal as sources of energy.⁵⁵

Natural gas power plants continue to be built at a steady clip.⁵⁶ Most of the same Clean Air Act authorities that EPA could use to impede the building of new coal plants could also be used to control new natural gas plants. This would entail promulgating new regulations, perhaps requiring the use of carbon capture and sequestration technology, or co-firing the natural gas with hydrogen that was produced using renewable energy. Those regulations would face litigation about their economic and engineering feasibility, so EPA would be required to produce a solid record to withstand judicial review.

Leakage and flaring of methane during oil and gas production, and leakage of natural gas during production, processing, and distribution, are now known to be even greater problems than was thought just a few years ago. Nonetheless, the Trump administration revoked Obama-era regulations that curtailed these emissions. Those regulations need to be reinstated, strengthened, and expanded to cover existing as well as new facilities.

The Natural Gas Act gives FERC almost exclusive regulatory authority over interstate natural gas pipelines. FERC has been hospitable to pipeline expansion, even before Trump. President Biden should be able to attain a Democratic majority on FERC in mid-2021, although the exact timing depends on whether there are early retirements and the pace of Senate confirmations. At that point, perhaps FERC will cast a newly critical eye on new pipeline projects, as well as on liquefied natural gas (LNG) exports.

The continued construction of natural gas power plants, pipelines, and LNG export terminals creates expensive assets that will have to be stranded if we are to migrate away from this fossil fuel. It also strengthens the resolve of the powerful economic interests that will

⁵³ ENERGY INFO. ADMIN., ENERGY-RELATED CO2 EMISSIONS FROM NATURAL GAS SURPASS COAL AS FUEL USE PATTERNS CHANGE (2016).

⁵⁴ An administration's ability to ban fracking is very limited because Congress has exempted it from the principal statute that would otherwise regulate it, the Safe Drinking Water Act. 42 U.S.C. § 300(h)(d)(1).

⁵⁵ Natural gas will continue to be needed as a feedstock for many petrochemical operations.

⁵⁶ Stephanie Tsao & Richard Martin, *Overpowered: Why A US Gas-Building Spree Continues Despite Electricity Glut*, S&P GLOBAL (Dec. 2, 2019).

oppose this migration. If EPA, FERC, and the Department of Energy (which also has a role in approving LNG exports) were to make full use of their existing statutory authorities to restrain the production and use of natural gas, the success of the inevitable litigation that would follow might be influenced by how the Supreme Court views the *Chevron* deference, major questions and nondelegation doctrines.

The Biden administration will also be able to limit natural gas development on public lands by reducing the amount of land offered for lease, restricting the issuance of drilling permits, or increasing royalty rates.

D. Energy Efficiency and Buildings

Improving the efficiency of energy use is one of the most important tools for tackling climate change. A series of congressional actions starting with the Energy Policy and Conservation Act of 1975 and extending through the Consolidated Appropriations Act of 2021 have incrementally added to (and occasionally restricted) the authority of the Department of Energy to impose efficiency standards on appliances and industrial equipment. Many standards are now in place, but there is much more the Department could do with its existing statutory authority to adopt new standards and update and strengthen existing ones, and to improve the testing methods used to enforce compliance. These efforts would reduce energy use and greenhouse gas emissions and lower consumers' utility bills.⁵⁷

Unsurprisingly, the pace of this work slowed to a crawl during the Trump administration. In October and November 2020, two lawsuits were filed – one by fourteen states, the other by six environmental groups – against the Department of Energy over violations of mandatory deadlines for energy efficiency standards for twenty-five consumer and commercial products.⁵⁸

The governing statute requires the standards to "be designed to achieve the maximum improvement in energy efficiency ... which the Secretary determines is technologically feasible and economically justified."⁵⁹ The courts have upheld the use of the social cost of carbon in making this determination.⁶⁰ This is another reason why the Trump administration's trivialization of the social cost of carbon needs to be undone. Appliance standards are complex and typically follow extended technical negotiations with the manufacturers, but where

⁵⁷ Joanna Mauer & Andrew deLaski, Appliance Standards Awareness Project, Am. Council for an Energy Efficient Econ., A Powerful Priority: How Appliance Standards Can Help Meet U.S. Climate Goals and Save Consumers Money (2020); Kit Kennedy, *Lighting, Appliances, and Other Equipment, in* Legal Pathways *supra* note 39 at 217-255.

⁵⁸ New York v. Brouillette, No. 20-cv-9362 (S.D.N.Y., filed Nov. 9, 2020); Natural Resources Defense Council v. Brouillette, No. 20-cv-9127 (S.D.N.Y., filed Oct. 30, 2020). ⁵⁹ 42 U.S.C. §6295(o)(2).

⁶⁰ Zero Zone, Inc. v. U.S. Department of Energy, 832 F.3d 654 (7th Cir. 2016).

disagreement remains and litigation ensues, the government needs a solid administrative record to prevail.

Residential and commercial buildings account for 28% of the energy consumed in the United States⁶¹ and 27% of natural gas used.⁶² Thus, reducing buildings' energy use is a key element in fighting climate change. The nonprofit sector has taken the lead here. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) voluntary standards have gained wide acceptance in the real estate market. The federal government has a limited role in the efficiency of buildings, except for its own. The federal government is the largest building owner in the United States and can mandate that its buildings comply with LEED or similar standards. Congress has encouraged energy conservation in federal buildings beginning in 1976, and continuing through the Energy Independence and Security Act of 2007.63 However, President Trump revoked an executive order issued by President Obama setting targets for building energy intensity, water intensity, and greenhouse gas emissions, replacing it with something much vaguer.⁶⁴ Promptly after his inauguration, President Biden revoked this Trump action.⁶⁵ Beyond that, President Biden will have broad authority to require federal buildings to set a model for the nation, and also to ensure that the federal government procures only the cleanest vehicles and the most efficient appliances and other equipment, helping to boost the market for these products. The federal government annually purchases fifty-four terawatt hours of electricity, but only 10% of it comes from renewable sources.66 This too is within the administration's control.

Existing buildings not owned by the federal government are a much harder nut to crack. Most of the buildings that will be standing in 2050 already exist today. Achieving net zero emissions will require retrofitting most of them to make them more efficient, to convert oil and natural gas heating and gas cooking to electricity, and to put solar panels on their roofs wherever possible. All of this is mostly a matter of building codes, which are set by state and local governments. These codes need to be revised to move in the direction of net zero emissions.

⁶¹ Frequently Asked Questions: How Much Energy is Consumed in U.S. Buildings?, U.S. ENERGY INFORMATION ADMINISTRATION (June 15, 2020).

⁶² Natural Gas Explained: Use of Natural Gas, U.S. ENERGY INFORMATION ADMINISTRATION (Nov. 30, 2020).

⁶³ James Charles Smith, Existing Buildings, in LEGAL PATHWAYS supra note 39 at 277-300.

⁶⁴ Exec. Order No. 13834, 83 Fed. Reg. 23771 (May 17, 2018), replacing Exec. Order No. 13693, 80 Fed. Reg. 15869 (Mar. 19, 2015); See also American Council for an Energy-Efficient Economy A Buildings Efficiency Agenda for 2021: Standards for Federal Buildings (November 2020).

⁶⁵ Exec. Order No. 13990, 86 Fed. Reg. 737 (Jan. 20, 2021).

⁶⁶ OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY, FEDERAL AGENCY USE OF RENEWABLE ELECTRIC ENERGY.

The American Clean Energy and Security Act of 2009, also known as the Waxman-Markey bill, would have not only established a nationwide cap-and-trade program⁶⁷, but also required a national energy efficiency code for buildings.⁶⁸ That bill died in the Senate, and there has been little discussion of a binding national code since then. If one were somehow enacted, serious legal questions would arise concerning how to enforce it. It is hard to imagine federal agents going into each town hall in the country to make sure that all building permit applications comply with the federal code. Moreover, even if they did, the federal government cannot tell local officials such as building inspectors what to do without risking a finding that their instructions violate the "anticommandeering" doctrine under the Tenth Amendment, which reserves to the states all powers not delegated to the federal government or prohibited to the states.⁶⁹ More plausible, if Congress were to appropriate the money, would be a program that provides states or cities that opted in with substantial financial assistance for building retrofits and inspections.

E. Renewable Energy

Achieving President Biden's goal of zero carbon electricity by 2035 is a formidable task. It will require the retirement of all coal plants and just about all natural gas plants (except perhaps some that are held in reserve to meet peak demand or equipped with carbon capture and sequestration). The nation's fleet of nuclear plants is aging. Many will retire by 2035, and barring stunningly rapid development of new technologies, no new ones will be opened by then except for two now being built in Georgia. At the same time, the demand for electricity will soar, despite aggressive energy efficiency measures, due to the electrification of vehicles, building temperature systems, and some industrial uses.

Current renewable generation capacity in the U.S. is 1,100 gigawatts.⁷⁰ A 2020 study by the Zero Carbon Action Plan concluded that this will need to grow to 3,000 gigawatts by 2050.⁷¹ That would entail adding an average of about 300 gigawatts a year, mostly from wind and solar – an order of magnitude greater than the current annual record.⁷²

⁶⁷ Cap and trade programs are market-based approached to controlling pollution by providing economic incentives for reducing the emissions of pollutants.

⁶⁸ See Amit Talapatra, FED'N OF AM. SCIS., IMPLEMENTING ENERGY EFFICIENCY IN BUILDING CODES BASED ON THE AMERICAN CLEAN ENERGY AND SECURITY ACT OF 2009 (2009).

⁶⁹ Murphy v. National Collegiate Athletic Ass'n, 138 S. Ct. 1461 (2018).

⁷⁰ U.S. ENERGY INFORMATION ADMINISTRATION, ELECTRIC POWER MONTHLY, *Table 6.1, Electric Generating Summer Capacity Changes*.

⁷¹ SUSTAINABLE DEVELOPMENT SOLUTIONS NETWORK, ZERO CARBON CONSORTIUM, AMERICA'S ZERO CARBON ACTION PLAN 33 (2020). A good-sized nuclear power plant has a capacity of about one gigawatt.
⁷² Id.

Federal lands and waters have immense potential for hosting many of these facilities, especially in the western states and off the coasts.⁷³ Most of the land is administered by the Bureau of Land Management (BLM). BLM can speed up the leasing of this land for renewables and charge lower rents, while also slowing down leasing for coal, oil, and natural gas extraction. The development of renewable energy facilities on federal lands is often delayed by the worthwhile but often protracted environmental assessment processes under the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). Rather than conducting separate reviews for each project, these processes can be sped up by undertaking regional environmental and species studies, which allows individual projects in the covered region to be approved much more quickly. The Obama administration did this successfully with the Western Solar Plan, an initiative that identified nineteen zones suitable for solar farms across 285,000 acres in six states.⁷⁴ This is one area where the Supreme Court is likely to be receptive to the Biden administration's probable position with respect to regulatory flexibility in using NEPA and the ESA. The federal government almost never loses NEPA cases there.⁷⁵ The Court issued some decisions in the 1970s and 1980s treating the ESA expansively, 76 but the Court's more recent decisions under the ESA read the statute narrowly.⁷⁷

Offshore areas are controlled by the Bureau of Ocean Energy Management (BOEM). Under President Trump, who was hostile to wind energy, ⁷⁸ BOEM moved very slowly to approve some offshore wind projects. This can be accelerated, and BOEM should also open up more offshore areas for renewables leasing.

During the Trump administration, FERC took several actions that favored fossil fuel generation over renewables. Among them were orders requiring certain wholesale electricity market operators to, in effect, require renewable energy companies to bid at auctions at artificially high prices, allowing fossil fuel generators to outbid them. FERC has changed the rules under the Public Utility Regulatory Practices Act in a way that harms distributed renewable energy resources, and the Commission has approved natural gas infrastructure

⁷³ Though subject to environmental controversy, there is also considerable untapped potential for geothermal energy and for hydropower from existing dams in the United States, and for importing hydropower from Canada.

⁷⁴ Michael B. Gerrard, Legal Pathways for a Massive Increase in Utility-Scale Renewable Generation Capacity, 47 ENVTL. L. REP. 10591 (2017).

⁷⁵ Richard Lazarus, The National Environmental Policy Act in the U.S. Supreme Court: A Reappraisal and a Peek Behind the Curtains, 100 GEO. L.J. 1507 (2012).

⁷⁶ Tennessee Valley Authority v. Hill, 437 U.S. 153, 156 (1978); Babbitt v. Sweet Home Chapter of Cmties. for a Greater Ore., 515 U.S. 687 (1985).

⁷⁷ Weyerhaeuser Co. v. U.S. Fish and Wildlife Serv., 139 S. Ct. 361 (2018); Winter v. Nat. Res. Def. Council, 555 U.S. 7 (2008); Nat'l Assoc. of Home Builders v. Defs. of Wildlife, 551 U.S. 644 (2007)

⁷⁸ Sophie Lewis, *Trump Claims Wind Energy "Kills All the Birds." Cats and Windows Are Actually Much More to Blame*, CBS NEWS (Oct. 23, 2020).

without considering its climate impacts. FERC might start moving in the opposite direction once President Biden secures a Democratic majority.

FERC could also reiterate that it will approve carbon pricing in the wholesale electricity markets if proposed by regional market operators. FERC could give clearer guidance to these operators to encourage distributed energy resources, energy storage, and demand response, which, for example, allows utilities to raise the settings on air conditioners and reduce power to certain appliances in participating households during peak demand. The Supreme Court's most recent rulings concerning the two principal statutes that FERC administers – the Federal Power Act and the Natural Gas Act – have seemed to confer flexibility in their application rather than the traditionally rigid separation of authority between the federal and state governments.⁷⁹

IV. Conclusion

Unless Congress adopts major new climate legislation, the Biden administration will need to use existing statutes to carry out its climate pledges. These statutes amount to a very large toolbox – even larger when the states use their own laws to pursue the same goals. Using some of these tools could be made more difficult by the 6-3 conservative majority on the Supreme Court. These legal risks can be reduced, but not eliminated, if federal agencies scrupulously follow the applicable administrative procedures, develop solid factual records, and clearly explain why they are revoking the damaging decisions of the Trump administration and moving forward to fight climate change.

⁷⁹ FERC v. Energy Power Supply Association, 136 S. Ct. 760 (2016); Hughes v. Talen Energy Mktg., 136 S. Ct. 1288 (2016); Oneok, Inc. v. Learjet, Inc., 575 U.S. 373 (2015).

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Since 1986, Gerrard has written an environmental law column for the *New York Law Journal*. He is author or editor of thirteen books, two of which were named Best Law Book of the Year by the Association of American Publishers: *Environmental Law Practice Guide* (twelve volumes, 1992) and *Brownfields Law and Practice* (four volumes, 1998). Among his other books are *Global Climate Change and U.S. Law* (with Jody Freeman) (2d ed. 2014); *Law of Clean Energy* (2011); *Climate Engineering and the Law: Regulation and Liability for Solar Radiation Management and Carbon Dioxide Removal* (with Tracy Hester 2018); and *Legal Pathways to Deep Decarbonization in the United States* (with John Dernbach 2019).

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