

# Why Not a Regional Approach to State Renewable Power Mandates?

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## I. INTRODUCTION

Dismayed at the slow progress being made in reducing the nation's reliance on fossil fuels, many scholars have decried the divergence between energy and environmental law.<sup>1</sup> An especially illustrative example of this divide is found in the differing geographic scope of programs designed to cap greenhouse gases, on the one hand, and programs designed to grow the market for renewable energy, on the other.

With respect to greenhouse gas reductions, many states are adopting a regional approach. Examples include the Regional Greenhouse Gas Initiative,<sup>2</sup> the Midwest Accord,<sup>3</sup> and the Western Climate Initiative,<sup>4</sup> each of which embody a regional approach to greenhouse gas reductions. In contrast, renewable portfolio standards ("RPSs"), currently the most powerful engine for the growth of renewable power,<sup>5</sup> remain primarily

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1. Lincoln Davies, *Alternative Energy and the Energy-Environment Disconnect*, 46 IDAHO L. REV. 473, 475-99 (2010); Amy J. Wildermuth, *Is Environmental Law a Barrier to Emerging Alternative Energy Sources*, 46 IDAHO L. REV. 509 (2010).

2. See REG'L GREENHOUSE GAS INITIATIVE, <http://www.rggi.org/> (last visited July 13, 2011). There are ten founding members of the Regional Greenhouse Gas Initiative ("RGGI"): Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. However, Governor Chris Christie of New Jersey recently announced that his State would withdraw from RGGI by the end of the 2011. See Christopher Baxter, *Gov. Christie Announces N.J. Pulling Out of Regional Environmental Initiative*, NJ.COM (May 28, 2011), [http://www.nj.com/politics/index.ssf/2011/05/gov\\_christie\\_to\\_announce\\_nj\\_pu.html](http://www.nj.com/politics/index.ssf/2011/05/gov_christie_to_announce_nj_pu.html). Meanwhile, the State of New York is being sued by an oil-industry funding organization in an effort to end New York's participation in RGGI as well. See Mireya Navarro, *Group Sues to End N.Y.'s Role in Regional Cap-and-Trade*, N.Y. TIMES (June 29, 2011), <http://green.blogs.nytimes.com/2011/06/29/group-sues-to-end-n-y-s-role-in-regional-cap-and-trade/>.

3. See *Midwestern Greenhouse Gas Accord 2007*, OFF. OF THE GOVERNOR SCOTT WALKER (2007), available at <http://www.wisgov.state.wi.us/docview.asp?docid=12497>. Signatories of the Accord are Minnesota, Wisconsin, Illinois, Iowa, Michigan, Kansas and the Canadian Province of Manitoba. Observers of the Accord are Indiana, Ohio, and South Dakota, as well as the Canadian Province of Ontario. Implementation of the Accord was put on hold in 2009, pending what was considered to be imminent action by the U.S. Congress to regulate greenhouse gas emissions. Although Congress did not act, at least one climate watchdog group reports that the Accord is not being implemented. See Emily Kelchen, *Midwest Climate Accord Abandoned*, GREAT LAKES LEGAL FOUND. REGULATORY WATCH (Jan. 4, 2011), <http://glf-regwatch.org/index.php?q=blog/2011/01/04/midwest-climate-accord-abandon ed>.

4. See W. CLIMATE INITIATIVE, <http://www.westernclimateinitiative.org/> (last visited July 12, 2011).

5. For instance, from 1999 through 2010, 63% of the wind power capacity built in the United States was located in states with renewable portfolio standard ("RPS") policies. Existing RPS programs are projected to increase annual average renewable energy additions by 4–6 gigawatts ("GW") per year between 2011 and 2020. In the aggregate, existing state RPS policies are estimated to require roughly 100 GW of new renewable capacity by 2035, which represents 7% of total U.S. retail electricity sales in that year and 32% of projected load growth between 2000 and 2035. See Ryan Wiser & Mark Bolinger, 2010 *Wind Technologies Market Report*, DEP'T OF ENERGY 62–63 (June 2011), available at <http://www1.eere.energy.gov/wind/pdfs/51783.pdf>.

the product of states working largely independently of each other. State RPSs expand the market for renewable power by requiring utilities to obtain a certain share of their energy from renewable sources. As of this writing, 26 states, plus the District of Columbia and Puerto Rico, have adopted a mandatory RPS requiring energy suppliers to demonstrate a minimum percentage of renewable energy in their energy portfolio. Four other states have alternative energy portfolio standards that allow suppliers to comply with a broader set of energy resources. Eight other states have adopted a voluntary, as opposed to a mandatory, standard.<sup>6</sup> Although many states employ regional organizations for the registration of renewable energy credits (“RECs”), unlike greenhouse gas emissions limits, states have yet to join together to adopt uniform RPS requirements within a specific region. Instead, although not always unique, each state that has enacted an RPS has its own renewable energy target, its own standards for what type of energy generation satisfies the renewable energy mandate, and, perhaps most importantly, its own rules for favoring renewable energy generated within the territorial borders of the state.

This last aspect of state RPSs has the most parochial effect of any of the differences among state standards. Just about every state imposes either a geographic location restriction or a location incentive in an attempt to steer utilities toward the purchase of renewable power generated within the state.<sup>7</sup> Such location restrictions are often implemented through the state’s rules and regulations governing RECs—environmental commodities used by suppliers to comply with the RPS mandate of a given state.<sup>8</sup>

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6. See CTR. FOR CLIMATE AND ENERGY SOLUTIONS, <http://www.pewclimate.org> (last visited Nov. 4, 2011).

7. For example, the Western Renewable Energy Generation Information System (“WREGIS”) is an independent renewable energy tracking system that tracks the generation and trade of the renewable energy generated within those western states that are members of WREGIS. See W. RENEWABLE ENERGY GENERATION INFO. SYS., <http://www.wregis.org/> (last visited Nov. 18, 2011). For a discussion of the importance of a regional tracking system to the integrity of the renewable energy credit (“REC”) compliance mechanism to state RPS laws, see Matthew McDonnell, Kirsten H. Engel & Ardeth Barnhart, *The Potential and Power of Renewable Energy Credits to Enhance Air Quality and Economic Development in Arizona*, 43 ARIZ. ST. L.J. (forthcoming 2012).

8. According to the excellent definition provided by researchers at the Lawrence Berkeley National Laboratory, “a REC is created when a megawatt-hour of renewable energy is generated, is a purely financial product, and can be traded separately from the underlying electricity generation. REC transactions create a supplemental revenue stream for renewable generators, and allow retail suppliers to demonstrate compliance with an RPS by purchasing RECs in lieu of directly purchasing renewable electricity.” See Ryan Wisner & Galen Barbose, *Renewable Portfolio Standards in the United States: A Status*

RECs may accompany the electricity produced by the renewable resource (in which case the REC is said to be “bundled” with the renewable energy), or generators may sell the RECs separate from the electricity (in which case the REC and the renewable energy are referred to as “unbundled”).<sup>9</sup> In states whose RPS incorporates geographic restrictions or in-state incentive provisions, the law usually requires either that the RECs used to satisfy the state RPS is “bundled,” or that the RECs represent renewable energy generated within the state or sold to consumers within the state.<sup>10</sup>

Not surprisingly, restrictions upon where eligible renewable power can be generated undermine the potential efficiency of the expanded renewable energy markets created by state RPS laws. Take, for instance, the situation where, due to less windy conditions, wind energy generated within one state is twice as expensive as wind energy generated in a nearby state. By restricting the wind energy that satisfies the state’s RPS to wind energy generated within the state’s borders, the state’s ratepayers pay more than they would for wind energy generated in the nearby state. Eliminating such geographic restrictions—by allowing, in the provided example, utilities to satisfy the state RPS with wind energy generated in a neighboring state—increases the efficiency of the renewable energy market, resulting in the generation of more renewable energy for the same (subsidized) price.

More than efficiency is at stake. The legality of those state RPS laws that incorporate a geographic restriction may be in the mix as well. The dormant Commerce Clause prohibits states from discriminating against, or imposing an undue burden upon, interstate commerce for the benefit of its residents.<sup>11</sup> Under this doctrine, the Supreme Court has already invalidated state regulation of electricity that discriminates in favor of state ratepayers.<sup>12</sup> Hence, geographic location restrictions upon the source of the renewable power used to satisfy a state’s RPS risks constitutional challenge.

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*Report with Data Through 2007*, LAWRENCE BERKELEY NAT’L LAB. 2 n.3 (Apr. 2008), available at <http://eetd.lbl.gov/ea/ems/reports/lbnl-154e.pdf>.

9. See Bruce Elder, *Renewable Energy Credits (RECs) in California*, UNIV. OF SAN DIEGO 7 (June 2007), available at [http://www.sandiego.edu/epic/research\\_reports/documents/070625\\_RECs\\_SB107\\_FINAL\\_000.pdf](http://www.sandiego.edu/epic/research_reports/documents/070625_RECs_SB107_FINAL_000.pdf) (discussing the nature of “bundled” and “unbundled” RECs).

10. See *infra* text accompanying notes 21–43.

11. *Philadelphia v. New Jersey*, 437 U.S. 617, 623–24 (1978).

12. *New England v. New Hampshire*, 455 U.S. 331, 339 (1982) (“The order of the New Hampshire Commission, prohibiting New England Power from selling its hydroelectric energy outside the State of New Hampshire, is precisely the sort of protectionist regulation that the Commerce Clause declares off-limits to the states.”).

Some have suggested a national RPS as an antidote to the inefficiency of state-level RPS programs.<sup>13</sup> A national RPS would address these inefficiencies by broadening the renewable power market, enabling trades from coast to coast. Better yet, a national RPS would offer policy consistency across states and impose a renewable energy mandate in the twenty states that currently lack an RPS. Nevertheless, efforts to pass a national RPS have failed repeatedly in Congress.<sup>14</sup> Experts disagree over whether a national RPS is currently politically feasible.<sup>15</sup>

One major stumbling block to a national RPS is that not all states would benefit similarly under a national program. Thus the idea of a national RPS suffers from the very same reason that states continue to impose geographic restrictions upon the location of renewable power satisfying the state mandate: states seek a return on their investment in renewable power. After all, a RPS is a ratepayer-based subsidy for renewable power. Geographic restrictions upon qualifying renewable energy are understandable attempts by states to receive a *quid pro quo*—benefits in the form of jobs, taxes and a renewable energy business sector. Why should a state pour ratepayer dollars into supporting renewable power generated in a nearby state, rather than in its own?

While leading to inefficiencies, state restrictions upon the generation location of renewable energy exist to ensure that the state reaps economic development benefits associated with the state's subsidy of renewable power through the state RPS. Without this incentive, it is possible that state support for a RPS would diminish. True, all states enjoy the climate change mitigation that accompany the displacement of fossil fuel generated electricity with renewable resource generated electricity, regardless of whether any renewable power generators are actually located within their borders. However, given that there is little to prevent a state from free-riding off of the provision of this benefit by

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13. See Lincoln Davies, *Power Forward: The Argument for a National RPS*, 42 CONN. L. REV. 1339 (2010).

14. In 2009, the Senate Energy and Natural Resources Committee passed a bill that included a national renewable energy standard ("RES") of 15% by 2021. However, this bill failed to gain approval from the full Senate. Also in 2009, the House passed the Waxman-Markey climate bill, which contained a more aggressive national RPS—20% by 2020. Nevertheless, the House and Senate failed to agree on a climate bill and hence the national RPS was never signed into law.

15. But see Brian Walsh, *Can Congress Pass a Renewable Portfolio Standard?*, TIME (July 26, 2010), <http://ecocentric.blogs.time.com/2010/07/26/can-congress-pass-a-renewable-energy-standard/> (reporting that the same Republican congressional leaders that oppose a national carbon cap can support enactment of a national RES).

other states, this climate change mitigation benefit is likely undervalued by state policymakers. In suggesting that states organize themselves into regional trading regimes, this article seeks a response to the economic inefficiencies and legal threats attending the current state-level approach in which states do not want to give up—or at least not give up entirely—the economic development benefits associated with state support of renewable power. The logic for regional trading regimes is simple. First, a regional renewable energy market is more efficient than a state-level market and hence ratepayers should pay less where utilities are allowed to comply with state RPS mandates with renewable power generated or delivered into the region, as opposed to being limited to complying with power generated within or delivered within the state. Second, all of the states within a given area stand to gain economically from a strong regional market in renewable energy. There is at least the potential that, in the aggregate, the economic development benefits from a strong regional renewable power market exceeds the sum of the region’s individual state renewable power markets. Finally, given that many of the benefits of renewable power generation are regional, regional-level restrictions upon the generation of renewable energy likely have a better chance of withstanding Commerce Clause scrutiny than state-level restrictions.

There still remains the tricky question of how to implement a regional approach to renewable energy markets. To form a regional market, states must allow energy suppliers to comply with the state RPS through the use of RECs generated in other states within the same region. States may be unwilling to do so unilaterally. Hence adoption of a regional approach will require collective agreement on the part of all of the states in a given region that they will each repeal restrictions or incentives for energy suppliers to purchase renewable energy generated in-state, and replace such restrictions and incentives with those that at most favor the purchase of renewable power generated within the same region.

This brings us back full circle to the states’ regional agreements to reduce greenhouse gas emissions. Such agreements can serve as models for regional agreements with respect to state subsidization for renewable energy. Thus far, the most successful regional agreement for greenhouse gas emissions cuts is the Regional Greenhouse Gas Initiative (“RGGI”). Under RGGI, ten northeastern states jointly agreed to regulate greenhouse gas emissions from their own electricity sectors.<sup>16</sup> The agreement among all of the states in the region to independently impose greenhouse

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16. Memorandum of Understanding, Regional Greenhouse Gas Initiative, REG’L GREENHOUSE GAS INITIATIVE (Dec. 20, 2005), *available at* [http://www.rggi.org/docs/mou\\_final\\_12\\_20\\_05.pdf](http://www.rggi.org/docs/mou_final_12_20_05.pdf).

gas emission standards prevents the import of electricity from any other state within the region from undercutting the environmental benefits of the regional scheme.<sup>17</sup>

There is much to be said in favor of a regional approach with respect to renewable energy mandates. First, uniformity in the particulars of state RPS laws would assist the growing interstate renewable energy market. Second, allowing renewable power that is generated anywhere but delivered locally to satisfy the RPS of any of the states within the region, should enhance the reliability of the market for renewable power, increase the amount of intermittent power accommodated by the grid, and lower the price of renewable power. Each of these effects will strengthen the regional market for renewable power to the overall benefit of each state within the region. Finally, while facial prohibitions upon the eligibility of power generated outside the region to satisfy a state RPS are likely to be considered just as repugnant to the dormant Commerce Clause as prohibitions upon electricity generated out-of-state, the same is likely not true with respect to non-facially discriminatory provisions designed to protect a regional, as opposed to a state, market. This is primarily because many of the benefits of such a provision—especially the air quality benefits—would be sustained by the entire region, as opposed to any particular state.

## II. STATE RENEWABLE PORTFOLIO STANDARDS: THE PREVALENCE OF THE “GO IT ALONE” APPROACH

While there are considerable similarities between state RPS laws and policies, what is remarkable, especially in view of the trend toward regional regulation in greenhouse gas emissions limitations, is the extent to which RPS policies are a product of state-level concerns and priorities.

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17. Memorandum of Understanding, *supra* note 16; *see also Regional Greenhouse Gas Initiative Model Rule*, REG’L GREENHOUSE GAS INITIATIVE (Dec. 31, 2008), available at <http://www.rggi.org/docs/Model%20Rule%20Revised%2012.31.08.pdf>.

*A. Similar Design Features Mask a Wealth of  
Difference in Detail*

Commentators have remarked upon the similarity in the design features incorporated into just about every state RPS.<sup>18</sup> True enough, all RPSs require suppliers located within the state (and often other entities as well) to procure a minimum percentage or amount of electricity generation or capacity from renewable resources by a particular date, with such percentage usually increasing over time until it hits a designated threshold at some future date.<sup>19</sup> Similarly, each RPS usually specifies the type of renewable resources that satisfies the minimum percentage or amount of renewable energy required, and also the entities subject to the mandate.<sup>20</sup> Finally, each RPS specifies how compliance will be determined; whether through a demonstration of the purchase of a minimum number of RECs or through power purchase agreements with renewable energy generators.<sup>21</sup>

But the superficial similarity in the design elements of state RPS laws masks great diversity in whether the renewable standard is mandatory or voluntary, the types of resources that qualify as renewable, the scope of the requirements, and the means by which compliance with program requirements are achieved and monitored.<sup>22</sup> For instance, virtually all state RPSs are satisfied by core renewable resources such as wind, biomass, methane, photovoltaic solar generators and thermal solar generation. However, a slightly smaller number of states also give credit for geothermal generation and landfill gas.<sup>23</sup> Additionally, several states allowed electricity

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18. See, e.g., Barry G. Rabe, *Race to the Top: The Expanding Role of U.S. State Renewable Portfolio Standards*, CTR. FOR CLIMATE AND ENERGY SOLUTIONS 5 (June 2006), available at <http://www.pewclimate.org/docUploads/RPSReportFinal.pdf>.

19. See generally DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, <http://www.dsireusa.org> (last visited Sept. 16, 2011) (presenting a comprehensive list of the renewables percentage target applicable under each state's RPS).

20. *Id.*

21. *Id.* For example, under Arizona's RES, "utilities subject to the RES must obtain renewable energy credits . . . from eligible renewable resources to meet 15% of their retail electric load by 2025 and thereafter." *Arizona: Incentive/Policies for Renewable Energy*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=AZ03R&re=1&ee=0](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=AZ03R&re=1&ee=0) (last updated June 29, 2011).

22. For excellent (and comprehensive) overviews of the variation in state RPS programs, see Davies, *supra* note 13, at 1386–90; Wisner & Barbose, *supra* note 8, at 6–10. See also Wisner & Barbose, *supra* note 8, at 6 ("[D]esign variations among states are so stark that there is even some debate over what exactly constitutes an RPS, and whether certain states qualify as having one.").

23. See Davies, *supra* note 13, at 1376.



and/or heat from combined heat and power and/or waste heat recovery facilities to “count” toward satisfaction of the RPS.<sup>24</sup>

Other examples of differences between state RPS laws abound. In an effort to encourage the development of certain renewable resources, many states offer a “credit multiplier” for these purchases. However, states differ drastically in determining which resources receive such a credit multiplier and the size of the multiplier. For example, Colorado provides a 300 percent credit for solar energy, Delaware offers a 350 percent credit for offshore wind energy, and Utah affords a 240 percent multiplier for in-state solar facilities.<sup>25</sup>

Another important difference is the manner in which states use RECs to ensure compliance. For instance, states differ in the length of time a REC remains viable—also referred to as the REC’s “shelf life”—for purposes of satisfying the state RPS. Some states, such as Arizona, place no cap on the length of time a REC is considered viable. Other states impose caps of varying lengths, such as five years in Colorado<sup>26</sup> and four years in Wisconsin.<sup>27</sup> A cap upon a REC’s shelf life encourages the ongoing development of renewable resources, as RECs cannot be held indefinitely and used to comply with a state’s mandate.

### *B. State RPS Geographic Location Restrictions*

Perhaps the best demonstration of the state-centered nature of state RPS policies is the degree to which such policies favor the in-state generation of renewable energy. Most states use the possession of RECs as the mechanism whereby retail suppliers demonstrate compliance with the RPS. Hence, in most states, geographic restrictions are expressed as conditions upon the creation of RECs for RPS compliance purposes. With few exceptions, states organize their requirements to favor the in-state generation of renewable power.

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24. See also Wisner & Barbose, *supra* note 8, at 8 tbl.1 (Colorado, Connecticut, Hawaii, Illinois, Maine, Nevada and North Carolina).

25. Davies, *supra* note 13, at 1377; see also Wisner & Barbose, *supra* note 8, at 8 tbl.1.

26. Davies, *supra* note 13, at 1378.

27. Thomas Content, *Advocates Say Wind Projects in Jeopardy*, JS ONLINE (May 25, 2011), <http://www.jsonline.com/business/122630524.html> (discussing a state bill that would prevent the expiration of renewable energy credits even after four years and its predicted impact of weakening the state market for renewable energy).

The most restrictive states require each retail energy supplier to demonstrate that its energy portfolio consists of a certain percentage of renewable energy that is either generated by the supplier itself (as in a vertical utility) or procured by the supplier from in-state renewable generators. By limiting a supplier's compliance options, the state ensures that the renewable power used to satisfy the RPS is generally generated in-state. Arizona,<sup>28</sup> Hawaii,<sup>29</sup> and Iowa,<sup>30</sup> each follow this option.

A few other states employ a similar scheme to ensure that the renewable power used to satisfy the state's RPS is generated locally. For example, although Texas allows a supplier to use out-of-state RECs for compliance, the state requires that the energy output of the facility be metered within Texas.<sup>31</sup> Nevada has a similar requirement.<sup>32</sup> Other states provide incentives for suppliers to satisfy their RPS obligation with renewable power generated in-state. The most direct form of incentive is an in-state REC multiplier whereby a REC created through renewable power generated in-state is worth a greater amount toward the supplier's RPS obligation than a REC created by renewable power generated out-of-state. For example, Colorado has such a provision. The state counts each kilowatt-hour ("kWh") of renewable energy generated in Colorado as 1.25 kilowatt-hours of energy for purposes of satisfying the state's RPS requirement.<sup>33</sup>

Many states use REC multipliers to encourage the development of particular types of renewable energy—an approach that often favors

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28. In Arizona, utilities may obtain bundled RECs to satisfy the state RPS requirement. See *Arizona: Incentives/Policies for Renewable Energy*, *supra* note 21.

29. *Hawaii Renewable Portfolio Standard Summary*, UNION OF CONCERNED SCIENTISTS 3 (April 2008), available at [http://www.ucsusa.org/assets/documents/clean\\_energy/hawaii.pdf](http://www.ucsusa.org/assets/documents/clean_energy/hawaii.pdf).

30. "Iowa requires its two investor-owned utilities . . . to own or to contract for a combined total of 105 megawatts (MW) of renewable generating capacity." *Iowa: Incentives/Policies for Renewables & Efficiency*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=IA01R&RE=1&EE=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=IA01R&RE=1&EE=1) (last updated June 29, 2011).

31. Texas regulations provide that, to be eligible for credits, the output of the renewable energy facility "must be readily capable of being physically metered and verified in Texas by the program administrator." The regulations further provide: "Energy from a renewable facility that is delivered into a transmission system where it is commingled with electricity from non-renewable resources before being metered cannot be verified as delivered to Texas customers." TEX. ADMIN. CODE § 26.173(c)(11), (e)(4) (2010).

32. *Nevada Renewable Portfolio Standard Summary*, UNION OF CONCERNED SCIENTISTS 5 (Jan. 2007), available at [http://www.ucsusa.org/assets/documents/clean\\_energy/nevada.pdf](http://www.ucsusa.org/assets/documents/clean_energy/nevada.pdf).

33. 4 COLO. CODE REGS. 723-3 § 3654(e) (2007). For example, Colorado grants 1.25 RECs for renewable energy generated in-state and 1.0 REC for renewable energy generated out-of-state. *Colorado: Incentives/Policies for Renewable Energy*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=CO24R&re=1&ee=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CO24R&re=1&ee=1) (last updated Sept. 27, 2010).

local generation of renewable power. In Texas, for instance, a given amount of non-wind renewable power creates twice the amount of RECs as wind power.<sup>34</sup> In Delaware, photovoltaic (“PV”) solar power installed prior to 2015 will yield three times the amount of RECs as non-photovoltaic solar power.<sup>35</sup> Some states apply a REC credit multiplier to distributed generation—which is renewable power generated on-site or on a small scale.<sup>36</sup> This also has the effect of favoring in-state renewable energy generators.

Other states include a solar power or a distributed generation “set-aside” in their RPS to favor in-state generation of renewable power. Under a set-aside, some fraction of the RPS must be met through the generation of a particular renewable technology. Sixteen states and the District of Columbia have adopted solar or broader distributed generation set-asides or credit multipliers as part of their RPS policies.<sup>37</sup> In encouraging the generation of solar power, without reducing the total amount of renewable energy generated through a RPS, solar carve-outs are proving more effective than credit multipliers.<sup>38</sup>

A majority of states allow the suppliers of electricity subject to the state’s RPS to comply through the use of “unbundled RECs” or tradable RECs (“TRECs”)—RECs that are not accompanied by a purchase of the renewable electricity represented by the REC.<sup>39</sup> Nevertheless, most of these states limit the TRECs that satisfy the state RPS to RECs representing power generated within the state or fed into the power pool serving the state. States requiring the power be delivered into the state include California,<sup>40</sup> Illinois,<sup>41</sup> Montana,<sup>42</sup> New Mexico,<sup>43</sup> New York,<sup>44</sup> Ohio,<sup>45</sup>

34. Wisner & Barbose, *supra* note 8, at 16 fig.8.

35. *Id.*

36. *Id.* For instance, Washington provides a 2x credit multiplier for distributed generation.

37. See *Solar Set-Asides in Renewables Portfolio Standards*, DATABASE FOR STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, <http://www.dsireusa.org/solar/solarpolicy/guide/?id=21> (last visited July 14, 2011).

38. Ryan Wisner, Galen Barbose & Ed Holt, *Supporting Solar Power in Renewables Portfolio Standards: Experience from the United States*, LAWRENCE BERKELEY NAT’L LAB. 34 (Oct. 2010), available at <http://eetd.lbl.gov/ea/ems/reports/lbnl-3984e.pdf>.

39. See Elder, *supra* note 9, at 7.

40. CAL. PUB. RES. CODE § 25741(a)–(b) (2010); CAL. PUB. UTIL. CODE §§ 399.12(a)–(c), (e), 399.15 (2011); see also CAL. PUB. UTIL. CODE § 399.13(c)–(d) (2011).

41. 20 ILL. COMP. STAT. § 3855/1-75(c)(3) (2011).

42. MONT. CODE ANN. § 69-3-2003(7) (2011).

and Wisconsin.<sup>46</sup> An in-state delivery requirement ensures that the renewable electricity is generated either in state or in close proximity to the state so that it can be transmitted to in-state customers.

A sizable number of states, mostly in the northeastern United States, have adopted a regional delivery requirement. These states require only that the renewable power be generated within or delivered into the regional electricity distribution system serving the state. States with a regional delivery requirement include: Connecticut,<sup>47</sup> Maine,<sup>48</sup> Maryland,<sup>49</sup> Massachusetts,<sup>50</sup> New Hampshire,<sup>51</sup> New Jersey,<sup>52</sup> Pennsylvania,<sup>53</sup> and Rhode Island.<sup>54</sup> Only two states—Colorado<sup>55</sup> and Missouri<sup>56</sup>—are reported to go further than the regional approach and permit the use of renewable power generated from any location.<sup>57</sup>

One state, California, recently adopted a hybrid approach to RPS compliance using a combination of bundled and unbundled RECs. In the context of increasing the state's RPS mandate to 33 percent, the state will, for the first time, allow suppliers to comply with the state RPS using TRECs.<sup>58</sup> For suppliers, the introduction of TRECs will ease the burden of complying with the state's more stringent RPS. For out-of-state renewable generators, California just opened up a new market to

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43. *New Mexico Renewable Portfolio Standard Summary*, UNION OF CONCERNED SCIENTISTS 3 (Feb. 2008), available at [http://www.ucsusa.org/assets/documents/clean\\_energy/new-mexico.pdf](http://www.ucsusa.org/assets/documents/clean_energy/new-mexico.pdf).

44. *Id.*

45. *Id.*

46. *Id.*

47. CONN. GEN. STAT. ANN. § 16-245(a)–(b) (West 2011).

48. ME. REV. STAT. ANN. tit. 35-A, § 3210(2)(B)(1) (2011).

49. MD. CODE ANN., PUB. UTIL. COS. §§ 7-701(i), 7-704(a)(2) (West 2011).

50. 225 MASS. CODE REGS. 14.05(1)(a)(9)(d)(1)–(2), (5)(a)–(c) (2011). To generate energy eligible for use to comply with Massachusetts's RPS, off-grid renewable power generation must be located in Massachusetts and behind-the-meter generation must be located within the ISO-NE Control Area.

51. N.H. REV. STAT. ANN. § 362-F:6(IV) (2011).

52. N.J. ADMIN. CODE § 14:8-2.7(b)–(c) (2011).

53. See *Pennsylvania's "Alternative" Energy Law*, ACTIONPA, <http://www.actionpa.org/cleanenergy/#geography> (last visited Nov. 12, 2011).

54. *Rhode Island Renewable Energy Standard Summary*, UNION OF CONCERNED SCIENTISTS 4, available at [http://www.ucsusa.org/assets/documents/clean\\_energy/rhode-island.pdf](http://www.ucsusa.org/assets/documents/clean_energy/rhode-island.pdf) (last visited Jan. 10, 2012).

55. *Colorado Renewable Energy Standard Summary*, UNION OF CONCERNED SCIENTISTS 4, available at [http://www.ucsusa.org/assets/documents/clean\\_energy/colorado.pdf](http://www.ucsusa.org/assets/documents/clean_energy/colorado.pdf) (last visited Jan. 10, 2012).

56. *Missouri Renewable Energy Standard Summary*, UNION OF CONCERNED SCIENTISTS 3 (NOV. 2008), available at [http://www.ucsusa.org/assets/documents/clean\\_energy/Missouri.pdf](http://www.ucsusa.org/assets/documents/clean_energy/Missouri.pdf) (last visited Jan. 10, 2012).

57. But recall that Colorado includes a REC multiplier for renewable energy generated within the state.

58. S.B. 2, 2011 Cal. Legis. Serv., 1st Ex. Sess. 2, 23 (West).

compete for contracts to export power. To the dismay of many in the California electricity industry, however, the state is limiting the percentage of the obligation that can be satisfied with TRECs to just 10 percent of a utility's obligation.<sup>59</sup>

### C. *The Motivation Behind the State-Centered Approach*

Most states that employ the state-centered approach appear to be motivated by the desire to reap in-state economic benefits from their ratepayer-subsidized RPS. Such economic benefits include cleaner air (through the displacement of air pollutants from fossil fuel-fired electricity), jobs, taxes and the creation of a “green” image that may attract related green-technology industries and new residents.<sup>60</sup>

Nevertheless, although valid as a rough approximation, the benefits of a state's RPS do not perfectly match the political boundaries of that state. With respect to reductions in air pollution, a state's RPS may result in improving the air quality of another state, not its own, because the physical laws of electricity and the nature of interconnected transmission grids limit the ability of a state to control where in-state generated renewable power can be directed and utilized. According to one RPS law expert, “[a] state's cost-benefit analysis therefore must determine what resources will be displaced *by in-state and out-of-state renewables* (in either case, the displaced resources could well be located outside the state), and whether that displacement will cause net improvements in the state's air sheds, land, and waterways.”<sup>61</sup> Nor are a state's political boundaries a good proxy for climate mitigation. Reductions in carbon emissions anywhere in the world will have an equivalent impact in mitigating climate change impacts within a state and not simply reductions taken by the state.

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59. Steven F. Greenwald & Jeffrey P. Gray, *California's New RPS: Opportunity Squandered*, POWER (July 1, 2011), [http://www.powermag.com/issues/departments/legal\\_and\\_regulatory/Californias-New-RPS-Opportunity-Squandered\\_3790\\_p2.html](http://www.powermag.com/issues/departments/legal_and_regulatory/Californias-New-RPS-Opportunity-Squandered_3790_p2.html).

60. Barry Rabe, *Race to the Top: The Expanding Role of U.S. State Renewable Portfolio Standards*, 7 SUSTAIN. DEVEL. L. & POL'Y 10, 10 (2007). See also Kirsten H. Engel & Barak Y. Orbach, *Micro-Motives and State and Local Climate Change Initiatives*, 2 HARV. L. & POL'Y REV. 119 (2008).

61. Nancy Rader & Scott Hempling, *The Renewable Portfolio Standard: A Practical Guide*, NAT'L ASS'N OF REGULATORY UTIL. COMM'RS 34 (Feb. 2001), available at <http://www.naruc.org/Grants/Documents/rps.pdf>.

### III. LEGAL RISKS

The state-centered approach also carries legal risks. The greatest of these risks is that state RPS laws favoring in-state generation of renewable power might be successfully challenged on constitutional grounds as a violation of the dormant Commerce Clause. Granted, to date, there has been no court ruling invalidating a state RPS law or regulation on this basis. Nevertheless, this may be attributed to a dearth of motivated plaintiffs as opposed to a lack of a meritorious legal basis for such a challenge. There are many reasons a provider of renewable power might not challenge a state's preference for renewable power generated in-state. Those renewable power providers located within the state serve to benefit from the restriction and hence may have little motivation to challenge it. Renewable power companies located outside of the subject state may not be in a position to compete for power sales within the state at issue and hence may have difficulty demonstrating harm attributable to the in-state restriction. Furthermore, even if outside providers could make such a demonstration, constitutional litigation is expensive and even a successful result does not guarantee any benefit. While they may succeed in invalidating an in-state geographic preference, this does not guarantee that they will receive a contract for the provision of power as opposed to another renewable power provider. Hence, filing a dormant Commerce Clause challenge to state RPS geographic restrictions carries high risks and minimal benefits for a renewable energy generator.<sup>62</sup>

Nevertheless, in just the past two years, three challenges to state RPS geographic preferences have been filed. This may signal the rising costs of these preference provisions to participants in the renewable energy market. This section will discuss the status of these legal challenges in an attempt to assess the significance of the legal risk posed by state RPS geographic restrictions.

#### A. *Escalating Legal Risk?*

Within the past two years, three legal challenges have been filed against state geographic location restrictions in state RPS laws.

In 2010, TransCanada, a power marketer that purchases wholesale renewable energy and sells it to distribution companies and retail customers in the northeastern United States, challenged geographic

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62. I owe Jerry Elmer from the Conservation Law Foundation for the benefit of these insights. E-mail from Jerry Elmer, Staff Att'y, Conservation Law Found., to Kirsten H. Engel, Professor of Law, Univ. of Arizona James E. Rogers Coll. of Law (Sept. 3, 2010) (on file with author).

restrictions applicable to Massachusetts’s statutes and regulations encouraging the generation of renewable power as a violation of the dormant Commerce Clause. Under one provision, the Massachusetts Department of Energy Resources implemented a statutory requirement that utilities purchase a portion of the RECs needed to comply with the state’s RPS from solar generation located within the state.<sup>63</sup> Under the second provision challenged by TransCanada, Massachusetts required retail electricity providers to solicit bids for long-term electricity supply contracts from renewable generators located within Massachusetts.<sup>64</sup> Renewable energy advocates consider long-term contracts to be of critical importance to developers of new renewable energy projects because they assist developers in obtaining bank financing for their projects. Ultimately, the case was settled after Massachusetts repealed in-state restrictions upon its solar set-aside provision.<sup>65</sup>

Also in 2010, TransCanada challenged the in-state renewables purchase requirement accompanying the long-term contracting requirement enacted by Rhode Island in 2009.<sup>66</sup> Similar to the statute in Massachusetts, the Rhode Island statute requires electric distribution companies to enter into long-term contracts with renewable energy generators. However, the statute articulated an explicit preference for renewable energy generated “within the jurisdictional boundaries of the state.”<sup>67</sup>

63. 225 MASS. CODE REGS. 14.05(1)(a)(1) (proposed Oct. 1, 2010). This regulation implemented a Massachusetts statute mandating that each utility meet a portion of its RPS requirement through “new on-site renewable energy generating sources located in the [C]ommonwealth,” and providing the Department of Energy Resources with the authority to “specify that a certain percentage of these requirements shall be met through energy generated from a specific technology or fuel type.” MASS. GEN. LAWS ch. 25A, § 11F(e), (g) (2011).

64. Green Communities Act, S. 169, § 83 (2008). This provision required that, beginning July 1, 2009, distribution companies must, within 5 years, solicit proposals for long-term contracts from in-state renewable energy generators at least twice. If the distribution companies receive “reasonable proposals,” they must “enter into cost-effective long-term contracts to facilitate the financing of renewable energy generation within the jurisdictional boundaries of the Commonwealth.”

65. Stephen Lacey, *Is Requiring In-State Generation Unconstitutional?*, RENEWABLEENERGYWORLD.COM (June 21, 2010), <http://www.renewableenergyworld.com/rea/blog/post/2010/06/is-in-state-generation-unconstitutional>.

66. TransCanada Power Marketing LTD’s Motion to Dismiss for Violation of Commerce Clause, *In Re: Review of Amended Power Purchase Agreement Between Narragansett Electric Company D/B/A National Grid and Deepwater Wind Block Island, LLC Pursuant to R.I. Gen. Laws § 39-36.1.7*, Docket No. 4185 (filed July 13, 2010).

67. R. I. Gen. Laws § 39-26.1 (“The purpose of this chapter is to encourage and facilitate the creation of commercially reasonable long-term contracts between electric

Finally, the most recent, and also the most worrisome from the perspective of state RPS advocates, is an across-the-board challenge to Colorado's RPS filed in 2011 by the American Tradition Institute, a politically-conservative advocacy group.<sup>68</sup> Although the complaint targets the RPS in general as a violation of the Commerce Clause, several of its more targeted allegations are noteworthy. Specifically, the complaint challenges an aspect of Colorado's RPS solar power set-aside that requires half of the set-aside to originate from solar power installations located on-site at the customer's facilities.<sup>69</sup> The complaint also challenges various compliance-credit multipliers included in the law that favor in-state generation of renewable power. In particular, a kilowatt-hour obtained from renewable resources located within Colorado has a greater compliance value than a kilowatt-hour of renewable power generated out-of-state.<sup>70</sup> The complaint also alleges that the Colorado RPS extends the same preferential accounting method to renewable power generated through community-based projects located in Colorado and to Colorado-based renewable power projects that interconnect to electric transmission or distribution facilities owned by a cooperative electric association or a municipally-owned utility.<sup>71</sup>

Interestingly, the *American Tradition Institute* lawsuit is the only legal action to date that challenges the legality of a distributed generation set-aside and an in-state credit multiplier. While the latter is fairly rare within state RPS laws, the former is common. Hence, the lawsuit could have broad implications for distributed generation set-aside provisions beyond Colorado.

### *B. Recent Developments in the Court's Dormant Commerce Clause Jurisprudence*

The basic framework of the Court's dormant Commerce Clause jurisprudence has remained relatively unchanged in the past thirty years. A state law that discriminates on its face against interstate commerce is

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distribution companies and developers or sponsors of newly developed renewable energy resources with the goals of stabilizing long-term energy prices, enhancing environmental quality, creating jobs in Rhode Island in the renewable energy sector, and facilitating the financing of renewable energy generation within the jurisdictional boundaries of the state or adjacent state or federal waters or providing direct economic benefit to the state.”)

68. Complaint, *American Tradition Institute v. Colorado*, Civ. Action No. 1:11-CV-00859 (D. Colo.) (filed Apr. 4, 2011) [hereinafter “Complaint”].

69. *Id.* para. 68–74.

70. For instance, the Colorado RPS provides that “[e]ach kilowatt-hour of electricity generated from eligible energy resources in Colorado . . . shall be counted as one and one-quarter kilowatt-hours for the purposes of compliance with this standard.” COLO. REV. STAT. § 40-2-124(1)(c)(III) (2011).

71. Complaint, *supra* note 68, para. 74.



considered *per se* invalid.<sup>72</sup> On the other hand, a state law that regulates even-handedly to effectuate a legitimate state interest with only “incidental” impacts upon interstate commerce is subject to a balancing test. Under this test, the state law will be upheld unless the burden on interstate commerce is “clearly excessive” in relation to local benefits.<sup>73</sup>

At the same time, the Court’s recent decisions indicate that the justices are losing interest in a vigorous approach to the enforcement of the dormant Commerce Clause. Indeed, Justices Scalia and Thomas have proclaimed that they think the whole doctrine should be scrapped due to the absence of a textual basis for the doctrine. Justice Scalia has stated that he is willing to apply the dormant Commerce Clause only where *stare decisis* compels him.<sup>74</sup> It is not clear that Justice Thomas would even go so far as to apply the doctrine where warranted by precedent.<sup>75</sup> In any case, the reluctance of Justices Scalia and Thomas means two of the nine justices are unlikely to strike down a state law on dormant Commerce Clause grounds, at least if they can distinguish the case from prior precedent. Although the other justices have not manifested this same willingness to scrap the dormant Commerce Clause, they do seem to have softened on the applicability of the doctrine where state or local government has actively intervened in the private market associated with a traditional local or state government function.

Within this context, two developments are noteworthy. First, the Court has rejuvenated the traditional governmental functions test as an exemption to the Clause. Second, the Court has broadened the exception for discriminatory actions by states in their capacity as market actors.

### *1. Rejuvenation of the Traditional Governmental Function Test*

In two recent cases, the Supreme Court has unearthed the traditional public function test under which the Court had previously upheld local regulations that discriminate in favor of the local government itself. In an opinion authored by Chief Justice Roberts, in *United Haulers v.*

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72. *Philadelphia*, 437 U.S. at 624.

73. *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970).

74. *Dep’t of Revenue v. Davis*, 553 U.S. 328, 359 (2008) (Scalia, J., concurring) (“I will apply our negative Commerce Clause doctrine only when *stare decisis* compels me to do so.”).

75. *Id.* at 361 (“I would entirely ‘discard the Court’s negative Commerce Clause jurisprudence.’”) (Thomas, J., concurring).

*Oneida-Herkimer Solid Waste Management Authority*, the Court upheld flow control ordinances enacted by New York county governments that ensured that the trash generated in the counties was delivered by private waste haulers to solid waste processing facilities owned and run by a government authority created by the State of New York.<sup>76</sup> The Court held that the ordinances were not facially discriminatory and hence were properly analyzed under the *Pike* undue burden test.<sup>77</sup>

Applying the *Pike* test, the Court upheld the county flow control ordinance. The decision rested on two factors. First, the Court could not find any tangible harm to out-of-state interests resulting from the law. Instead, the Court found that the “most palpable harm” fell upon the very persons that voted for it in the first place—the residents of the counties that enacted the flow control ordinances and who would thus pay the higher fees for solid waste disposal charged by the state processing facilities (as opposed to competitor facilities).<sup>78</sup>

Second, the Court supported its *Pike* analysis by rejuvenating an older distinction since abandoned by the Court—that the ordinance was enacted in order to benefit the localities in carrying out a “typical and traditional concern of local government.”<sup>79</sup> At another point in the opinion, the Court quoted a Second Circuit decision that labels garbage collection and disposal a “core function of local government in the United States.”<sup>80</sup>

While the unearthing of the traditional function distinction has caught the attention of commentators, it is not clear that its use in *United Haulers* (as opposed to *Dep’t of Revenue*) is all that significant. The Court clearly held that the ordinance was valid under the *Pike* test, based upon the lack of a clear interstate burden, and the existence of local benefits in the form of revenue generation and enhanced incentives for recycling and enforcement of recycling laws. If anything, the Court’s resort to the traditional government function rationale merely boosts the Court’s conclusions under the *Pike* test.

Thus, potentially more important is the use of the traditional government function rationale in a later case, *Department of Revenue of Kentucky v. Davis*, to exempt from Commerce Clause scrutiny a state law exempting interest from bonds issued by the state (but not from

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76. See, e.g., *Davis*, 553 U.S. 328; *United Haulers Ass’n v. Oneida-Herkimer Solid Waste Mgmt. Auth.*, 550 U.S. 330 (2007).

77. *United Haulers Ass’n*, 550 U.S. at 330.

78. *Id.* at 345.

79. *Id.* at 346–47.

80. *Id.* at 344 (quoting *USA Recycling, Inc. v. Babylon*, 66 F.3d 1272, 1275 (C.A.2 1995)).

bonds issued by other states) from state taxes.<sup>81</sup> In an opinion written by the now-retired Justice Souter, the Court held that the issuance of debt securities to pay for public projects is quintessentially a public function and hence the tax preference was justified under *United Haulers*.<sup>82</sup> The Court was careful to point out that the tax preference benefited only a public entity—the State—and not private participants in the market for bonds and securities.<sup>83</sup>

## 2. *Expansion of the Market Participant Doctrine Exemption*

The *Dep't of Revenue* case is significant in another respect: by upholding the Kentucky tax preference, the Court broadened the market participant exception to the dormant Commerce Clause.

The Kentucky appeals court had rejected the market participant exception as inapplicable to the law at issue because the state's tax preference was a separate regulation that, on its face, was unconnected with any participation by the state itself in the bond market. However, the Supreme Court rejected this as a basis for not applying the exception, holding that it was not possible to disentangle the state's action as a regulator (enacting the tax preference) from its capacity as a market participant (issuing bonds) because "imposing the differential tax scheme makes sense only because Kentucky is also a bond issuer."<sup>84</sup> Hence, to the Court, the state's regulatory preference was part and parcel of its market participation: "when Kentucky exempts its bond interest, it is competing in the market for limited investment dollars, alongside private bond issuers and its sister States, and its tax structure is one of the tools of competition."<sup>85</sup>

Thus, in *Dep't of Revenue*, the Court expanded the market participant exception to encompass overtly discriminatory regulatory actions that a state or local government may undertake to assist the government entity in its activities within the market. The fact that the Court reinterpreted the *United Haulers* case as being justified by the market participant exemption underscores this expansion. The *United Haulers* Court did not

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81. *Davis*, 553 U.S. at 341–42.

82. *Id.* at 342–43.

83. *Id.* at 343.

84. *Id.* at 344.

85. *Id.*

rely upon this exception, presumably because the issue in the case was the impact of government regulations—the county flow ordinances—as opposed to the impact of actions by the state authority-run solid waste processing facilities. However, in *Dep’t of Revenue*, the Court stated that *United Haulers* “may also be seen under the broader rubric of the market participation doctrine.”<sup>86</sup> According to the *Dep’t of Revenue* Court, the dispositive fact in *United Haulers* was the government’s own activity in processing trash. Indeed, it was the fact of the state’s involvement in the trash processing business that, the Court stated, distinguished the case from the *C & A Carbone* case in which the Court invalidated the challenged flow control ordinance enacted in favor of a solid waste processing facility operated by a private company.<sup>87</sup>

### C. Validity of In-state Location Preferences in State RPS Law

Under the traditional dormant Commerce Clause analysis set forth under *Philadelphia v. New Jersey* and its progeny, state RPS provisions that explicitly mandate the purchase of renewable power generated in-state, or that even preference renewable power generated in-state, would appear to be unconstitutional. For example, the Massachusetts statutory provisions at issue in the TransCanada complaint would appear to have violated the dormant Commerce Clause. The plain language of the statute differentiated between in-state and out-of-state renewable energy generators, specifying that only the in-state generation of solar power could satisfy the law’s solar power set-aside, and that only contracts for renewable energy resources generated in-state would satisfy the Commonwealth’s long-term supply contract requirement. Thus, these provisions plainly facially discriminated against interstate commerce in favor of in-state firms and hence would likely have been struck down by a court had the case not settled. The same is true with respect to the facially-discriminatory long-term contracting provision in Rhode Island’s RPS law.<sup>88</sup>

There is little reason to believe that traditional dormant Commerce Clause analysis would produce a different result with respect to a law that, like the Colorado RPS provision challenged in the 2011 lawsuit by the American Tradition Institute, bestows a greater value upon in-state renewable generation by applying a multiplier to only renewable energy

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86. *Id.* at 343.

87. *Id.* at 346–47.

88. See also Nathan E. Endrud, *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, 270 (2008).

generated in-state. Multipliers facially discriminate against interstate commerce in favor of intrastate commerce. It matters not that the provision at issue is in the nature of an incentive as opposed to a regulatory mandate.<sup>89</sup>

It is possible—though unlikely—that the RPS statutory provisions at issue in the recent litigation could be upheld based upon one of the exceptions to the dormant Commerce Clause reaffirmed in the Court’s recent cases, i.e., discriminatory regulation that assists a state or local government in carrying out a traditional governmental function or participating in a market.<sup>90</sup>

To qualify for the first exception, electricity generation must be considered a traditional government function. The Supreme Court has never ruled on whether this is the case. Electricity generation has long been the subject of government regulation and also government provision. In the late 1800s, municipally-owned utilities provided street lighting and trolley services. However, the share of electricity provided by municipally-owned utilities never exceeded the high of 8 percent reached at the turn of the century.<sup>91</sup> Starting in the 1930s, the federal government began an era of providing electric power, beginning with large reclamation projects in the American West.<sup>92</sup> With the addition of the Tennessee Valley Authority, the provision of federal power reached its peak of 17 percent of total electricity generation in 1957.<sup>93</sup> Non-federal public power projects, consisting of cooperatives, power districts and state projects, also grew rapidly in this time period, reaching a peak of 8.5 percent in 1960.<sup>94</sup> Subsequent to this time period of heavy involvement by primarily the federal government in electricity generation, the role of the government in the provision of electricity has primarily been that of a regulator. Whether, as a result, electricity generation qualifies as a “traditional government function” is unclear. Certainly it has been an important historical function of government. Nevertheless, the dominant role of commercial entities in providing electricity indicates that the

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89. *New Energy Co. of Ind. v. Limbach*, 486 U.S. 269, 271 (1988).

90. *Davis*, 553 U.S. at 342–43.

91. EDISON ELEC. INST., *HISTORICAL STATISTICS OF THE ELECTRIC UTILITY INDUSTRY THROUGH 1970* 24 (2d ed. 1973).

92. *Id.*

93. *Id.*

94. *Id.*

economics of the industry are not characterized by market failures that would necessitate the provision of electricity by government.

To qualify for the second exception, the state discriminating in favor of in-state renewable power would have to be a provider of renewable electricity. In such a case, the state might argue that its regulatory preference for renewable energy generated in-state was merely to assist the state's participation in the electricity market. However, in the states favoring in-state generation of renewable power, the state government itself is not providing the electricity. Even if it was, its regulatory preferences for in-state renewable power generation are broader than the simple benefit of state-run entities. In contrast, the Court made clear in *United Haulers* and in *Dep't. of Revenue* that the laws at issue solely benefited the government entity participating in the market.

Hence, it is difficult to make the case that the Court's recent dormant Commerce Clause cases would authorize the preferences for in-state generation of renewable power present in the RPS statutes and regulations enacted or promulgated by Massachusetts, Rhode Island, and Colorado.

With respect to the requirements in other RPS laws that the renewable energy be delivered into the state or to state consumers, the case for validity under the dormant Commerce Clause is stronger. Such a requirement does not facially discriminate against interstate commerce and hence such provisions would be analyzed under the *Pike* balancing test as opposed to the *per se* invalidity test of *Philadelphia v. New Jersey*. In the context of this balancing test, the state could argue that the local benefits flowing from such a requirement, especially reduced air pollution, justifies whatever burden such a delivery requirement imposes upon interstate commerce.

#### IV. THE CASE FOR A REGIONAL APPROACH TO RENEWABLE PORTFOLIO STANDARDS

The state-centered approach to renewable portfolio standards in which states impose various requirements or incentives to encourage the in-state generation of renewable power has several drawbacks. First, such requirements would increase costs for state ratepayers by forcing utilities to purchase in-state generated power even in situations where renewable power generated out-of-state is cheaper. Second, to the extent the state's motivation is to benefit the overall welfare of the state by improving air quality and encouraging the in-state generation of renewable power with its associated promise of jobs, taxes, and spin-off businesses, research demonstrates that such benefits are best encouraged on the regional

level, as opposed to the state-level.<sup>95</sup> Thus, the use of state political boundaries as a guide to such incentives is likely to reduce the total quantity of such benefits.

If a state-centered approach is not the most optimal method for reaping the benefits of renewable power generation, why have so many states adopted the approach as opposed to a larger, more regional approach? One explanation is that, acting unilaterally, states lack any incentive to adopt a regional approach. Insofar as a regional approach may, for instance, lead to states allowing freely-tradable RECs to satisfy their state RPSs (as opposed to RECs created through the generation of in-state renewable power), why should a state unilaterally allow such RECs to satisfy its RPS when this means utilities might satisfy the state RPS entirely through renewable power generated out of state? States are unlikely to do so in the absence of an assurance from other states that they are similarly allowing for compliance with their RPS with out-of-state generated power, thereby increasingly the likelihood that the state will benefit from a relaxation of the state-centered approach.

The pattern of the payoffs facing states as to whether they should allow compliance with their RPS with out-of-state generated renewable power or only in-state generated renewable power thus resembles the payoff structure found in the classic prisoner's dilemma. Under this structure, it is rational that players pursue their own interest and not cooperate with the other players, even if each player would benefit the greatest if she cooperated with the other players. The payoffs to individual states interested in supporting renewable power through an RPS law might be assigned hypothetical values and resemble those in Figure 1 on the next page.

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95. See Mark Muro & Kenan Fikri, *Job Creation on a Budget: How Regional Industry Clusters Can Add Jobs, Bolster Entrepreneurship, and Spark Innovation*, in PROJECT ON STATE AND METROPOLITAN INNOVATION (Brookings-Rockefeller ed., 2011); Mark Muro & Bruce Katz, *The New "Cluster Moment": How Regional Innovation Clusters Can Foster the Next Economy*, in METROPOLITAN POLICY PROGRAM (Brookings ed., 2010).

FIGURE 1: HYPOTHETICAL PAYOFFS FACING STATES CHOOSING BETWEEN RESTRICTING RECS TO IN-STATE GENERATION ONLY OR ALLOWING RECS TO REFLECT OUT-OF-STATE GENERATION

State A State B	Allow only in-state generation to satisfy RPS	Allow TREC's to satisfy RPS
Allow only in- state generation to satisfy RPS	(A, B) <b>(1, 1)</b>	(A, B) <b>(3, 0)</b>
Allow TREC's to satisfy RPS	(A, B) <b>(0, 3)</b>	(A, B) <b>(2, 2)</b>

#### V. RECS TO REFLECT OUT-OF-STATE GENERATION

A cooperative regional approach, similar to the regional greenhouse gas emissions trading regimes adopted by states (e.g., RGGI), addresses the prisoner's dilemma inherent in a state's choice as to whether to allow the generation of renewable power out-of-state to satisfy its state RPS. Under such an approach, each of the states within a particular region—the northeastern, Midwestern or Western states, for instance—would agree to adopt laws or regulations that would allow renewable energy produced within or delivered into the region to be used by energy suppliers within their state to satisfy the state's RPS. This would address the prisoner's dilemma issue since every state would know that although it would be opening its RPS market to out-of-state (but in-region) renewable power, so would every other state within the region. Provided that the renewable energy produced in each state is at least somewhat competitive in price with the renewable power generated in the other states within the region, this agreement should be sufficient to make each state comfortable allowing its suppliers to the use of this out-of-state but in-region renewable energy.

Second, there is some reason to believe that by adopting a regional trading market, states could be made better off economically than were they to stick to the creation of single state markets. As mentioned above, a



regional market might lead to lower costs for renewable power, leading to ratepayer savings. In addition, however, the regional trading market might create a larger market for renewable generators and spin-off industries, such as manufacturing and research facilities. This could create a stronger, more vibrant and potentially larger renewables industry on the regional scale than might be created on a state-by-state basis. Supporting this hypothesis are studies suggesting that economic development is most successful when pursued on a regional, as opposed to a state-by-state, basis.<sup>96</sup>

Finally, location restrictions designed to foster a regional renewable energy market may have a better chance of withstanding Commerce Clause scrutiny than similar restrictions designed to enable a state market. Granted, the Court has indicated that facial discrimination on the basis of regional boundaries is no different than facial discrimination on the basis of state boundaries.<sup>97</sup> However, by adopting only an in-region *delivery* requirement (allowing renewable energy delivered into the region to comply with the state's RPS) as opposed to an in-region *generation* requirement, the state avoids facial discrimination and the potential that its law will be struck down as a "per se" violation of the dormant Commerce Clause. An in-region delivery requirement is not facially discriminatory as renewable energy generated out-of-state but delivered into the region could be used by energy suppliers to comply with the state RPS. Under the less stringent *Pike v. Bruce Church* test prohibiting undue burdens upon interstate commerce,<sup>98</sup> a state enacting an in-region delivery requirement will have a much better chance of surviving a Commerce Clause challenge. For one, given the larger regional market and hence the greater number of out-of-region locations where out-of-

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96. See Muro & Fikri, *supra* note 95; Muro & Katz, *supra* note 95.

97. See *Northeast Bancorp, Inc. v. Board of Governors*, 472 U.S. 159, 174 (1985). In this case, two New England states authorized bank holding companies located in other New England states to purchase an in-state bank only if the state in which the holding company was located afforded reciprocal privileges to the authorizing state's holding companies. The Court stated that discrimination by states against bank holding companies located outside a particular region would violate the dormant Commerce Clause in the same manner as state discrimination against holding companies merely located out-of-state. *Id.* ("There can be little dispute that the dormant Commerce Clause would prohibit a group of States from establishing a system of regional banking by excluding bank holding companies from outside the region if Congress had remained completely silent on the subject.") This statement is arguably dicta, however, as the Court went on to hold that Congress had authorized any discrimination that might be involved. *Id.*

98. *Pike*, 397 U.S. at 146.

region renewable energy might be imported into the region, there is less likelihood that the in-region delivery requirement will impose an “undue burden” upon renewable energy generated located out-of-region. Furthermore, where such an undue burden might be found, the legitimacy of the state’s justification for the burden will be stronger. This is because the state can argue that such an in-region delivery requirement increases the likelihood that the renewable energy used to comply with the state’s RPS is displacing dirtier fossil fuel power and hence that the region will reap the associated environmental benefits of the state RPS. Here, it may be important that the state contend that a motivation of its RPS law is the reduction in conventional pollutants, such as particulates, sulfur dioxide and nitrous oxides generated by fossil-fuel burning sources of energy, and not just reductions in greenhouse gas emissions. Because, as global pollutants, greenhouse gas reductions cannot be limited to any particular location, much less a region, reliance upon the greenhouse gas reduction benefits is a less persuasive justification for an in-region delivery requirement. Reduction of conventional pollutants is a stronger justification for a state’s in-region delivery restriction as this benefit can be localized to a particular region.

## VI. CONCLUSION

The emergence of multi-state greenhouse gas initiatives highlights the benefits of addressing climate change through regional, as opposed to state-level, policy approaches. Specifically, enabling electric utilities to comply with state greenhouse gas emissions reduction targets on a regional basis, as is done currently under the northeastern states’ Regional Greenhouse Gas Initiative, reduces the costs of compliance for those sources and lowers costs for ratepayers.

While some states—primarily those in the northeast—similarly allow utilities to comply with state renewable energy mandates through the purchase of renewable energy generated within the same region, many others require that the energy be generated within or be delivered into the state. This state-limited approach to RPS compliance is a manifestation of a more general characteristic of the structure of state RPS laws to favor in-state investment in renewable energy. Such a preference is completely understandable given that renewable energy is not yet cost competitive with fossil fuel-based energy and that the RPS functions as a ratepayer subsidy to renewable energy generation. In-state economic development resulting from renewable energy thus functions as an implicit “pay back” for this subsidy.

Nevertheless, the in-state investment preference inherent in the location restrictions found in many state RPS laws has several drawbacks. Not

only is the efficiency of the market created through the RPS law limited, leading to higher prices for renewable power (and perhaps lower RPS targets than might otherwise be supported by voters were prices lower), but inclusion of state-level preferences run the risk of invalidation by the courts under the dormant Commerce Clause. While still low, the last several years have seen an upswing in the number of challenges to state-level preference provisions in state RPS laws on dormant Commerce Clause grounds.

Given the objectives of renewable power advocates in continuing the ratepayer-based subsidization of renewable power, which, as discussed, is implicitly tied to the ability to channel the resulting investment in a manner that generates local economic development benefits, as well as a corresponding desire to minimize the risk of a successful Commerce Clause challenge, broadening investment preferences so that they operate on the regional, as opposed to state-level, scale, may be a solution. Location restrictions designed to foster a regional renewable energy market may better survive Commerce Clause scrutiny than similar restrictions designed to enhance a state market. Furthermore, research suggests that economic development initiatives are most successful when pursued on a regional, as opposed to a state-level, basis. States should thus be encouraged to revise the preferences now included in their RPS laws for renewable energy generated within or delivered to the state and rework them into preferences for renewable power delivered into the region of which they are a part.