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## Article

### The Political Barriers to a National RPS

DAVID B. SPENCE

*A national renewable portfolio standard (“RPS”) represents one way to move the American economy toward cleaner sources of energy. By requiring electricity providers to secure a specified percentage of their power from renewable sources, a national RPS would replace some fossil-fueled power with cleaner power from solar, wind, biomass, and other renewable energy sources. As such, it represents one tool policy makers can use to reduce American emissions of greenhouse gases, which drive climate change. At the same time, a national RPS imposes its own costs—costs that make passage of a national RPS politically difficult. Renewable energy sources are, generally speaking, more expensive than conventional sources, meaning that increased reliance upon renewables implies higher electricity rates. While those higher rates will fall on today’s voters, many of the benefits of using renewable power will accrue to future generations and to people living outside of the United States. In addition, some parts of the country are blessed with more renewable energy potential than others, meaning that the national standard would impose more costs on some regions than others. This Article examines why these issues make supporting a national RPS politically risky and difficult for members of Congress.*

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# The Political Barriers to a National RPS

DAVID B. SPENCE\*

## I. INTRODUCTION

Thomas Edison famously predicted that man would one day “harness the rise and fall of the tides and imprison the rays of the sun.”<sup>1</sup> Indeed, shortly before his death he told his friend Henry Ford, “I’d put my money on the sun and solar energy. What a source of power! I hope we don’t have to wait till oil and coal run out before we tackle that.”<sup>2</sup> As Professor Lincoln L. Davies demonstrates in his comprehensive and engaging article advocating a national renewable portfolio standard (“RPS”), we have been promoting renewable energy for several decades now, though our efforts to date have been halting and fragmented.<sup>3</sup> We have beaten Edison’s deadline in that we are “tackling” renewables issues while we continue to rely heavily on oil and coal; yet one imagines that Edison would be frustrated with the relative lack of progress we have made toward the goal of harnessing the power of the tides and the sun after all this time.

Professor Davies’ article provides a number of valuable contributions to our understanding of renewables and energy policy. First, his survey of state RPSs provides a comprehensive picture of state efforts, one that we would not have but for his analysis of existing state policies. Second, Professor Davies’ evaluation of those state standards shines a light on some of their important defects, including the way some disguise their low aspirations, fragment renewable energy credit (“REC”) markets,<sup>4</sup> and flout the Dormant Commerce Clause.<sup>5</sup> Finally, and most importantly, Professor Davies makes a strong practical and philosophical argument for a national RPS, one that makes good sense.

My primary criticism of his argument, however, is that it disposes of counterarguments a little too easily, particularly those arguments whose political resonance might explain why a national RPS has eluded us despite years of effort. Indeed, Professor Davies’ case seems to belie a kind of

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<sup>1</sup> ANNA SPROULE, THOMAS A. EDISON: THE WORLD’S GREATEST INVENTOR 60 (2000).

<sup>2</sup> JAMES D. NEWTON, UNCOMMON FRIENDS: LIFE WITH THOMAS EDISON, HENRY FORD, HARVEY FIRESTONE, ALEXIS CARREL & CHARLES LINDBERGH 31 (1987).

<sup>3</sup> Lincoln L. Davies, *Power Forward: The Argument for a National RPS*, 42 CONN. L. REV. 1339, 1339 (2010).

<sup>4</sup> *Id.* at 1376–79.

<sup>5</sup> *Id.* at 1368.

surprise or frustration with arguments against a national RPS. This may be a byproduct of his contention that the current debate over a national RPS has lost its focus. Since more than thirty states have created their own RPSs, says Davies, we ought not to be discussing the merits of the RPS as a policy instrument, but rather whether a federal standard is preferable to the system of state standards we now have.<sup>6</sup> There are, however, very real political impediments to the goal of enacting a national RPS, and, to my reading at least, Professor Davies does not give all of the opposing interests and arguments their full due. I share Professor Davies' preference for a national RPS, but a national RPS requires congressional action that will only be forthcoming if a majority of legislators decide that a national RPS serves their interests. Those interests, in turn, are related (but not necessarily identical) to voters' interests or the national interest.

## II. THE CASE FOR INTEGRATION

Professor Davies' case for a national RPS is an argument for a better integrated policy, in two respects. First, he seeks to integrate energy law and environmental law. Second, he seeks an integrated, national market for RECs that is driven by a national RPS. This Part addresses both arguments in turn, before turning to the legislative politics of a national RPS in Part III.

### A. *The Energy and Environmental Law Contexts*

Professor Davies begins with the observation that energy law and environmental law are related in important ways and argues that it is necessary to understand each in the presence of the other. Both legal regimes regulate many of the same actors, but for reasons Davies explains nicely, they sometimes work at cross purposes to one another. Environmental law seeks to internalize pollution costs, thereby making the production of energy more costly and the price higher. Energy regulation, by contrast, seeks efficient pricing, toward which end regulators often focus on controlling market power so as to keep prices down. As Professor Davies notes, this is an artifact of both traditional energy regulation and the bumpy road to competitive markets.<sup>7</sup> Davies summarizes the evolution of electricity markets over the last thirty years, a period during which wholesale markets and some retail markets (those in a minority of states) moved from traditional public utility regulation and administrative price-

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<sup>6</sup> *Id.* at 1342–45.

<sup>7</sup> *Id.* at 1391–92. For more detailed treatment of the regulation of market power after restructuring, see David B. Spence, *Can Law Manage Competitive Energy Markets?*, 93 CORNELL L. REV. 765, 779–82 (2008).

setting to competition and market pricing.<sup>8</sup> In states where retail service is provided by the licensed monopoly, the public utility commission sets rates with an eye toward guarding against monopoly pricing. In wholesale markets and competitive retail markets, regulators fear a repeat of the California energy crisis of 2000–01, and remain on the lookout for evidence of market power in the form of high prices.<sup>9</sup>

Meanwhile, the last three decades have also seen a transformation of the environmental regulatory landscape. I am referring not so much to the movement toward market-based regulatory instruments that Professor Davies describes. Rather, I am referring to the imposition of increasingly broad and stringent regulatory requirements on fossil-fueled power plants, which have reduced emissions of sulfur dioxide, nitrogen oxides, particulate matter, and mercury from those sources. The 1990 amendments to the Clean Air Act<sup>10</sup> created the so-called “acid rain program,” which imposed additional sulfur dioxide regulation on previously grandfathered coal-fired power plants through the first national marketable permit program in the United States.<sup>11</sup> Just as importantly, litigation has, over several decades, extended most of the rest of the Clean Air Act regulatory

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<sup>8</sup> Professor Davies states that retail competition is “moribund,” and that the benefits of competition may therefore never “reach fully down to the everyday consumer.” Davies, *supra* note 3, at 1353–54. This seems to me an overstatement. The *spread* of retail competition has stopped, and a few states have returned from competition to traditional regulation. Retail competition, however, remains the norm in a significant minority of states. See KENNETH ROSE & KARL MEEUSEN, 2005 PERFORMANCE REVIEW OF ELECTRIC POWER MARKETS: UPDATE AND PERSPECTIVE 34 (2005), available at [http://www.scc.virginia.gov/comm/reports/2005\\_rose.pdf](http://www.scc.virginia.gov/comm/reports/2005_rose.pdf) (reporting that sixteen states and the District of Columbia allow retail access to electricity markets). Indeed, some retail markets are reputed to be running fairly well. See, e.g., L. Lynne Kiesling & Andrew N. Kleit, *Introduction to ELECTRICITY RESTRUCTURING: THE TEXAS STORY* 1, 1–2 (L. Lynne Kiesling & Andrew N. Kleit eds., 2009) (discussing Texas’s move to a retail market).

<sup>9</sup> Davies, *supra* note 3, at 1354–55; see also FED. ENERGY REGULATORY COMM’N, FINAL REPORT ON PRICE MANIPULATION IN WESTERN MARKETS: FACT-FINDING INVESTIGATION OF POTENTIAL MANIPULATION OF ELECTRIC AND NATURAL GAS PRICES, at ES-1 (2003), available at <http://www.ferc.gov/industries/electric/indus-act/wec/rev-chron.asp> (concluding that “large-volume, rapid-fire trading by a single company, in what was incorrectly assumed to be a liquid market, substantially increased natural gas prices in California”); FED. ENERGY REGULATORY COMM’N, THE WESTERN ENERGY CRISIS, THE ENRON BANKRUPTCY, AND FERC’S RESPONSE 2 (2005), available at <http://www.ferc.gov/industries/electric/indus-act/wec/chron/chronology.pdf> (chronicling the “major Commission actions during and following the Western energy crisis and Enron’s collapse”); Spence, *Can Law Manage Competitive Energy Markets?*, *supra* note 7, at 779–81 (discussing market regulation efforts in the wake of the California energy crisis).

<sup>10</sup> 42 U.S.C. § 7612 (2006).

<sup>11</sup> Marketable permit programs usually involve the auctioning or free distribution of rights to pollute, rights which can be sold to or purchased from others. Such programs can achieve reductions in overall pollution levels by reducing the number of permits auctioned or distributed each year. Marketable permit systems reduce compliance costs (compared with traditional permitting) because the polluters that can reduce pollution least expensively will bear the lion’s share of the pollution reduction obligation. For a good summary of marketable permit programs in the United States, see U.S. Environmental Protection Agency, National Center for Environmental Economics, Trading and Marketable Permits, <http://www.epa.gov/> (search “5.6. Trading and Marketable Permits”) (last visited June 11, 2010).

scheme to those grandfathered plants.<sup>12</sup> The 1990 amendments also paved the way for the regulation of toxic mercury emissions from coal-fired power plants, though that process was slowed considerably by litigation and political change.<sup>13</sup>

Yet despite these developments, Americans continue to rely heavily on fossil-fueled power. Despite its growing regulatory burden, coal remains the dominant source of electric power in the United States, comprising about one-third of our total annual electric generation.<sup>14</sup> We can conceive of RPSs as a response to this state of affairs. As Professor Davies notes, state RPS programs date back to the 1980s, but they have spread fairly rapidly since.<sup>15</sup> Indeed, some of the states that restructured their retail electric markets preserved or imposed an RPS as part of their restructuring plans, in response to concerns that a competitive generation market would favor coal.<sup>16</sup> As Professor Davies notes, these state RPS programs can be credited with much of the growth we have seen in renewable technologies; as a consequence, in percentage terms, some renewable sources (e.g., wind) are growing faster than coal-fired generation. Renewables, however, started from a very small base. In 2008, renewables, including hydroelectric power, constituted about 9.3% of American electric generation, about two-thirds of which was hydroelectric power.<sup>17</sup> In fact, the lion's share of growth in electric generating capacity since the 1970s has been taken by natural gas-fired plants,<sup>18</sup> which are relatively

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<sup>12</sup> Not only have standards for air emissions from coal-fired power plants grown more stringent over time, a series of legislative and regulatory developments have extended their coverage to older, previously grandfathered, coal-fired power plants, and oil refineries. For a summary of the decades-long legal battles over this so-called "new source review" issue, see FRED BOSSELMAN ET AL., *ENERGY, ECONOMICS, AND THE ENVIRONMENT: CASES AND MATERIALS* (3d ed., forthcoming 2010) (manuscript at 216–21, on file with author), and David B. Spence, *Coal-Fired Power in a Restructured Electricity Market*, 15 *DUKE ENVTL. L. & POL'Y F.* 187, 193–99 (2005). In *Environmental Defense v. Duke Energy Corp.*, the Supreme Court affirmed the EPA's discretion to apply (more stringent) new source standards to older plants on which earlier repair work was done, permitting the plant to operate longer, thereby emitting more pollution annually. 549 U.S. 561, 565–68 (2007).

<sup>13</sup> See BOSSELMAN ET AL., *supra* note 12. In *New Jersey v. EPA*, the D.C. Circuit overturned the Bush administration's relatively lenient approach to regulating mercury emissions from coal-fired plants. 517 F.3d 574, 577–78 (D.C. Cir. 2008).

<sup>14</sup> ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, *ELECTRIC POWER ANNUAL 2008*, at 18 (2010), available at <http://www.eia.doe.gov/cneaf/electricity/epa/epa.pdf> [hereinafter EIA, *ELECTRIC POWER ANNUAL 2008*]. Across the individual American states, there is great variety in their generation mixes. Some states relied on coal for as much as ninety percent of their generating capacity; others have little or no coal-fired capacity. See, e.g., ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, *STATE ELECTRICITY PROFILES 2007*, at 25–30, 103–08 (2009), available at [http://www.eia.doe.gov/cneaf/electricity/st\\_profiles/sep2007.pdf](http://www.eia.doe.gov/cneaf/electricity/st_profiles/sep2007.pdf) (profiling the energy use of California and Kentucky).

<sup>15</sup> Davies, *supra* note 3, at 1341–42.

<sup>16</sup> See, e.g., ME. REV. STAT. ANN. tit. 35-A, § 3210 (2009) (Maine's restructuring law); NEV. REV. STAT. ANN. § 704.7821 (West 2009), amended by S. 358, 2009 Leg., 75th Reg. Sess. (Nev. 2009) and Assem. 387, 2009 Leg., 75th Reg. Sess. (Nev. 2009) (Nevada's restructuring law); see also Spence, *Coal-Fired Power*, *supra* note 12, at 199–202 (discussing the effects of market restructuring and regulation on pollution from coal combustion).

<sup>17</sup> EIA, *ELECTRIC POWER ANNUAL 2008*, *supra* note 14, at 2.

<sup>18</sup> Spence, *Coal-Fired Power*, *supra* note 12, at 214–15.

inexpensive to build, produce fewer pollutants per unit of energy produced than coal, and have benefited from advances in turbine design that have driven down costs.<sup>19</sup> Moreover, while renewables can compete on price in a few places, fossil-fueled power plants seem likely to retain their cost advantages even in the face of more stringent regulation of emissions of sulfur dioxide, nitrogen oxides, particulates, and mercury. As described below, however, that advantage is less clear when we add greenhouse gas controls.

Professor Davies recognizes a kind of complementarity between the respective movements toward market-based regulation in environmental law and toward competition in energy law. He argues that an RPS “merges” energy and environmental law so that they do not undermine one another.<sup>20</sup> In a conceptual sense, that may be true, but only at the margins. Certainly an RPS provides environmental benefits by promoting particular energy sources. It does so, however, not by way of some merger of two kinds of market-based regulation; rather, it is a mandate. It requires retailers who might otherwise generate or acquire power elsewhere to get some of it from renewable sources. While states may have the right to approve construction of power plants, an RPS goes one step further, specifying the use of particular sources of power. If an RPS permits compliance by purchasing RECs, the mandate can be *satisfied* in part using a market for RECs, that is, retailers may either generate renewable power or buy RECs.<sup>21</sup> But it is a mandate nevertheless, one that constrains choice. A national RPS may be a good idea, but I do not share Professor Davies’ sense that it represents (or will trigger) a broader integration of environmental and energy law, let alone one that embraces markets.

In fact, the move to competition in the electricity industry has, in some ways, made the world less hospitable for renewables. When electric utilities were vertically integrated operations, and investors could count on a guaranteed return on investment (through cost of service ratemaking), investment in a power plant or a transmission line was a much less risky venture. The owner of the grid was also the owner of most or all of the generation of the system, and the owner did not need to worry about competition from yet-to-be-built plants, or whether there would be adequate transmission to get the power to customers. That is no longer the case. Prospective investors in renewable and nonrenewable plants alike must worry about competition. A national RPS would provide a guaranteed market to renewable plants, but does not ensure that any particular plant will find a customer. Nor does it guarantee that the owner

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<sup>19</sup> For a more detailed comparison of the cost and environmental attributes of natural gas and other electric generating technologies, see *infra* Part III.B.1–2.

<sup>20</sup> Davies, *supra* note 3, at 1344.

<sup>21</sup> *Id.* at 1359–60.

of the generating plant will be able to get his power to customers. For that, the owner needs a connection to the grid.

Restructuring of electricity markets has brought competition to wholesale markets, but it has also strained the electric grid by drastically increasing the number and volume of arms-length wholesale electricity sales. More energy is traveling longer distances over the grid than ever before, and investment in new transmission capacity is not keeping pace with demand. To the extent that RPSs provide incentives for construction of central station renewables, such as wind farms or concentrated solar plants, those facilities are likely to be located far from the customers they will serve. This will put additional strain on the electric grid, and we are already seeing disputes over who should pay for the extension of transmission lines to renewable generation plants located far from load.<sup>22</sup> This is primarily a cost allocation issue and does not undermine Professor Davies' case for a national RPS, but it does go to the question of the magnitude of the benefits of an RPS.

Similarly, I think that Professor Davies overstates his case when he argues that increased reliance on renewable power will increase system reliability by diversifying the generation mix. In places where wind and solar offer a cost-competitive alternative to natural gas, their presence may act as a hedge against rising gas prices. Wind and solar, however, face another reliability problem: intermittency. Davies acknowledges this problem, but he does not offer a persuasive rejoinder to it. Wind turbines provide power to the grid only when the wind blows. Solar stations provide power to the grid only when the sun shines. Some critics of renewables argue that grid operators must therefore keep fossil fuel plants on spinning reserves (running and ready to provide power to the grid) in case the wind stops blowing or the sun stops shining.<sup>23</sup> These reliability

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<sup>22</sup> Federal Energy Regulatory Commission ("FERC") Chairman Jon Wellinghoff discussed these issues in testimony before Congress last year:

FERC also has approved rates to fund the development of transmission facilities needed for renewable resources. . . . Last year, the Commission addressed the delays of Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) in processing the requests of planned generation projects to interconnect with the electric grid. Many of these projects are wind projects. . . . A significant expansion of renewable resources in our electricity supply portfolio will impose other stresses on the electric grid, requiring additional high-voltage transmission facilities, network upgrades, and feeder lines. It is highly unlikely that the transmission facilities necessary to deliver the output of these renewable resources will be constructed without additional federal planning, siting, and cost allocation authority.

*Climate Change and Clean Energy: Hearing Before S. Comm. on Environment and Public Works, 111th Cong. (2009)* (statement of Jon Wellinghoff, Chairman, FERC).

<sup>23</sup> James Schlesinger & Robert. L. Hirsch, Opinion, *Getting Real on Wind and Solar*, SALT LAKE TRIB., Apr. 24, 2009.

claims are sometimes overstated;<sup>24</sup> for example, recent generations of wind turbines are much less sensitive to changes in wind speeds, and they are thus able to generate more reliable power from variable wind conditions, than their ancestors.<sup>25</sup> Concerns about intermittency, however, are not wholly without merit. In most locations, renewable power is not *as* reliable as fossil-fueled power, and this is especially true as we move from the best renewable plant locations (which are being taken) toward second-best locations. Therefore, as renewable generation is deployed, it will not displace fossil-fueled power on a megawatt-to-megawatt basis, unless and until we develop the capacity to store electric energy in larger quantities. While a great deal of research energy is being devoted to this problem,<sup>26</sup> commercially viable alternatives that solve the intermittency dilemma remain unavailable.

Nevertheless, some political momentum for a “transition to a sustainably fueled society”<sup>27</sup> remains, thanks to the rise of climate change as a front burner issue. As Professor Davies notes, fossil-fueled power plants continue to shift to society the costs associated with greenhouse gas emissions, including costs associated with climate change.<sup>28</sup> Scientific concern over the effects of anthropogenic emissions of greenhouse gases is not new: the leading scientific organization for the study of global warming and climate change, the Intergovernmental Panel on Climate Change (“IPCC”), was created more than two decades ago.<sup>29</sup> Within the last half-decade, however, the world’s climatologists have concluded that human activity—emissions of carbon dioxide and other greenhouse gases<sup>30</sup>—is “*very likely*” hastening global warming.<sup>31</sup> Global mean

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<sup>24</sup> In some places and at some times, the wind blows and the sun shines quite reliably. In the Southwest, solar power is fairly reliable and generates the most power during periods of peak demand (late afternoons).

<sup>25</sup> Leland E. Teschler, *Green Technology: Inside an Advanced Wind Turbine*, MACHINE DESIGN, June 5, 2008, <http://machinedesign.com/article/green-technology-inside-an-advanced-wind-turbine-0605>.

<sup>26</sup> Some analysts have suggested that energy from renewable stations can be stored in the form of compressed air or using flywheels. Neither these technologies, nor battery technology, have developed sufficiently to present a solution to the electricity storage problem. For a summary of the technical aspects of electricity storage, see National Renewable Energy Laboratory, Energy Storage Basics, [http://www.nrel.gov/learning/eds\\_energy\\_storage.html](http://www.nrel.gov/learning/eds_energy_storage.html) (last visited June 8, 2010).

<sup>27</sup> This, says Professor Davies, is the core objective of the RPS. Davies, *supra* note 3, at 1358.

<sup>28</sup> See *id.* at 1370–71 (analyzing the ability of a national RPS to eliminate the “social costs associated with the mining, processing, transportation, combustion, and clean-up of fossil and nuclear fuels” (quoting Benjamin K. Sovacool & Christopher Cooper, *Congress Got It Wrong: The Case for a National Renewable Portfolio Standard and Implications for Policy*, 3 ENVTL. & ENERGY L. & POL’Y J. 85, 127 (2008))).

<sup>29</sup> The IPCC was established by the United Nations Environment Program. For a brief description of the panel’s history, see Intergovernmental Panel on Climate Change, History, [http://www.ipcc.ch/organization/organization\\_history.htm](http://www.ipcc.ch/organization/organization_history.htm) (last visited June 8, 2010).

<sup>30</sup> The primary greenhouse gases are carbon dioxide, nitrous oxide, and various fluorocarbon compounds. Molecules of these gases tend to trap more solar radiation in the atmosphere than do other air molecules. While most of these other gases trap more heat than carbon dioxide on a molecule-by-

temperatures are behaving consistently with the models produced by climatologists,<sup>32</sup> and the effects projected by these models (including unprecedented shrinking of polar ice caps) are happening. As a result of human activity, greenhouse gas concentrations in the atmosphere have increased from their preindustrial level of 280 parts per million (“ppm”) to their current level of just under 380 ppm.<sup>33</sup> While there is much less agreement over the nature and distribution of the effects of warming, concern about the worst-case scenario has motivated calls for changes in the way the world produces and uses energy. Because greenhouse gases dissipate slowly in the atmosphere, today’s emissions will have warming effects for many years to come. Over the last decade, climatologists and a majority of the world’s political leaders have concluded that growth in greenhouse gas emissions ought to be managed so as to limit them to a maximum concentration of 450 ppm or lower, in order to minimize the probability of catastrophic effects.<sup>34</sup> All of this seems to offer support for state RPS programs, the regulation of greenhouse gas emissions, and, perhaps, a national RPS. The question, then, is which combination of these regulatory approaches makes the most sense?

#### B. *Analysis of State RPS: Politics Matters*

Professor Davies makes a strong case for the superiority of a federal RPS over a series of state RPSs, and his insightful and comprehensive exploration of state RPS programs reveals some important problems with the state-by-state approach. He evaluates each existing state RPS’s effectiveness (or “efficacy tendency”) by scoring each on four dimensions. Three of his four dimensions shine a light on the role domestic politics plays in state RPS policy. The first criterion, “aspirational aggressiveness,” focuses on the question of whether the standard is voluntary or mandatory. The second criterion, which he calls “salience distortion,” focuses on the extent to which the state RPS does what it claims to do. His fourth criterion, “enforcement rigor,” assesses the

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molecule basis, carbon dioxide volumes in the atmosphere dwarf those of the other gases, making it the focus of most of the regulatory and policy attention.

<sup>31</sup> *Summary for Policymakers*, in CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 1, 3 (2007), available at [http://www.ipcc.ch/publications\\_and\\_data/publications\\_ipcc\\_fourth\\_assessment\\_report\\_wg1\\_report\\_the\\_physical\\_science\\_basis.htm](http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm).

<sup>32</sup> According to the IPCC, “Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.” *Id.* at 5.

<sup>33</sup> *Id.* at 2.

<sup>34</sup> See, e.g., Michael Oppenheimer & Annie Petsonk, *Article 2 of the UNFCC: Historical Origins, Recent Interpretations*, 73 CLIMACTIC CHANGE 195, 205–11 (2005) (discussing potential consequences of elevated CO<sub>2</sub> levels).

stringency of (de facto) penalties for noncompliance.<sup>35</sup> Taken together, these criteria separate state programs that are truly action-forcing from those that are mere window dressing. If a state RPS is voluntary, or if penalties for noncompliance are less than the benefits of noncompliance, we cannot expect the RPS to affect behavior. Likewise, if the renewable capacity would have been built without the RPS, the RPS does not advance the goal of transitioning to a post-fossil-fueled economy. But these weak or toothless “standards” have political value: they let politicians take credit for symbolic action without imposing costs on influential constituents.

For example, the early versions of Texas’s RPS were certainly not terribly ambitious. Thanks to favorable conditions for wind-based generation in west Texas (and subsidies, such as the production tax credit), wind capacity in west Texas developed rapidly, exceeding some of the state RPS goals before they took effect.<sup>36</sup> Similarly, one cannot compare the aggressiveness of state targets merely by looking at the numerical targets themselves. In 1999, the State of Maine established a renewable electricity target of thirty percent; however, Maine includes its ample existing hydroelectric resources within its definition of renewable power, making the thirty percent goal seem much less ambitious.<sup>37</sup> On the other hand, some state RPSs have high aspirations and do set mandatory standards for renewable electricity that the market seems unlikely to meet on its own. Distinguishing the action-forcing RPSs from those that represent mere symbolic action is difficult, and Professor Davies’ look behind the numbers is a welcome addition to our understanding and comparison of state RPSs.

Professor Davies’ remaining criterion for evaluating state RPSs—“market definition”—identifies another problem that we can chalk up to state politics, namely, the tendency of legislators to build protectionist elements into RPSs, elements that may be unconstitutional. The Dormant

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<sup>35</sup> Davies, *supra* note 3, at 1360–62.

<sup>36</sup> RYAN WISER & OLE LANGNISS, LAWRENCE BERKELEY NAT’L LAB., THE RENEWABLES PORTFOLIO STANDARD IN TEXAS: AN EARLY ASSESSMENT 11 (2001), available at <http://eetd.lbl.gov/EA/EMP/reports/49107.pdf>. Wisser and Langniss note:

That the initial RPS targets are to be exceeded may therefore come as little surprise: wind power in Texas, with the PTC, is close to competing on purely economic grounds against new natural gas facilities, even with relatively low natural gas prices. With early over-compliance with the purchase standard and compliance costs that are at low levels given the competitive pricing offered by renewable generators, there have been calls for increasing the policy’s renewable electric capacity goals.

*Id.*

<sup>37</sup> *Id.* at 16. Maine subsequently added a ten percent non-hydro requirement to its RPS to address this deficiency. See DSIRE: Database of State Incentives for Renewables & Efficiency, Maine: Incentives/Policies for Renewables & Efficiency, [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=ME01R&state=ME&CurrentPageID=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=ME01R&state=ME&CurrentPageID=1) (last visited June 7, 2010).

Commerce Clause<sup>38</sup> places strict limits on the ability of states to impede interstate commerce. Professor Davies states that “a number of state RPSs favor in-state renewable resources,” either by giving more credit (toward reaching the mandated target) for using power from in-state renewable generators than out-of-state generators or by directly limiting credit for imported renewable power.<sup>39</sup> Some of these forms of favoritism are almost certainly unconstitutional.<sup>40</sup> This sort of intentional impediment to the operation of interstate markets for renewable electricity, combined with the absence of a uniform definition of renewables and limits on the tradability of RECs are among the strongest parts of Professor Davies’ argument for a national standard. Trading enables those who can provide renewable power at the least cost to bear more of the burden of meeting RPS goals, but tradable emissions permit markets require liquidity in order to work well.<sup>41</sup> Restricting the REC market geographically limits buyers’ access to low-price REC generators. Therefore, a national market for RECs has a much better chance of reducing the costs of complying with an RPS in significant ways.

Thus, Professor Davies is exactly right when he says that if RECs are not tradable across state lines (either because different states define the credits differently or because cross-border trades are prohibited), REC markets will do a much poorer job of reducing compliance costs<sup>42</sup>—all of which suggests that a national RPS ought to do the work of the fifty state RPSs much more efficiently.

### III. POLITICS: THE PROSPECTS FOR A “REPUBLICAN MOMENT”

Of course, the creation of a national RPS requires congressional action, which means garnering the support of a majority of both the House and the Senate. Professor Davies is fully aware of this, and he offers some convincing rebuttals to the arguments that political opponents raise in opposition to a national RPS. His rejoinder to the argument that an RPS gives renewables an unfair advantage in the market is a strong one. He

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<sup>38</sup> Of course, the Commerce Clause of the U.S. Constitution authorizes Congress to regulate interstate commerce. U.S. CONST. art. I, § 8, cl. 3. Since the 1824 case of *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824), Supreme Court jurisprudence has interpreted the Commerce Clause to imply limits on state regulation of interstate commerce. For a good summary of Dormant Commerce Clause jurisprudence and its applicability to state RPSs, see Nathan E. Endrud, Note, *State Renewable Portfolio Standards: Their Continued Validity and Relevance in Light of the Dormant Commerce Clause, the Supremacy Clause, and Possible Federal Legislation*, 45 HARV. J. ON LEGIS. 259, 265–74 (2008).

<sup>39</sup> Davies, *supra* note 3, at 1368.

<sup>40</sup> See Endrud, *supra* note 38, at 270–74.

<sup>41</sup> For a discussion of the importance of liquidity in emissions markets, see Christopher S. Hooper, Student Article, *Limiting the Use of Emissions Allowances: A Statutory Analysis of Title IV of the 1990 Amendments to the Clean Air Act*, 5 N.Y.U. ENVTL. L.J. 566, 599 (1996).

<sup>42</sup> Davies, *supra* note 3, at 1379–80.

notes that traditional fuels have long enjoyed their own policy advantages (including subsidies of one kind or another) not given to other fuels,<sup>43</sup> and that fossil fuels have benefited from the ability to shift some of their costs (in the form of pollution) to society. These costs may not be easy to monetize, but they are real and substantial nevertheless. Professor Davies also has an answer to the objections of legislators representing states with low renewable generation potential (i.e., states with few wind, solar, or other renewable resources). It is true, he notes, that a national RPS will force a geographic transfer of wealth, but so do most regulatory programs.<sup>44</sup>

Why, then, have members of Congress not recognized the wisdom of the case for a national RPS? It cannot be simply that entrenched business interests are holding this good idea hostage. We know from experience that such interests can be overcome. The history of American environmental law has witnessed so-called “republican moments”—instances in which the broad interest in environmental protection has overcome entrenched local interests to produce national legislative victories.<sup>45</sup> If the public interest is compelling enough, it can overcome even powerful resistance. Congress passed the Clean Air Act, Clean Water Act, and other major environmental statutes over the initial objections of industry, in part because the public demanded it.<sup>46</sup> Can we depend upon reasoned arguments to overcome local interests in the case of a national RPS in much the same way they did in the case of the Clean Air Act or the Clean Water Act? I think not, because the politics of a national RPS are different, and more difficult, in several important ways.

#### A. Electoral Effects and Regulatory Legislation

It is commonplace in analyses of congressional behavior to begin with the following generally accepted premises. The first is that *members of Congress are motivated by a mix of goals, but the desire to be reelected is preeminent among them.*<sup>47</sup> Thus, legislators may seek particular policy

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<sup>43</sup> *Id.* at 1358–59.

<sup>44</sup> *Id.* at 1367.

<sup>45</sup> This idea comes from James Gray Pope, *Republican Moments: The Role of Direct Popular Power in the American Constitutional Order*, 139 U. PA. L. REV. 287, 311–13 (1990); see also Daniel A. Farber, *Politics and Procedure in Environmental Law*, 8 J.L. ECON. & ORG. 59, 66–67 (1992) (adapting the idea of republican moments to environmental politics).

<sup>46</sup> For a lengthier discussion of the political logic of republican moments, see Farber, *supra* note 45, at 66–67; Christopher H. Schroeder, *Rational Choice vs. Republican Moment—Explanations for Environmental Laws, 1969–1973*, 9 DUKE ENVTL L. & POL'Y F. 29, 31, 45–46 (1998). For a rational choice explanation of republican moments, see David B. Spence, *A Public Choice Progressivism, Continued*, 87 CORNELL L. REV. 397, 429–32, 436 (2002).

<sup>47</sup> This is the working assumption of most congressional scholars in political science. For the often-credited best argument of this working assumption, see DAVID MAHYEW, *CONGRESS: THE ELECTORAL CONNECTION* 14–17 (1974).

goals, prestige, career advancement within the institution, and more; however, in order to accomplish any of these goals, a legislator must remain in office.<sup>48</sup> Hence, reelection is the overriding goal. The second premise is that *most voters are rationally ignorant*, that is, they remain relatively uninformed about most policy decisions.<sup>49</sup> It is rational for voters to be relatively less informed about policy choices because they lack the time, the resources, and (sometimes) the inclination to become fully informed. Instead, they delegate the process of making informed decisions to their elected representatives. From these two propositions we can deduce some important conclusions about how individual legislators make policy choices.

Calculations of the electoral risk associated with different courses of action will drive the initial stages of the legislator's decisionmaking process. Thus, for each policy choice a legislator faces, she must try to anticipate the electoral risk of her action alternatives.<sup>50</sup> That calculation, in turn, will depend upon several factors:

1. The *electoral vulnerability* of the legislator (the safety of the legislator's seat and the reservoir of trust, or "leeway,"<sup>51</sup> the legislator has developed among her reelection constituency).
2. "The legislator's perception of how *salient* the issue is to voters, and how likely it is that voters will become aware of the legislator's choice . . . ."<sup>52</sup>
3. The *traceability* of the consequences of the vote, both negative (the risk of blame) and positive (the ability to claim credit),<sup>53</sup> which in turn is partly a function of the issue's salience and other factors.<sup>54</sup>

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<sup>48</sup> *Id.* at 16.

<sup>49</sup> Economist Anthony Downs is credited with popularizing this notion. ANTHONY DOWNS, AN ECONOMIC THEORY OF DEMOCRACY 246 (1957).

<sup>50</sup> R. DOUGLAS ARNOLD, THE LOGIC OF CONGRESSIONAL ACTION 14–15 (1990); WILLIAM T. BIANCO, TRUST: REPRESENTATIVES AND CONSTITUENTS 14–16 (1994); MORRIS P. FIORINA, RETROSPECTIVE VOTING IN AMERICAN NATIONAL ELECTIONS 11 (1981). Arnold notes that a vote can rouse the "inattentive public," a risk to which legislators must constantly attend. ARNOLD, *supra*, at 68–70.

<sup>51</sup> BIANCO, *supra* note 50, at 22–24.

<sup>52</sup> See Spence, *A Public Choice*, *supra* note 46, at 423 & n.114; see also BIANCO, *supra* note 50, at 14–15.

<sup>53</sup> See ARNOLD, *supra* note 50, at 47–51; RICHARD F. FENNO, JR., HOME STYLE: HOUSE MEMBERS IN THEIR DISTRICTS 137–41 (1978).

<sup>54</sup> Other factors might include the extent to which the public will associate an adverse outcome with the legislator's vote. See ARNOLD, *supra* note 50, at 48–49 (positing that traceability requires a visible individual contribution by the legislator); FIORINA, *supra* note 50, at 5–6 (arguing that citizens "know what life has been like during the incumbent's administration" and need not know what the actual policies entail in order to "see or feel the *results* of those policies").

4. “The legislator’s perception of voters’ *preference intensity*—that is, the importance of the issue to voters relative to other issues on which the legislator has taken a position.”<sup>55</sup>

Consider how these factors work together to produce legislative decisions that may or may not represent the opinions of the median voter.<sup>56</sup> If an issue is not salient to most voters, the legislator’s seat is electorally “safe,” and/or the consequences of the decision will not be traceable to the legislator, she may feel free to deviate from her median constituent’s preferences. That is, she may pursue her electoral goals by choosing policies that serve the interests of a minority for whom the issue is particularly salient or important, at the expense of the majority of her constituents’ preferences.<sup>57</sup>

Social scientists have long argued that wealthy individuals and business groups exert disproportionate influence over the policy process in this very way. Speaking long ago about the role of interest group pressure in the policy process, political scientist E.E. Schattschneider stated, “The flaw in the pluralist heaven is that the heavenly chorus sings with a strong upper-class accent. Probably about 90 percent of the people cannot get into the pressure system.”<sup>58</sup> Economist Mancur Olson, Jr. offered a logical explanation for this perception, arguing that small, organized groups face fewer transaction costs when organizing and have more at stake and more to gain from organizing to pressure government;<sup>59</sup> hence, they will have an easier time being heard by government officials.<sup>60</sup> When legislators attend to the interests of these highly motivated, better informed minorities, Congress will produce decisions consistent with the fully informed

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<sup>55</sup> Spence, *A Public Choice*, *supra* note 46, at 424. “Even when an issue is salient or the legislator’s seat is not safe, constituents might not care deeply enough about the issue to change their votes,” compared with other issues. *Id.* at 424 n.115.

<sup>56</sup> If each voter’s preferences over a range of possible policy choices can be arranged on a dimension (say, from liberal to conservative, or left to right), half of the voters’ preferences will lie to the left of the median voter’s preferred outcome, and half will lie to the right.

<sup>57</sup> Political scientist Richard Fenno distinguishes between the representative’s “geographical constituency” and his or her “reelection constituency.” FENNO, *supra* note 53, at 1–11.

<sup>58</sup> E.E. SCHATTSCHNEIDER, *THE SEMISOVEREIGN PEOPLE: A REALIST’S VIEW OF DEMOCRACY IN AMERICA* 35 (1960). Schattschneider was arguing from the premise that voters exerted influence through group pressure, and that the most voters did not belong to an influential pressure group.

<sup>59</sup> MANCUR OLSON, JR., *THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS* 141–46 (1965). Olson’s work gave birth to a huge literature that conceptualized interest group activity and the regulatory process as a prisoner’s dilemma game, one in which members of groups representing diffuse interests have much more of a temptation to free ride than members of groups representing tightly organized interests, further exacerbating the underrepresentation of non-business interests. For two good post-Olsonian examinations of Olson’s ideas, see RUSSELL HARDIN, *COLLECTIVE ACTION* 20–22 (1982), and TODD SANDLER, *COLLECTIVE ACTION: THEORY AND APPLICATIONS* 1–3 (1992).

<sup>60</sup> OLSON, *supra* note 59, at 33–35.

preferences of the median voter *only if* the preferences of those minorities happen to correspond to those of the fully informed median voter.

Despite all these disadvantages, mass interests sometimes prevail. A groundswell of support for environmental protection produced one major piece of environmental legislation after another during the 1970s. These “republican moments” benefited from changes during the 1960s in three of the four elements of electoral risk outlined above. First, the growth of mass media and popularization of the science of ecology<sup>61</sup> helped make environmental issues more salient to the general public. That is, people learned more about the harm caused by environmental pollution. Second, according to public opinion polling, people cared more about environmental protection than ever before.<sup>62</sup> Whether people always preferred less pollution, by the late 1960s, they preferred it more strongly than ever. Third, voters ascribed to Congress the power and responsibility to remedy the problem, since neither states<sup>63</sup> nor courts<sup>64</sup> had been able to do so. In this setting, members of Congress concluded that it was to their political advantage to respond to this groundswell. Can the same sort of groundswell produce a national RPS today?

#### B. *The Electoral Effects of a National RPS*

The politics of the national RPS are similar to the politics of those early environmental fights in some ways. Both involve proposals whose benefits will be realized in the future, and most of whose costs will be incurred now. Both involve proposals whose benefits will be spread widely among all voters, and most of whose costs will be concentrated on a powerful few industries. In both cases, the public seems to support

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<sup>61</sup> Rachel Carson’s seminal bestseller, *Silent Spring*, was probably the best known popularization of the ecological framework. RACHEL CARSON, *SILENT SPRING* (1962).

<sup>62</sup> For a good summary of how the public mobilized to support environmental legislation in the early 1970s, see Michael E. Kraft & Norman J. Vig, *Environmental Policy from the 1970s to the 1990s: Continuity and Change*, in ENVIRONMENTAL POLICY IN THE 1990S: TOWARD A NEW AGENDA 3, 3–29 (Norman J. Vig & Michael E. Kraft eds., 2d ed. 1994).

<sup>63</sup> For a summary of state and local efforts to regulate air emissions prior to the Clean Air Act, see PETER S. MENELL & RICHARD B. STEWART, ENVIRONMENTAL LAW AND POLICY 241–48 (1994).

<sup>64</sup> Perhaps the quintessential example of the inability or unwillingness of courts to provide a comprehensive solution to pollution problems is found in the New York Court of Appeals opinion in *Boomer v. Atlantic Cement Co.*, 257 N.E. 2d 870 (1970). The court refused to enjoin pollution from a cement plant, noting:

A court performs its essential function when it decides the rights of parties before it. Its decision of private controversies may sometimes greatly affect public issues. . . . Effective control of air pollution is a problem presently far from solution . . . . A court should not try to do this on its own as a by-product of private litigation and it seems manifest that the judicial establishment is neither equipped in the limited nature of any judgment it can pronounce nor prepared to lay down and implement an effective policy for the elimination of air pollution. This is an area beyond the circumference of one private lawsuit.

*Id.* at 871.

legislative action. Depending upon how the question is worded, opinion polls show widespread public concern over global warming and climate change,<sup>65</sup> a problem to which a national RPS offers a partial solution. There are, however, also some important differences: characteristics of the political economy of a national RPS that dim the prospects for a republican moment in this case.

### 1. *Direct Costs*

Depending upon its stringency, a national RPS seems likely to impose immediate costs that are greater than Professor Davies suggests. As a preliminary matter, I agree with Professor Davies' observation that the costs of a national RPS are very difficult to estimate, and may include both benefits (e.g., new jobs and price stability benefits of a diversified energy mix) and costs (e.g., building transmission associated with renewable plants) that are difficult to foresee, let alone quantify. I also agree that any fair comparison of the costs of renewables with traditional sources ought to include an estimate of the social and environmental costs of those traditional sources. Nevertheless, the magnitude of the initial compliance costs matters politically, and I think Davies overstates the probability that immediate cost impacts of a national RPS will be small. It is axiomatic that the rate impacts of a national RPS will be a function of the degree to which the RPS forces real change in the energy mix. Citing a relatively small number of studies that focus on existing state RPSs, Professor Davies implies that price increases are not likely to exceed two cents per kilowatt-hour ("kWh"), an increase he calls small or moderate.<sup>66</sup> These estimates are consistent with those of the Energy Information Administration.<sup>67</sup> This mean effect, however, may belie widely varying effects in different parts of the country; and in most places, two cents per kWh represents a fifteen to thirty percent increase in electricity rates.

More importantly, if the studies Professor Davies cites include those state RPSs that were more symbolic than action-forcing (less aspirational, high on salience distortion, low on enforcement rigor, in Davies' nomenclature), we would not expect to see much in the way of cost impacts because those RPSs are not actually forcing change. By contrast, if a national RPS will be action-forcing, it ought to have a larger impact on electricity prices. The U.S. Department of Energy's Green Power Network

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<sup>65</sup> While concern about global warming and climate change seems to be dampening rather than increasing, it remains strong. See Lydia Saad, *Increased Number Think Global Warming Is "Exaggerated,"* GALLUP, Mar. 11, 2009, <http://www.gallup.com/poll/116590/increased-number-think-global-warming-exaggerated.aspx>.

<sup>66</sup> Davies, *supra* note 3, at 1384.

<sup>67</sup> ENERGY INFO. ADMIN, U.S. DEP'T OF ENERGY, IMPACTS OF A 15-PERCENT RENEWABLE PORTFOLIO STANDARD 8-10 (2007), available at [http://www.eia.doe.gov/oiaf/servicerpt/prps/pdf/stoiaf\(2007\)03.pdf](http://www.eia.doe.gov/oiaf/servicerpt/prps/pdf/stoiaf(2007)03.pdf).

publishes an index of the premiums electric utilities charge for renewable power in various states. While these data do not measure the overall cost impacts of an RPS, they do seem to reflect a larger than two cents per kWh premium for renewable power in some parts of the country.<sup>68</sup> If members of Congress suspect that their constituents are unwilling to pay even a two cent per kWh increase, they are unlikely to support a national RPS.

## 2. *Avoided Social Costs and “Traceability”*

Professor Davies also overstates the benefits (avoided social costs) of renewable power—at least those that are not associated with avoided greenhouse gas emissions. Environmental regulation of coal and natural gas is growing more stringent all the time. It has been a long time coming, but the courts and the Obama administration have put environmental law on track to drastically reduce some of the externalities associated with fossil-fueled power, including the effects of surface coal mining<sup>69</sup> and the environmental costs of sulfur dioxide, nitrogen oxides, particulates, and mercury emissions from fossil fuel combustion.<sup>70</sup> This progress means that RPSs (national or otherwise) cannot be credited with avoiding significant quantities of those emissions, which in turn may reduce public pressure for action.<sup>71</sup>

The largest quantifiable benefits of a national RPS would be the greenhouse gas emissions avoided, as renewable sources displace fossil fuel generators. The Clean Air Act has left untouched these emissions, and coal- and gas-fired plants continue to emit carbon dioxide and other greenhouse gases unabated. Legislators may rightly conclude, however,

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<sup>68</sup> U.S. Dep’t of Energy, The Green Power Network, Green Pricing: Utility Programs by State, <http://apps3.eere.energy.gov/greenpower/markets/pricing.shtml?page=1> (last visited June 8, 2010).

<sup>69</sup> The controversial practice of mountaintop mining—removing the surface vegetation at the top of the mountain and depositing it in valleys below—can wreak havoc on the environment. The Obama administration is now applying the Clean Water Act in such a way as to drastically reduce the practice of dumping fill material into streams and wetlands. On July 15, 2009, the Army Corps of Engineers proposed changes in its so-called Nationwide Permit 21 to prohibit its use to authorize discharges of dredged or fill material into waters of the United States for surface coal mining activities in the Appalachian region. Suspension and Modification of Nationwide Permit 21, 74 Fed. Reg. 34,311 (proposed July 15, 2009).

<sup>70</sup> See *supra* note 12. More recently, on February 6, 2009, the Obama EPA announced its intention to promulgate rules regulating mercury emissions from coal-fired power plants as toxic emissions under section 112 of the Clean Air Act. Steven D. Cook, *EPA Plans Mercury Rules for Power Plants, Moves To Withdraw Supreme Court Petition*, 40 Env’t Rep. Cur. Dev. (BNA) No. 317 (Feb. 13, 2009). On June 3, 2010, the EPA announced its intention to tighten national ambient air quality standards for sulfur dioxide. John M. Broder, *E.P.A. Tightens Rule on Sulfur Dioxide*, N.Y. TIMES, June 4, 2010, at A18.

<sup>71</sup> It is theoretically possible that these gains may be lost if the White House falls under the control of an administration that wishes to reinstate lax regulation of strip mining and coal-fired combustion. It seems very unlikely, however, that a new administration would undo the settlements reached with old coal-fired power plants and oil refineries providing for tougher pollution controls at those facilities. Similarly, new rules governing disposal of spoil material at mining locations and regulation of mercury emissions as a toxic pollutant will be difficult and costly to undo.

that the costs of inaction (environmental harm) and benefits of action (averted harm) on an RPS are far less traceable to their votes than the costs of action (higher electric rates). In plain English, voters will see and feel the costs of an RPS (in the form of electric rate increases) more directly and immediately than they will see its benefits. While the economic costs of climate change may be enormous, regardless of how much we discount future impacts,<sup>72</sup> they remain relatively uncertain and difficult to understand for most voters. By contrast, when the Clean Air Act and Clean Water Act were passed, voters could see (and smell) the harm that the laws would avoid. The Santa Barbara oil spill, the Cuyahoga River fire, the “death” of Lake Erie, and the smog that choked major urban areas all represented tangible, immediate costs that voters wanted to avoid. Most recently, the catastrophic oil spill from the Deepwater Horizon platform in the Gulf of Mexico is certainly a high salience event, one that highlights the costs of our dependence upon oil. It is possible that this crisis could accelerate support for energy reform, including legislation containing a national RPS. A national RPS would do relatively little, however, to ease our dependence on oil, focusing as it does on sources of electricity. Rather, the benefits of the national RPS code toward our dependence on another fossil fuel: namely, coal. In other words, the effects of climate change—receding polar ice caps and glaciers, and the threat of slowly rising sea levels—are important; but they are not nearly as immediate to most American voters. Moreover, climatologists do not agree on the nature and distribution of the likely impacts of climate change, their magnitude, and the degree to which humans will be able to adapt in ways that minimize impacts, among other issues, further exacerbating the traceability problem for legislators.<sup>73</sup>

In addition, since greenhouse gases persist in the atmosphere for fifty years after being emitted, the benefits of action now will accrue not so much to this generation or the next, but to the ones after that. In other words, we will not see the benefits of a national RPS in ways that are easy to measure or understand, nor will we see them in our lifetimes. Atmospheric greenhouse gas concentrations will continue to grow long after we have reduced our emissions. Furthermore, in the absence of

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<sup>72</sup> For a review of the literature, see generally MICHAEL D. MASTRANDREA, *CALCULATING THE BENEFITS OF CLIMATE POLICY: EXAMINING THE ASSUMPTIONS OF INTEGRATED ASSESSMENT MODELS* (2009), available at <http://www.pewclimate.org/benefits-workshop/mastrandrea-calculating-benefits-of-climate-policy>, and Lawrence H. Goulder & William A. Pizer, *The Economics of Climate Change* (Resources for the Future Discussion Paper 06-06, 2006), available at <http://www.rff.org/documents/RFF-DP-06-06.pdf>. Most estimates of the cost range from as low as a few dollars per ton of CO<sub>2</sub> to as high as \$360 per ton of CO<sub>2</sub>. MASTRANDREA, *supra*, at 46–52.

<sup>73</sup> See MASTRANDREA, *supra* note 72, at 30–35 (discussing the effect of assumptions about adaptation on cost estimates).

emissions reductions in China and India,<sup>74</sup> those benefits may never be realized. Even if one accepts the sensible rejoinder that the industrialized world ought to be the first mover on this issue because it grew to wealth on the back of uncontrolled fossil-fueled emissions,<sup>75</sup> the nature of the greenhouse effect is such that emissions reductions in the United States (or Europe or anywhere) accrue to the benefit of the entire world. This is the tragedy of the commons<sup>76</sup> on its grandest (and, therefore, most powerful) scale yet. While the Clean Air Act of 1970 benefited Canadians by imposing emissions controls on American power plants,<sup>77</sup> Congress knew then that most of the benefits would accrue to Americans. Consequently, legislators could take credit for addressing the problem, and for any progress that could be traced back to those statutes. As it happened, the Clean Air Act and the Clean Water Act produced results relatively quickly: each represents an enormous success story, having drastically reduced air and water emissions in real terms, despite growth in population, economic activity, and vehicle miles traveled since their passage.<sup>78</sup> If Congress enacts a national RPS or takes other steps to reduce greenhouse gas emissions, we will not see the same sort of easily identifiable benefits. It may only be fair to future generations and to citizens of the world for the United States to reduce its greenhouse gas emissions now, but it is very difficult for members of Congress to enact legislation, the costs of which fall entirely on their constituents, and most of the benefits of which fall elsewhere and in the distant future.

The regional politics of a national RPS may also be about costs, benefits, and traceability, at least on the surface. The argument that a national RPS represents a wealth transfer from “renewable resource poor”

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<sup>74</sup> Of course, China and India are two of the largest emitters of greenhouse gases. As developing countries, they were not obligated to reduce their emissions under the Kyoto Protocol. Since Kyoto, negotiations over the next steps in combating climate change have broken down repeatedly over the question of whether developing nations like China and India ought to commit to emissions reductions. They have steadfastly refused to commit, which was a sticking point at the most recent negotiations in Copenhagen in December 2009. John M. Broder, *5 Nations Forge Pact on Climate; Goals Go Unmet*, N.Y. TIMES, Dec. 19, 2009, at A1.

<sup>75</sup> The developing world is currently at a point on its growth curve that the developed world was at long before it began regulating air emissions from fossil fuel combustion. There is a strong argument that it would be unfair for the United States to insist now that China forego the kind of growth that the United States enjoyed—that is, growth based upon the exploitation of cheap energy without regulations designed to internalize social and environmental costs. According to this argument, at the very least, the United States ought to limit its own greenhouse gas emissions before it insists that China do so.

<sup>76</sup> See Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243, 1244–45 (1968).

<sup>77</sup> The United States was not aware of it at the time, but Europeans were to benefit from American emissions reductions as well. We now know that some pollutants travel across the oceans to be deposited on continents other than those from which they were emitted. COMM. ON THE SIGNIFICANCE OF INT’L TRANSP. OF AIR POLLUTANTS, NAT’L RESEARCH COUNCIL, GLOBAL SOURCES OF LOCAL POLLUTION 1–8 (2010), available at [http://www.nap.edu/catalog.php?record\\_id=12743](http://www.nap.edu/catalog.php?record_id=12743).

<sup>78</sup> Robin Lloyd, *Success Stories: Cleaning Up Planet Earth*, LIVESCIENCE, Apr. 22, 2009, <http://www.livescience.com/environment/090422-earth-day-success.html>.

parts of the country (largely in the East) to “renewable resource rich” parts of the country (the windy plains and coasts, and the sunny Southwest) may be logically weak, as Professor Davies suggests.<sup>79</sup> It is, however, politically powerful. Davies is quite right that the status quo benefits states that are blessed with natural deposits of fossil fuels or that chose to shift environmental costs to the rest of us by burning those fuels.<sup>80</sup> There is no inherent justice in the status quo, and no inherent injustice in a policy change that alters that status quo. Legislative politics, however, is not always about justice. The fact remains that legislators from the southeastern United States appear to see this policy change as a transfer of wealth from their constituents to other parts of the country, and they oppose it. As Professor Davies notes, their arguments ring a bit hollow for another reason: even if the southeastern states cannot exploit solar and wind resources, they have an ample supply of biomass, which qualifies as a renewable resource under the national RPS provisions contained in the Waxman-Markey bill.<sup>81</sup> Thus, theirs may be a bargaining position that is designed to extract more benefits from the negotiation process; alternatively, the arguments may be disingenuous “makeweight” claims supporting a case against renewables that is philosophically driven. Unfortunately, merely pointing out their logical faults does not advance the goal of achieving a national RPS very far. Presumably, the better hope of securing the support of these senators and representatives lies in the provision of additional benefits designed to compensate or mitigate the costs of a national RPS to these regions.<sup>82</sup>

The prospects for a republican moment in support of a national RPS may also be reduced by confusion over regulatory instruments. If a national RPS is mainly about transitioning away from fossil fuels so as to mitigate climate change, one might reasonably ask if an RPS is the best way to achieve that objective. Professor Davies discusses the literature critiquing RPSs on this ground, but he does not address head-on the claims that we might better achieve that goal by promoting energy efficiency and directly regulating greenhouse gas emissions. He does say that an RPS “requires a more complete internalization of long-term externalities than health-based pollution regulation,” because “politically-brokered emissions standards” never fully internalize social costs.<sup>83</sup> This answer seems

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<sup>79</sup> See *supra* note 44 and accompanying text.

<sup>80</sup> Davies, *supra* note 3, at 1367–68, 1390–91.

<sup>81</sup> American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. § 126 (2009) (as passed by House of Representatives, June 26, 2009).

<sup>82</sup> This sort of bargaining seems to be behind the controversy over the Waxman-Markey bill’s definition of “renewable biomass.” For environmental reasons, section 126 of the bill excludes from the definition old growth trees and certain material taken from protected areas, such as wilderness areas. *Id.* To the extent that legislative bargaining were to expand this definition, it might lead to reductions in natural carbon sequestration by vegetation turned to biomass feedstock.

<sup>83</sup> Davies, *supra* note 3, at 1394–95.

insufficient because it seems to presume that politics waters down air emissions regulation more than it does renewables policy. Professor Davies' vision of a national RPS, one that acts "like an off-ramp on a highway" toward a clean energy future,<sup>84</sup> will only become a reality through the political process. That process may yield a national RPS that is aspirational, with low salience distortion, and plenty of enforcement rigor—or it may not. Indeed, we might speculate that the chances of passage for a national RPS are directly proportional to its weaknesses, for reasons outlined above. The Energy Information Administration predicts fairly dire consequences for coal-fired power plants in the event of regulation of carbon dioxide emissions. This is understandable, and to be expected, whether we achieve that goal using a national RPS or greenhouse gas emissions regulations. Moving away from a carbon-based energy system means shedding our cheapest sources of energy. That, in turn, means an increase in electric rates.

### 3. *Party and Ideology*

Finally, there are two additional, and interrelated, differences between the politics of energy reform in 2010 and the environmental politics of the early 1970s. They have to do with party and ideology. At the time the Clean Air Act and Clean Water Act were passed, both major political parties claimed the mantle of environmental leadership. A Republican president, Richard Nixon, signed into law both of these landmark environmental statutes, having previously created the Environmental Protection Agency through an executive reorganization plan.<sup>85</sup> Indeed, President George H.W. Bush, who signed the 1990 Clean Air Act amendments creating the acid rain program, ran for office claiming to be "the environmental president."<sup>86</sup> We do not see that sort of bipartisanship on environmental policy anymore. In addition, the environmental legislation of the 1970s was part of a family of left-leaning social movements, which included the civil rights movement, the consumer movement, and the anti-war movement. The environmental movement produced "republican moments" in Congress because the fervor and energy of the general public was behind it. To members of Congress, the issues seemed far more salient to those favoring regulation than to those opposing it. That is not the case today. To the contrary, right-wing populists who oppose federal regulation of the private sector seem to be the modern analogues of the left-wing protesters of the 1960s and 1970s. To

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<sup>84</sup> *Id.* at 1396.

<sup>85</sup> Reorganization Plan No. 3 of 1970, 3 C.F.R. 199 (1970), *reprinted in* 5 U.S.C. app. at 643 (2006), *and in* 84 Stat. 2086 (1970).

<sup>86</sup> LESLIE D. FELDMAN & ROSANNA PEROTTI, HONOR AND LOYALTY: INSIDE THE POLITICS OF THE GEORGE H.W. BUSH WHITE HOUSE 83, 254 (2002).

today's members of Congress, environmental issues may seem far more salient to those who oppose action than to those who favor it. All of this further reduces the likelihood of Congress enacting a national RPS.<sup>87</sup>

#### IV. CONCLUSION

Despite all of this pessimism, it is worth remembering that there is a persuasive case for a national RPS, one that Professor Davies makes comprehensively and well. At times, his arguments seem a bit overstated, but it is difficult to dispute his claim that a national RPS is far superior to a system of state RPSs. Professor Davies' analysis of state RPSs is a welcome contribution to our understanding of energy policy. Like Professor Davies, I find the purported benefits of state regulations to be dwarfed by the costs and the defects of a patchwork system.

I have, however, taken issue with Professor Davies' frustration and wonderment at the fact that we continue to debate the merits of an RPS at all. That debate, it seems to me, is perfectly understandable given the political economy of energy and environmental policy in 2010. This is a difficult issue for members of Congress. Even if they are inclined to believe that the net present value of the benefits of a national RPS (in averted environmental harm) outweighs the costs, they may reasonably wonder whether the benefit-cost ratio is positive for their current constituents. Proponents of a national RPS may not be able to overcome this kind of resistance unless and until we experience the climate change equivalent of the Cuyahoga River fire or a Santa Barbara oil spill: catalyzing events that make the costs of inaction more immediate for most voters. A depressing thought, perhaps, but one that points in two directions. The first is toward the need to continue to study, measure, and document the costs and benefits of moving toward a cleaner energy future, so as to prepare for a future republican moment favoring a national RPS. The second is toward the need to understand how we might adapt to climate change, in the event that a republican moment never comes.

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<sup>87</sup> On the other hand, most of the ire directed at Congress over the Waxman-Markey and Kerry-Boxer bills seems aimed at greenhouse gas regulation. If greenhouse gas emissions regulation fails in Congress, might a weak version of national RPS emerge as a face-saving compromise alternative? Perhaps.