2

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 now 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 recent heads of the U.S. Environmental Protection Agency (EPA), including Gina McCarthy in the Obama administration, took federal office after extended state government experience and frequently endorsed the idea of shifting more authority back to statehouses. 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? 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.

The States as "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 highly dynamic and effective. Environmental policy is often depicted as a prime example of this general pattern of state effectiveness. Some analysts routinely characterize states as the "new heroes" of American federalism, 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. In turn, many state bureaucracies have grown and become more professionalized, as have staffs serving governors and legislatures. Expanded policy engagement has been further stimulated by increasingly competitive two-party systems in many regions through at least 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 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 package of public services and regulations dispensed from their state capitals than those generated from Washington.[1] 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 U.S. economy, including many areas in which environmental concerns come into play.[2] The Environmental Council of the States has estimated that states operate 96 percent of all federal environmental programs that can be delegated to them.[3] Collectively, they approach that high level of engagement in issuance of all environmental permits and implementation of all environmental enforcement actions. Despite this expanded role, federal financial support to states in the form of grants to support environmental protection efforts has generally declined since the early 1980s, forcing states to find ways to fund most of their operations.

Many areas of environmental policy are clearly dominated by states, including most aspects of waste management, groundwater protection, land use management, transportation, and electricity regulation. This state-centric role is also reflected in rapidly emerging areas such as protection of air, land, and water quality related to the dramatic expansion in the exploration of shale gas and oil via hydraulic fracturing (or "fracking") techniques. In many instances, this represents "compensatory federalism," whereby Washington proves "hesitant, uncertain, distracted, and in disagreement about what to do," with states responding with a "step into the breach."[4] Even in policy areas with an established federal imprint, such as air and water pollution control, states often have considerable opportunity 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 is further reflected in the institutional arrangements established by states to address environmental problems. Many states have long since moved beyond their historical placement of environmental programs in public health or natural resource departments in favor of comprehensive agencies that gather most environmental responsibilities under a single organizational umbrella. These agencies have sweeping, cross-programmatic responsibilities and have grown steadily in staff and complexity in recent decades. Ironically, many of these agencies mirror the organizational framework of the much maligned EPA, dividing regulatory activity by environmental media of air, land, and water and thereby increasing the likelihood of shifting environmental contamination back and forth across medium boundaries. Despite this fragmentation, such institutions provide states with a firm institutional foundation for addressing a variety of environmental concerns. 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, a growing number of scholars contend that broad public support for environmental protection provides considerable impetus for more decentralized policy development. 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" environmental governance.[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, where numerous areas of specialization place a premium on expert ideas and allow for considerable innovation within agencies.[8] Recent scholarly work on the performance of state environmental agencies 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 adoption 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, which is not allowed at 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 U.S. 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, mandatory disclosure of commercial product toxicity, and public land acquisition. In November 2013, Washington voters narrowly rejected

required labeling of any food that was genetically engineered whereas they joined voters in Colorado and Missouri in previous years in enacting ballot propositions requiring a steady increase in the amount of electricity derived from renewable sources. Western states have generally made the greatest use of these provisions on environmental issues, particularly Oregon, California, and Colorado. In November 2010, California decisively rejected a proposal that would have brought far-reaching climate legislation enacted four years earlier to a virtual halt, demonstrating that ballot propositions can be used to either initiate or curtail environmental policies.

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. A variety of scholars have attempted to analyze some of this activity through ranking schemes that determine which states are most active and innovative. They 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, data collected in 2014 by the Center for Local, State, and Urban Policy examine state willingness to adopt a wide range of possible environmental policy innovations weighted on a ten-point scale. The fifty states are ranked in Table 2-1 according to the total number of these policies that they have adopted, ranging from water conservation and efficiency programs to air toxics programs for utilities. This ranking suggests considerable variation among states, with the highest scores generally among states in the Northeast and with larger populations, and is broadly consistent with earlier analyses of this type.

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.[11] An important but less examined question concerns whether recent developments in state environmental policy have actually served to demonstrably improve environmental quality. Emerging research evidence suggests that a number of state innovations offer promising alternatives to prevailing approaches, often representing a direct response to local environmental crises and revelation of 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 U.S. 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 them. Growing evidence suggests that some states have launched serious planning processes and are attempting to pursue preventative strategies in an increasingly systematic and effective way. All fifty states have adopted at least one pollution prevention

Table 2-1 Receptiveness of States to Environmental Policies

State	*Total Points Received*	*States*	*Total Points Received*
California	10	West Virginia	6
Colorado	10	Arkansas	5
Connecticut	10	Florida	5
Delaware	10	Kansas	5
Illinois	10	Michigan	5
Minnesota	10	Nevada	5
Maine	9	Utah	5
New York	9	Virginia	5
Rhode Island	9	Arizona	4.5
Texas	8.5	Georgia	4
Iowa	8	Mississippi	4
Maryland	8	Nebraska	4
Massachusetts	8	New Hampshire	4
New Jersey	8	Oklahoma	4
Oregon	8	South Carolina	4
Washington	8	South Dakota	4
Wisconsin	8	Tennessee	4
Ohio	7.5	Alabama	3
Vermont	7.5	Missouri	3
New Mexico	7	North Dakota	3
Hawaii	6.5	Wyoming	3
North Carolina	6.5	Alaska	2
Pennsylvania	6.5	Idaho	2
Indiana	6	Kentucky	2
Montana	6	Louisiana	2

Source: Compiled by the author from data collected in 2014 by the Center for Local, State, and Urban Policy.

program. The oldest and most common of these involve technical assistance to industries and networking services that link potential collaborators. But some states have increasingly redefined pollution prevention in bolder terms, cutting across conventional programmatic boundaries with a series of 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.[12]

Among the more active states, Minnesota has one of the most far-reaching programs. A series of state laws requires hundreds of Minnesota firms to submit annual toxic pollution prevention plans and give priority

treatment to "chemicals of concern."[13] 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 a specified period 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. The state was also one of the first two states to ban bisphenol A, a controversial chemical used in plastics.[14]

From these earlier efforts, Minnesota and other states have established multidisciplinary teams that attempt to forecast emerging environmental threats and respond before problems arise. This has included pioneering efforts in recent years to review potential environmental risks from nanotechnology and its generation of staggeringly small particles that may improve product design but also harbor environmental risks.[15] Minnesota has also taken a lead role in pricing the environmental impacts of carbon dioxide emissions in long-term planning for electricity generation. This latter practice contributed to the 2007 enactment of the Next Generation Energy Act that requires new coal-burning power plants to fully offset their greenhouse gas emissions, although this was challenged in court by coal interests based in North Dakota. In 2013, the state adopted model standards that developed unusually strong safeguards to regulate silica sand mining, a substance in increasing demand for use in oil and gas drilling.

Illinois has taken a "race-to-the-top" approach to policy designed to anticipate and thereby minimize environmental risks from hydraulic fracturing practices. After a two-year review of potential "fracking" risks and policy options by a diverse committee of stakeholders, the Illinois legislature in 2013 overwhelmingly adopted comprehensive shale drilling legislation on a bipartisan basis that had a strong risk reduction emphasis. This legislation requires water quality testing by an independent third party both before any drilling and in a series of subsequent intervals, a seismic "traffic-light" warning system to slow or halt drilling if earthquakes increase or expand in intensity, and an expansive state-operated disclosure system on the chemicals used in the drilling process.[16]

Economic Incentives

Economists have long lamented the penchant for command-and-control rules and regulations in U.S. 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. 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."[17] States use related revenues to cover approximately 60 percent of their total environmental agency expenses and, in some cases, the full costs of some popular programs such as recycling and energy efficiency.[18]

A growing number of states have begun to revisit their general tax policies with an eye toward environmental purposes. For example, Iowa exempts from taxation all pollution control equipment purchased for use in the state, whereas Maryland and other states offer major tax incentives to purchasers of hybrid and electric vehicles. Numerous states provide a series of tax credits or low-interest loans for the purchase of recycling or renewable energy equipment or capital investments necessary to develop environmentally friendly technologies. Many states and localities have also developed some form of tax on solid waste, usually 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. Ten states—covering 30 percent of the population—have such programs in place. Deposit collections flow through a system that includes consumers, container redemption facilities such as grocery stores, and firms that reuse or recycle the 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 of 97 percent. This type of policy has diffused to other products, including scrap tires, used motor oil, pesticide containers, appliances with ozone-depleting substances, and electronic waste materials such as used computers.

States also have constitutional authority to tax all forms of energy, including transportation fuel and electricity. Many policy analysts across ideological divides have long argued that such taxation would be one of the most effective ways to deter environmental degradation, as use of conventional energy sources contributes to many environmental problems. Many states have been reluctant to move beyond their traditional levels of taxation for fuels such as gasoline. These averaged 31.46 cents per gallon among the fifty states in 2014, ranging from a low of 8 cents per gallon in Alaska to a high of 46.5 cents per gallon in California. This began to change in 2013–2014, as nearly half of the states adopted either an increase in their excise tax or some alternative form of tax designed to produce greater revenue for related transportation costs. One possible model in this area involves so-called public benefit funds or social benefit charges, an electricity tax used in eighteen states that generates funds for energy efficiency and renewable energy programs.[19] Yet another area for state innovation based on economic incentives may be the application of severance tax revenues from oil and gas drilling operations to help alleviate related environmental impacts. Nearly all states that allow drilling have such taxes, with rates generally highest in more conservative states. Funds generated from these taxes have soared in many states

with the onset of expanded drilling through fracking techniques. In North Dakota, for example, nearly half of total state revenue for fiscal 2013 was generated by this tax; the state has established a Legacy Fund that sets aside 30 percent of proceeds for longer-term use and has also designated increasing portions to address "oil and gas drilling impacts" and related environmental concerns.

Filling the Federal Void: Reducing Greenhouse Gases

Global climate change and the challenge of reducing the release of greenhouse gases such as carbon dioxide and methane have been characterized almost exclusively as the responsibility of national governments and international regimes. The United States has commonly been perceived as disengaged regarding climate policy. This is reflected in the country's 2001 withdrawal from the Kyoto Protocol, the failure during the Clinton and Bush administrations to enact policies to reduce these emissions, and Obama-era difficulties in reaching consensus on federal climate legislation. Throughout this period, states have steadily begun to fill the "policy gap" created by federal inaction. This has produced an increasingly diverse set of policies that address every sector of activity that generates greenhouse gases and collectively would reduce national emission levels if fully implemented.[20]

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 tend to also pursue these policies for other environmental reasons. Twenty-nine states and Washington, DC, have enacted "renewable portfolio standards (RPS)," mandating that a certain level of state electricity must come from such renewable sources as wind, geothermal, and solar. These policies generally follow a similar structure, although they vary in terms of the definition of eligible sources and the overall targets and timetables for expanding capacity.[21] For example, Hawaii has set a target of 40 percent renewables by 2030 whereas Kansas is aiming for a 20 percent level by 2020. Five states (Illinois, Minnesota, Nevada, Oregon, and West Virginia) have adopted 25-by-25 programs, reaching for 25 percent renewable capacity by 2025. In turn, twenty-six states have adopted an energy-efficiency equivalent of an RPS, mandating a steady increase in overall energy efficiency that in some cases is integrated with renewable energy mandates.[22]

California has been among the world's most active governments in addressing climate change. Along with renewable energy and energy-efficiency mandates, California pioneered legislation in 2002 that established the world's first carbon dioxide emissions standards for motor vehicles. This ultimately prodded federal government acceptance in 2009 of an ambitious national fuel economy standard and subsequent expansion in 2013. California also forged ahead with additional legislation, including

the 2006 Global Warming Solutions Act. AB 32 imposes a statutory target to reduce statewide emissions to 1990 levels by 2020 and steadily reduce them 80 percent below 1990 levels by 2050. It proposes to attain those goals through an all-out policy assault on virtually every sector that generates greenhouse gases, including industry, electricity, transportation, agriculture, and residential activity. The state launched an ambitious cap-and-trade program in 2013 and added the Canadian province of Quebec as a formal partner the following year. California lost six potential state (Arizona, Montana, New Mexico, Oregon, Utah, and Washington) and three Canadian provincial (British Columbia, Manitoba, and Ontario) partners in political shifts in those jurisdictions after 2010 but revisited possible emissions trading alliances with some western states and subfederal jurisdictions in Canada, Mexico, and China in 2013–2014. On the East Coast, nine states launched a Regional Greenhouse Gas Initiative in 2009, featuring a cap-and-trade mechanism that also sought additional state and Canadian partners and tightened its emissions cap by more than 30 percent in 2013.

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. In the George W. Bush administration, some states pursued litigation to attempt to push the federal government into taking bolder environmental steps; under Barack Obama, some states have turned to litigation to compel added federal efforts whereas others have sought to thwart new steps by federal environmental agencies. In both cases, state responses have been guided by an increasingly active set of state attorneys general who have begun to develop multistate litigation strategies to influence federal policy. Unlike their federal counterpart, most state attorneys general are elected officials, and their powers have expanded significantly since the mid-1970s. They frequently represent a political party different from that of the sitting governor and often use their powers as a base from which to seek higher office, most commonly governorships.

Collectively, these officials have increasingly become a force to be reckoned with, not only in their home states but also as they expand their engagement through challenges brought into the federal courts. In a 2014 Supreme Court case reviewing federal authority to establish greenhouse gas emission limits for power plants, fifteen states, including California and New York, implored the court to sustain federal regulatory authority. In turn, twelve states, including Texas and Michigan, filed a court brief that decried the federal plan as "one of the most brazen power grabs ever attempted by an administrative agency." No state has been as aggressive in combating federal environmental authority as Texas, where Attorney General Greg Abbott filed more than twenty suits attempting to block environmental actions by the

Obama administration. "I go to the office in the morning," quipped Abbott in 2014, "I sue the federal government, and I go home."

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 authority in environmental policy 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 conventional wisdom 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.

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 farther down the list, somewhat consistent with their placement in Table 2-1, 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."[23] 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, reflected in recent efforts in states such as West Virginia, Michigan, and Wisconsin to weaken dramatically the implementation of existing policies with the express goal of promoting economic growth by creating an environment friendlier to industry.[24]

What we know more generally about state policy commitment should surely give one 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.[25] 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.

Although many states have unveiled exciting new programs, EPA 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.[26] 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.[27]

Even in many high-saliency cases, such as Everglades protection, states have sought a federal rescue rather than taking serious unilateral action. As political scientist Sheldon Kamieniecki notes, Florida's "state government, which has been continuously pressured from all sides, has waffled in its intentions to improve the wetlands ecosystem in South Florida."[28] Agricultural interests, particularly those promoting sugar production in this region, have proven formidable opponents of major restoration that would restrict their access to massive volumes of water.[29] Similar issues have arisen as states have struggled in recent years to formulate policies to reduce potential risks to groundwater supplies from shale gas and oil development, with some states such as Pennsylvania racing in the opposite direction as Illinois, downplaying environmental concerns and local government reservations in order to maximize immediate development.[30]

Comparable problems have emerged in state enforcement of air quality and waste management programs. Despite efforts in some states to integrate and streamline permitting, many states have extensive backlogs in the permit programs they operate and lack any real indication of facility compliance with various regulatory standards. Measurement of the impact of state programs on environmental outcomes remains imprecise in many areas. Existing indicators confirm enormous variation among states, although we likely know less about such variation than in the 1990s, given that the EPA lacks funding and staff to continue collecting 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 33.8 percent in 2009. At the same time, state recycling policy and performance varies markedly, and the EPA last updated its estimate of national trends in 2009. Growing gaps in state and federal data gathering and dissemination capacity raise sobering questions about the transparency of environmental policy and any ability to assess important indicators of performance.

There was also growing indication in some states during the first years of the 2010s that environmental policy faced major challenges in cases where power shifted rapidly toward exclusive Republican control. North Carolina was an increasingly prominent example of this pattern after Republicans won both legislative chambers after the 2010 election for the first time since the 1870s and Republican Pat McCrory was elected governor two years later. This shift produced a Regulatory Reform Act that emphasized "customer service" for regulated parties and reversed numerous established provisions for air and water quality. The state's new leadership also embraced formal efforts to thwart new federal climate policies and banned state agency use of climate change science to shape coastal protection policy. Controversy surrounding these changes reached new heights in early 2014 when a pipe ruptured at a Duke Energy power plant and led to the release of thirty thousand tons of coal ash into the Dan River. In this case, political conflict only escalated given Governor McCrory's long-standing prior employment with Duke Energy and failure to disclose his considerable stock holdings in the utility before the incident. Conflict extended to other areas when new shale development legislation enacted in June 2014 bore considerable resemblance to the controversial form developed two years earlier in Pennsylvania. Critics of Governor McCrory and Republican legislative leaders decried a policymaking process that largely excluded environmental group views and those of Democratic legislators.[31]

Enduring Federal Dependency

More sweeping assertions of state resurgence are undermined further by the penchant of many states to cling to organizational designs and program priorities set in Washington, DC. Some states have demonstrated that far-reaching agency reorganization and other integrative policies can be pursued without significant opposition—or grant reduction—from the federal government, but the vast majority of states continue to adhere to a medium-based pollution control framework for agency organization that contributes to enduring programmatic fragmentation. Although a growing number of state officials speak favorably about shifting toward integrative approaches, many remain hard pressed to demonstrate how their states have begun to move in that direction. Many Clinton-era federal initiatives to give states more freedom to innovate were used to streamline operations rather than foster prevention or integration. The Bush administration weakened many of these initiatives and, more generally, proved extremely reluctant to give states expanded authority or encouragement to innovate. The Obama administration was not initially seen as fostering state innovation and capacity, although it pumped considerable short-term environmental funding into states through economic stimulus support in 2009–2011 and began to outline in 2013–2014 a climate policy that could create considerable incentive for creative state approaches.

Indeed, a good deal of the most innovative state-level activity has been at least partially underwritten through federal grants, which serve to stimulate

additional state environmental spending.[32] In contrast, in Canada, where central government grant assistance—and regulatory presence—is extremely limited, provinces have proven somewhat less innovative than their American state counterparts. Although a number of states have developed fee systems to cover the majority 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 "state-of-the-state" environment reports, undertake comparative risk assessment projects, launch inventories and action plans for greenhouse gas reductions, and implement some voluntary federal programs. On the whole, states have annually received between one-quarter and one-third of their total environmental and natural resource program funding from federal grants in recent years, although a few states (such as Colorado, Hawaii, Idaho, North Dakota, West Virginia, and Utah) relied on the federal government for between 40 and 70 percent of their total funding in 2012–2013. The overall level of federal support dropped to 23 percent in 2008, increased to 30 percent three years later due to temporary injections of federal stimulus dollars, but declined to 25 percent in 2013. It appeared likely to drop further due to anticipated federal budget cuts.[33]

Furthermore, for all the opprobrium heaped on the federal government in environmental policy, it has provided states with at least four other forms of valuable assistance, some of which has contributed directly to the resurgence and innovation of state environmental policy. First, federal development in 1986 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.[34] 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 may also do so for chemical use disclosure related to hydraulic fracturing.[35]

Second, states remain almost totally dependent on the federal government for essential insights gained through research and development. Each year, the federal government outspends the states in environmental research and development by substantial amounts, and states have shown little inclination to assume this burden by funding research programs tailored to their particular technological and informational needs.

Third, 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.[36] By contrast, other major bioregions, including Puget Sound, the Gulf of Mexico, the Columbia River system, and the

Mississippi River Basin have lacked comparable federal participation and have generally not experienced creative interstate partnerships. Their experience contradicts the popular thesis that regional coordination is most likely in the absence of federal engagement, and two of the three recent regional initiatives to reduce greenhouse gases have struggled to endure in the absence of federal engagement or support.

Fourth, the EPA's ham-handedness is legendary, but its role in overseeing state-level program implementation looks far more constructive when examining 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. 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.[37] Surveys of state environmental officials confirm that they have a more positive relationship with regional rather than central agency staff.[38] Regional offices have played a central role in many of the most promising state-level innovations, including those in Minnesota and New Jersey. Their involvement may include formal advocacy on behalf of the state with central headquarters, direct collaboration on meshing state initiatives with federal requirements, and special grant support or technical assistance. This appears to be particularly common when regional office heads have prior state experience, as demonstrated in a number of instances in the Clinton, Bush, and Obama administrations.

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.[39] Nonetheless, state regulatory dynamism may diminish 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 the industrial policies of European Union nations, a range of scholars have 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.[40] A number of states offer incentives in excess of $50,000 per new job to prospective developers and have intensified efforts to retain jobs in the struggling manufacturing sector. 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, the tourism industry has played an active role in seeking strong environmental programs

designed to maintain natural assets. In some instances, states may be keen to take action that may produce internal environmental benefits while not having much localized economic impact. California and other states that have formally endorsed setting strict carbon emissions standards from vehicles, for example, have very few jobs to lose in the vehicle manufacturing sector while also seeing 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 T. Gormley Jr. notes, sometimes "states can readily export their problems to other states," resulting in potentially serious environmental "balance of trade" problems.[41] In such situations, states may be inclined to export environmental contaminants to other states 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 effort along state borders but a measurable decline in effort along state borders with Mexican states or Canadian provinces.[42]

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. States such as Ohio and Pennsylvania, for example, have depended heavily on burning massive quantities of coal to meet energy demands. Prevailing winds invariably transfer pollutants from this activity to other regions, particularly New England, leading to serious concern about acid deposition and related contamination threats. At times, states throughout the nation have utilized so-called dispersion enhancement as one approach to improve local air quality. Average industrial stack height in the United States soared from 243 feet in 1960 to 730 feet in 1980.[43] Although this increase resulted in significant air quality improvement in many areas near elevated stacks, it generally served to disperse air pollution problems elsewhere. It also contributed to the growing problem of airborne toxics that ultimately pollute water or land in other regions. Between 80 and 90 percent of many of the most dangerous toxic substances found in Lake Superior, for example, stem from air deposition, much of which is generated outside of the Great Lakes Basin.

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." In April 2014, the Supreme Court voted decisively to reinstate the EPA's Cross-State Air Pollution Rule, the agency's "good neighbor" provision that restricts 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 has only exacerbated 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 systems of waste management and facility siting, 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 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, such as disposal of wastes generated by hydraulic fracturing procedures, perhaps best illustrated in the migration of wastes generated in western Pennsylvania to deep-injection wells in eastern Ohio. This has triggered considerable controversy in Ohio, especially following a significant expansion of earthquake activity in areas near wells that accept large amounts of out-of-state fracking wastes.

No area of waste management, however, is as contentious as nuclear waste. In the case of so-called high-level wastes, intensely contaminated materials from nuclear power plants which require between ten thousand and a hundred thousand years of isolation, the federal government and the vast majority of states have supported a thirty-year effort to transfer all of these wastes to a geological repository in Nevada. Ferocious resistance by Nevada and concerns among states who would host transfer shipments have continued to scuttle this approach, leaving each of the hundred nuclear reactors spread across thirty-one states a *de facto* storage site. In the case of "low level" wastes, greater in volume but posing a less severe threat, states received considerable latitude from Washington in the early 1980s to develop a strategy for creating a series of regional sites, as well as access to funds to develop facilities. But subsequent siting efforts were riddled with conflict, and the growing reality is that increasing amounts of such waste must be stored near its point of generation.[44] One facility in western Texas has emerged as a potential "host" for such waste, though it is remote, actually closest to settled communities across the New Mexico border and thousands of miles away from the bulk of generated waste.

Rethinking Environmental Federalism

Federalism scholars and some political officials have explored models for 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.[45] 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 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 actual performance that 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 forty 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 recent analysts, "there have been few real gains."[46] 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 the Obama administration has made little effort 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. As we shall see, however, one Obama-era initiative may provide a new test of the possibility for a more flexible and functional environmental federalism.

Challenges to State Routines

The future role of states in environmental policy may be further shaped by four additional developments. First, given the impact of the Great Recession, it remains increasingly unclear whether states will have sufficient fiscal resources to maintain core environmental protection functions and continue to consider new initiatives. Most states enjoyed generally robust fiscal health during the middle years of the 2000s, with growing tax revenues producing healthy budgets that helped facilitate a period of considerable state environmental policy innovation. However, state fiscal conditions turned increasingly gloomy in subsequent years, as the precipitous economic decline and twin crises in the housing and banking sectors served to shrink state coffers

and prompt consideration of substantial program cuts in many statehouses. Federal stimulus funds provided some stabilization in 2009–2011, but significant budget reductions followed in many states, leading to an overall reduction in state government employment outside the education sector of 6.8 percent between 2008 and 2012.[47] In turn, pressures for expanded spending in certain domains, such as medical care and unemployment insurance, further threatened any restoration of state fiscal support for environmental protection as the economic recovery accelerated.

Second, the 2010 and 2012 elections 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. As of 2014, Republicans controlled both legislative chambers in twenty-seven states and all but three governorships in these states. Of the remaining states, fifteen featured exclusive Democratic control of the legislative and executive branches, and eleven had divided partisan control. This represented the largest Republican domination over state government in generations and also the most unified period in which one party controlled all state functions in many decades. This raised the possibility of major shifts in environmental priorities in various states such as North Carolina and expanding heterogeneity in the kinds of state policies produced given such partisan divides.

Third, one early testing ground for potential environmental policy shifts was reflected in a flurry of new legislative proposals in 2013–2014 to either downsize or repeal many of the twenty-nine operational state renewable portfolio standards. More than 120 reform bills were introduced in 2013 alone, and while many of these involved relatively minor modifications, an "all-out attack" was launched in twenty states, facilitated by a standardized "Electricity Freedom Act" template produced by the Republican-leaning American Legislative Exchange Council. However, none of these repeal efforts passed, even in a bitterly contentious battle in Kansas, and the only eight RPS bills that were enacted in 2013 involved expansion or technical modification of existing policies.[48]

Fourth, states began to adjust by mid-decade from somewhat earlier expectations that major new federal environmental legislation or changes in established federal statutes might be politically feasible. The years 2009 and 2010 marked a period in which states faced not only economic decline but enormous uncertainty over whether many of their homegrown environmental policy initiatives would be eliminated by far-reaching federal legislative action. This form of "contested federalism" had a somewhat chilling effect on new initiatives, compounded further by the realization of likely state budget cuts and possible challenge from incoming state government leaders.[49] More recent years suggest not only a likelihood of declining federal financial support for state environmental operations but also a marked reduction in the prospects for any new or revised federal environmental legislation. Indeed, the one exception to this pattern was unilateral action by the executive branch, as will be discussed below.

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 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. It might be particularly useful to revisit these options before taking major new environmental policy steps, including any far-reaching effort to retract state policy commitments.

In moving toward a more functional environmental federalism, certain broad design principles might be useful to consider. The Clinton-era experiment with NEPPS was billed as a major attempt at such reallocation, but a more substantial effort would require establishment of state environmental performance measures that were publicized and utilized to determine a more appropriate allocation of functions. One such opportunity to move in this direction could emerge through ongoing negotiations between the EPA and the fifty states over federal efforts to establish a national permitting system for greenhouse gases. Given the collapse of serious congressional deliberations over climate policy in 2010, the Obama administration moved ahead with a process to cap emissions from new power plants, and initial permitting began in 2013.

The administration's selection of Section 111(d) of the 1990 Clean Air Act Amendments as its climate compliance tool meant that states must develop plans for emissions reductions from each new plant through existing state air quality "implementation plans." Failure to do so would lead to federal imposition of reduction requirements and a possible federal takeover of permitting operations. Sixteen states joined an effort by Nebraska Attorney General Jon Bruning in late 2013 arguing that they should have complete latitude to determine what would be acceptable ways to respond to this federal requirement. EPA Administrator Gina McCarthy repeatedly responded by lauding those states that have taken early steps to reduce greenhouse gas emissions but noting that ultimate responsibility for approval of state plans rests with the federal government. "The states have been leaders, I don't need EPA to tell them what to do," she said in a December 2013 speech. That said, McCarthy also noted that "it is not the intent of the federal government to take over their duties, but if they don't perform as the Clean Air Act requires them to, we will be forced to do that."

In 2014, McCarthy returned to these themes in introducing the next installment of this climate approach, unveiling a "Clean Power Plan" that

would set different state emission reduction targets that would collectively produce a national reduction of 30 percent in greenhouse gas emissions from 2005 levels in the power sector by 2030. These reductions would be phased in over time, and states were given many options for achieving them, including cap and trade, carbon taxes and fees, and energy efficiency and renewable energy requirements. Initial state plans were required to be submitted to the EPA by 2016, beginning a process of intergovernmental negotiation.[50] The agency also encouraged multiple states to work collaboratively, noting the possibility that existing regional programs could expand to include other states.

While some states quickly adopted statutes and resolutions challenging a strong federal role and others such as Texas lobbed multiple litigation and administrative hurdles in front of the advancing federal effort, other states moved in a very different direction. Those states with an established track record of climate policy development, including commitment to a cap-and-trade program, have advanced the case for "equivalency." Under this approach, they assembled empirical evidence that they already operate programs designed to accomplish all (or at least some) of the EPA's goals and argued that they should be rewarded for that early engagement with maximum flexibility while the federal agency could then focus on laggard states. This would be a model of decentralization linked to measurable performance, perhaps consistent with larger goals of federalism reform. Some midwestern states began in 2014 to explore how best to follow this model, including a possible "carbon fee" under the auspices of the Midwestern Power Sector Collaborative, whereas both California and Regional Greenhouse Gas Initiative states began to openly court other states to join as cap-and-trade partners. According to Mary D. Nichols, director of the California Air Resources Board and one of the leading advocates for this form of selective decentralization, "When you step back from the fray, the seemingly disjointed pieces of climate policy are actually coming together—perhaps not quite seamlessly or uniformly—but in a pattern. And you can see that we have been creating a very lovely and effective patchwork quilt."[51] However, not all states were so sanguine about this emerging national tapestry or the potential changes they might have to make under emerging federal regulations.

Beyond this initiative, a more discerning environmental federalism might also begin by concentrating federal regulatory energies on problems that are clearly national in character. Many air and water pollution problems, for example, are by definition cross-boundary concerns unlikely to be resolved by a series of unilateral state actions. In contrast, problems such as protecting indoor air quality and cleanup of abandoned hazardous waste dumps may present more geographically confinable challenges; they are perhaps best handled through substantial delegation of authority to states. As policy analyst John D. Donahue notes, "Most waste sites are situated within a single state, and stay there," yet are governed by highly centralized Superfund legislation, in direct contrast to more decentralized programs in environmental

areas in which cross-boundary transfers are prevalent.[52] Under a more rational system, the federal regulatory presence might intensify as the likelihood of cross-boundary contaminant transfer escalates. Emerging issues such as environmental protection of expanded shale gas and oil drilling present an opportunity to test this approach, combining a highly decentralized system of relatively small and localized drilling operations with considerable cross-border movement of wastes and chemicals as well as transport of natural gas and oil via rail and pipelines. Such an initial attempt to sort out functions might be reinforced by federal policy efforts to encourage states or regions to take responsibility for internally generated environmental problems rather than tacitly allow exportation to occur. In the area of waste management, for example, federal per-mile fees on waste shipments would provide a disincentive for long-distance transfer, instead encouraging states, regions, and waste generators to either develop their own capacity or pursue waste reduction options more aggressively.

In many areas, shared federal and state roles likely remain appropriate, reflecting the inherent complexity of many environmental problems. Effective intergovernmental partnerships are already well established in certain areas. But even if essentially sound, these partnerships could clearly benefit from further maturation and development. Alongside the sorting-out activities discussed earlier in this section, both federal and state governments could do much more to promote creative sharing of policy ideas and environmental data, ultimately developing a system informed by "best practices." Such information has received remarkably limited dissemination across state and regional boundaries, and potentially considerable advantage is to be gained from an active process of intergovernmental policy learning. More broadly, the federal government might explore other ways to encourage states to work cooperatively, especially on common boundary problems. As we have discussed, state capacity to find creative solutions to pressing environmental problems has been on the ascendance. However, as Lord Bryce concluded many decades ago, cooperation among states does not arise automatically, although at times it can, in the words of Mary D. Nichols, "produce a very lovely and effective patchwork quilt."[53]

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.

Center for Local, State, and Urban Policy (www.closup.umich.edu) The Center for Local, State, and Urban Policy's Energy and Environmental Policy Initiative places a strong emphasis on state and local policy issues. It also features public opinion surveys that emphasize state and intergovernmental questions in collaboration with the Muhlenberg Institute of Public Opinion.

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 and state legislators, as well as the general citizenry. The organization offers an extensive set of publications, including specialized reports.

National Governors Association (www.nga.org) The National Governors Association maintains an active research program concerning state environmental protection, natural resource, 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.

Stateline (www.stateline.org) The Pew Charitable Trusts sponsors this site, which provides a number of useful vantage points for examining state politics and policy, including special sections for environmental and energy policy. This site is particularly strong in providing information on state election results and offering links to articles about state issues published in periodicals across the nation.

Notes

1. John Kincaid and Richard L. Cole, "Citizen Attitudes toward Issues of Federalism in Canada, Mexico and the United States," *Publius: The Journal of Federalism* 41 (Winter 2011): 53–75.
2. Paul Teske, *Regulation in the States* (Washington, DC: Brookings Institution Press, 2004), 9.
3. R. Steven Brown, *State Environmental Expenditures* (Washington, DC: Environmental Council of the States, 2008).
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).
7. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (New York: Cambridge University Press, 1990); 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).
10. Andrew Karch, *Democratic Laboratories: Policy Diffusion among the American States* (Ann Arbor: University of Michigan Press, 2007).
11. Evan J. Ringquist, *Environmental Protection at the State Level: Politics and Progress in Controlling Pollution* (Armonk, NY: M. E. Sharpe, 1993).
12. Kathy Kinsey, "Neither of These Bills Address the Law's Failings," *Environmental Forum* 31 (May–June 2014): 48.
13. Linda Breggin, "Broad State Efforts on Toxic Controls," *Environmental Forum* 28 (March–April 2011): 10.

14. Andy Kim, "Time to Ban BPA?" *Governing* (March 2011): 13.
15. Christopher Bosso, ed., *Governing Uncertainty: Environmental Regulation in the Age of Nanotechnology* (Washington, DC: Resources for the Future, 2010), 105–30.
16. Barry G. Rabe, "Shale Play Politics: The Intergovernmental Odyssey of American Shale Governance," *Environmental Science & Technology* 48 (August 2014): 8369–75.
17. 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.
18. R. Steven Brown, *Status of State Environmental Agency Budgets: 2011–2013* (Washington, DC: Environmental Council of the States, 2012).
19. Sanya Carley, "The Era of State Energy Policy Innovation: A Review of Policy Instruments," *Review of Policy Research* 28 (May 2011): 265–94.
20. Neil Craik, Isabel Studer, and Debora Van Nijnatten, *Climate Change Policy in North America* (Toronto, ON: University of Toronto Press, 2013).
21. Linda Breggin, "Portfolio Standards Entrench across US," *Environmental Forum* (January–February 2014): 10.
22. Annie Downs and Celia Cui, *Energy Efficiency Resource Standards: A New Progress Report on State Experience* (Washington, DC: American Council for an Energy-Efficient Economy, 2014).
23. William R. Lowry, *The Dimensions of Federalism: State Governments and Pollution Control Policies*, rev. ed. (Durham, NC: Duke University Press, 1997), 125.
24. Evan Osnos, "Chemical Valley," *New Yorker* (April 7, 2014): 38–49; Keith Matheny, "Did State Agency Lobby to Bend Rules on Pollutants at Steel Mill?" *Detroit Free Press*, May 5, 2014; Trip Gabriel, "Ash Spill Shows How Watchdog Was Defanged," *New York Times*, February 28, 2014.
25. Brown, *Status of State Environmental Agency Budgets*.
26. 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.
27. Shama Ghamkar and J. Mitchell Pickerill, "The State of American Federalism 2011–2012," *Publius: The Journal of Federalism* 42 (Summer 2012): 357–86.
28. Sheldon Kamieniecki, *Corporate America and Environmental Policy* (Palo Alto, CA: Stanford University Press, 2006), 253.
29. William Lowry, *Repairing Paradise: The Restoration of Nature in America's National Parks* (Washington, DC: Brookings Institution Press, 2010), Chapter 4.
30. Barry G. Rabe and Christopher Borick, "Conventional Politics for Unconventional Drilling?" *Review of Policy Research* 30 (May 2013): 321–40.
31. Chris Kardish, "A Hard Right," *Governing* (July 2014): 32–39; Daniel Bush and Josh Kurtz, "Wrenching Political Change Comes to N.C., and Energy Is Part of the Struggle," *E&E News*, May 22, 2014.
32. Benjamin Y. Clark 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.
33. Brown, *Status of State Environmental Agency Budgets*.
34. Michael E. Kraft, Mark Stephan, and Troy D. Abel, *Coming Clean: Information Disclosure and Environmental Performance* (Cambridge, MA: MIT Press, 2011).
35. 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* 6 (March 2014).

36. 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.
37. Denise Scheberle, *Federalism and Environmental Policy: Trust and the Politics of Implementation,* rev. ed. (Washington, DC: Georgetown University Press, 2004), Chapter 7.
38. Michelle Pautz and Sarah Rinfret, *The Lilliputians of Environmental Regulations*, 50–51.
39. Paul Teske, *Regulation in the States*; Pautz and Rinfret, *The Lilliputians of Environmental Regulation*.
40. 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.
41. William T. Gormley Jr., "Intergovernmental Conflict on Environmental Policy: The Attitudinal Connection," *Western Political Quarterly* 40 (1987): 298–99.
42. 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.
43. Lowry, *The Dimensions of Federalism*, 45.
44. Daniel J. Sherman, *Not Here, Not There, Not Anywhere* (Washington, DC: Resources for the Future, 2011).
45. 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).
46. Klyza and Sousa, *American Environmental Policy, 1990–2006*, 253.
47. Lucy Dadayan and Donald Boyd, *The Depth and Length of Cuts in State-Local Government Employment Is Unprecedented* (Albany, NY: Rockefeller Institute of Government, 2013).
48. Jonathan Walters, "A Second Wind," *Governing* (April 2014); Breggin, "Portfolio Standards Entrench across US."
49. Barry G. Rabe, "Contested Federalism and American Climate Policy," *Publius: The Journal of Federalism* 40 (Summer 2011): 1–28.
50. Paul Hibbard, Andrea Okie, and Susan Tierney, *EPA's Clean Power Plan: States' Tools for Reducing Costs and Increasing Benefits to Consumers* (Boston: Analysis Group, 2014).
51. Mary D. Nichols, "Policymaking Is a Patchwork Quilt," Presentation at the CAPCOA Climate Change Forum, San Francisco (August 30, 2010).
52. Donahue, *Disunited States,* 65.
53. Nichols, "Policymaking Is a Patchwork Quilt."