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"Maladaptive" Federalism: The Structural Barriers to Coordination of State Sustainability Initiatives

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“MALADAPTIVE” FEDERALISM: THE STRUCTURAL BARRIERS TO COORDINATION OF STATE SUSTAINABILITY INITIATIVES

Jim Ross[†]

ABSTRACT

The federal government has been slow to confront problems such as climate change, but many states have adopted innovative approaches to addressing the impacts of using natural resources to produce energy, including aggressive regulation of carbon emissions and renewable energy standards. This Article questions whether celebration of these types of state initiatives as a form of “adaptive” federalism is premature. The Article identifies an emerging challenge that subnational regulation faces in the energy and environmental context—what I will call “maladaptive” federalism—and argues that federalism discussions need to account for its possibility.

Part I highlights adaptive regulation as a form of federalism, echoing a vision for subnational regulation that many federalism scholars and policymakers have endorsed over the past two decades.

Part II argues that policy choices by subnational units of government that fail to account for or consider these coordination benefits should not be celebrated as a form of adaptive federalism merely because they are state policy choices. I identify subnational recalcitrance (on inaction by states) and backlash (or reversing course) as two potential types of maladaptation, provide examples of each, and use these to illustrate the structural features of subnational governments that make maladaptation most likely.

Part III evaluates the pro-adaptation tools that federal agencies can use to address the enactment costs of states taking maladaptive approaches. In certain contexts, such as in clean energy initiatives, focusing on enactment costs associated with the structure of state governments will be superior to federal policies that preempt subnational units of government altogether by making the policy choice for them. Such tools not only make maladaptation less likely; they also help to ensure that when a state does opt for a maladaptive policy path that it does so because it is making explicit tradeoffs in

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ways that are more likely to be welfare-enhancing and politically accountable.

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INTRODUCTION

This Article identifies an emerging challenge that subnational regulation faces in the energy and environmental context—what I will call “maladaptive” federalism—and argues that federalism discussions need to account for its possibility. What is known as “adaptive” federalism sees subnational units of government as effective institutions for promoting regulatory experimentation and solving regulatory problems, especially in the energy and environmental law arena.¹ While the federal government has been slow to adopt climate change initiatives, many state governments have enacted innovative approaches to addressing the impacts of using natural resources to produce energy, including aggressive approaches to regulating carbon emissions and renewable energy standards.² To name a few examples: more than 30 states have adopted Renewable Portfolio Standards

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1. See, e.g., David E. Adelman & Kirsten H. Engel, *Adaptive Federalism: The Case Against Reallocating Environmental Regulatory Authority*, 92 MINN. L. REV. 1796 (2008) (arguing that an adaptive model should be utilized in the framework for environmental federalism). From what I can tell, this view was first advanced as an intergovernmental theory in Australia, by Bhajan Grewal at the James Cook University of North Queensland. Bhajan S. Grewal, *Economic criteria for the assignment of functions in a federal system*, in TOWARDS ADAPTIVE FEDERALISM: A SEARCH FOR CRITERIA FOR RESPONSIBILITY SHARING IN A FEDERAL SYSTEM 5 (Australian Advisory Council for Intergovernmental Relations ed., 1981).
 2. See Adelman & Engel, *supra* note 1, at 1846–49, for examples of states leading climate change policy initiatives.

(RPSs), requiring a certain percentage of electric power sold to come from renewable sources;³ California has adopted comprehensive climate change legislation;⁴ and several states have been leaders in promoting renewable energy and clean energy initiatives, including smart grids.⁵

Many environmental law policymakers and scholars celebrate adaptive federalism because subnational institutions can better adapt to unique geographic conditions and promote policy experimentation and its diffusion.⁶ Seeing environmental law advocates look to subnational governments seems surprising, given environmental law’s insistence on the superiority of national regulation in addressing jurisdictional spillover problems associated with pollution. Perhaps it is even odder to see environmental law scholars embrace subnational units of government in addressing a problem like climate change, where the harms are widely recognized to be global rather than local.⁷ There is a simple pragmatism to this turn towards subnational

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3. See Lincoln L. Davies, *Power Forward: The Argument for a National RPS*, 42 CONN. L. REV. 1339, 1375–79 (2010). See also Brannon P. Denning, *Environmental Federalism and State Renewable Portfolio Standards*, 64 CASE W. RES. L. REV. 1519 (2014) (providing a survey of a range of RPS programs and some of the constitutional challenges that they may present).
 4. See Ann E. Carlson, *Iterative Federalism and Climate Change*, 10 NW. U. L. REV. 1097, 1099–1100 (2009) (asserting the significant climate change initiatives to come from California as examples of iterative federalism schemes).
 5. Texas, for example, has been a leader in promoting wind power and building infrastructure to encourage its development. See David A. King, *Interregional Coordination of Electric Transmission and Its Impact on Texas Wind*, 8 TEX. J. OIL, GAS & ENERGY L. 309, 310 (2013). Joel Eisen has discussed the role of states in implementing smart grid initiatives. See Joel B. Eisen, *Smart Regulation and Federalism for the Smart Grid*, 37 HARV. ENVTL. L. REV. 1 (2013). There are many other environmental/energy contexts where states have been leaders, such as building codes, appliance standards, and auto emissions standards. See Alexandra B. Klass, *State Standards for Nationwide Products Revisited: Federalism, Green Building Codes, and Appliance Efficiency Standards*, 34 HARV. ENVTL. L. REV. 335 (2010); Carlson, *supra* note 4, at 1115.
 6. See Adelman & Engel, *supra* note 1, at 1801 (asserting that an adaptive model of federalism is an important advance). Adaptive federalism is also called “iterative” federalism. See Carlson, *supra* note 4, at 1099. Others refer to this as “dynamic” or “collaborative” federalism. See *infra* notes 15, 17, and accompanying text.
 7. See Robert L. Glicksman & Richard E. Levy, *A Collective Action Perspective on Ceiling Preemption by Federal Environmental Regulation: The Case of Global Climate Change*, 102 NW. U. L. REV. 579, 610 (2008) (asserting climate change is a global problem in analyzing federal regulation of it).

governments in environmental law: At the subnational level it is easier to pass new initiatives, making adaptive federalism a particularly attractive approach for policy innovation.

Against the backdrop of federal legislative inaction—no doubt in part rooted in federal institutions that have held up legislation, such as the Senate—climate change policy initiatives have had more traction at the subnational level.⁸ State governments are closer and more reactive to their constituent stakeholders than the U.S. Congress, do not suffer from mass geographic diversity that plagues U.S. lawmaking, and may face fewer veto points than Congress. According to some, subnational regulatory initiatives may even be superior to federal legislation, which could potentially limit the space for state initiatives or hamper innovation and experimentation.⁹

Beyond these benefits to adaptive federalism, environmental scholars have paid less attention to how subnational policies can produce coordination benefits beyond any individual state’s borders and what impact this has on federalism discussions. To take an example related to renewable energy, harmonized RPS standards across individual states produce spillover benefits for renewable project developers and others in the financing and contracting process.¹⁰ Planning for and allocating the costs of multistate project infrastructure such as transmission and power grid reliability also produces important benefits for renewable power projects, regardless of any particular jurisdiction.¹¹ Of course, there are always positive externalities to the policy diffusion related to subnational innovation, but the coordination benefits I describe transcend the diffusion of ideas.

This Article argues that, in many public goods contexts, that there are externalities that go beyond experimentation itself—benefits (and sometimes even costs) that receive almost no attention in the federalism literature. In contexts where adaptation produces positive policy externalities, federalism is challenged to account for the

8. See Kirsten Engel, *State and Local Climate Change Initiatives: What Is Motivating State and Local Governments to Address a Global Problem and What Does This Say About Federalism and Environmental Law?*, 38 URB. LAW. 1015, 1023–26 (2006) (asserting that economic and political factors provide an explanation for the success of local and state efforts in addressing climate change).

9. See, e.g., Adelman & Engel, *supra* note 1, at 1801 (stating that adaptive federalism would combat federal regulations that hamper state’s efforts); Jonathan H. Adler, *When is Two a Crowd? The Impact of Federal Action on State Environmental Regulation*, 31 HARV. ENVTL. L. REV. 67, 70 (2007) (arguing that federal action can directly limit the effectiveness of state action).

10. See *infra* notes 34, 36 and accompanying text.

11. See *infra* notes 36–37 and accompanying text.

possibility that individual states can just as readily take positions that hobble or thwart the production of public goods as they can promote them. Specifically, the analysis of this Article explores whether there should be limits on a state or other subnational unit of government acting independently when this stands in the way of other states creating coordination benefits from an adaptive federalism program such as climate change or sustainable energy initiatives.

Part I highlights adaptive regulation as a form of federalism, echoing a vision for subnational regulation that many federalism scholars and policymakers have endorsed over the past two decades. As Part I suggests, adaptive federalism does not embrace subnational regulation per se, but because it advances other values, such as promoting policy experimentation and its diffusion—the core value of adaptive federalism. Diffusion itself is a spillover benefit from adaptation, albeit a benefit that is indifferent to any particular institution’s policy choice. Beyond diffusion, I argue that in many contexts adaptation also produces other benefits related to the substance of policy—which can take the form of coordination benefits (positive externalities) of adaptation that spillover to the regional or national level.

Part II argues that policy choices by subnational units of government that fail to account for or consider these coordination benefits should not be celebrated as a form of adaptive federalism merely because they are state policy choices. Structural features of state governments can contribute to the possibility of subnational governments failing to recognize these coordination benefits—what I characterize as “maladaptation.” I identify subnational recalcitrance (inaction by states) and backlash (reversing course) as two potential types of maladaptation, provide examples of each, and use these to illustrate the structural features of subnational governments that make maladaptation most likely.

Preserving a role for states to dissent from trends and from inchoate national or regional policies is important, even essential, to federalism. However, that does not mean that federalism must be indifferent to every substantive state policy choice. Part III maintains that to the extent the potential for maladaptation subverts welfare-enhancing coordination, it is an appropriate concern for regulators. I identify a variety of legal tools that regulators and courts can look to in order to address the decision costs of maladaptation and make it less likely, especially in contexts where national regulators have endorsed subnational trends or policy choices. These include substantive preemption by statute or regulation, explicit interstate entrenchment tools designed to promote adaptive regulatory commitments, and process preemption. Adaptive federalism may be mostly likely to flourish in situations where Congress has established direct enforcement “sticks” (such as in the context of the Clean Air

Act), but it is also an important regulatory approach even where a federal agency has no direct enforcement authority.

Part III argues in favor of pro-adaptation tools that federal agencies can use to address the enactment costs of states taking maladaptive approaches. In certain contexts, focusing on enactment costs associated with the structure of state governments will be superior to federal policies that preempt subnational units of government altogether by making the policy choice for them. Such tools not only make maladaptation less likely; they also help to ensure that when a state does opt for a maladaptive policy path that it does so because it is making explicit tradeoffs in ways that are more likely to be welfare-enhancing and politically accountable. I identify the Federal Energy Regulatory Commission’s (FERC’s) Order 1000, which addresses transmission and cost allocation for renewable energy projects, as a lead example of how a federal agency can discourage maladaptation without preempting state policy choices.¹²

The potential for maladaptation in state policy choices is a legitimate area of concern for regulatory federalism. Understanding the potential maladaptation in state lawmaking is important to identifying when subnational decisions will promote coordination and positive externalities, or conflicts between different policies can potentially get in the way. I conclude that paying attention to the decision costs of maladaptive subnational decisions provides an important alternative to the conventional options of leaving policy choices entirely to the whims of state politics or to Congress or federal regulators making the choices for states.

I. ADAPTIVE FEDERALISM

Adaptive federalism is the view that state and local governments can better experiment and conform their policies to the particular conditions that they face and the preferences of their citizenry. David Edelman and Kirsten Engel perceptively advocate for a version of adaptive federalism in solving problems associated with climate change and energy sustainability—an approach that would allow multiple jurisdictions to independently address the problem without ceding authority or limiting strategies.¹³ Environmental law is an especially likely candidate for such an approach, notwithstanding the existence of significant federal statutes and regulations regarding pollution. As William Buzbee has highlighted, major federal environmental statutes such as the Clean Air Act and Clean Water Act envision state governments playing a major implementation and

12. See *infra* Part III.C.

13. See Edelman & Engel, *supra* note 1, at 1801.

enforcement role that exceed a federal floor, or minimum regulatory standard.¹⁴

Apart from the legal structure allowing for states to set stricter standards than the federal government, it is perhaps not surprising that adaptive federalism has many converts in the environmental law community—where some also refer to this approach as “dynamic,”¹⁵ “iterative,”¹⁶ or “collaborative” federalism.¹⁷ The federal government, Congress in particular, has been steadfast in its inaction related to climate change. States, most notoriously California, have been far more aggressive innovators on this front. If one prefers more aggressive environmental approaches to solving problems related to climate change, state and local governments are a more fertile level of government for policy adoption.

But adaptive federalism is not merely a convenient political strategy for pursuing a certain policy vision to address climate change. There are legitimate benefits to adaptive federalism that transcend any particular policy agenda on substantive issues such as the environment. Adaptive federalism is a serious theory of federalism, not just a political strategy. Although many different accounts of adaptive federalism have been advanced, these share emphasis on promoting policy experimentation and learning and the values of interjurisdictional competition and the advantages of subnational regulation. Less recognized is how adaptive federalism policies can mediate interstate coordination problems and create spillover benefits. In other words, where coordinated, adaptive federalism programs can produce some of the benefits of national regulation (by addressing interstate spillovers), without embracing a one-size-fits-all solution to problems such as climate change.

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14. See William W. Buzbee, *Asymmetrical Regulation: Risk, Preemption and the Floor/Ceiling Distinction*, 82 N.Y.U. L. REV. 1547, 1576 (2007) (asserting that states can choose their own strategies using the federal law as a starting point). See Adler, *supra* note 9, at 70, for the argument that federal floors can adversely impact or effect the level of state regulation.
 15. See Hari Osofsky & Hannah Wiseman, *Dynamic Energy Federalism*, 72 MD. L. REV. 773, 774 (2013) (advocating for a multidimensional federalism approach); see also Kirsten H. Engel, *Harnessing the Benefits of Dynamic Federalism in Environmental Law*, 56 EMORY L.J. 159, 162–63 (2006) (arguing for states to have the freedom to develop policy situations).
 16. Carlson, *supra* note 4, at 1099 (highlighting iterative features of environmental federalism).
 17. Jody Freeman & Daniel A. Farber, *Modular Environmental Regulation*, 54 DUKE L.J. 795, 801, 843 (2005) (presenting a detailed case study of a collaborative federal-state approach to watershed regulation in California).

A. *Policy Experimentation in Addressing Climate Change*

Justice Louis Brandeis famously praised state and local governments as “laboratories of democracy.”¹⁸ Climate change is widely recognized to be a global problem.¹⁹ Yet in the context of addressing the problems associated with climate change, the policy benefits of experimentation and subnational innovation related to climate change solutions can be significant. More than 30 states have established RPS standards to encourage the development of renewable energy.²⁰ Many states have also regulated carbon emissions, most notably California, and nearly 20 states have established energy efficiency standards.²¹

This kind of subnational innovation produces positive goods in the form of knowledge benefits and innovation in sustainable and renewable energy. The U.S. encompasses a vast body of land with varying environmental conditions, along with significant variations in the tastes and preference of citizens and economic conditions. Local decision makers will be better equipped with the knowledge and expertise to solve problems in ways that adapt to local circumstances. Climate change is widely recognized to be a global problem,²² but the most effective and cost-effective mechanisms for addressing its effects will vary significantly from place to place. That leaves state and local governments a significant role to play in formulating and implementing policy solutions to climate change or other environmental law problems.

A good illustration of how adaptation can produce these benefits is the variations in geology and resources that produce opportunities for energy production, and understanding how that production will impact ecology and the environment. David Adelman and Kirsten Engel provide a range of examples of innovation that are dependent

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18. *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting) (stating, “a single courageous State may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country.”).
 19. See Jonathan B. Wiener, *Think Globally, Act Globally: The Limits of Local Climate Policies*, 155 U. PA. L. REV. 1961, 1962 (2007) (asserting that subnational solutions are not the best way to combat global climate change).
 20. See Davies, *supra* note 3, at 1375–77 (providing data on the 36 states that have adopted Renewable Portfolio Standards); see also DSIRE: Database of State Incentives for Renewables & Efficiency, RPS DATA, <http://www.dsireusa.org/rpsdata/index.cfm> (follow “DSIRE RPS Data Spreadsheet” hyperlink) (last visited Mar. 3, 2014) (containing the most recent state RPS data from March 2013).
 21. See ERIN RYAN, *FEDERALISM AND THE TUG OF WAR WITHIN* 167–76 (2011), for one snapshot of these various innovations.
 22. See Wiener, *supra* note 19, at 1962.

on resource allocation and also responsive to environmental concerns, including state adoption of standards and goals for renewable energy.²³ David Spence has also recently made a compelling case for why states should retain significant authority related to the regulation of natural gas fracking activities and their effects.²⁴

Such experimentation can also produce the benefit of innovation. Ann Carlson asserts that state experimentation not only better matches the problems to the local knowledge needed to solve them, but that it also can produce better innovation.²⁵ This kind of technological innovation may occur if state regulatory measures induce private investment in the development of technologies to meet local emissions controls²⁶ or other requirements such as smart grid²⁷ or energy efficiency standards.²⁸ There are also positive externalities created by state innovation due to policy diffusion in the policymaking sphere. Both federal and state regulators can learn from each other where state and local governments have the flexibility to adapt in adopting and enforcing environment and energy standards. This learning can improve the overall quality regulation—a theory of federalism that others outside of environmental and energy law circles have referred to as “democratic experimentalism.”²⁹

B. Interjurisdictional Competition for Sustainable Energy

But the benefits of adaptation go beyond facilitating diversity in matching problems to local knowledge and circumstances and promoting policy diffusion. The idea that states are better suited than the federal government to “adapt” to social problems such as climate

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23. See Adelman & Engel, *supra* note 1, at 1848 (arguing that state action can feed back into encouraging federal action).
 24. See David B. Spence, *Federalism, Regulatory Lags, and the Political Economy of Energy Production*, 161 U. PA. L. REV. 431, 432 (2013) (asserting there is no overriding national interest to regulating fracking activities because of the controversy surrounding fracking).
 25. See Carlson, *supra* note 4, at 1135–36 (using California as an example of a state utilizing private investment to encourage innovation and reduce emissions).
 26. *Id.*
 27. See Eisen, *supra* note 5, at 21 (asserting that private investment in innovating with the smart grid can be utilized in a dynamic federalism model).
 28. See Klass, *supra* note 5.
 29. See Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267, 288 (1998) (“We call the overall system of public problem solving that combines federal learning with the protection of the interests of the federated jurisdictions and the rights of the individuals *democratic experimentalism*.”) (emphasis in original).

change is consistent with the idea of federalism as promoting a kind of interjurisdictional competition. As Ilya Somin writes:

Whereas the theory of interstate diversity assumes merely that states are responsive to the preferences of citizen-voters already residing within their boundaries, the theory of interstate competition asserts that states actively compete with each other to attract new citizens, who can improve their lot through the power of “exit” rights. Conversely, states also strive to ensure that current residents will not depart for greener pastures offered by competitors. Citizens dissatisfied with state policy have the option not only of lobbying for changes but also of moving to another state that deliberately seeks to attract them with more favorable policies. To the benefits of political voice provided by interstate diversity, the possibility of interstate competition adds those of exit.³⁰

An adaptive approach to federalism in the context of energy and climate change policy nicely illustrates how interjurisdictional competition could work. From the perspective of citizens, living in states that use lower carbon sources of energy might have an impact on the health and well-being of citizens and their offspring. Relying on a diversity of sources to generate electricity, as RPS standards promote, might soften the impact of volatilities in energy prices introduced through world political and economic events. Moreover, living in a state that is better prepared to address the effects of climate change might reduce the costs of property or health insurance and better insulate citizens from the extreme effects of weather patterns, coastal sea rise and the like.

Whether this kind of competition actually occurs in citizen decisions is the subject of much disagreement in the federalism literature.³¹ In contrast, there is considerable evidence that competition in state policy approaches has an effect on business decisions of firms in deciding where to locate plants and their operations.³² In the context of state sustainability initiatives, RPS standards are frequently touted as driving investments in energy development. There appears to be some anecdotal correlation between states with RPS standards and sustainable or green investment

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30. Ilya Somin, *Closing the Pandora’s Box of Federalism: The Case for Judicial Restriction of Federal Subsidies to State Governments*, 90 GEO. L.J. 461, 468 (2001).
31. See generally, Daniel L. Millimet, *Environmental Federalism: A Survey of the Empirical Literature*, 64 CASE W. RES. L. REV. 1669 (2014).
32. *Id.* at 1683–84 (summarizing second-generation studies that show a meaningful effect of environmental regulation on the location of economic activity).

activities.³³ Yet this correlation does not appear to be conclusive of causation, since many of the states with RPS standards also appear to be states that are already rich in the natural resources needed to produce renewable energy.³⁴

C. *Mediating Interstate Coordination Problems*

Less appreciated is how adaptive federalism solutions can produce policy benefits beyond diffusion, innovation, and competition. Where states converge on similar policy approaches, they may be able to solve spillover problems on their own by coordinating regulatory approaches. Environmental and energy regulation provides an example of these kinds of coordination benefits. In environmental law, it is well-recognized that state emissions standards can lead to the reduction of cross-border air and water emissions. The sharing of enforcement resources and information can also assist states, and sometimes even federal regulators, in implementing and enforcing standards.

In the energy context, the spillover benefits of coordination that flow from adaptive federalism are also significant. The benefits of a critical number of states coordinating their policy initiatives related to sustainable energy seem obvious where what is at issue are technical standards related to the interconnection of renewable sources with the grid or technologies such as smart meters. States are already working in this direction as they coordinate with private standard-setting organizations in the electric power industry.³⁵ Standards such as RPS have also facilitated coordination in utilities offering standard offer contracts for renewable power projects; these kinds of contracts have been essential to providing the credible commitments for projects necessary to attract long-term financing.³⁶ As state RPS standards

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33. See, e.g., Mindy Lubber, *Protecting Renewable Portfolio Standards from Cynical Attacks*, FORBES (March 19, 2013, 1:02 PM), <http://www.forbes.com/sites/mindylubber/2013/03/19/protecting-renewable-portfolio-standards-from-cynical-attacks/>.
34. Magali A. Delmas & Maria J. Montes-Sancho, *U.S. State Policies for Renewable Energy: Context and Effectiveness*, 39 ENERGY POL'Y 2273, 2282 (2011) (“While higher natural resources endowment can facilitate the adoption of policies that are not effective, some effective policies might be adopted in states with low resource potential [F]actors other than natural resources can predict successful renewable policies.”).
35. See Eisen, *supra* note 5 (describing state-led process, but ultimately arguing in favor of a national-led initiative to set standards for interconnection and smart grids).
36. Like TVA, many utilities subject to RPS standards operate in many states and, as RPS standards in the state in which they operate have proliferated, this has facilitated their offering standard offer contracts that provide power producers and consumers similar terms, reducing the costs of financing projects. *TVA Generation Partners Program / Mid-*

have proliferated, one problem that has arisen is that state renewable energy credits differ across state regarding what counts as a renewable resource and how these are credited towards RPS goals; the availability of tradable renewable energy credits present a monitoring problem, presenting the opportunity for double counting or even fraud.³⁷ Even absent any federal initiative or leadership relating to the issue, adaptive federalism approaches have facilitated the harmonization of renewable energy credits—coordination that ensures that the goals of RPS standards are not undermined.³⁸

Perhaps no issue in the energy industry illustrates the coordination benefits of adaptive federalism as vividly as does electric power transmission. The siting of electric power transmission lines is largely controlled by state regulators, who also bear direct responsibility for deciding who pays for the costs of new lines in retail rates. Adaptive federalism approaches to encouraging the development of new sources of electric power create shared opportunities and incentives for investment in new infrastructure. As multiple states in a particular region of the U.S. have developed a shared vision for the growth of renewable sources of electric power, there arises a need for new infrastructure to bring power supply to customers. For example, in the Midwest, multiple states have invested in promoting the development of wind energy, and share interests in seeing transmission expanded to accommodate transmitting wind energy to a larger customer base.³⁹ This kind of coordination can diffuse and minimize many of the barriers that might otherwise exist in state siting of transmission lines, including holdout problems.

These spillover benefits open up the door for better coordination of sustainability policies across states and improve the chances that any individual state’s climate change initiatives will be successful. In

Sized Standard Offer, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (Sept. 26, 2012), <http://epa.gov/agstar/tools/funding/incentive/Regional%20%28AL,%20GA,%20KY,%20MS,%20NC,%20TN,%20VA%29tvagenerationpartnersprogrammid sized.html> (TVA’s standard offer contract).

37. See Davies, *supra* note 3, at 1376–78, for a discussion about differences across states in accounting approaches for RECs.
38. See Center for Energy Economics, Bureau of Economic Geology, University of Texas at Austin, *Harmonization of Renewable Energy Credit (REC) Markets Across the U.S.*, CENTER FOR ENERGY ECONOMICS (Nov. 2009), http://www.beg.utexas.edu/energyecon/transmission_forum/CEE_National_RECs_study.pdf.
39. See, e.g., Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801 (2012) (describing the need for coordination in state transmission siting decisions, especially to address the development of wind energy in the Midwest and Western United States).

this sense, coordination among state policies can help to solve regional (and even national) problems—even in instances where the federal government has not imposed a floor or any incentive for states to take initiative. For sustainable energy, the spillover coordination benefits of adaptive federalism may be just as significant as the more conventionally recognized benefits, such as experimentation and interjurisdictional competition.

II. FEDERALISM’S POTENTIAL FOR MALADAPTATION

The adaptive federalism account above tells a very optimistic story about state regulation. But there is another side to the coin. A state acting independently can serve as a form of adaptation, especially when it produces some of the benefits described above. However, some of the same features of state and local governments that make adaptation attractive—such as the low costs of enacting laws—can also threaten or undermine it. Structural features of state governments may impede the ability of a state to recognize and weigh the interstate coordination benefits of its policy choice, producing the possibility of what I call “maladaptation.” For example, state limits on executive authority can limit the ability of governors or state agencies to take the lead in adopting adaptive policies in the first place. Even where a state has adopted an adaptive policy, such as an RPS standard, the ease of overcoming veto points in the state lawmaking process can just as easily lead a state to endorse parochial policies that fail to recognize the coordination benefits associated with adaptation.

The potential for adaptation at the state and local government level is no doubt present. But so is a potential for maladaptation—states acting in ways that thwart interstate coordination or other spillover associated with adaptive federalism. Conflating maladaptive forms of state regulation with adaptive federalism—as does the conventional account, which assumes states will always promote the goals of adaptive federalism merely by experimenting—is a conceptual and practical mistake. It masks important problems that policymakers must take into account for adaptive regulatory programs to succeed where there is a possibility of coordination benefits. I identify two types of maladaptation: recalcitrance, a type of state holdout problem, and backlash, or states reversing course to subvert sustainability initiatives of surrounding states.

A. *Maladaptive Recalcitrance*

Recalcitrance represents a classic form of government inaction. It occurs when a state or local unit of government makes no decision at all regarding a crucial issue of regional or national importance. California may have been a leader in adopting climate change policies, but other states such as West Virginia have not been quick out of the gate in addressing the impacts of carbon emissions. Failure to address

social problems in the first place is commonplace and occurs for a variety of reasons, including a deliberate judgment by policymakers that the benefits of acting do not justify the costs.

Recalcitrance can be quite consistent with the features of adaptive federalism. This may occur if a state's reasons for not acting relate to a policy innovation choice or a desire to learn from other states' approaches. It is entirely understandable that some subnational units of government may prefer the status quo over approaches to regulation that have been adopted by neighboring jurisdictions or that are emerging as a national trend. It is legitimate for a state to make an explicit political choice to opt for the status quo, as many states have in the context of marijuana laws or (prior to national health care policies) in failing to adopt state-specific plans to address health care costs. Yet, recalcitrance is sometimes a product of structural limits on state's making any decision at all; such structural limits can increase the costs of coordination for other states, thwart inter-jurisdictional competition, or preclude any consideration of spillover benefits of state policies. At the extreme, recalcitrance can represent an overt effort to thwart national regulatory goals, as may occur when a state or local government inaction precludes approval of an electric power transmission line that promotes coordination or creates interstate benefits, or if a state persistently fails to enforce environmental or health and safety regulations. Recalcitrance is especially likely to be maladaptive in the context of cooperative federalism initiatives—if for example, a state is resisting federal interference with its programs—although as I argue, its scope is not limited to cooperative federalism and extends to other scenarios where adaptation produces positive externalities.

By acting independently, a state may engage in inaction with respect to an issue related to climate change, favoring the status quo over innovations in sustainable energy. There are good reasons states may choose to do this, including poor renewable resource allocation for energy production (as may occur throughout parts of Southeastern United States) or a concern about the costs that sustainable energy initiatives may impose on consumers. These reasons may make recalcitrance legitimate, especially where a state has made a deliberate choice to favor the status quo. However, in some instances states may be recalcitrant not because of a deliberate choice, but because of structural limits on government action that impede any deliberate choice in the first place.

A good example of this maladaptive form of recalcitrance is state holdouts in siting new transmission lines for electric power. In some states, state siting statutes limit proposals for new transmission lines to an in-state utility, foreclosing any possibility of an out-of-state utility proposing to build a line and also foreclosing any possibility of

a non-utility developer proposing a line.⁴⁰ For example, in Arkansas an administrative law judge recently chose a transmission line route that would have relocated a line through Missouri; however the line’s proponent, a utility operating in Arkansas, lacked retail customers and operations in Missouri and thus may be ineligible to apply for eminent domain to build the line.⁴¹ Even in states that might allow for a broader range of transmission line developers to propose to build lines, many state regulators are limited in considering the impact of a line on in-state residents and are not allowed to consider the broader benefits a new line might create for the reliability and efficiency of the grid regionally.⁴² Arizona regulators, for example, took a narrow approach to considering the benefits of a new line, refusing to approve a transmission line that would allow for the export of low carbon emission power to Southern California.⁴³ Arizona regulators nixed the proposed transmission line calling the project a “230-mile extension cord.”⁴⁴ The limited legal authority of many state siting statutes means that in many instances regulators cannot even act on applications to build transmission lines that would relieve congestion on the grid and open up new markets for renewable energy sources, especially wind power.

Similar stories may perhaps be told about state regulators failing to implement cooperative federalism programs where they lack enforcement authority, or about states refusing to pass implementing legislation for initiatives related to the implementation of federal health care laws or authorizing cooperation with federal immigration policies. It is important, of course, to distinguish maladaptive recalcitrance from a state making a deliberate choice to act independently to support the status quo. What makes recalcitrance maladaptive is the institutional features of state governments that thwart any effort to evaluate benefits of status quo vis-à-vis the alternatives. For example, the limited siting statutes for electric power transmission avoid placing any political choice on a state’s regulatory agenda at all. Recalcitrance can become maladaptive when it begins to undermine other adaptive federalism goals, especially when it strategically increases the costs of interstate coordination or attempts to thwart any inter-jurisdictional competition by attempting to

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40. Ashley C. Brown & Jim Rossi, *Siting Transmission Lines in a Changed Milieu: Evolving Notions of the “Public Interest” in Balancing State and Regional Considerations*, 81 U. COLO. L. REV. 705, 719–21 (2010).
41. See Jeffrey Tomich, “Very Real” Tension Between Grid Operators, State Regulators on Display in Ark. Siting Case, ENERGY & ENV’T (Feb. 14, 2014), <http://www.eenews.net/stories/1059994595>.
42. Brown & Rossi, *supra* note 40, at 721–26.
43. *Id.* at 725.
44. Tomich, *supra* note 41.

impose one state's approach onto other states in a region. As the example of state holdouts in transmission siting illustrates, a core problem is that state inaction may work to benefit a few at the expense of the many in ways that are not welfare-enhancing and that thwart the kind of interstate coordination needed to solve some regulatory problems. When this occurs, it should not be celebrated as a form of adaptive federalism but should be recognized as maladaptation.

B. Maladaptive Backlash

Another variation of maladaptive federalism is state or local regulatory backlash. Of course, reversing or diluting a previous policy course may occur for good reasons, including a state's assessment that the costs of a previous choice do not justify the benefits. For example, states may legitimately adopt a moratorium on activities such as fracking or limit a state agency's jurisdiction—completely reversing the previous regulatory status quo—especially where there is a need to take some time to learn about benefits, or because a decision has been made that the benefits do not justify the costs. States may also whittle away at programs, diluting previous regulatory priorities. However, what makes reversal or dilution of policy choices maladaptive is the low cost of their enactment, given limits on veto points in adopting policies at the state and local level.⁴⁵ States legislatures may, for example, reverse adaptive federalism policies for reasons related to symbolic political values or as an effort to thwart regional innovation, with little or no serious assessment of jurisdictional or regional benefits. This kind of backlash may be common in cooperative federalism programs, where states resist federal regulatory encroachment; backlash also presents a potential for maladaptation in contexts where there is no federal regulation at all—as where a state with a stand-alone regulatory program rapidly changes course without any serious evaluation of the program.

A lead example this Article discusses is the national movement to repeal and dilute clean energy standards, also known as renewable portfolio requirements (RPSs). As is argued above, state initiatives like RPS standards advance adaptive federalism goals, such as

45. Some of these limits are a byproduct of the simple fact that subnational units of government are smaller and more likely to be responsive to interest groups, which also face fewer collective action obstacles at the state or local level than they may face at the national level. *See* THE FEDERALIST NO. 10 (Madison). Other features, however, relate to the state lawmaking process, which does not generally face as many obstacles in law adoption as does the U.S. Congress. The highest profile example of course is the adoption of direct democracy initiatives in many states. *See* Caroline J. Tolbert & Daniel A. Smith, *Representation and Direct Democracy in the United States*, 42 REPRESENTATION 25 (2006).

coordination. But RPS standards promote sources of energy that are more expensive to produce than energy from fossil fuel-fired plants and, not surprisingly, have also come under attack for imposing costs on consumers. This has led to a backlash effort to repeal or scape back RPS initiatives in many of the more than thirty states that have adopted them.⁴⁶

Nationally, the push to repeal state RPS's is being driven by the American Legislative Exchange Council (ALEC), a group that stresses free-market views and drafts legislation supporting its positions.⁴⁷ The organization has drafted model legislation, dubbed the *Electricity Freedom Act*,⁴⁸ aimed at repealing state renewable energy mandates across the country.⁴⁹ The model legislation takes the position that wind and solar power are too expensive and unreliable, and that requiring utilities to use renewable energy threatens grid reliability and ultimately increases the cost of doing business through rate increases or higher taxes.⁵⁰

This model legislation is influencing RPS repeal initiatives in more than a dozen states, with over forty bills to repeal or cut-back within the scope of RPS standards considered by state legislatures in 2013.⁵¹ For example, former Duke Energy engineer, current ALEC member, and current North Carolina Representative Mike Hager was the lead sponsor of the HB 298 proposal seeking repeal of the North

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46. U.S. efforts to repeal RPS standards are not unique, and echo repeal efforts to repeal or scale back renewable energy requirements that have occurred in Europe and elsewhere in the world. See Stephen Castle, *Europe, Facing Economic Pain, May Ease Climate Rules*, N.Y. TIMES, Jan. 22, 2014, available at http://www.nytimes.com/2014/01/23/business/international/european-union-lowers-ambitions-on-renewable-energy.html?_r=0.
47. ALEC counts among its members some of the most powerful fossil fuel energy corporations, including ExxonMobil, Koch Industries, Duke Energy and Peabody Energy, the country's largest coal producer. ALEC CORPS., http://www.sourcewatch.org/index.php/ALEC_Corporations (last visited March 3, 2014).
48. See *Be Alerted: ALEC Prioritizes Renewable Energy for Next Year*, SUSTAINABLE BUS. (Nov. 6, 2012, 11:27 AM), <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/24245>.
49. See Tiffany Germain & Matt Kasper, *The Loophole That's Letting Conservatives Manipulate Renewable Energy Standards*, CLIMATE PROGRESS (Mar. 4, 2013, 12:30 PM), <http://thinkprogress.org/climate/2013/03/04/1662051/hydropower-renewable-energy-standards/>.
50. *Be Alerted*, *supra* note 48.
51. See Maria Gallucci, *Renewable Energy Standards Target of Multi-Pronged Attack*, INSIDECLIMATE NEWS (Mar. 19, 2013), <https://insideclimatenews.org/print/24712> (“In total, 42 separate efforts are wending their way through legislatures and courts in more than two dozen states. . .”).

Carolina RPS - a proposal based on ALEC’s model legislation.⁵² North Carolina’s RPS, enacted in 2007, requires 12.5% of electricity from investor-owned utilities to come from renewable sources by 2021.⁵³ A bill introduced in 2013, House Bill 298, titled the *Affordable and Reliable Energy Act*,⁵⁴ proposed to fully repeal North Carolina’s RPS. The proposed bill suggested the state RPS is a “wasteful, uneconomic, and inefficient” use of energy.⁵⁵ Perhaps indicative of a strong fossil-fuel industry lobbying influence, surviving text to the current RPS law targeted by House Bill 298 includes provisions allowing utilities to charge their ratepayers to recover compliance costs from the clean energy requirements.⁵⁶

Such RPS repeal efforts have had a high profile. They have not generally succeeded for a variety of reasons.⁵⁷ Yet they continue to be proposed and considered.⁵⁸ Even where outright repeals have not been passed into law by state legislature several states have used the opportunity to reassess and, in some instances, substantially dilute existing RPS standards. There are several other examples of potential backlash regarding RPS standards, including: expansion of the definition of renewable sources to reduce RPS quotas, to include hydro or other conventional sources, to introduce multiplier effects for favored sources, or repeal of state biofuel standards.⁵⁹

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52. See Connor Gibson, *Duke Energy & Koch Brothers Aim to Kill Clean Energy in North Carolina*, GREENPEACE BLOGS, <http://greenpeaceblogs.org/2013/03/14/alec-bill-to-kill-nc-clean-energy-law-surfaces-koch-fronts-and-duke-energy-behind-the-curtains/>.
 53. N.C. GEN. STAT. § 62-133.8 (2007).
 54. H.B. 298, Sess. 2013 (N.C. 2013).
 55. *Id.*
 56. See N.C. GEN. STAT. § 62-133.8(h)(4) (2007).
 57. See generally Brad Plumer, *State Renewable-Energy Laws Turn Out to be Incredibly Hard to Repeal*, WASH. POST: WONKBLOG (Aug. 8, 2013, 3:52 PM), <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/08/08/state-renewable-energy-laws-turn-out-to-be-really-hard-to-repeal/> (discussing the difficulty of repealing state renewable energy laws and reasons for such difficulty).
 58. See, e.g., Jeffrey Tomich, *In Kansas, Renewable Energy Standard Again Under Attack*, MIDWEST ENERGY NEWS (Jan. 24, 2014), <http://www.midwestenergynews.com/2014/01/24/in-kansas-renewable-energy-standard-again-under-attack/>.
 59. See Katherine Heriot Hoffer & Jeff Lyng, *The Real RPS Story Is Not Rollback*, ADVANCED ENERGY PERSPECTIVES (Jul. 11, 2013, 5:41 PM), <http://blog.aee.net/aee/bid/316387/the-real-rps-story-is-not-rollback> (describing the most common policy initiative adopted by state legislatures regarding RPS standards in 2013 as “expansion in the definitions of eligible resources” including the additions of hydroelectric power in the RPS standards in Connecticut and Montana).

Like recalcitrance, backlash should not be automatically celebrated as a form of adaptive federalism, especially when it undermines innovation at the state level or efforts by states to coordinate renewable and sustainable energy initiatives. The concern is that some backlash initiatives are motivated by efforts to increase the costs of interstate coordination or thwart others' innovations and pose significant negative externalities on those outside of the state that is reversing its previous initiatives. At the core, concerns with backlash are difficult to identify and probably would require some assessment of what is motivating a state's lawmaking efforts, but that does not mean that indifference towards state efforts is required by federalism.

III. ADDRESSING MALADAPTATION

The coordination challenges presented by adaptive federalism arise because state-led initiatives can create both positive and negative externalities. Positive externalities may arise where one state takes the lead but other states hold out from addressing a problem because they can benefit from the leading state's regulatory program. There is nothing wrong with positive externalities per se, but their existence may undermine the incentives for some states to take initiative in the first instance. Negative externalities arise when one state's initiatives impose costs outside of that particular jurisdiction that undermine other states' initiatives. For example, negative externalities may result from state-led cap and trade initiatives, due to carbon leakage.⁶⁰ Similarly, as Lincoln Davies has highlighted, state RPS programs can impose monitoring costs on other states, as the need to evaluate out-of-state renewable energy production becomes important to a workable renewable energy credit trading program.⁶¹

To the extent that maladaptation presents a problem for climate change and sustainability initiatives, a challenge for regulators is how to minimize maladaptation without a) decreasing the space for independent state regulatory initiatives, or b) launching into a futile exercise in attempting to determine the intent or purposes of state regulators. The best tools for facilitating adaptive federalism would leave sufficient space for independent state decisions to flourish and innovate in ways that enhance social welfare, without requiring federal agencies or courts to assess the intent or purpose of subnational regulators on a case-by-case basis. The analysis presented in this Article favors entrenchment tools that are attentive to the enactment costs of maladaptation, rather than outright preemption.

60. See Wiener, *supra* note 19, at 1966–73 (discussing state level actions and carbon leakage).

61. See Davies, *supra* note 3, at 1378–79.

This kind of approach leaves states the opportunity to evolve independently, as adaptive federalism envisions, while also allowing the federal government a role in setting an agenda and in steering policy objectives. Climate change and sustainability initiatives provide a particularly fertile opportunity for the federal government to play this role.

A. *Conventional Federal Tools for Discouraging Maladaptation*

The two most common tools used by the federal government to address the coordination issues presented by adaptive federalism solutions are the substantive preemption of state law and the provision of monetary incentives. In the end, however, the type of preemption in most environmental statutes does not solve the need to address coordination problems among state regulatory standards, implementation and enforcement approaches. Cooperative federalism programs, such as many environmental statutes that rely on backup penalties imposed by the federal government, do not necessarily solve interstate coordination problems presented by adaptive federalism initiatives. Indeed, in contexts where such programs do not exist—such as in the standards for development of renewable energy—state regulators are largely left to their own devices in developing, implementing and enforcing regulatory standards, such as RPS programs.

Expansive federal preemption, such as field preemption of a regulatory area or express preemption of a state’s regulatory initiatives, would avoid the need for state regulation of an activity altogether. Where the federal government completely “preempts” a certain regulatory area, it leaves states little ability to decide regulatory programs on their own, and thus may reject adaptive federalism solutions to regulatory problems. In the environmental and energy law contexts, such preemption is rare, and is usually accomplished through express rather than field preemption.⁶²

62. While rare, such preemption is not extinct. Section 209(d) of the Clean Air Act prohibits states from adopting “any standard relating to the control of emissions from new motor vehicle[s].” 42 U.S.C. § 7543(a) (2006). There are exceptions to this rule. *See* Carlson, *supra* note 4, at 1109 (discussing California’s request for waiver of the CAA’s one-size-fits-all standard for motor vehicles); *see also* Jonathan H. Adler, *Hothouse Flowers: The Vices and Virtues of Climate Federalism*, 17 TEMP. POL. & CIV. RTS. L. REV. 443, 462–64 (2008) (arguing in favor of a general waiver provision for environmental law, similar to California’s fuel waiver provision in the CAA). Other preemption provisions can be found in the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. § 136v(b) (2012), and the Toxic Substances Control Act, 15 U.S.C. § 2617 (2012).

In contrast to this kind of preemption, many federal environmental statutes, such as the Clean Air Act⁶³ and Clean Water Act,⁶⁴ establish “floor” regulatory standards.⁶⁵ Such standards allow states significant flexibility in enforcing federal standards and pursuing their own emissions standards over and above the federal minimum.⁶⁶ Elsewhere, a co-author and I have argued that this kind of “floor” preemption should serve as a model for energy as well as environmental law.⁶⁷ While floor preemption may leave states considerable leeway to pursue their own regulatory priorities, floor preemption does not necessarily solve the coordination challenges presented by adaptive federalism. Indeed, to the extent it leave states space to decide what standards and implementation programs to allow, it may even encourage the kinds of independent state decisions that prevent maladaptive coordination problems.

Independent of preemption, there may be opportunities for the federal government to solve coordination problems through the provision of regulatory carrots (typically monetary benefits) or the imposition sticks (penalties). Although the availability of carrots may depend on national resources, there may be opportunities for federal regulators to offer states incentives to coordinate and share information in developing and enforcing regulatory standards. Some cooperative federalism programs draw on such “carrots,” especially where the federal government offers fiscal incentives for states to cooperate. As Brian Galle has observed, the political process has a tendency to overproduce carrots.⁶⁸ Still, the availability of “carrots” depends on the federal budget, and the distribution of dollars can raise significant conditional funding and commerce clause problems (e.g., health care). Even if funding for coordinated solutions were

63. Clean Air Act, 42 U.S.C. §§ 7401–7671(q) (2006).

64. Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387 (2006).

65. See, e.g., Buzbee, *supra* note 14, at 1565–66.

66. For a skeptical argument regarding the ability of floor preemption to improve emissions standards, see generally Adler, *supra* note 9.

67. See Jim Rossi & Thomas Hutton, *Federal Preemption and Clean Energy Floors*, 91 N.C. L. REV. 1283 (2013).

68. Brian Galle, *The Tragedy of the Carrots: Economics and Politics in the Choice of Price Instruments*, 64 STAN. L. REV. 797, 797 (2012). Galle identifies a range of reasons for the overproduction of carrots by government, *id.* at 844, including the congressional budget process, but he also observes that the overproduction of carrots at the subnational level may be especially likely due to inter-jurisdictional competition among states. *Id.* at 841–42. Some programs that are embraced as forms of adaptive federalism operate as carrots, and if these are overproduced it may be important to retain space for reconsideration or repeal of such programs—an approach that is consistent with the enactment cost approach made in this section.

available, at a minimum, there are structural limits on what the federal government can do in making carrots contingent on states adopting particular policy approaches.⁶⁹

Stick approaches, such as penalties for noncompliance with a pre-articulated standard, have worked well in the context of environmental statutes such as the Clean Air Act.⁷⁰ However, these also depend on Congress giving federal agencies direct or backup enforcement authority—and in many areas of energy and environmental regulation there is no such federal enforcement mechanism. Absent enforcement sticks, which exist in some cooperative federalism programs, it is not clear how well adaptive federalism works—and it seems to be precisely these kinds of contexts where maladaptation can present problems for coordinated interstate solutions to regulatory programs.

B. State-Led Efforts to Discourage Maladaptation

State-led efforts can address coordination problems, even absent any kind of preemption or monetary incentives on the part of the federal government. A good example of a bottom-up regional effort to try to address coordination problems in the context of climate change is the Regional Greenhouse Gas Initiative (RGGI) in the Northeastern U.S.—“a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont to cap and reduce CO₂ emissions from the power sector.”⁷¹ RGGI has not only led to a market-based trading initiative, but has facilitated greater coordination of RPS standards and other sustainability initiatives among its member states, helping to entrench and strengthen state-led initiatives.⁷² RGGI is a voluntary initiative negotiated by the governors of its member states; although its members have agreed to treat emissions reductions as binding, it has no sovereign authority, and all authority is vested entirely within its member states.⁷³ Similarly voluntary

69. See, e.g., Erin Ryan, *The Spending Power and Environmental Law After Sebelius*, 85 U. COLO. L. REV. 1003 (2014).

70. Clean Air Act, 42 U.S.C. §§ 7401–7671(q) (2006).

71. See Reg'l Greenhouse Gas Initiative, REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/>.

72. For a discussion of how RGGI policies interact with state RPS standards, see Robert C. Grace, *Regional Greenhouse Gas Initiative Moves Forward—What Does It Mean for Wind Power*, NEW ENGLAND WIND F., http://www.windpoweringamerica.gov/newengland/policy_rggi.asp.

73. See *Reg'l Greenhouse Gas Initiative, RGGI, Inc.*, REGIONAL GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/rggi>.

initiatives to address climate issues have developed among western and midwestern states.⁷⁴

States might also potentially draw on more formal arrangements to coordinate and address spillover problems with sustainability initiatives. Interstate agreements could allow states to create binding and enforceable agreements, but under the Constitution these require the consent of the U.S. Congress.⁷⁵ In 2005 Congress amended the Federal Power Act to authorize three or more contiguous states to enter into an interstate compact that establishes regional siting agencies for electric power transmission and prohibited FERC from using its preemptive backstop authority over state siting operating under such compacts.⁷⁶ As Robin Craig has argued, interstate compacts present an opportunity to solve many of the interstate coordination problems associated with the expansion of electric power transmission facilities; although FERC itself may not be able to preempt state siting procedures, compacts themselves may prove helpful in using preemption in overcoming state holdout problems.⁷⁷ However, such compacts have been slow to form; despite widespread use of interstate compacts in addressing regional issues such as water and port management, no interstate compacts have been formed to address electric power transmission issues—though states are beginning to consider the possibility.⁷⁸

Short of state-led initiatives of formal compacts, voluntary industry arrangements may also help to solve some of the coordination challenges presented by adaptive federalism programs. Voluntary initiatives have no doubt played a significant, albeit underappreciated, role in environmental regulation, alongside federal and state-led initiatives.⁷⁹ In the context of energy and sustainability initiatives, private initiatives have also been significant mechanisms

74. See DSIRE: Database of State Incentives for Renewables & Efficiency, *supra* note 19 (summarizing multi-state climate initiatives).

75. U.S. CONST. art. I, § 10.

76. Energy Policy Act of 2005, § 1221(i), Pub. L. No. 109-58, 119 Stat. 594 (codified as 16 U.S.C. § 824(p)(i) (2012)).

77. Robin K. Craig, *Constitutional Contours for the Design and Implementation of Multistate Renewable Energy Programs and Projects*, 81 U. COLO. L. REV. 771, 824–28 (2010).

78. See Jim Malewitz, *States Weigh Compact to Bolster Energy Grid*, STATELINE (July 26, 2013), <http://www.pewstates.org/projects/stateline/headlines/states-weigh-compact-to-bolster-energy-grid-85899493041>.

79. See generally Michael P. Vandenbergh, *Private Environmental Governance*, 99 CORNELL L. REV. 129, 129 (2013) (discussing the value of “private activities as a discrete new model of environmental governance”).

for solving interstate coordination problems. Some of these initiatives have included industry-wide certification of technical standards for smart grid and transmission operation⁸⁰ as well as private initiatives certifying renewable energy credits for RPS programs.⁸¹ In addition, although voluntary arrangements such as power pools have played a major role in managing interstate power markets for decades,⁸² beginning in the 1990’s interstate regional transmission operators (RTOs) began to form as voluntary organizations comprised of utilities owning transmission lines.⁸³ RTOs, which operate subject to the regulatory approval of FERC, have filled an important regulatory gap by helping private firms to mediate the coordination challenges presented by independent state regulatory initiatives—in ways that neither state nor federal authorities have been able to mediate on their own.

C. Diffusing Maladaptation by Addressing Enactment Costs

Adaptive federalism approaches may thrive in contexts where federal regulators have sticks at their disposal to steer states towards a certain regulatory vision. A good example is how federal environmental regulators can recognize certain state energy efficiency initiatives in implementing its new carbon emissions regulation under section 111(d) of the Clean Air Act, or how a state may opt out of these flexible approaches in favor of imposition of stricter emissions requirements by the EPA (which ultimately may serve as a form of penalty for states not adopting energy efficiency or RPS standards).⁸⁴ However, even where federal regulators lack any authority to impose standards directly onto the states, federal regulators may still have

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80. For an excellent discussion of these industry-led efforts, see Eisen, *supra* note 5, at 29–31.
81. See Green-e, *Renewable Energy Certificates 101*, GREEN-E, http://www.green-e.org/learn_recs_101.shtml (providing background information about one such program, called Renewable Energy Certifications (RECs)).
82. PAUL L. JOSKOW & RICHARD SCHMALENSEE, *MARKETS FOR POWER: AN ANALYSIS OF ELECTRIC UTILITY DEREGULATION* 4–8 (1983) (describing the role that private pooling arrangements played in promoting reliability standards in the electric power industry during the 1960’s and 1970’s).
83. See *Regional Transmission Organizations (RTO)/Independent System Operators (ISO)*, FEDERAL ENERGY REGULATION COMMISSION, <http://www.ferc.gov/industries/electric/indus-act/rto.asp> (last visited Feb. 28, 2014) (describing the formation of RTOs and ISOs).
84. See Nathan Richardson, *Playing Without Aces: Offsets and the Limits of Flexibility Under Clean Air Act Climate Policy*, 42 ENVTL. L. 735, 774 (2012) (discussing the options states have for flexible environmental policy).

tools at their disposal to discourage maladaptation—specifically by paying attention to the enactment costs associated with the state lawmaking process that produces adaptive federalism initiatives. Energy law provides an example of how federal regulators can do this.

Federal or regional regulation can discourage the kinds of maladaptation that are most likely to be welfare-reducing or present accountability problems by being attentive to the enactment costs associated with the lawmaking process that produces subnational maladaptation. This can be done through applying implied preemption doctrine to reduce the costs of adopting adaptive programs and increasing the costs of maladaptation without the federal government making a policy choice on behalf of a state. Recalcitrance can be addressed by lowering the enacting costs of subnational adaptation—as with federal statutes to authorize governors or state agencies to act, even where state legislatures have not authorized them to do so or have explicitly limited their authority. Backlash can be addressed by increasing the costs of state repealing regulatory approaches that create positive externalities; this can be done if federal regulators endorse state policies that produce national or regional benefits without explicitly adopting them as a one-size-fits-all solution.

Federal agencies may also possess tools to decrease the costs of states taking adaptive approaches to problems related to climate change in the first place. One of the barriers to states approving transmission lines is the perception that state executive officers often do not possess the power to approve transmission lines for the interstate power market absent state legislative authorization—a policy that gives the status quo of no legislative authorization a virtual veto point over any approval of new transmission lines.⁸⁵ In the federal spending context, Roderick Hills has argued in favor of “dissecting the state” by using federal preemption to authorize municipal governments and counties to accept federal dollars even absent state legislative authorization.⁸⁶ Similarly, the use of implied preemption based on the Federal Power Act, which authorizes FERC to set just and reasonable rates⁸⁷ and to promote reliability in

85. See Jim Rossi, *Transmission Siting in Deregulated Wholesale Power Markets: Re-Imagining the Role of Courts in Resolving Federal-State Siting Impasses*, 15 DUKE ENVTL. L. & POL’Y F. 315, 332–38 (2005) (offering a proposal to deal with “recalcitrant state legislatures”).

86. Roderick M. Hills, Jr., *Dissecting the State: The Use of Federal Law to Free State and Local Officials from State Legislatures’ Control*, 97 MICH. L. REV. 1201, 1201 (1999).

87. FERC has exclusive jurisdiction over the “transmission of electric energy in interstate commerce,” and over the “sale of electric energy at wholesale in interstate commerce,” and over “all facilities for such transmission or sale of electric energy.” Federal Power Act § 201, 16

interstate power markets,⁸⁸ could be used as a mechanism to preempt state separation of powers limitations on executive, municipal government or county approval over transmission lines.⁸⁹ Such an approach might consider non-legislative actors as presumptively authorized to consider applications by non-utilities or utilities from outside of that particular jurisdiction, or require them to take into account broader national concerns in refusing or denying siting applications.⁹⁰ Such preemption could be constructed or a state legislature could explicitly pass a law to the contrary, overriding any federal authorization for a state regulator to act, but this would occur through a deliberate choice, not by merely adhering to the status quo. By preempting state separation of powers limitations on the ability of state regulators to consider siting applications or to take into account broader benefits, federal regulators could reduce the enactment costs associated with states implementing adaptive federalism solutions, enabling a lawmaking process at the state level that would promote greater interstate coordination. This kind of approach to reducing the costs of adaptive federalism approaches to energy and environmental issues can also be used to empower governors, mayors and other executive officials to take into account climate change and sustainability goals in their policy initiatives.⁹¹

In the context of adaptive federalism programs that have been adopted by individual states but are challenged by backlash at the state level, such as with repeal of RPS standards,⁹² federal regulators also have opportunities to address enactment costs and discourage maladaptive approaches by states. Where state regulators have adopted adaptive federalism measures that produce national or regional benefits but attempt to dilute or repeal them, federal regulators can discourage maladaptive approaches through regulatory measures that are attentive to the enactment costs associated with regulatory change at the state level. Federal regulators can do so by

U.S.C. § 824(b) (2012). For the sections providing for FERC’s rate authority, see Federal Power Act §§ 205–06, 16 U.S.C. §§ 824d–824e (2012).

88. Section 215 gives FERC authority to promote grid reliability. Federal Power Act § 215, 16 U.S.C. § 824o (2012).

89. See *supra* note 85 and accompanying text.

90. Congress authorized FERC having backstop preemptive authority over state siting approval of transmission lines in limited geographic areas in 2005, but courts have scaled back on FERC’s authority and the agency has never exercised it. See *Klass & Wilson, supra* note 39, at 1858 (discussing the history of “federal backstop siting authority”).

91. See *supra* note 85 and accompanying text.

92. See *supra* notes 44–58 and accompanying text (discussing RPS repeal initiatives).

endorsing state or regional policy goals or build these into national or regional regulatory priorities, thereby increasing the enactment costs of state backlash.

An example of this in the energy context is FERC’s landmark Order No. 1000, adopted in 2011.⁹³ Order No. 1000 amends the transmission planning and cost allocation requirements that FERC previously established in Order No. 890⁹⁴ to require coordinated regional transmission planning, including the consideration of state public policy requirements in the planning process.⁹⁵ In addition, Order No. 1000 addresses how the costs of new transmission projects are paid for by requiring each regional or interregional plan to include a method for allocating costs of producing the proposed new transmission facility that comports with some basic principles.⁹⁶ Regional transmission planning is intended to resolve a region’s transmission needs “more efficiently or cost-effectively than solutions” planned by each individual public utility transmission provider—as has historically occurred.⁹⁷ Order No. 1000 requires the local and regional transmission planning process to account for transmission needs driven by what FERC calls “Public Policy Requirements”⁹⁸—defined to include state enacted statutes and regulations for the electric power industry.⁹⁹ Renewable portfolio standards are an important example of the types of state laws that would affect transmission needs, and must be considered when creating the regional plan.¹⁰⁰

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93. Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000), 76 Fed. Reg. 49,842 (Aug. 11, 2011) (to be codified at 18 C.F.R. pt. 35). In a consolidated challenge to Order No. 1000 by several state regulators and utility industry stakeholders, the U.S. Court of Appeals for the D.C. Circuit upheld FERC’s rules. *See* S.C. Pub. Serv. Auth. v. FERC, ___ F.3d ___ (D.C. Cir. 2014) (12-1232).
 94. Preventing Undue Discrimination and Preference in Transmission Service (Order No. 890), 72 Fed. Reg. 12,266 (Mar. 15, 2007) (to be codified at 18 C.F.R. pts. 35 & 37) (requiring each public utility transmission provider to have a coordinated, open, and transparent regional transmission planning process).
 95. *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000-A), 77 Fed. Reg. 32,184, 32,189 (May 31, 2012) (to be codified at 18 C.F.R. pt. 35) (discussing the scope of Order No. 1000).
 96. *See id.* at 32,184 (affirming Order No. 1000’s requirements).
 97. *Id.* at 32,202.
 98. Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000), 76 Fed. Reg. at 49,871.
 99. *Id.* at 49,845.
 100. *See id.* at 49,919.

One federalism objection¹⁰¹ some in the industry raise with Order No. 1000 is based on the principle that the federal government cannot commandeer state legislatures and executives to pursue federal interests.¹⁰² More specifically, industry commentators in the rulemaking process have claimed that FERC cannot require public utility transmission providers to consider the impacts of public policies under federal and state laws and regulations. Boiled down, the concern is that consideration of regional planning based on public policy requirements can produce a result where one state’s public policy agenda dominates the others. If one state’s policy dominates the outcome of the regional transmission planning process, the policies of that state in effect could be forced onto customers in other states within that region, regardless of whether they have voted against such a policy in their home state.¹⁰³ This disconnect between who establishes public policy and who is affected by it, critics maintain, creates a potential accountability problem. Regional planning could allow one state to impose costs on consumers in another state “without sufficient democratic or procedural checks and balances.”¹⁰⁴ Of course, RTOs are tasked with reconciling and prioritizing competing state policies, yet they are insulated from the political process. Citizens who disagree with the regional plan, or the Public Policy Requirements that affect the plan’s creation, may not be able to vote to change the plan if the officials shaping the plan are in another state or are not in an elected position. In the worst scenario, the Order might permit one state’s public policy agenda to adversely affect electricity prices in another state that does not share that

101. FERC Order Nos. 1000, 1000-A, and 1000-B collectively only mention “federalism” in Order No. 1000-A’s part III.A.1.e. *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000-A), 77 Fed. Ref. at 32,216 (“Several petitioners express concerns . . . that the requirements raise federalism issues.”). Over and over again in its order FERC claims that nothing in the order preempts state authority, but to the extent FERC’s order envisions the agency approving cost allocation mechanisms, this may preempt state retail rate decisions. *See id.* at 32,219 (“We disagree . . . that Order No. 1000’s requirements regarding Public Policy Requirements raise significant federalism issues.”).

102. *See, e.g.,* New York v. United States, 505 U.S. 144, 177–78 (1992) (holding that state sovereignty constrains federal mandates); Printz v. United States, 521 U.S. 898, 926 (1997) (confirming this anti-commandeering principle).

103. *See* Request for Clarification and Rehearing at 10, 136 FERC ¶ 61,051 (2011) (No. RM10-23-000) (arguing that regional regulation raises federalism concerns).

104. *Id.*

agenda.¹⁰⁵ In effect, this means the Order permits the federal government to require state taxpayers to subsidize the policy goals of other states that are in no way politically accountable to the burdened state.

Ultimately, however, Order 1000 changes the planning *process*, and does not mandate any specific outcome. FERC adopted these planning requirements to help ensure that transmission service is offered at just and reasonable rates, and not to infringe on state jurisdiction.¹⁰⁶ On rehearing, FERC clarified that the Order only requires consideration of the Public Policy Requirements; it does *not*, however, mandate that these requirements be fulfilled, whether they are RPS policies or other energy efficiency or climate change measures.¹⁰⁷ Moreover, it characterizes the Public Policy Requirements as “facts” that can affect the need for transmission services, and that merely need to be considered.¹⁰⁸ Of course, in implementation, FERC may frown upon proposed plans that fail to adopt such state requirements, but it has not yet done so.

In the end, this landmark set of regulations provides a mechanism for multi-state transmission operators (RTOs), and FERC, to endorse state public policy goals such as RPS standards in transmission planning and cost allocation. Once an RTO has considered these as a part of its planning process, to the extent it incorporates them into future transmission projects and their cost allocation, this can help to entrench existing state public policy requirements within a particular region. At this point, any state legislature that wished to endorse a policy at odds with these priorities, or repeal them, would face higher enactment costs (making repeal of RPS standards less likely); for example, RPS repeal efforts would face resistance from utilities in the state that are members of an RTO that has taken these into account (helping utilities to recover the costs of compliance and new transmission infrastructure in their rates), and if these are repealed, the RTO will now face the potential for overcapacity in transmission infrastructure—a cost that would be borne at least in part by consumers in that state. Of course, increasing the costs of repeal may

105. *See* Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000-A), 77 Fed. Ref. at 32,216 (noting concerns that regional policies could impact some states adversely).

106. Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000), 76 Fed. Reg. 49,842, 49,860 (Aug. 11, 2011) (to be codified at 18 C.F.R. pt. 35).

107. Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities (Order No. 1000-A), 77 Fed. Ref. at 32,217.

108. *Id.*

also increase the costs of adopting a policy in the first place, if state political actors expect that their policies are more difficult to reverse; this might make adaptation more difficult in some circumstances, but also can produce accountability benefits by ensuring that state political actors have weighed the implications of their policy choices. In this sense, by increasing the enactment costs of maladaptation, Order No. 1000 may not present the kind of accountability deficiency some of its critiques allege. Instead, it can be understood as an effort to improve accountability of state policy choices to ensure that adaptive federalism measures are more sensitive to the coordination benefits that they can produce.

CONCLUSION

In sum, federalism provides space for state politics to encourage adaptation, but not all independent state regulation should be celebrated as a form of “adaptive federalism.” State climate change initiatives provide a fertile example of how adaptation can be effective in addressing social problems, particularly where the federal government has not adopted comprehensive legislation. However, state politics can also sometimes lead to inaction or backlash—forms of maladaptation that can undermine adaptive federalism, particularly its coordination benefits. This Article does not suggest that this is constitutionally inappropriate, or that it should be limited. However, what has been described as maladaptation can represent a type of inaction or backlash that, at its core, is not consistent with federalism in certain regulatory contexts. This kind of maladaptation presents a challenge for regulatory policies designed to promote innovation, interjurisdictional competition, or coordinated regional approaches. Yet most discussions of federalism are generally indifferent to the substance of state policy choices and assume any exercise of state sovereignty advances federalism values, regardless of the nature of the state policy. Maladaptation illustrates how this view is impoverished.

In some instances, exercises of state power simply cannot be characterized as promoting the values of regulatory competition, improved interstate coordination, or regulatory experimentation—a state political choice can be welfare-reducing (as where the benefits are concentrated and the costs dispersed, especially to those outside of a jurisdiction), or may not be made in a way that is politically accountable (as where positive externalities are ignored). FERC Order No. 1000 is an illustration of how federal regulators have tools at their disposal that do not preempt the ability of states to make adaptive policy choices while also increasing the enactment costs of states acting to thwart or undermine the benefits of coordination.

Ultimately, federalism theories must account for maladaptive exercises of state power, and assess how best to respond. This Article has argued in favor of federal initiatives that leave states the flexibility in policy choices but that are attentive to the enactment

costs of states adaptation measures, especially in contexts where coordination among states is desirable and direct federal enforcement is lacking. I have made an effort to furnish such an account of adaptive federalism for one narrow corner of federalism, using energy and the environment as an example. To the extent that adaptive federalism's values extend to other areas where subnational governance is desirable, the lessons about addressing maladaptation may prove useful to understanding the entrenchment of state policies in federalism discussions more generally.