

RACING TO THE TOP, THE BOTTOM, OR THE MIDDLE OF THE PACK?

The Evolving State Government Role in Environmental Protection

Barry G. Rabe

The problem which all federalized nations have to solve is how to secure an efficient central government and preserve national unity, while allowing free scope for the diversities, and free play to the... members of the federation. It is... to keep the centrifugal and centripetal forces in equilibrium, so that neither the planet States shall fly off into space, nor the sun of the Central government draw them into its consuming fires.

Lord James Bryce, The American Commonwealth, 1888

Before the 1970s, the conventional wisdom on federalism viewed "the planet States" as sufficiently lethargic to require a powerful "Central government" in many areas of environmental policy. States were widely derided as mired in corruption, hostile to innovation, and unable to take a serious role in environmental policy out of fear of alienating key economic constituencies. If anything, they were seen as "racing to the bottom" among their neighbors, attempting to impose as few regulatory burdens as possible. In more recent times, the tables have turned—so much so that current conventional wisdom often berates an overheated federal government that squelches state creativity and capability to tailor environmental policies to local realities. The decentralization mantra of recent decades has endorsed an extended transfer of environmental policy resources and regulatory authority from Washington, DC, to states and localities.

Governors turned presidents, such as Ronald Reagan, Bill Clinton, and George W. Bush, extolled the wisdom of such a strategy, at least in their rhetoric. Many heads of the US Environmental Protection Agency (EPA), including Gina McCarthy in the Obama administration and Scott Pruitt under Donald Trump, took federal office after extended state government experience. They frequently endorsed the idea of shifting some authority back to statehouses, while differing on just what that meant in practice. Pruitt repeatedly invoked the phrase "cooperative federalism" during his 2017 confirmation hearings in embracing a state-centered model of federalism. His 2019 successor, Andrew Wheeler, employed similar rhetoric in advancing many Trump initiatives designed to soften federal authority over air, water, and climate in favor of expanded state discretion. Of course, such a transfer would pose a potentially formidable test of the thesis that more localized units know best and has faced major political hurdles.

What accounts for this sea change in our understanding of the role of states in environmental policy? How have states evolved in recent decades, and what types of functions do they assume most comfortably and effectively? Despite state resurgence, are there areas in which states fall short? How did states respond to efforts by the Trump administration to reduce federal engagement and shift many environmental protection responsibilities to them? Looking ahead, should regulatory authority devolve to the states, or are there better ways to sort out federal and state responsibilities?

This chapter addresses these questions, examining evidence of state performance in environmental policy. It provides both an overview of state evolution and a set of brief case studies that explore state strengths and limitations. These state-specific accounts are interwoven with assessments of the federal government's role, for good or ill, in the development of state environmental policy. Indeed, as political scientist John Kincaid has noted in a sophisticated analysis of power shifting between federal and state governments since the founding of the Republic, federal environmental policy powers have expanded markedly since 1970 and yet the American system remains quite balanced between federal and state authority. In order to be truly effective, US environmental policy often needs to reflect constructive engagement across state and federal levels rather than acrimony.

THE STATES AS THE "NEW HEROES" OF AMERICAN FEDERALISM

Policy analysts are generally most adept at analyzing institutional foibles and policy failures. Indeed, much of the literature on environmental policy follows this pattern, with criticism particularly voluminous and potent when directed toward federal efforts in this area. By contrast, states have received much more favorable treatment. Many influential books and reports on state government and federalism portray states as dynamic and effective. Environmental policy is often depicted as a prime example of this general pattern of state performance. Some analysts routinely characterize states as the "new heroes" of American federalism, as having long since eclipsed a doddering federal government. According to this line of argument, states are consistently at the cutting edge of policy innovation, eager to find creative solutions to environmental problems, and "racing to the top" with a goal of national preeminence in the field. When the states fall short, an overzealous federal partner is often said to be at fault.

Such assertions have considerable empirical support. The vast majority of state governments have undergone fundamental changes since the first Earth Day in 1970. Many states have drafted new constitutions and gained access to unprecedented revenues through expanded taxing powers. These state powers have been further refined and expanded through highly active constitutional amendment processes.² In turn, many state bureaucracies have grown and become more professionalized, as have staff serving governors and legislatures. Expanded policy engagement was further stimulated by increasingly competitive two-party systems in many regions between 1980 and 2010, intensifying pressure on elected officials to deliver desired services. Heightened use of direct democracy provisions, such as the initiative and referendum, and increasing activism by state courts and coalitions of elected state attorneys general create

alternative routes for policy adoption. On the whole in recent decades, public opinion data have consistently found that citizens have a considerably higher degree of "trust and confidence" in the public services and regulations dispensed from their state capitals than those generated from Washington. This pattern was evident during 2020 when governors received far higher marks than President Trump in their ability to address the profound challenges of the COVID-19 crisis. These factors have converged to expand state capacity and commitment to environmental protection.

This transformed state role is evident in virtually every area of environmental policy. States directly regulate approximately 20 percent of the total US economy, including many areas in which environmental concerns come into play.³ States operate more than 90 percent of all federal environmental programs that can be delegated to them. Collectively, they approach that high level of engagement in the issuance of all environmental permits and the implementation of all environmental enforcement actions. Despite this expanded role, federal financial support to states in the form of grants to fund environmental protection efforts has generally declined since the early 1980s and plunged further during the Trump presidency. This increasingly forces states to find ways to fund most of their operations even as many face significant fiscal strains and face constitutional limits on their ability to run deficits.

Many areas of environmental policy remain clearly dominated by states, including most aspects of waste management, groundwater protection, land use management, transportation, energy production, and electricity regulation. This state-centric role is also reflected in rapidly emerging areas, such as environmental risks to air, water, and land linked to dramatic expansion in the exploration of shale gas and oil via hydraulic fracturing ("fracking") techniques. In many instances, state action represents "compensatory federalism," whereby Washington proves "hesitant, uncertain, distracted, and in disagreement about what to do," and states respond with a "step into the breach."4 Even in policy areas with an established federal imprint, such as air and water quality, states often have considerable latitude to oversee implementation and move beyond federal standards if they so choose. In air quality alone, more than a dozen states routinely adopt policies to either exceed federal standards or fill federal regulatory gaps, often setting models for national consideration. Political scientists Christopher McGrory Klyza and David Sousa confirm that "the greater flexibility of state government can yield policy innovation, opening the way to the next generation of environmental policy."5

That flexibility and commitment are further reflected in the institutional arrangements established by states to address environmental problems. Many states maintain comprehensive agencies that gather most environmental responsibilities under a single organizational umbrella. These agencies have sweeping, cross-programmatic responsibilities and some take the lead on emerging issues such as climate change. In turn, many states have continued to experiment with new organizational arrangements to meet evolving challenges, including the use of informal networks, special task forces, and interstate compacts to facilitate cooperation among various departments and agencies.⁶

This expanded state commitment to environmental policy may be accelerated, not only by the broader factors introduced above but also by features somewhat unique to this policy area. First, many scholars contend that broad public support for

environmental protection provides considerable impetus for more decentralized policy development tailored to salient local concerns. Such "civic environmentalism" stimulates numerous state and local stakeholders to take creative collective action independent of federal intervention. As opposed to top-down controls, game-theoretic analyses of efforts to protect so-called common-pool resources, such as river basins and forests, side decisively with local or regional approaches to resource protection. Much of the leading scholarly work of the late Elinor Ostrom, who in 2009 became the first political scientist to win the Nobel Prize in economics, actively embraced "bottom-up" or "polyarchic" environmental governance, including possible climate change applications.⁷

Second, the proliferation of environmental policy professionals in state agencies and legislative staff roles has created a sizable base of talent and ideas for state-level policy innovation. Contrary to conventional depictions of agency officials as shackled by elected "principals," an alternative view finds considerable policy innovation or "entrepreneurship" in state policymaking circles. This pattern is especially evident in environmental policy because numerous areas of specialization place a premium on expert ideas and allow for considerable innovation within agencies.8 Recent scholarly work on state environmental agency performance gives generally high marks to officials for professionalism, constructive problem-solving, and increasing emphasis on improving environmental outcomes, albeit with considerable state-to-state variation.9 Networks of state professionals, working in similar capacities but across jurisdictional boundaries, have become increasingly influential in recent decades. These networks facilitate information exchange, foster the diffusion of innovation, and pool resources to pursue joint initiatives. Such multistate groups as the Environmental Council of the States, the National Association of Clean Air Agencies, and the National Association of State Energy Officials also band together to influence the design of subsequent federal policies, seeking either latitude for expanded state experimentation or federal emulation of state "best practices." Other entities, such as the Northeast States for Coordinated Air Use Management, the Great Lakes Commission, and the Pacific Coast Collaborative, represent state interests in certain regions.

Third, environmental policy in many states is stimulated by direct democracy, unlike the federal level, through initiatives, referendums, and the recall of elected officials. In every state except Delaware, state constitutional amendments must be approved by voters via referendum. Thirty-one states and Washington, DC, also have some form of direct democracy for approving legislation, representing well over half the US population. Use of this policy tool has grown at an exponential rate to consider a wide array of state environmental policy options, including nuclear plant closure, disclosure of commercial product toxicity, and public land acquisition. In 2016 and 2018, Washington voters decisively rejected proposals to establish the first tax in the United States on carbon dioxide emissions, a policy already in place in parts of Canada and Europe, prompting Governor Jay Inslee to pursue other paths to climate policy. In prior years, however, Washington voters approved a ballot proposition requiring a steady increase in the amount of electricity derived from renewable sources, as was the case in Colorado and Missouri. Western states have generally made the greatest use of these provisions on environmental issues, particularly Oregon, California, and Colorado. In 2020, voters considered a wide range of environmental ballot

propositions, including far-reaching expansion in Missouri and Nevada of earlier renewable energy policies, an Oregon proposal to heighten water protection from logging and pesticides, and a Colorado proposal to reintroduce the gray wolf to wildlife areas.

THE CUTTING EDGE OF POLICY: CASES OF STATE INNOVATION

The convergence of these various political forces has unleashed substantial new environmental policy at the state level. Various researchers have attempted to analyze some of this activity through ranking schemes that determine which states are most active and innovative, often tracking how policy ideas then diffuse across states. Such studies consistently conclude that certain states tend to take the lead in most areas of policy innovation, followed by an often uneven pattern of innovation diffusion across state and regional boundaries.¹⁰ For example, the American Council for an Energy-Efficient Economy produces annual rankings of states on the basis of their adoption rates for a range of policies that offer environmental protection through more efficient energy use. In 2019, its researchers found that Massachusetts retained the top ranking for the ninth straight year, followed by California and other states located primarily on the East and West coasts, Maryland registered the biggest advances of any state from 2018, while Hawaii also made major strides. Minnesota maintained the highest ranking among Midwestern states, Colorado led Mountain West states, and Florida received top rating in the Southeast. Kansas, Louisiana, and North and South Dakota ranked at the very bottom.11

Additional analyses have attempted to examine which economic and political factors are most likely to influence the rigor of state policy or the level of resources devoted to it. An important but less examined question concerns the relationships between environmental policy and both environmental quality and economic growth. Policy scholars Daniel Fiorino and Riordan Frost have created an "eco-efficiency index" that looks across multiple areas of environmental protection over time, ranking states according to the "stress on health and ecology required to generate a given unit of income." These rankings generally parallel earlier studies that track rates of policy innovation and adoption, with higher scores reflecting greater eco-efficiency (see Table 2.1). In turn, a more established body of research suggests that a number of state innovations offer promising alternatives to prevailing approaches, often representing a direct response to local environmental crises and revealing shortcomings in existing policy design. Brief case studies that follow indicate the breadth and potential effectiveness of state innovation.

Anticipating Environmental Challenges

One of the greatest challenges facing US environmental policy is the need to shift from a pollution control mode that reacts after damage has occurred to one that anticipates potential problems and attempts to prevent or minimize them. Some states have launched serious planning processes in recent decades, attempting to pursue preventative strategies in an increasingly systematic and effective way. All fifty states have

TABLE 2.1 ■ State Air, Climate, and Energy (ACE) Index			
State	Weighted Overall Score	State	Weighted Overall Score
New Jersey	47.04	Georgia	9.60
California	41.36	Minnesota	9.34
Connecticut	36.17	Utah	9.16
New York	36.03	Texas	8.84
Rhode Island	30.49	Arizona	8.54
Massachusetts	28.81	South Carolina	8.31
Delaware	26.57	Indiana	7.00
Maryland	26.18	lowa	6.70
Washington	17.86	Idaho	6.63
Virginia	17.36	Missouri	6.56
New Hampshire	16.91	Nebraska	6.44
Hawaii	16.71	Kentucky	6.15
North Carolina	15.15	South Dakota	5.61
Pennsylvania	14.56	Alabama	5.03
Illinois	13.55	Kansas	4.93
Florida	13.10	West Virginia	4.82
Vermont	12.99	Oklahoma	4.60
Nevada	12.58	Louisiana	4.58
Oregon	11.38	Arkansas	4.53
Colorado	11.02	New Mexico	4.31
Tennessee	11.00	Mississippi	4.17
Ohio	10.28	Alaska	4.00
Michigan	10.07	Montana	3.38
Wisconsin	9.99	North Dakota	3.35
Maine	9.87	Wyoming	2.20

Source: Daniel Fiorino and Riordan Frost, "The Pilot Eco-Efficiency Index: A New State Environmental Ranking for Researchers and Government" (paper presented at the Association for Public Policy Analysis and Management's fall research conference, Washington, DC, November 4, 2016), www.researchgate.net/publication/315736703_The_Pilot_Eco-Efficiency_Index_A_New_State_Environmental_Ranking_for_Researchers_and_Government.

adopted at least one pollution prevention program, and some have taken particularly bold approaches, cutting across conventional programmatic boundaries with various mandates and incentives to pursue prevention opportunities. Thirty-four states have adopted laws that move beyond federal standards in preventing risks from chemical exposure, such as bans of specific chemicals thought to pose health risks or comprehensive chemical management systems.¹⁴ California has been particularly active in this area and heavily influenced the design of new federal legislation adopted in 2016.

Minnesota has long joined California as a national leader in this area. It requires hundreds of state firms to submit annual toxic pollution prevention plans and prioritize "chemicals of concern." These plans must outline each firm's current use and release of a long list of toxic pollutants and establish formal goals for their reduction or elimination over specified periods of time. Firms have considerable latitude in determining how to attain these goals, contrary to the technology-forcing character of much federal regulation. But they must meet state-established reduction timetables and pay fees on releases. Minnesota was also one of the first two states to ban bisphenol A, a controversial chemical used in plastics. It moved quickly to address polyfluoroalkyl (PFAS) chemicals in water supplies, supported by an \$850 million 2018 legal settlement with a major manufacturer of these chemicals. From these earlier efforts, Minnesota and other states have established multidisciplinary teams that attempt to forecast emerging environmental threats and respond before problems arise, including review of potential environmental risks from nanotechnology and its production of tiny particles that may improve product design but also harbor environmental risks. 16 Minnesota has also taken a pioneering role in measuring the environmental impacts of carbon dioxide emissions and attaching a price to them in statewide electricity planning.¹⁷ In 2019, Governor Tim Walz elevated the role of climate change in longterm policy development, creating a climate "sub-cabinet" involving every Minnesota department and establishing benchmarks for future mitigation and adaptation.¹⁸

Colorado has taken a "race-to-the-top" approach to policy designed to anticipate and thereby minimize environmental risks from hydraulic fracturing practices. The state has a long-standing history in oil and gas extraction and has sought in recent years to temper all-out energy production by addressing environmental challenges in the fracking era. This featured pioneering steps in requiring public disclosure of chemicals used in drilling operations, water quality sampling, air quality standards, and property owner protections.¹⁹ It emerged through a deliberative process orchestrated by former Governor John Hickenlooper to engage diverse stakeholders to take proactive steps to mitigate risks.²⁰ In 2019–2020, Colorado adopted a suite of additional laws that went even farther, imposing unusually strong regulatory standards on methane and other hydrocarbons and nitrogen oxides from energy production and transmission and requiring continuous emissions monitoring with cutting-edge technology. The state also took steps to give localities considerable authority to add their own regulatory oversight while transitioning for a less carbon-intensive future through sweeping new energy efficiency and renewable energy policies. Another major energy-producing state, New Mexico, began moving in similar directions in 2020, developing performancebased regulatory standards and penalties that offered firms incentives for emission release reductions that could be verified while intensifying oversight on laggard firms.²¹

Economic Incentives

Economists have long lamented the penchant for command-and-control rules and regulations in US environmental policy. Most would prefer to see a more economically sensitive set of policies, such as taxes on emissions to capture social costs or "negative externalities" and provide monetary incentives for good environmental performance.²² The politics of imposing such costs has proven contentious at all governmental levels, although a growing number of states have begun to pursue some form of this approach in recent years. In all, the states have enacted hundreds of measures that can be characterized as "green taxes," including environmentally-related "surcharges" and "fees" that avoid the explicit use of the label "tax" but are functional equivalents.²³ Revenues from such programs are often used to cover costs of popular programs such as recycling, land conservation, and energy efficiency. A growing number of states have begun to revisit their general tax policies with an eye toward environmental purposes, including major tax incentives in many states to purchase hybrid and electric vehicles or invest in renewable energy. Many states and localities have also developed taxes on solid waste, often involving a direct fee for garbage pickup while offering free collection of recyclables.

One of the earliest and most visible economic incentive programs involves refundable taxes on beverage containers.²⁴ Ten states—covering one-third of the population—operate such programs. Deposit collections flow through a system that includes consumers, container redemption facilities such as grocery stores, and firms that reuse or recycle containers. Michigan's program is widely regarded as among the most successful of these state efforts and, similar to a number of others, is a product of direct democracy. Michigan's program places a dime deposit on containers—double the more conventional nickel—which may contribute to its unusually high redemption rate above 95 percent through the 2010s. The failure to adjust this policy for inflation or expand it to other beverages, however, served to erode its effectiveness over time. This type of state policy has diffused to other products, including scrap tires, used motor oil, pesticide containers, appliances with ozone-depleting substances, electronic waste such as used computers, and plastic bags.

States also have constitutional authority to tax all forms of energy, including transportation fuel and electricity. Increasing the price of energy in concert with its environmental damage would likely discourage consumption and related environmental damage, just as sustained tax increases have elevated the costs of smoking and driven down rates of tobacco use in recent decades. Many states have been highly reluctant to move beyond their traditional levels of taxation for fuels such as gasoline that are commonly used to maintain highways and bridges. But ten states have worked over the past decade to place a price on the release of carbon emissions through an auctioning process linked to an emissions cap that declines over time. Building on pioneering American work to reduce sulfur dioxide emissions, nine northeastern states have maintained the Regional Greenhouse Gas Initiative (RGGI) that requires purchase, through quarterly public auctions, of allowances to emit carbon. This pricing mechanism also provides revenue whereby RGGI states can support alternative energy projects or rebate consumer electricity bills. Political scientist Leigh Raymond has argued that RGGI offers a "new model" for climate policy that is already influencing

other governments in America and internationally. ²⁵ California operates its own version of this cap-and-trade system in collaboration with Canadian province Québec. During 2019–2020, New Jersey and Virginia formalized plans to join RGGI and significantly expand its reach. In turn, Pennsylvania Governor Thomas Wolf issued a 2019 executive order preparing the Keystone State for RGGI membership. This faced legislative opposition and potential state court scrutiny but, if advanced, would literally double RGGI's size in terms of carbon emission volume.

RGGI's successes inspired creation of a transportation sector replica. The Transportation Climate Initiative involves a partnership between twelve northeastern and Atlantic states, designed to create a regional "cap-and-invest" system. This would price oil and gas use, reallocating revenue to participating states to develop more environmentally friendly transportation systems. This region continues to be a hotbed for experimentation on environmental pricing strategies, further reflected in active exploration of carbon tax options in such states as Massachusetts and New York.

Filling the Federal Void: Reducing Greenhouse Gases

As the RGGI case demonstrates, states have proven unexpectedly active players in the fight to reduce greenhouse gas emissions to curb climate change. While most Congresses and some presidents have struggled to make any policy contribution to this problem, a number of states have attempted to fill some of the "policy gap" created by federal inaction.²⁶ This American "bottom-up" approach has also emerged in other federal or multilevel governmental systems, including Canada, Australia, and the European Union.²⁷ Many states are responsible for substantial amounts of greenhouse gas emissions, even by global standards. If all states were to secede and become independent nations, eighteen of them would rank among the top fifty nations in the world in terms of releases. In response, many states have adopted policies that promise to reduce their greenhouse gas releases, although they often tend to also pursue these policies for other environmental and economic reasons.

State-level engagement on climate policy has tended to peak during periods where federal engagement is lowest, thereby seizing opportunities that were being ignored or reversed nationally. This has certainly been evident since the advent of the Trump administration, including formation of a 25-state coalition that has pledged to meet Paris Climate Agreement emission reduction commitments within their boundaries. A 2019 study of subfederal climate policy concluded that American states could be divided into three tiers in terms of environmental commitment. At the top, 45 percent of the population and one-third of total emissions involved "first-mover" states actively engaged in policy. In contrast, 35 percent of the population and 47 percent of total emissions involved "slow-follower" states that lagged far behind all others. In the middle were "fast-follower" states seen as attempting to keep pace with first-movers, with 20 percent of the population and emissions. The study concluded that full implementation of all state policies adopted through 2018 alone could achieve approximately two-thirds of total American emission reductions that had been pledged under Paris.²⁸

One common climate policy involves a clean electricity mandate designed to accelerate state transition away from fossil fuel sources. Twenty-nine states and Washington, DC, have established "renewable portfolio standards (RPS)," beginning

with Iowa in 1991, and three have clean energy standards. Eight additional states have nonbinding renewable energy goals and two have comparable clean energy goals. These policies generally follow a similar structure, although they vary in terms of both the definition of eligible sources and the overall targets and timetables for expanding capacity. Seven states (California, Hawaii, Maine, New Mexico, New York, Virginia, and Washington) expanded earlier RPS commitments between 2018 and 2020, with legislation mandating that all state electricity emanate from nonfossil fuel sources between 2045 and 2050. Three others (Connecticut, New Jersey, and Wisconsin) took similar steps via gubernatorial executive orders.²⁹ Even without additional federal or state policies, these existing state efforts were projected to increase the share of electricity provided by renewables nationally to 26 percent by 2030. In turn, 20 states have adopted energy efficiency equivalents of an RPS, mandating an ongoing increase in overall energy efficiency that in some cases is integrated with renewable energy mandates. Seven states have adopted nonbinding versions of these policies, and numerous states have adopted more rigorous efficiency standards for new buildings or appliance purchases. These policies loom large among state pledges to honor Paris reduction targets.

Several states also developed policy to reduce climate damage related to greenhouse gases other than carbon dioxide, including accelerated transition away from hydrofluorocarbons (HFCs) in refrigerators and air conditioning systems. HFCs were devised decades ago as far friendlier to the ozone layer than previous chemicals that they replaced. But they have far greater global warming potential per molecule than carbon or even methane. Cost-effective chemical alternatives are available, and there was widespread international support even among industry for a 2016 phase-out treaty. However, the Trump administration's decision to withdraw the treaty from Senate consideration in 2017 prompted four states to adopt legislation phasing out HFCs and two more to develop regulatory provisions. These state actions prompted serious bipartisan Congressional consideration of a national version of this approach in 2019–2020, although this ultimately collapsed.

California has ranked among the world's most active governments in addressing climate change, developing cap-and-trade policies alongside renewable electricity and fuel standards and energy-efficiency provisions.³⁰ It has adopted a number of pioneering climate statutes in recent decades, including multiple bills designed to achieve aggressive statewide emission reductions. California attempts to attain those goals through an all-out policy assault on virtually every sector that generates greenhouse gases, including industry, electricity, transportation, agriculture, livestock, waste management, and residential activity, giving extraordinary authority to the formidable California Air Resources Board in overseeing implementation. But California's flagship climate initiative reflected repeated use of a unique waiver it holds under federal air legislation. On more than 100 occasions since 1968, California has established more rigorous tailpipe emission standards for cars and trucks than the rest of the nation, although its waiver frequently leads to other states joining a "bandwagon" that ultimately prompts adoption of a national standard reflecting California's lead. This policy has resulted in substantial statewide and national emission reductions per vehicle in past decades and took new form in 2009 when the Obama administration embraced a bold California waiver focused on carbon emissions as national policy, merging vehicle

emission with fuel economy standards and setting bold targets that would reach an average of 54.5 miles per gallon in 2025. This reform reflected a unique situation whereby one state can innovate within its own boundaries but leverage national-level change in the process through power granted to it through federal legislation, although it would face an unprecedented challenge to continue use of this power in 2020 as noted below.³¹ Governor Gavin Newsom pushed even farther in late 2020, issuing an executive order to ban all sales of gas-powered vehicles in California by 2035, raising added questions about constitutional authority in his state.

Taking It to the Federal Government

At the same time that states have eclipsed the federal government through new policies, they have also made increasingly aggressive use of litigation to attempt to force the federal government to take new steps or reconsider previous ones. The ability of state attorneys general from the party opposite the president to take unified and aggressive countermeasures against executive branch policy reached new heights under Barack Obama, where virtually every major climate, air, or water initiative was actively confronted, resulting in protracted litigation and some state efforts to refuse to comply with federal orders.³² Unlike their federal counterpart, most state attorneys general are elected officials, with powers that have expanded significantly in recent decades. They do not necessarily work collaboratively with the sitting governor and often use their powers as a base from which to secure broader visibility and seek higher office, most commonly governorships.³³

Collectively, these officials have increasingly become a force to be reckoned with, particularly as they expand their engagement through challenges brought into the federal courts. Whereas President Obama was routinely challenged by Republican attorneys general, President Trump was peppered with comparable responses to his environmental deregulation efforts from Democratic attorneys general. California's Xavier Becerra, Massachusetts' Maura Healey, and New York's Letitia James routinely led coalitions tailored to each particular issue and these expanded in 2019–2020 after more Democratic attorneys general were elected. A 2019 study identified some 300 separate actions, ranging from multistate lawsuits to comment letters, that these officials took to block Trump administration actions on issues such as climate, air and water quality, chemical accidents, and public lands and wildlife.³⁴ It appeared increasingly likely that this form of collective action by states led by officials of the party opposite the sitting president might become a permanent feature of political opposition to policies of a given federal executive.³⁵

STATE LIMITS

Such a diverse set of policy initiatives would seem to augur well for the states' involvement in environmental policy. Any such enthusiasm must be tempered, however, by a continuing concern over how evenly that innovative vigor extends over the entire nation. One enduring rationale for giving the federal government so much environmental policy authority is that states appear to face inherent limitations. Rather than a consistent,

across-the-board pattern of dynamism, we see a more uneven pattern of performance than decentralization advocates might anticipate. Just as some states consistently strive for national leadership, others appear to seek the middle or bottom of the pack, seemingly doing as little as possible and rarely taking innovative steps. This imbalance becomes particularly evident when environmental problems are not confined to a specific state's boundaries. Many environmental issues are, by definition, transboundary, raising important questions of interstate and interregional equity in allocating responsibility for environmental protection. These doubts about state capacity and commitment raise important concerns for any effort to shift more responsibility for environmental protection from federal to state governments, as was a central Trump administration emphasis.

Uneven State Performance

Many efforts to rank states according to their environmental regulatory rigor, institutional capacity, or general innovativeness find the same subset of states at the top of the list year after year. By contrast, a significant number of states consistently tend to fall much further down the list, somewhat consistent with their placement in Table 2.1 and characterization above as "slow followers," raising questions as to their overall policy capacity and commitment. As political scientist William R. Lowry notes, "Not all states are responding appropriately to policy needs within their borders.... If matching between need and response were always high and weak programs existed only where pollution was low, this would not be a problem. However, this is not the case."³⁶ A 2018 study on state policy adoption across multiple policy areas confirmed wide environmental policy disparities among states, concluding that "the most conservative states on the environment simply do not pass the major environmental laws that the 'green' states do."³⁷

Given all the hoopla surrounding the newfound dynamism of states racing to the top in environmental policy, there has been remarkably little analysis of the performance of states that not only fail to crack top-ten rankings but may view racing to the bottom as an economic development strategy. Such a downward race may be particularly attractive during recessions, as was reflected in recent efforts in states such as North Carolina, Ohio, West Virginia, and Wisconsin to weaken dramatically the implementation of existing policies, efforts that had the express goal of promoting economic growth by creating a policy environment friendlier to industry.³⁸ What we know more generally about state policy commitment should surely give pause over any claims that state dynamism is truly national in scope. Despite considerable economic growth in formerly poor regions, such as the Southeast, substantial variation endures among state governments in their rates of public expenditure, including their total and per capita expenditures on environmental protection.³⁹ Such disparities are consistent with studies of state political culture and social capital, which indicate vast differences in probable state receptivity to governmental efforts to foster environmental improvement. These divides increasingly reflect deep partisan cleavage, unlike early periods between the 1990s and 2000s where it was more common to see Republicans and Democrats join forces behind state environmental policy adoption as is discussed in Chapter 1.

Although many states have unveiled exciting new programs, nearly half have established some formal restrictions that preclude their environmental agencies from adopting any regulations or standards that are more stringent than those of the federal government in such areas as air and water quality. 40 EPA Office of Inspector General reports and other external reviews generate serious questions about how effectively states handle core functions either delegated to them under federal programs or left exclusively to their oversight. Studies of water quality program implementation have found that states use highly variable water quality standards in areas such as sewage contamination, groundwater protection, nonpoint water pollution from diffuse sources, wetland preservation, fish advisories, and beach closures. Inconsistencies abound in reporting accuracy, suggesting that national assessments of water quality trends that rely on data from state reports may be highly suspect.⁴¹ More than half of the states lack comprehensive water management and drought response plans, and several with such plans have not revised them in many years. 42 Even in many high-saliency cases, such as Everglades protection, states have sought a federal rescue rather than taking serious unilateral action that can be sustained over time.⁴³ Agricultural interests, particularly those promoting regional sugar production, have proven formidable opponents of major restoration, which would restrict their access to massive water volumes.⁴⁴

Similar issues have arisen as states have struggled in recent years to formulate policies to reduce environmental risks linked to shale gas and oil development, with many racing in the opposite direction from Colorado's. Many have proven particularly lenient with methane releases, even though these represent the permanent loss of a nonrenewable energy source and pose significant air quality and climate concerns. Many states have long recognized either direct venting of methane or flaring into carbon dioxide as wasteful and dangerous practices, yet offer generous exemptions or exceptions to established regulations. Venting and flaring triggered particular concern in the booming Bakken region (North Dakota and Montana) and Permian Basin (Texas and New Mexico) as methane releases soared amid rapid expansion of production. State officials routinely acknowledge the problem as well as their chronic failure to prepare for longterm remediation of hundreds of thousands of idle or "orphan" wells after production ends. However, they remained highly reluctant to impose methane regulations, bonding requirements, or taxes on prominent energy producing firms, fearful that they might shift operations to other states with softer standards in response or accelerate their pursuit of bankruptcy protection during economic downswings.⁴⁵

Comparable problems have emerged in state enforcement of air quality and waste management programs, including basic data collection and reporting. Despite efforts in some states to integrate and streamline permitting, many have extensive backlogs and lack reliable measures of facility compliance with various regulatory standards. Existing indicators confirm enormous variation among states, although we likely know less about such variation than in the 1990s, given that the EPA has lost funding and staff to maintain state-by-state data in many areas of environmental policy. State governments—alongside their local counterparts—have understandably claimed much of the credit for increasing solid waste recycling rates from a national average of 6.6 percent in 1970 to 16 percent in 1990 to 35.2 percent in 2017. At the same time, state recycling rates and policy design vary markedly, with some states formally restricting what local governments can do.

There was also growing indication in some states during the previous decade that environmental policy faced major challenges in cases where state leaders assumed that government could be managed similarly to business and industry. Michigan shifted to total Republican control of the executive and legislative branches in 2010, and former Republican Governor Rick Snyder won high marks nationally for his role in addressing fiscal concerns and assisting cities such as Detroit navigate bankruptcy en route to economic recovery.⁴⁶ But the use of state-appointed emergency financial managers to oversee fiscally-challenged municipalities backfired with tragic consequences in the case of Flint, a declining city that had once been an auto manufacturing hub.⁴⁷ The search for fiscal balance led to a 2015 decision to shift the source of Flint's water supply to save money and resulted in significant lead exposure for a city of nearly 100,000 residents. A set of state environmental and public health agencies ignored early warning signs and failed to respond to the emerging crisis, as did regional EPA authorities based in Chicago. This resulted in substantial lead contamination for Flint residents and has necessitated massive efforts to provide alternative water supplies and begin to replace damaged water infrastructure that continued more than 5 years after the initial incident. Research on water quality trends indicates that Flint is not alone among American localities in this regard, raising questions over state and local stewardship of drinking water quality in Michigan and nationally as well as long-term challenges that may require massive new investments in modern water infrastructure that few states have shown commitment to supporting.⁴⁸

Enduring Federal Dependency

Many states have proven reluctant or unable to tap into their own revenues to support environmental protection efforts, thereby developing a deep dependency on federal grant funding to cover core programs or launch new initiatives. There are enormous differences between states in terms of their tax base and both capacity and willingness to produce significant revenues, compounded by a focus in some to only pursue policy when most of the operational costs are covered through intergovernmental financial transfers. Indeed, considerable innovative state-level activity has been at least partially underwritten through federal grants, which can serve to stimulate additional state environmental spending. 49 Although a number of states have developed fee systems to cover much of their operational costs, many continue to rely heavily on federal grants to fund some core environmental protection activities. States have continued to receive other important types of federal support, including grants and technical assistance to complete air and water quality management, wetlands program development, drinking water infrastructure, brownfields reclamation, and more. On the whole, states have annually received between one-fifth and one-third of their total environmental and natural resource program funding from federal grants in recent years, although a few states have remained more heavily reliant on federal dollars. The overall level of federal support has declined in recent decades and reduction accelerated during the Trump administration.

State dependence on federal funding has grown in the majority of states given widespread reluctance to expand agency funding and staff, even during periods of relative fiscal well-being for many states during the latter 2010s. A 2019 Environmental

Integrity Project report on state commitment to environmental programs found that "a majority of states have cut their pollution control spending and staffing over the last decade—often more drastically than EPA—even at times when overall state budgets have grown and environmental challenges have increased." Some states pursued particularly far-reaching reductions. The Texas Commission on Environmental Quality, for example, cut its budget by 35 percent between 2008 and 2018, even though overall state spending increased by 41 percent. Other states with particularly deep cuts included Indiana, North Carolina, Pennsylvania, and Wisconsin. In contrast, 20 states reduced their dependency on federal dollars through spending and staff increases during this period.

Furthermore, for all the opprobrium heaped on the federal government in environmental policy, it has provided states with at least three other forms of valuable assistance, some of which has contributed directly to the resurgence and innovation of state environmental policy. First, federal development of the Toxics Release Inventory, modeled after programs initially attempted in Maryland and New Jersey, has emerged as an important component of many of the most promising state policy initiatives. This program has generated considerable data concerning toxic releases and provided states with a vital data source for exploring alternative regulatory approaches. Many state pollution prevention programs would be unthinkable without such an annual information source. This program has also provided lessons for states to develop supplemental disclosure registries for greenhouse gases and chemical releases related to hydraulic fracturing. Explored the states of th

Second, many successful efforts to coordinate environmental protection on a multistate, regional basis have received substantial federal input and support. A series of initiatives in the Chesapeake Bay, the Great Lakes Basin, and New England have received considerable acclaim for tackling difficult issues and forging regional partnerships; federal collaboration—via grants, technical assistance, coordination, and efforts to unify regional standards—with states has proven useful in these cases. One model for engagement was the Great Lakes Restoration Initiative championed by the Obama administration; intended to address pressing regional environmental challenges, it was successful in accelerating ecological recovery in several states with legacies of heavy toxic contamination, although funding to sustain operations lagged in the Trump administration. Aside from RGGI, other recent regional initiatives in the West and Midwest to reduce greenhouse gases struggled to endure in the absence of federal engagement or support.

Third, the EPA can constrain state innovativeness, but its oversight of state-level program implementation often looks more constructive when considering the role played by the agency's ten regional offices. Most state-level interaction with the EPA involves such regional offices, which employ approximately two-thirds of the total EPA workforce and regularly delegate enormous implementation authority to states.⁵⁴ Relations between state and regional officials are generally more cordial and constructive than those between state and central EPA officials, and such relations may even be, in some instances, characterized by high levels of mutual involvement and trust.⁵⁵ Surveys of state environmental officials confirm that they have a more positive relationship with regional rather than central agency staff.⁵⁶ Regional offices have played a key role in many promising state-level innovations, particularly during sympathetic

presidential administrations. Their involvement may include formal advocacy on behalf of states with central headquarters, direct collaboration on meshing state initiatives with federal requirements, and special grant support or technical assistance.

The Interstate Environmental Balance of Trade

States may be structurally ill equipped to handle a large range of environmental concerns. In particular, they may be reluctant to invest significant energies to tackle problems that might literally migrate to another state or nation in the absence of intervention. The days of state agencies being captured securely in the hip pockets of major industries are probably long gone, reflecting fundamental changes in state government.⁵⁷ Nonetheless, state regulatory dynamism may be particularly likely to decline when cross-boundary transfer is likely.

The state imperative of economic development clearly contributes to this phenomenon. As states increasingly devise economic development strategies that resemble Asian and European industrial policies, a range of research has concluded they are far more deeply committed to strategies that promote investment or development than to those that involve social service provision or public health promotion.⁵⁸ A number of states routinely offer incentives of tens of thousands of dollars per new job to prospective developers and have intensified efforts to outbid neighboring states in the struggling manufacturing sector. Energy-producing states often maintain generous tax preferences and provide infrastructure to support extraction firms. Environmental protection can be eminently compatible with economic development goals, promoting overall quality of life and general environmental attractiveness that entices private investment. In many states, tourism and recreation industries have played active roles in seeking strong environmental programs designed to maintain natural assets. In some instances, states may be keen to take actions that could produce internal environmental benefits as long as these actions do not disrupt their economic growth. California and other states that have formally endorsed setting strict emissions standards from vehicles or even bans over time on purchase of gas-powered cars and trucks, for example, have very few jobs to lose in the vehicle manufacturing sector. They also see potential economic advantages if they can take a lead role nationally in developing alternative transportation technologies.

But much of what a state might undertake in environmental policy may largely benefit other states or regions, thereby reducing an individual state's incentive to take meaningful action. In fact, in many instances, states continue to pursue a "we make it, you take it" strategy. As political scientist William Gormley notes, sometimes "states can readily export their problems to other states," resulting in potentially serious environmental "balance of trade" problems.⁵⁹ In such situations, states may be inclined to export environmental contaminants to other jurisdictions while enjoying any economic benefits to be derived from the activity that generated the contamination. One careful study of state air quality enforcement found no evidence of reduced regulatory effort along state borders but a measurable decline in effort along state borders with Mexican states or Canadian provinces.⁶⁰

Such cross-boundary transfers take many forms and may be particularly prevalent in environmental policy areas in which long-distance migration of pollutants is most

likely. Air quality policy has long fit this pattern. Midwestern states, for example, have historically depended on burning massive quantities of coal to meet electricity demands. Prevailing winds invariably transfer pollutants from this activity to other regions, particularly New England, leading to serious concern about various contamination threats. Nationally, many states fail to meet federal air quality standards due to "interstate 'downwind' pollution." Despite some advances linked largely to federal air policy, air pollution remains responsible for estimated premature deaths of more than 100,000 people per year.⁶¹ A 2020 study concluded that between 41 and 53 percent of premature mortality due to air pollution exposure resulted from a state's emissions that occurred outside its boundaries. It found that electricity sector emissions were particularly prominent but that releases from other forms of commercial and residential activity had grown in significance over recent decades. Fine particulate matter and ozone emerged as particularly large public health concerns in this research, whereas sulfur dioxide emissions have declined as a threat.⁶² Cross-border transfers have also contributed to the growing problem of airborne toxics that ultimately pollute water or land in other regions, including chronic Lake Superior water quality problems linked to air contaminants generated outside the Great Lakes. Political scientist John Kincaid has noted that "externality mitigation across states" contributed to greater centralization of environmental policy in past decades.⁶³

Interstate conflicts, often becoming protracted battles in the federal courts, have endured in recent decades as states allege they are recipients of such unwanted "imports." This has included prolonged political and legal combat over EPA's Cross-State Air Pollution Rule, the agency's "good neighbor" provision intended to restrict cross-border exports of nitrogen oxides and sulfur dioxide emissions from twenty-eight midwestern and southern states into the northeast. No region of the nation or environmental media appears immune from this kind of conflict. Prolonged battles between Alabama, Florida, and Georgia over access to waters from Lake Lanier and six rivers that cross their borders, for example, reached new intensity in recent years, resulting in extended mediation, litigation, and uncertainty about long-term approaches. Growing water scarcity linked to increased demand for water and extended drought in many regions continues to exacerbate these conflicts.

Perhaps nowhere is the problem of interstate transfer more evident than in the disposal of solid, hazardous, and nuclear wastes. States have generally retained enormous latitude to devise their own waste management and facility siting systems, working either independently or in concert with neighbors. Many states, including a number of those usually deemed among the most innovative and committed environmentally, continue to generate substantial quantities of waste and have struggled to establish comprehensive recycling, treatment, storage, and disposal capacity. Instead, out-of-state (and -region) export has been an increasingly common pattern, with a system that often resembles a shell game in which waste is ultimately deposited in the least resistant state or facility at any given moment. This pattern is repeated in emerging areas of waste management, such as the disposal of wastes generated by hydraulic fracturing procedures, and it is perhaps best illustrated in the migration of wastes generated in western Pennsylvania to deep-injection wells in eastern Ohio. This policy triggered considerable controversy in Ohio, especially following a significant expansion of earthquake activity near areas that accepted large amounts of out-of-state

fracking wastes injected into vacated wells, ultimately forcing Pennsylvania to develop an alternative.

No area of waste management, however, is as contentious as nuclear waste disposal. In the case of so-called high-level wastes, intensely contaminated materials from nuclear power plants that require between 10,000 and 100,000 years of isolation, the federal government and the vast majority of states have supported a 35-year effort to transfer these wastes to a geological repository in Nevada. Ferocious resistance by Nevada officials and concerns among states who would host transfer shipments have continued to scuttle this approach, leaving each of the 57 commercial nuclear power plants with 95 reactors located in 29 states a de facto storage site. In the case of "low level" wastes, greater in volume but posing a less severe health threat, states have received considerable latitude from Washington for decades to develop a strategy for creating a series of regional sites, including access to funds to develop facilities. But subsequent siting efforts have been riddled with conflict, and no long-term plans have emerged.⁶⁴ One facility established for hazardous waste in western Texas has volunteered as a potential "host" for such waste, though it was not designed for nuclear materials, is thousands of miles away from the bulk of generated waste, and has triggered political opposition in the state. The Trump administration in 2017 proposed reopening active pursuit of the Nevada disposal option, triggering renewed opposition from that state, only to reverse that position in 2020 as the president prepared a reelection bid in which Nevada would be a contested state. This pivot included a 2021 budget proposal lacking any funding for continued Yucca site development.

RETHINKING ENVIRONMENTAL FEDERALISM

Federalism scholars and some political officials have explored models for the constructive sharing of authority in the American federal system, many of which attempt to build on the respective strengths of varied governmental levels and create a more functional intergovernmental partnership. But it has generally proven difficult to translate these ideas into actual policy, particularly in the area of environmental policy. Perhaps the most ambitious effort to reallocate intergovernmental functions in environmental protection took place in the 1990s during the Clinton administration, under the National Environmental Performance Partnership System (NEPPS). This effort was linked to Clinton's broader attempts to "reinvent government," heralded by proponents as a way to give states substantially greater administrative flexibility over many federal environmental programs if they could demonstrate innovation and evidence of improved environmental outcomes. NEPPS also offered Performance Partnership Grants that would allow participating states to concentrate resources on innovative projects that promised environmental performance improvements.

More than 40 states elected to participate in the NEPPS program, which required extensive negotiations between state and federal agency counterparts. Although a few promising examples of innovation can be noted, this initiative failed to approach its ambitious goals, and in the words of two scholarly analysts, "there have been few real gains." NEPPS stemmed from an administrative action by a single president and thereby lacked the clout of legislation or resilient political support. In response, federal

authorities often resisted altering established practices and failed to assume the innovative role anticipated by NEPPS proponents. In turn, states proved considerably less amenable to innovation than expected. They tended to balk at any possibility that the federal government might establish—and publicize—serious performance measures that would evaluate their effectiveness and environmental outcomes.

Ultimately, many NEPPS agreements were signed, especially in the waning years of the Clinton administration, and these generally remain in place. But the Bush administration never pursued NEPPS with enthusiasm, and neither the Obama nor Trump administrations made significant efforts to revitalize this program. It thereby remains a very modest test of the viability of accountable decentralization, whereby state autonomy is increased formally in exchange for demonstrable performance. No subsequent administration has attempted such a conceptual and far-ranging attempt to improve intergovernmental performance, as federal environmental policy has lurched back and forth across priorities of respective presidents.

Challenges to State Routines

The future role of states in environmental policy may be further shaped by three additional developments. First, the COVID-19 pandemic upended American life and politics, leaving potential long-term impacts that could influence future state capacity to pursue environmental policy. The severe economic contraction linked to the pandemic threatened tax revenue and budget solvency in all 50 states, with particularly severe threats in states that produce substantial amounts of oil and natural gas and depend on related tax dollars. Most states had begun to recover by 2020 from the Great Recession of the prior decade, although states such as Alaska, Connecticut, Illinois, and Wyoming remained in dire fiscal straits even prior to the pandemic. In turn, chronic pressures for expanded spending in certain domains, such as unfunded pensions and benefits for state employees and state health policy, only intensified during the economic downswing, further threatening restoration of state fiscal support for environmental protection efforts.⁶⁸

Second, a sequence of elections during the 2010s reversed a long-standing pattern of divided, joint-party control of most state governments in favor of sweeping control by one party, with particularly strong gains among Republicans through 2016. However, state elections between 2017 and 2019 tilted more power back toward Democrats, including a shift in 10 governorships and three attorneys general as well as more than 300 state legislative seats. As of 2020, Republicans held "trifectas," controlling both legislative chambers and the governorship in 21 states. Of the remaining states, 15 featured exclusive Democratic control of the legislative and executive branches and 14 had divided partisan control. This gave both parties considerable strongholds and raised the possibility of continued divides among states over environmental policy given severe partisan splits on many issues.

Third, one early testing ground for potential environmental policy shifts was reflected in a flurry of new legislative proposals between 2010 and 2020 to either downsize or repeal many established state policies. These were most commonly introduced by Republican legislators, reflecting the growing partisan polarization between the parties during this period. Many such proposals focused on climate change

and some reflected standardized legislative templates produced by the conservative American Legislative Exchange Council (ALEC), which offers luxurious conference venues and detailed policy advice for state legislators. One early theme in ALEC-supported repeal bills involved the reversal of state renewable portfolio standards. Kansas embraced repeal in 2015 and Ohio dramatically weakened its commitment to expanding renewables in 2018, with strong backing from electric utilities.⁶⁹

One emerging theme in such bills in recent years was placing a tax on wind turbines, advanced by supporters of fossil fuel interests to slow the pace of wind adoption. These taxes faced intense opposition from representatives of wind-producing districts in states such as Montana, North Dakota, and Wyoming, although Oklahoma created a 0.5 cent per kilowatt-hour tax on wind and also repealed its tax credit for wind farm developers. Other types of state climate policies also failed to prove durable, most commonly when partisan control of a governorship or legislature shifted from Democrats to Republicans. While RGGI and California remained steadfast in their commitment to carbon cap-and-trade policies, 13 other states abandoned such initiatives after 2010, including Arizona, Illinois, New Mexico, Oregon, and Utah. The 2020 elections would prove particularly important for the next decade of state politics, as states generally redraw legislative district boundaries after each decennial census and dominant political parties can often manipulate control over this process to gain considerable advantage in subsequent elections.

LOOKING AHEAD

Amid the continued squabbling over the proper role of the federal government vis-à-vis the states in environmental policy, remarkably little effort has been made to sort out which functions might best be concentrated in Washington and which ones ought to be transferred to state capitals. Some former governors and federal legislators of both parties offered useful proposals during the 1990s that might allocate such responsibilities more constructively than at present. These proposals have been supplemented in later decades by thoughtful scholarly works by think tanks, political scientists, economists, and other policy analysts. Interestingly, many of these experts concur that environmental protection policy defies easy designation as warranting extreme centralization or decentralization. Instead, many observers endorse a process of selective decentralization, one leading to an appropriately balanced set of responsibilities across governmental levels.

Different presidents have attempted to advance a more functional form of environmental federalism that allowed for intergovernmental collaboration and played to the respective strengths of both federal and state partners. The NEPPS experiment in the Bill Clinton administration was one such example, as was an effort under George W. Bush to create more flexible state compliance paths for some contaminants under the Clean Air Act. In 2015, the Obama administration followed in this arena with the launch of the Clean Power Plan that established a national cap on carbon emissions from the electricity sector but offered states considerable latitude in achieving reduction targets that they were given.

One common theme across the Clinton, Bush, and Obama presidencies was the absence of congressional capacity to either adopt new environmental legislation or revise existing statutes as discussed in Chapter 5. This generated major incentives for respective presidents to take unilateral executive actions to achieve their environmental policy goals, whether through executive orders, regulatory revision processes, or other mechanisms as discussed in Chapter 4. It also created an opening for states, particularly through coalitions of elected attorneys general of the party opposite the president, in effect leading the direct challenge on those portions of a president's environmental agenda that affected states and their respective environmental policy roles. This rapid-fire response of coordinated litigation reached new intensity under President Obama, as Republican attorneys general attacked not only the Clean Power Plan but nearly every other regulatory initiative involving climate change and both air and water quality. These state efforts served to delay and in some instances thwart Obama from achieving his environmental policy goals.

This set the stage for the transition to the Donald Trump presidency and the question of how his approach to environmental governance might impact states. Trump said relatively little about federalism in the 2016 campaign but made clear his strong opposition to the Clean Power Plan, linking his plan to gut it with his vows to revive the fortunes of coal mining and coal use in electricity. Trump won 26 of the 27 most carbon-intensive states, whereas his opponent, Hillary Clinton, won the 14 least carbon-intensive states. He would not introduce any new environmental legislation but rather pursue a "search and destroy" strategy, involving a sequence of regulatory reversals or delays that would systematically attempt to undermine every regulatory effort on climate and air and water pollution taken by Obama, each of which would involve states in some respects.

Some of these Trump efforts would serve to *empower* states that had opposed these regulations and preferred to do far less in these areas. In the case of the Clean Power Plan, a multiyear regulatory revision effort led to its replacement with the Affordable Clean Energy rule. This alternative in essence eliminated any consequential pressures on states to transition their electricity generation sectors toward less reliance on fossil fuels, particularly coal and natural gas. This shift would be generally welcomed by states with the least aggressive climate policies and greatest production and use of fossil fuels. But it would be aggressively opposed by those states that had already made significant climate policy commitments and planned to do more. Similar patterns emerged as Trump rolled out the other elements of his deregulatory strategy for methane emissions and water pollution, empowering those states most opposed to new federal environmental policy. All of these steps would be countered not by Congress but rather coalitions of Democratic attorneys general, designed to derail their implementation and leave their future highly uncertain as they navigated the federal courts.

Other Trump initiatives would formally attempt to *constrain* states, particularly ones led by Democrats, from taking innovative environmental policy steps. Many of these focused on California's effort to adopt major new climate policy initiatives, in many cases securing allies from other states and even Canadian provinces. This included an unprecedented and direct assault on formal powers granted to California on vehicle emissions under the Clean Air Act for over a half-century, including the 2019 repeal of a state waiver approved 6 years earlier. This set the stage for the Trump

administration to write California and allied states out of the decision process in producing very modest vehicle emission standards through 2026. In turn, the Trump Justice Department sued California for allegedly encroaching on federal treaty-making powers by establishing a carbon pricing partnership with Québec, launching a federal court review. Moreover, President Trump and his environmental officials demonstrated loathing of California through public rhetoric denouncing the state for its alleged policy failures and enduring environmental problems, while also threatening unprecedented steps of terminating federal grants to the state. This took traditional intergovernmental conflict to a new and visceral level, triggering an aggressive set of responses by California leaders and no clear end to the turmoil in sight.⁷⁰ Federal courts might ultimately resolve these issues, although a future president could reverse the Trump actions.

This episode raised the broader question of whether the United States was lurching toward a permanent partisan and federalism divide whereby presidents of one political party were destined to engage in protracted political and legal combat with attorneys general of the opposite party or whether alternatives might emerge involving greater collaboration across parties, states, and levels of government. As political scientist John Kincaid lamented, "Coercive federalism has ironically relegitimized states' rights as a consolation prize for whichever party is out of power in Washington, D.C." Under a Democrat like Barack Obama, Republicans found merit in expanding state resistance to new federal policies. Under a Republican like Donald Trump, Democrats found new virtues in "progressive federalism" and expanded state authority. In short, was this an inevitable new feature of American politics and federalism?

Scholars turned increasingly to other models and examples, some drawn from beyond American boundaries, in beginning to envision alternatives. Political scientist Donald Kettl released a major new book on the "Divided States of America" in early 2020 just as the COVID-19 pandemic began. He noted that "the great public policy challenges of the 21st Century are health and climate. Both of them raise questions that require redistributive answers, and the redistributive answers inevitably require a robust federal role, in leadership, policy, and funding." Kettl invoked the ideas of Alexander Hamilton in proposing a new federal compact, with the federal government in a lead role in addressing profound problems of inequality across states. However, he further emphasized the need to allow states to play central roles in policy implementation and pursue innovation that can offer national models. Finally, he called for an expanded role for local governments in a revised American intergovernmental system.

There were no immediate prospects to transition to such a system, although a growing number of reform proposals with these qualities began to surface in 2019–2020. During 2019 House climate policy hearings, environmental policy scholar Tim Profeta unveiled a "comprehensive state-federal partnership" approach, whereby the federal government would establish enforceable greenhouse gas emission reduction targets but allow each state to decide how to achieve those reductions, permitting any revenues generated through a state carbon price to be kept within that state.⁷³ This approach would also allow all existing state climate policy efforts to continue and contribute to meeting emission reduction targets while providing flexibility to laggard states in devising their own plans. Enforcement would follow some of the traditional federalism patterns established under air and water quality statutes.

Americans could actually look across their northern border to Canada to see how such a system works in practice. Canada is a federal system much like the United States, although somewhat more decentralized in environmental policy through Constitutional design that gives considerable authority to provinces and territories to oversee their natural resources. Canada also is a major producer of fossil fuels, particularly in Western provinces such as Alberta and Saskatchewan, and struggled for decades to devise a climate policy that was politically feasible and durable given the many fault lines among different jurisdictions and their leaders. Instead, a frequent Canadian climate policy approach involved leaders of multiple parties making bold declaration of their climate concern at international gatherings but then failing to deliver through policy given deep divides between regions and parties over possible next steps.

Justin Trudeau's 2015 election as Prime Minister gave his Liberal Party yet another chance to explore climate policy design and what emerged was the 2018 Greenhouse Gas Pollution Pricing Act. This built directly on the most innovative provinces, most notably British Columbia and its bold carbon tax design that reduced emissions, had no adverse economic impacts, and expanded political support across parties over elections over its first decade.⁷⁵ The emerging Pan-Canadian Framework used this case as a model and called upon all provinces and territories to develop some form of a carbon price that would rise steadily and reach \$50 per ton (Canadian) by 2022. But the federal government offered these jurisdictions enormous latitude in policy design as long as they delivered results.⁷⁶ For provinces like British Columbia, compliance was automatic since they were already committed to such policy. For provinces willing to negotiate a plan with the federal government, they could design and implement an approved proposal, keeping any revenue and using it as they saw fit. For provinces unwilling to work cooperatively, the federal government would impose a carbon tax rising to \$50 per ton upon them, collect the revenue, and return all of it to every citizen of that province through an annual dividend check, thereby denying provincial leaders any input into deciding how to spend the money. This triggered many controversies and yet moved relatively smoothly into implementation. Late 2019 elections not only reelected Trudeau but 62 percent of Canadians voted for one of the multiple national parties that had endorsed the strategy. Even amid the COVID-19 crisis in March 2020, Trudeau announced that Canada's climate policy would continue to move forward.

Perhaps Canada provides a model of sorts for American consideration. In turn, there were at least a few signs in the early 2020s that there might be some ways to develop more collaborative relations across states and, possibly, between state and federal governments. Political scientists Paul Nolette and Colin Provost concluded that there were at least a few policy areas where states were developing multistate partnerships and even partisan attorneys general were able to work across divides. In particular, they noted that issues such as opioids, tobacco use reduction, sex trafficking, and elder abuse garnered unexpected ability to build coalitions involving both Republican and Democratic states and even partnerships between rural and urban jurisdictions.⁷⁷ Some energy policy analysts began to note that some of the greatest growth in renewable energy deployment was occurring in the very states least likely to have adopted major climate or environmental policies.⁷⁸ This included states such as Texas, which produces considerably more wind energy than any other state. Wyoming, North Dakota, and Nevada are the top-ranked states in terms of renewable energy generated per capita.

Wyoming's Chokecherry and Sierra Madre Wind Energy Project, scheduled to open in 2026, will be the United States' largest wind farm and one of the world's biggest, with plans to sell power to California.⁷⁹

Gaining political support for siting renewable technologies and needed transmission capacity may be easier in states with open vistas, a history of energy production and policies amenable to new development, and established systems of royalties that give property owners financial incentives to welcome developers. In contrast, states such as California and New York that are most likely politically to adopt bold renewable energy standards and related climate policies may face the greatest political opposition to actually siting these facilities within their boundaries. This raises questions of whether they force this development upon reluctant in-state localities or import such energy from other states where siting is easier. It also prompts the broader issue of the conditions under which disparate states might find common cause moving forward, particularly in the aftermath of the COVID-19 pandemic and lessons emerging from it on ways to improve the performance of both federal and state governments in responding to public policy challenges. Much as Lord Bryce pondered centuries ago, it is possible, at least in theory, to envision a political system in which multiple levels of government work toward the common good on such issues as environmental protection.

SUGGESTED WEBSITES

Environmental Council of the States (www.ecos.org) The Environmental Council of the States represents the lead environmental protection agencies of all fifty states. The site contains access to state environmental data and periodic "Green Reports" on major issues.

Georgetown Climate Center (www.georgetownclimate.org) The Georgetown Climate Center provides extensive data bases and reports on different dimensions of state climate and energy policy. This includes a State Energy Analysis Tool that provides highly detailed information on state energy sources and usage and updates on the Transportation Climate Initiative, where it has played a central convening role among participating states.

National Conference of State Legislatures (www.ncsl.org) The National Conference of State Legislatures conducts extensive research on a wide range of environmental, energy, and natural resource issues for its primary constituency of state legislators, as well as for the general citizenry. The organization offers an extensive set of publications, including specialized reports and monthly review of state policy developments.

National Governors Association (www.nga.org) The National Governors Association maintains an active research program concerning state environmental protection, natural resources, and energy concerns. It has placed special emphasis on maintaining a database on state "best practices," which it uses to promote diffusion of promising innovations and to demonstrate state government capacity in federal policy deliberations.

State Energy & Environmental Impact Center, New York University School of

Law (www.law.nyu/centers/state-impact.edu) The State Energy & Environmental Impact Center keeps close tabs on the actions of state attorneys general and state governments in environmental policy. This includes databases on multistate litigation and other strategies in instances where states choose to challenge federal environmental policy decisions.

NOTES

- 1. John Kincaid, "Dynamic De/Centralization in the United States, 1970–2010," *Publius: The Journal of Federalism* 49 (October 2018): 166–93.
- 2. John Dinan, State Constitutional Politics: Governing by Amendment in the American States (Chicago: University of Chicago Press, 2018).
- 3. Paul Teske, *Regulation in the States* (Washington, DC: Brookings Institution Press, 2004), 9.
- 4. Martha Derthick, "Compensatory Federalism," in *Greenhouse Governance*, ed. Barry Rabe (Washington, DC: Brookings Institution Press, 2010), 66.
- 5. Christopher McGrory Klyza and David Sousa, *American Environmental Policy: Beyond Gridlock*, updated and expanded edition (Cambridge, MA: MIT Press, 2013), 247.
- 6. Stephen Goldsmith and Donald F. Kettl, eds., *Unlocking the Power of Networks* (Washington, DC: Brookings Institution Press, 2009).
- Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action (New York: Cambridge University Press, 1990); Elinor Ostrom, A Polycentric Approach to Climate Change (Washington, DC: World Bank, 2009).
- 8. Barry G. Rabe, Statehouse and Greenhouse: The Emerging Politics of American Climate Change Policy (Washington, DC: Brookings Institution Press, 2004).
- 9. Michelle Pautz and Sara Rinfret, *The Lilliputians of Environmental Regulation: The Perspective of State Regulators* (New York: Routledge, 2013).
- Andrew Karch, Democratic Laboratories: Policy Diffusion Among the American States (Ann Arbor: University of Michigan Press, 2007).
- 11. American Council for an Energy-Efficient Economy, 2019 State Energy Efficiency Score-card (Washington, DC: ACEEE, 2019).
- 12. Evan J. Ringquist, Environmental Protection at the State Level: Politics and Progress in Controlling Pollution (Armonk, NY: M. E. Sharpe, 1993).
- 13. Daniel Fiorino and Riordan Frost, "The Pilot Eco-Efficiency Index: A New State Environmental Ranking for Researchers and Government" (paper presented at the Association for Public Policy Analysis and Management's fall research conference, Washington, DC, November 4, 2016), www.researchgate.net/publication/3157 36703_The_Pilot_Eco-Efficiency_Index_A_New_State_Environmental_Ranking_for_Researchers and Government.
- Kathy Kinsey, "Neither of These Bills Address the Law's Failings," Environmental Forum 31 (May–June 2014): 48.
- Linda Breggin, "Broad State Efforts on Toxic Controls," Environmental Forum 28 (March–April 2011): 10.
- 16. Christopher Bosso, ed., Governing Uncertainty: Environmental Regulation in the Age of Nanotechnology (Washington, DC: Resources for the Future, 2010), 105–30.
- 17. Barry G. Rabe, Can We Price Carbon? (Cambridge, MA: MIT Press, 2018), 239-40.
- 18. Glen Stubbe, "Walz Announces Climate Change Subcabinet," *Minnesota Star-Tribune* (December 2, 2019).

- Andrew Kear, "Natural Gas Policy Path—Built to Boom," Journal of Policy History 30 (2018): 334–65.
- 20. Jonathan M. Fisk, *The Fracking Debate: Intergovernmental Politics of the Oil and Gas Renaissance* (New York: Routledge, 2018).
- Nathan Hultman et al., Accelerating America's Pledge: Going All-In to Build a Prosperous, Low-Carbon Economy for the United States (New York: Bloomberg Philanthropies, 2019), Chapter 3.
- 22. Gilbert E. Metcalf, *Paying for Pollution: Why a Carbon Tax is Good for America* (New York: Oxford University Press, 2019).
- Barry G. Rabe and Christopher Borick, "Carbon Taxation and Policy Labeling: Experience from American States and Canadian Provinces," *Review of Policy Research* 29 (May 2012): 358–82.
- Samantha McBride, Recycling Reconsidered: The Present Failure and Future Promise of Environmental Action in the United States (Cambridge, MA: MIT Press, 2012).
- 25. Leigh Raymond, Reclaiming the Atmospheric Commons: The Regional Greenhouse Gas Initiative and a New Model of Emissions Trading (Cambridge, MA: MIT Press, 2016).
- 26. Roger Karapin, Political Opportunities for Climate Policy: California, New York, and the Federal Government (New York: Cambridge University Press, 2016).
- 27. Vivian E. Thomson, Sophisticated Interdependence in Climate Policy: Federalism in the United States, Brazil, and Germany (London: Anthem Press, 2014).
- 28. Nathan Hultman et al., Accelerating America's Pledge.
- 29. Kelly Trumbull, Colleen Callahan, Sarah Goldmuntz, and Michelle Einstein, *Progress Toward 100% Clean Energy in Cities & States Across the US* (Los Angeles: UCLA Luskin Center for Innovation, 2019).
- 30. David Vogel, California Greenin': How the Golden State Became an Environmental Leader (Princeton: Princeton University Press, 2018).
- 31. Barry G. Rabe, "Leveraged Federalism and the Clean Air Act: The Case of Vehicle Emissions Control," in *Lessons from the Clean Air Act: Building Durability and Adaptability into U.S. Climate and Energy Policy*, ed. Ann Carlson and Dallas Burtraw (Cambridge: Cambridge University Press, 2019), Chapter 4.
- 32. Ben Merelman, Conservative Innovators: How States are Challenging Federal Power (Chicago: University of Chicago Press, 2019); Paul Nolette and Colin Provost, "Change and Continuity in the Role of State Attorneys General in the Obama and Trump Administrations," Publius: The Journal of Federalism 48 (Summer 2018): 469–94.
- 33. Paul Nolette, Federalism on Trial: State Attorneys General and National Policymaking in Contemporary America (Lawrence, KS: University Press of Kansas, 2015).
- David J. Hayes et al., 300 and Counting: State Attorneys General Lead the Fight for Health and the Environment (New York: State Energy & Environmental Impact Center, 2019).
- 35. Frank J. Thompson, Kenneth K. Wong, and Barry G. Rabe, *Trump, the Administrative Presidency, and Federalism* (Washington, DC: Brookings Institution Press, 2020).
- 36. William R. Lowry, *The Dimensions of Federalism: State Governments and Pollution Control Policies*, rev. ed (Durham, NC: Duke University Press, 1997), 125.
- 37. Jacob M. Grumbach, "From Backwaters to Major Policymakers: Policy Polarization in the States, 1970–2014," *Perspectives in Politics* 16 (June 2018): 416–35; Rebecca Bromley-Trujillo and Mirya R. Holman, "Climate Change Policymaking in the States: A View at 2020," *Publius: The Journal of Federalism* 50 (Summer 2020): 446–72.
- 38. In Wisconsin, for example, Governor Scott Walker oversaw significant reductions in state environmental staff and research capacity, with a primary focus on accelerating approval time for proposed development. See Steven Verberg, "DNR to Alter Handling of Pollution, Parks, Enforcement," *Wisconsin State Journal* (December 1, 2016); Evan Osnos, "Chemical Valley," *New Yorker* (April 7, 2014), 38–49; and Trip Gabriel, "Ash Spill Shows How Watchdog Was Defanged," *New York Times* (February 28, 2014).

- 39. R. Steven Brown, *Status of State Environmental Agency Budgets* (Washington, DC: Environmental Council of the States, 2012).
- 40. Linda K. Breggin, "Stringency Laws Widely Adopted," *Environmental Forum* 32, no. 3 (May–June 2015): 18.
- 41. John A. Hoornbeek, "The Promise and Pitfalls of Devolution: Water Pollution Policies in the American States," *Publius: The Journal of Federalism* 35 (Winter 2005): 87–114.
- 42. Shama Gamkhar and J. Mitchell Pickerill, "The State of American Federalism 2011–2012," *Publius: The Journal of Federalism* 42 (Summer 2012): 357–86.
- 43. Sheldon Kamieniecki, *Corporate America and Environmental Policy* (Palo Alto, CA: Stanford University Press, 2006), 253.
- 44. William Lowry, Repairing Paradise: The Restoration of Nature in America's National Parks (Washington, DC: Brookings Institution Press, 2010), Chapter 4.
- 45. Barry G. Rabe, Claire Kaliban, and Isabel Englehart, "Taxing Flaring and the Politics of State Methane Release Policy," *Review of Policy Research* 37 (2020): 6–38.
- Nathan Borney, Detroit Resurrected: To Bankruptcy and Back (New York: W.W. Norton, 2017).
- 47. Anna Clark, *The Poisoned City: Flint's Water and the American Urban Tragedy* (New York: Metropolitan Books, 2018).
- 48. David Switzer and Manuel P. Teodoro, "The Color of Drinking Water: Class, Race, Ethnicity and Safe Drinking Water Act Compliance," *Journal of American Water Works Association* 108, no. 8 (2017): E416–E424; Sara Hughes, "Flint, Michigan, and the Politics of Safe Drinking Water in the United States," *Perspectives in Politics* 18 (July 2020): 1–14.
- 49. Benjamin Y. Člark and Andrew B. Whitford, "Does More Federal Environmental Funding Increase or Decrease States' Efforts?" *Journal of Policy Analysis and Management* 30 (Winter 2010): 136–52.
- 50. Keene Kelderman et al., *The Thin Green Line: Cuts in State Pollution Control Agencies Threaten Public Health* (Washington, DC: Environmental Integrity Project, 2019).
- 51. Michael E. Kraft, Mark Stephan, and Troy D. Abel, *Coming Clean: Information Disclosure and Environmental Performance* (Cambridge, MA: MIT Press, 2011).
- 52. Matthew J. Hoffmann, Climate Governance at the Crossroads (New York: Oxford University Press, 2011); Michael E. Kraft, Using Information Disclosure to Achieve Policy Goals: How Experience with the Toxics Release Inventory Can Inform Action on Natural Gas Fracturing, Issues in Energy and Environmental Policy No. 6 (Ann Arbor, MI: Center for Local, State, and Urban Policy, March 2014).
- 53. Paul Posner, "Networks in the Shadow of Government: The Chesapeake Bay Program," in *Unlocking the Power of Networks*, ed. Stephen Goldsmith and Donald F. Kettl (Washington, DC: Brookings Institution Press, 2009), Chapter 4; Barry G. Rabe and Marc Gaden, "Sustainability in a Regional Context: The Case of the Great Lakes Basin," in *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, ed. Daniel A. Mazmanian and Michael E. Kraft, 2nd ed (Cambridge, MA: MIT Press, 2009), 266–69.
- 54. Donald F. Kettl, *The Divided States of America: Why Federalism Doesn't Work* (Princeton: Princeton University Press, 2020), 119.
- 55. Denise Scheberle, Federalism and Environmental Policy: Trust and the Politics of Implementation, rev. ed (Washington, DC: Georgetown University Press, 2004), Chapter 7.
- 56. Michelle Pautz and Sarah Rinfret, The Lilliputians of Environmental Regulations, 50-51.
- 57. Paul Teske, *Regulation in the States*; Pautz and Rinfret, *The Lilliputians of Environmental Regulation*.
- 58. John D. Donahue, *Disunited States: What's at Stake as Washington Fades and the States Take the Lead* (New York: Basic Books, 1997); Paul E. Peterson, *The Price of Federalism* (Washington, DC: Brookings Institution Press, 1995), Chapter 4.
- 59. William T. Gormley Jr., "Intergovernmental Conflict on Environmental Policy: The Attitudinal Connection," Western Political Quarterly 40 (1987): 298–99.

- 60. David M. Konisky and Neal D. Woods, "Exporting Air Pollution? Regulatory Enforcement and Environmental Free Riding in the United States," *Political Research Quarterly* 63 (2010): 771–82.
- 61. William Boyd, "The Clean Air Act's National Ambient Air Quality Standards," in *Lessons from the Clean Air Act*, ed. Ann Carlson and Dallas Burtraw (Cambridge: Cambridge University Press, 2019), 15–18.
- 62. Irene C. Dedoussi, Sebastian D. Eastham, Erwan Monier, and Steven R.H. Barrett, "Premature Mortality Related to United States Cross-State Air Pollution," *Nature* 587 (February 13, 2020): 261–68.
- 63. Kincaid, "Dynamic De/Centralization in the United States, 1790-2010," 180.
- 64. Daniel J. Sherman, *Not Here, Not There, Not Anywhere* (Washington, DC: Resources for the Future, 2011).
- 65. Alice Rivlin, "Rethinking Federalism for More Effective Governance," *Publius: The Journal of Federalism* 42 (Summer 2012): 357–86; Jenna Bednar, *The Robust Federation* (New York: Cambridge University Press, 2008); R. Daniel Keleman, *The Rules of Federalism* (Cambridge, MA: Harvard University Press, 2004).
- John Buntin, "25 Years Later, What Happened to 'Reinventing Government'?" Governing (September 2016).
- 67. Klyza and Sousa, American Environmental Policy, 1990-2006, 253.
- 68. Alan Greenblatt, "State Budget Fallout: A Hurricane That Hits All Over the Country," *Governing* (April 9, 2020).
- 69. Leah Stokes, Short Circuiting Policy: Interest Groups and the Battle Over Clean Energy and Climate Policy in the American States (New York: Oxford University Press, 2020).
- Thompson, Wong, and Rabe, Trump, the Administrative Presidency, and Federalism, 96–104.
- 71. John Kincaid, "Introduction: The Trump Interlude and the States of American Federalism," *State and Local Government Review* 49 (September 2017): 165.
- 72. Kettl, The Divided States of America, 200.
- 73. David Obey, "House Panel Showcases Federalism Framework for Broad GHG Cuts," *Inside EPA/Climate* (December 6, 2019); Tim Profeta, "Using the Old to Solve the New—Creating a Federal/State Partnership to Fight Climate Change," *Duke Nicholas Institute for Environmental Policy Solutions Policy Brief* (October 2019).
- 74. Andrea Olive, *The Canadian Environment in Political Context* (Toronto: University of Toronto Press, 2016).
- 75. Rabe, Can We Price Carbon?, 88-119.
- Brendan Boyd and Barry Rabe, "Whither Canadian Climate Policy in the Trump Era?" in Canada-U.S. Relations: Sovereignty of Shared Institutions? ed. David Carment and Christopher Sands (New York: Palgrave Macmillan, 2018), 239–60.
- 77. Nolette and Provost, "Change and Continuity in the Role of State Attorneys General in the Obama and Trump Administrations," 483–87.
- 78. Miriam Fischlein et al., "Which Way Does the Wind Blow? Analysing the State Context for Renewable Energy Development in the United States," *Environmental Policy and Governance* 24 (2014): 169–87; "A Renewable-Energy Boom is Changing the Politics of Global Warming," *The Economist* (March 14, 2020); Elizabeth Weise, "Wind Energy Gives American Farmers a New Crop to Sell in Tough Times," *USA Today* (February 16, 2020).
- 79. Daniel Fiorino, Carley Weted, and Sabina Blanco Vecchi, "The Politics of Energy Efficiency: Explaining Policy Variations in the American States" (paper presented at the 2019 Conference of the International Public Policy Association, Montreal).