

# THE DORMANT COMMERCE CLAUSE THREAT TO MARKET- BASED ENVIRONMENTAL REGULATION: THE CASE OF ELECTRICITY DEREGULATION

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#### INTRODUCTION

If a governor, under pressure during hard economic times to save her state's struggling dairy industry, signed into law a bill banning the import of out-of-state milk products, such a law would surely be struck down in court under the dormant Commerce Clause.<sup>1</sup> Indeed, the principle against protectionism

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1. See, e.g., *Dean Milk Co. v. City of Madison*, 340 U.S. 349, 354 (1950)

in interstate trade applies to all articles traded in interstate commerce, including those related to the environment.<sup>2</sup>

Imagine instead that two states, for example, California and Maine, wish to reduce local levels of pollutants attributable to the generation of electricity from fossil fuels. They therefore adopt programs to foster their states' renewable power industries. According to each program, ten percent of the energy supplied to end-use customers within the state must consist of renewable power such as wind, solar, geothermal, or biomass. In developing strategies to implement this renewable power mandate, each state toys briefly with a traditional regulatory approach according to which each individual energy retailer must alter its energy sources to ensure that a minimum percentage of its portfolio consists of renewable power. Each state rejects this option, however, due to opposition from a subset of suppliers obligated under long-term fossil fuel supply contracts. Instead, each state implements a tradable obligation mechanism, a variation on the increasingly popular emissions trading programs recently adopted by federal, state, and local governments.<sup>3</sup> Under such a program, energy retailers can meet renewable energy requirements through the purchase of renewable energy credits from other generators or retailers without altering their own energy portfolio. Conversely, retailers who overcomply by purchasing more renewable power than the mandated minimum percentage may sell their extra credits to suppliers whose percentage of renewable power falls below the minimum. Marketable renewable energy credits thus efficiently spread the cost of satisfying the ten percent renewable requirement among the state's energy retailers.

Suppose that sometime later a California energy retailer purchases renewable energy credits from a biomass company in Maine and proffers such credits under California's minimum renewable energy mandate. Upon learning of the sale, the California legislature prohibits the use of out-of-state renewable energy credits under the California standard. California's legislators reason that accepting out-of-state credits will undermine the state's objective of improving air quality. Upset that the legislature has spoiled their trade, both the California energy credit importer and the Maine energy credit exporter sue

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(striking down a local ordinance prohibiting the sale of all milk except that which is pasteurized within five miles of the city center).

2. See *Philadelphia v. New Jersey*, 437 U.S. 617, 626-27 (1978) (striking down a state statute prohibiting the importation of municipal waste generated out of state).

3. See *infra* text accompanying notes 34-62.

California, claiming that the state's ban violates the dormant Commerce Clause.

What result? Can California's hypothetical ban on importing out-of-state renewable energy credits be distinguished from the New Jersey ban on importing out-of-state waste that was struck down in *Philadelphia v. New Jersey*?<sup>4</sup> Both constitute facial discrimination against articles of commerce, which the Supreme Court has generally held "virtually *per se*" invalid.<sup>5</sup> Nevertheless, California is guilty of nothing more than trying to ensure clean air in an efficient manner. California provides such clean air benefits when it adopts a renewable energy mandate, and it provides those benefits more efficiently by using a tradable obligation mechanism to implement that mandate. If California does not also prohibit credits from out-of-state renewables generators, it may subsidize clean air in distant areas such as Maine. To be sure, California could capture the clean air benefits simply by refusing to use a tradable obligation mechanism, but it would then lose the efficiencies gained by such a market-based approach. If California's ban on out-of-state credits is considered facial discrimination, the Commerce Clause would require California to choose either inefficient regulation that provides clean air only within the state or efficient regulation that may improve the air quality of distant states rather than its own.

This Article is an attempt to address the Commerce Clause issues raised when state regulators employ market-based approaches to environmental regulation. The above hypothetical exemplifies the problems that can arise when state legislators, in an effort to protect the environment, experiment with creating markets for things that were never before conceived of as marketable. Whether those things be tradable obligations to purchase renewable power or tradable permits to pollute, does a state that adopts such market-friendly approaches thereby automatically transform its regulatory authority into an article of commerce within the meaning of the commerce clause? Will such a state unwittingly find its efforts to protect the environment stymied by the Supreme Court's dormant Commerce Clause jurisprudence? Similar issues arise when a state employs other market-based approaches to regulation, such as forcing manufacturers to internalize the environmental costs of production or waste disposal, thereby increasing the

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4. 437 U.S. at 617.

5. *See id.* at 624.

price of goods. These Commerce Clause questions may be expected to arise with greater frequency as market-oriented approaches to achieving public goals become increasingly popular.

In the analysis of such questions, I will focus particular attention on the rapid deregulation of the electricity generation industry. As states and the federal government move swiftly to deregulate and reform long-standing electricity monopolies,<sup>6</sup> the

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6. After nearly 90 years, the monopoly status of electric power utilities is coming to an end. As of February 1999, 16 states had enacted legislation restructuring their electricity industry to allow for retail competition in the provision of electricity to commercial and residential customers. See 1998 ARIZ. REV. STAT. ANN. § 30-803 (1998) (electric utilities shall open their service territory to competition in the sale of 20% of the 1995 retail load by Dec. 31, 1998 and 100% of their retail load by Dec. 31, 2000); CAL. PUB. UTIL. CODE. § 331-381 (WEST 1996) (retail competition to begin Jan. 1, 1998); 1998 Conn. Acts 16-244, § 4 (retail competition shall begin by July 1, 2000); IL. REV. STAT. ch. 220, §§ 5/16-101, 5/16-104 (retail competition for nonresidential consumers shall begin by Oct. 1, 1999, and for residential consumers by May 1, 2002); ME. LAWS 568 (retail competition to begin Mar. 1, 2000); MONT. CODE ANN. tit. 69 § 201 (1997) (retail competition for customers with loads greater than 1000 kWh begins July 1, 1998, and for all other customers by July 1, 2002, unless an earlier date is established by the State Public Service Commission); MASS. GEN. LAWS ch. 164, § 11F (1998) (retail competition shall begin by Mar. 1, 1998); NEV. REV. STAT. 704.970 (1997) (retail competition to begin Dec. 31, 1999, unless a later date is chosen by the State Public Utilities Commission); 1997 N. H. REV. STAT. ANN. § 374-F(xv) (retail competition is to begin as expeditiously as possible); A. 10, 208th Leg. (N.J. 1998) (enacted) (retail competition will begin on June 1, 1999); N.Y. PUB. SERV. § 77-A (McKinney 1997) (as soon as possible, but not later than Mar. 1, 2000, all customers of electric corporations, including municipal utilities, shall have the opportunity to purchase electricity services from any supplier of electricity); OKLA. STAT. tit. 17, § 190.4 (1997) (retail competition to begin by July 1, 2002); 1997 PA. LAWS 1509 (transition to retail competition began Jan. 1, 1997; all customers are to have retail access by Jan. 1, 2001); 1997 R. I. LAWS 96-H 8124 (retail access for all customers to take place no later than July 1, 1998); H.B. 1172 (Va. 1998) (enacted) (retail competition shall commence on Jan. 1, 2004); VT. STAT. ANN. tit. 89, § 8001 (1997) (retail competition to begin no later than Jan. 1, 2000). Nearly thirty other state legislatures have established special or oversight committees to study electricity restructuring with an eye toward future legislative proposals. 30 *"Laboratories of Democracy" Test Electric Industry Issues*, 2 LEAP LETTER 24-31 (July-Aug. 1997). The transition to competition was given a tremendous boost in 1996 when the Federal Energy Regulatory Commission required all public utilities owning or controlling facilities used for transmitting electricity in interstate commerce to offer nondiscriminatory transmission services so that power can be wheeled or transported from one utility to another across a third utility's transmission system. See Federal Energy Regulatory Commission, Promoting Wholesale Competition Through Open Access Nondiscriminatory Transmission Services by Public Utilities and Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 Fed. Reg. 21,540 (1996) [hereinafter F.E.R.C. Order No. 888]. For a useful overview of electricity restructuring, see TIMOTHY J. BRENNAN ET AL., *A SHOCK TO THE SYSTEM: RESTRUCTURING AMERICA'S ELECTRICITY INDUSTRY* (1996). For an overview of the complicated federal and state regulatory jurisdictional issues involved in restructuring, see Richard J. Pierce, Jr., *The State of the Transition to Competitive Markets in Natural Gas and Electricity*, 15 ENERGY L. J. 323, 328-50 (1994). For a

landscape of this industry will be transformed, much as the telephone,<sup>7</sup> airline,<sup>8</sup> trucking,<sup>9</sup> and railroad<sup>10</sup> industries were transformed during previous decades. States have strong reasons to be concerned about the environmental consequences of electricity deregulation. The generation of electricity relies heavily on fossil fuels and hence is extremely pollution intensive.<sup>11</sup> Deregulation creates incentives to use cheaper, yet more polluting, coal and other fossil fuels. Thus a greater focus on short-term markets may bias investment against renewable energy and research and development. Many experts predict that deregulation will increase pollution outputs from the energy sector with possibly severe adverse effects on local and regional air quality.<sup>12</sup> Because pollutants generated by fossil fuel

regional perspective on the interface between electricity restructuring and environmental and consumer organizations' efforts to replace unproductive and environmentally harmful energy sources with clean technologies, see ED SMELOFF & PETER ASMUS, *REINVENTING ELECTRIC UTILITIES: COMPETITION, CITIZEN ACTION, AND CLEAN POWER* (1997). For a history of the growth of state-regulated monopoly electricity utilities in the early 1900s and the shift to competition in the 1990s, see generally Robert L. Bradley, *The Origins of Political Electricity: Market Failure or Political Opportunism?*, 17 *ENERGY L. J.* 59 (1996); SMELOFF & ASMUS, *supra* at 7-23.

7. See The Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.). See generally PETER W. HUBER ET AL., *THE TELECOMMUNICATIONS ACT OF 1996* (1996).

8. See Civil Aeronautics Board Sunset Act of 1984, Pub. L. No. 98-443, 98 Stat. 1703 (codified as amended in scattered sections of 49 U.S.C.); Airline Deregulation Act of 1978, Pub. L. No. 95-504, §§ 28, 30, 92 Stat. 1729, 1731 (codified as amended in scattered sections of 49 U.S.C.). See also MELVIN A. BRENNER ET AL., *AIRLINE DEREGULATION* (1985); STEPHEN BREYER, *REGULATION AND ITS REFORM* 197-204 (1982).

9. See Motor Carrier Act of 1980, 49 U.S.C. §§ 10706(b)(3)(B)-(D) (1994).

10. See Staggers Rail Act of 1980, Pub. L. No. 96-448, 94 Stat. 1895.

11. See, e.g., U.S. EPA, COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT ON FERC DOCKET No. RM95-8-000 and No. RM94-7-001 (Rev. Feb. 21, 1996) [hereinafter FERC EIS] (Electric power plant emissions are significant contributors to nation's most significant health and environmental concerns, contributing, in 1993, 72% of all sulfur dioxide, 33% of all nitrogen oxides, 32% of all particulate matter emissions, 23% of mercury emissions, and 36% of all anthropogenic carbon dioxide emissions; power plants also contribute a range of multimedia impacts related to their water consumption demands.); NATURAL RESOURCES DEFENSE COUNCIL & PUBLIC SERVICE ELECTRIC AND GAS CO., *BENCHMARKING AIR EMISSIONS OF ELECTRIC UTILITY GENERATORS IN THE U.S.* § 1 (Report, 1996) (100 largest of 838 electric generating utilities in the U.S. are responsible for 90% of all utility NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub> emissions, and utilities as a whole are major contributors to ground-level ozone, acid rain, visibility impairment, particulate emissions, nitrogen deposition in waterways, and global warming); NATURAL RESOURCES DEFENSE COUNCIL ET AL., *BENCHMARKING AIR EMISSIONS OF UTILITY ELECTRIC GENERATORS IN THE EASTERN U.S.* (Report, 1997) <<http://www.nrdc.org/nrdccpro/util/index.html>> (electric utility generating plants are the largest source of sulfur dioxide and carbon dioxide and the largest industrial emitters of nitrogen oxides).

12. See CENTER FOR CLEAN AIR POLICY, *AIR QUALITY AND ELECTRICITY RESTRUCTURING ES2-3* (March 1997); Henry Lee & Negeen Darani, *Electricity Restructuring and the*

combustion act as greenhouse gases, deregulation may accelerate global warming as well.<sup>13</sup>

How are states to control such pollution in a deregulated context, then? Regulators and policymakers are increasingly attracted to incentive-based market approaches to pollution control as the electricity industry itself becomes increasingly market driven.<sup>14</sup> Yet an incentive-based market approach

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*Environment*, (Kennedy School of Government, Harvard University, CSIA Discussion Paper 95-13, Dec. 1995); ALLIANCE TO SAVE ENERGY ET AL., *ENERGY INNOVATIONS* 33-34 (1997); U.S. EPA, FERC EIS, *supra* note 11, at 4. See also Michael E. Stern & Margaret M. Mlynczak Stern, *A Critical Overview of the Economic and Environmental Consequences of The Deregulation of the U.S. Electric Power Industry*, 4 ENVTL. LAW. 79, 97-104 (1997) (discussing predicted negative impacts of electricity deregulation upon the environment due to increased demand for the dirtier, cheaper energy produced by coal-fired utilities); Alan Miller & Adam Serchuk, *The Promise and Peril In a Restructured Electric System*, 12 NAT. RES. & ENVT. 118, (1997) (same).

13. Fossil fuel generation is the source of large quantities of carbon dioxide, the primary gas responsible for global warming. Electricity deregulation is likely to increase the United States' output of greenhouse gases at a time when the U.S. is under increased pressure to reduce its contribution to climate change. In December 1997, the United States signed an agreement in Kyoto, Japan, pledging to cut its emissions of six greenhouse gases, including carbon dioxide, by seven percent from 1990 levels between the years 2008 and 2012. The Kyoto Protocol was signed by a total of 160 nations, and includes a 5.2% reduction in total developed country emissions from 1990 levels. Although U.S. delegates signed the treaty, the measure has yet to be ratified by the United States Senate. *Industrialized Nations to Cut Greenhouse Gas Emissions by 5.2%*, DAILY ENVT. REP. (BNA) (Dec. 12, 1997). Strong criticism of the protocol's failure to require developing nations to reduce greenhouse gases makes it unclear whether the Senate will ultimately ratify the document. In a 95-0 vote earlier this year, the Senate called for the rejection of any international treaty on greenhouse gases that does not bind developing nations. The Clinton Administration has promised to delay submitting the accord to the Senate for ratification until it has obtained the agreement of developing nations in separate negotiations to participate in the treaty by pledging reductions in their contribution to greenhouse gas emissions. See Mark Felsenthal, *Climate Change: White House Seeks Developing Country Emission Cuts Before Pact is Ratified*, DAILY ENVT. REP. (BNA) (Dec. 12, 1997). Leaders of developing nations, environmental groups, and the EU argue, however, that it is not fair to require developing nations to cut back on greenhouse gas emissions where the existing buildup of such gases is attributable to industrialized nations and per capita consumption of energy in the developing world is still often over a hundred times lower than that in the United States. See *Climate Change: UNCTAD Proposes 'Buenos Aires Mandate' to Bring Developing Nations Into Treaty*, DAILY ENVT. REP. (BNA) (May 8, 1998). Without the implementation of innovative policies to reduce carbon intensive energy use, deregulation will accentuate the difficulty of meeting the Kyoto accord's ambitious, but fully supportable goal.

14. See, e.g., TELLUS INSTITUTE, ES-3, SUSTAINABLE ELECTRICITY FOR NEW ENGLAND: A REPORT TO THE NEW ENGLAND GOVERNORS' CONFERENCE, INC. (Jan. 1997) (recommending New England states "emphasize market transformation strategies in their support for both energy efficiency and renewable technologies"); CENTER FOR CLEAN AIR POLICY, *supra* note 12, at 108-09 (concluding that state decisionmakers reduce the risk of adverse environmental impacts from electricity restructuring by adopting emissions trading, access charges, emissions fee and rebate programs, and

threatens to subject state environmental policy to the dictates of the national market. A state's efforts to improve its environment through the market may result in benefits to other states that have not paid for them. To avoid this result, states are likely to enact market barriers to stem the flow of benefits out of their jurisdictions. Such market barriers are likely to invite challenges under the dormant Commerce Clause. It is therefore inevitable that state interest in market-based environmental regulatory mechanisms will require that the courts answer a fundamental question: If a state adopts such a mechanism and then shields it from national market forces by erecting trade barriers, does the state thereby violate the constitutional mandate for unrestricted interstate trade?

The thesis of this Article is that barriers to interstate commerce should be considered constitutionally permissible when they result from state efforts to (1) retain the benefits of an incentive-based environmental market the state itself has created; (2) prevent the loss, to other jurisdictions, of the benefits generated where citizens collectively invest in industries using more environmentally sensitive production processes; or (3) stem the flow, to other states, of conventional economic benefits that result when a state forces industries to internalize the environmental costs of production and waste disposal. In other words, the Commerce Clause should not void state regulation that attempts to prevent free benefits from accruing to other states.

At least four reasons justify making the above list of state trade barriers constitutionally permissible. First, although trade barriers are typically used as tools of economic protectionism, such is not the case with the type of regulations enumerated above. Rather than creating an economic advantage for in-state industries at the expense of out-of-state industries, these barriers prevent the loss of in-state economic and environmental benefits as a result of combining a national free trade regime with state market mechanisms for environmental protection. Given that the dormant Commerce Clause primarily exists to prevent state protectionism, the absence of a protectionist purpose is a strong argument for upholding the validity of the regulation from Commerce Clause attack.

Second, if the dormant Commerce Clause is touted as preserving economic efficiency (normally achieved through the

prohibition of state barriers to free trade),<sup>15</sup> environmental regulation poses a special case that may actually warrant *toleration* of trade barriers in the name of greater efficiency. Environmental regulation is necessary from an economic standpoint because it corrects for the market's failure to internalize the costs of pollution or to generate an efficient amount of public goods such as clean air. According to the economic theory of the "second best,"<sup>16</sup> if an economic system contains a market failure, it is not necessarily desirable to maintain competitive conditions throughout the system; a second failure (such as a trade barrier) can cancel the effects of the first and nearly restore the overall system to efficiency. In such a case, a fix that removes only one of the market failures while leaving the other standing can result in a less efficient outcome.<sup>17</sup> Thus if the dormant Commerce Clause is intended to promote efficiency, it should prohibit trade barriers only when the costs and benefits of the article of commerce under consideration are fully internalized. The invalidation of state barriers when the costs and benefits of environmental goods and harms are *not* fully internalized (as evidenced by widespread environmental degradation) undermines the Commerce Clause's goal of efficiency.

Third, another dormant Commerce Clause goal, interstate harmony, warrants toleration of trade barriers enacted pursuant to state market-based regulations.<sup>18</sup> For example, to the extent

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15. See, e.g., Richard B. Collins, *Economic Union as a Constitutional Value*, 63 N.Y.U. L. REV. 43, 63-64 (1988) (economic efficiency is important in defining the doctrine's boundaries because doctrine arrays local lawmaking efficiencies against national market, but focus of framers' concerns was interstate commercial harmony rather than market efficiency); Donald Regan, *The Supreme Court and State Protectionism: Making Sense of the Dormant Commerce Clause*, 84 MICH. L. REV. 1091, 1119-1122 (1986) (although framers did have some efficiency-related objections to interstate protectionism, their objections were much milder than the claims made by modern apostles of efficiency; some concern with efficiency underlies traditional concern in preventing states from engaging in purposeful economic protectionism).

16. See R.G. Lipsey & K. Lancaster, *The General Theory of Second Best*, 24 REVIEW OF ECONOMIC STUDIES 11 (1956-57). For applications of the theory of the second best to legal problems, see Peter B. McCutchen, *Mistakes, Precedent and the Rise of the Administrative State: Toward a Constitutional Theory of the Second Best*, 80 CORNELL L. REV. 1, 3 (1994); Kathryn L. Moore, *State and Local Taxation of Interstate and Foreign Commerce: The Second Best Solution*, 42 WAYNE L. REV. 1425, 1468 (1996).

17. See WALTER NICHOLSON, MICROECONOMIC THEORY 521 (5th ed. 1992).

18. There is widespread agreement among scholars that interstate harmony is at the heart of the dormant Commerce Clause. See, e.g., Collins, *supra* note 15, at 64 (focus of framers' concern was interstate commercial harmony to prevent strong states from exploiting weak states); Regan, *supra* note 15, at 1113 (state protectionism is unacceptable because it is "inconsistent with the very idea of

that a state requires that the prices of products sold within its territory reflect the environmental costs of their production, a state arguably manifests a concern for the welfare of neighboring jurisdictions. Hence state consideration of the environmental impacts of activities occurring in other states would appear generally *conducive* to interstate harmony. Yet under the dormant Commerce Clause such consideration could be considered unconstitutional extraterritorial regulation. Such unthinking analysis undermines the national interest in interstate harmony and, by extension, one of the very values upon which the legitimacy of the dormant Commerce Clause rests.

Finally, the logic, if not the letter, of the market participant exception should protect discrimination needed to capture the environmental public goods generated by state investment in environmentally-sensitive products such as renewable energy. The market participant exception furthers both fairness and efficiency by tolerating state preferences for residents and local businesses when a state distributes benefits accruing from resident-funded economic ventures.<sup>19</sup> When allowed to internalize the benefits of their own actions, states both reap what they sow and are encouraged to invest in response to resident preferences.<sup>20</sup> Where compliance with the state's investment requirement is made tradable through a marketable credit system, discrimination in favor of local businesses may be necessary to ensure that the environmental public goods generated by the investment obligation are not lost to nonresidents who did not pay for them. Such an interpretation of the market participant exception is consistent with the exception's purpose of furthering fairness and efficiency in state decision making.

Part I of this Article surveys many of the market-based

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political union"); Jonathan D. Varat, *State "Citizenship" and Interstate Equality*, 48 U. CHI. L. REV. 487, 493 (1981) (the interstate equality principle, which limits state power to discriminate against nonresidents and thus encourages friendship and intercourse among the states, is embodied in both the dormant Commerce Clause and the Article IV Privileges and Immunities Clause).

19. See *Hughes v. Alexandria Scrap*, 426 U.S. 794 (1976); *Reeves v. Stake*, 447 U.S. 429 (1980); *White v. Massachusetts Council of Constr. Employers, Inc.*, 460 U.S. 204, 214-15 (1983).

20. See Varat, *supra* note 15, at 523 ("[P]olitical communities, including states, have a prima facie justification for limiting distribution of their public goods to those who combined to provide them."); Mark P. Gergen, *The Selfish State and the Market*, 66 TEX. L. REV. 1097, 1112 (1988) (arguing that utility is maximized when states are able to internalize the benefits of their actions and thus supporting some, though not all, of the Court's market participant case law).

regulatory mechanisms currently being adopted by states to mitigate the adverse environmental impacts of electricity deregulation. For each mechanism, I analyze both the states' incentives to protect environmental and economic benefits through the erection of trade barriers and the dormant Commerce Clause issues that such barriers raise. I find that several of the market barriers currently employed by states in their electricity restructuring legislation could be considered unconstitutional under the Court's current interpretation of the dormant Commerce Clause. Part II demonstrates that alternatives to such constitutionally suspect approaches either protect the environment less effectively or less efficiently. Thus Part III argues that current dormant Commerce Clause doctrine invalidates more legislation than is justified by the principles underlying the Clause and furthermore stifles state regulatory innovation. Hence I offer three principles for reforming the facial discrimination and extraterritoriality tests under the Commerce Clause. These principles, if adopted by the Court, would allow states to adopt market-based regulatory mechanisms to achieve environmental protection, while preserving the underlying goals of the Commerce Clause.

## I

## STATE MARKET-BASED ENVIRONMENTAL REGULATION AND THE DEREGULATION OF THE ELECTRICITY INDUSTRY

Incentive-based environmental regulation derives from economic theories about the causes of environmental problems. From an economic perspective, environmental degradation results when the environmental costs of economic activities are not included in the costs of production.<sup>21</sup> Similarly, an undersupply of environmental amenities (for example, clean air, clean water, and open space) occurs because such amenities are public goods: goods which, because they are nonrival and nonexcludable, the market will produce in inefficiently low amounts.<sup>22</sup> Incentive-based environmental solutions respond to the externality problem by attempting to internalize the environmental costs of production.<sup>23</sup>

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21. See WILLIAM J. BAUMOL & WALLACE E. OATES, *THE THEORY OF ENVIRONMENTAL POLICY* 76-79 (1988).

22. See *id.*

23. See Robert W. Hahn & Robert N. Stavins, *Incentive-Based Environmental Regulation: A New Era from an Old Idea?*, 18 *ECOLOGY L.Q.* 1, 7-15 (1991) (describing and critiquing various incentive-based environmental regulatory mechanisms).

One incentive-based approach, attributed to Ronald Coase<sup>24</sup> and Garret Hardin,<sup>25</sup> treats excessive pollution and other environmental abuses as a problem of inadequately-defined property rights that allows some parties to use natural resources without paying for them. Accordingly, this approach controls environmental abuse by creating quasi-property rights in natural resources that may be traded among particular parties. The government must first establish a maximum level of permissible environmental harm (for example, maximum pollution levels), which may or may not be optimal.<sup>26</sup> Once established, the cost of meeting this maximum can be efficiently allocated through a system of tradable permits to exploit the resource at issue.<sup>27</sup>

Emissions trading programs are probably the most widely implemented of the many types of environmentally related marketable permit programs. Marketable permit schemes are not limited to pollution permits, but also encompass permits to develop wetlands, destroy wildlife habitat, and engage in commercial fishing operations.<sup>28</sup> Furthermore, marketable permits are not limited to negative rights with respect to a

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24. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

25. Garret Hardin, *Tragedy of the Commons*, 168 SCIENCE 1243 (1968).

26. For example, under the sulfur credit trading program enacted as part of the federal Clean Air Act Amendments of 1990, the sum total of sulfur dioxide emissions from electric utilities is capped at 8.9 million tons, an amount roughly 10 million tons less than sulfur dioxide emissions in 1990. This figure was not derived from an examination of the efficient level of sulfur dioxide because it was only loosely based upon scientific studies of the damage caused by sulfur emissions and their corresponding costs. Rather, the figures appear to have been the result of a political determination by the Bush Administration as to what level of control would be politically feasible. See 136 CONG. REC. S3257 (daily ed. Mar. 27, 1990) (statement of Sen. Chafee) ("[H]ere we have the administration, on its own, coming up with a 10-million-ton reduction. That was not us. That was them. We concurred with them. We, perhaps, could have gone with 12 or 8, but we went with 10 to have the horses in harness together."); see also Christopher S. Hooper, Comment, *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, 589-92 (1996).

27. See J.H. DALES, *POLLUTION, PROPERTY AND PRICES* 107 (1968)

28. Marketable permit schemes are also being implemented in programs that allow license holders to exploit a natural resource. Perhaps the most significant example of this is wetlands mitigation banking. See, e.g., William W. Sapp, *The Supply-Side and Demand-Side of Wetlands Mitigation Banking*, 74 OR. L. REV. 951 (1995); Michael Rolland, *The Systemic Assumptions of Wetlands Mitigation: A Look at Louisiana's Proposed Wetland Mitigation and Mitigation Banking Regulations*, 7 TUL. ENVTL. L.J. 497 (1994). For other examples of the use of the tradable permit approach to introduce efficiency into the allocation of natural resources, see Ransom E. Davis, *Individually Transferable Quotas and the Magnuson Act: Creating Economic Efficiency in Our Nation's Fisheries*, 5 DICK. J. ENVTL. L. & POLY 267, 305-09 (1996); David Sohn & Madeline Cohen, Note, *From Smokestacks to Species: Extending the Tradable Permit Approach From Air Pollution to Habitat Conservation*, 15 STAN. ENVTL. L.J. 405 (1996).

natural resource. Tradable permits may be in the nature of an obligation to improve the environment, for example by creating a tradable obligation to purchase renewable power.

A second incentive-based approach to environmental regulation consists of government subsidies to encourage certain environmentally beneficial activities. Such subsidies overcome the public goods problem that inhibits the creation of environmental benefits shared by all. Government subsidies permeate the landscape of environmental regulation in the form of supports for research and development, the construction of sewage treatment facilities, and regulatory breaks for facilities using more advanced pollution control technology.<sup>29</sup>

Yet a third approach to internalizing costs (attributed to A.C. Pigou<sup>30</sup>) taxes an environmentally harmful activity in proportion to the amount of harm it produces.<sup>31</sup> For example, a Pigovian tax might assess a fee for every ton of pollution discharged into a water body, ideally at a rate equal to the marginal damage of the pollution emitted.<sup>32</sup>

The following sections describe an array of incentive-based controls currently implemented by states to mitigate the potential adverse environmental impacts of electricity deregulation.<sup>33</sup> These controls are necessary because the dismantling of traditional energy regulatory institutions, such as public utilities commissions, is likely to witness a demand for regulatory approaches capable of proceeding largely in the absence of government agency oversight. For each mechanism described, I analyze the risks that the mechanism will cause a state to lose environmental public goods to other regions of the country. These very risks create an incentive for states to impose market barriers along with the regulatory mechanism (for example, restricting the geographic scope of a marketable obligation trading scheme) several of which I also describe. The

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29. See, e.g., Federal Water Pollution Control Act § 202, 33 U.S.C. § 1282 (1994) (authorizing federal grants for construction of wastewater treatment plants); FWPCA § 105, 33 U.S.C. § 1255 (1994) (grants for research and development).

30. See Dieter Helm & David Pearce, *Economic Policy Towards the Environment: An Overview*, in *ECONOMIC POLICY TOWARD THE ENVIRONMENT 1* (Dieter Helm ed., 1991).

31. See *id.*

32. One of the problems with pollution taxes is that government regulators generally lack sufficient information regarding the effects of a given charge upon a firm's incentives to reduce pollution (as opposed to paying the tax) to set the tax at a level that will ensure efficient pollution levels. See SANFORD E. GAINES & RICHARD A. WESTIN, *TAXATION FOR ENVIRONMENTAL PROTECTION 73* (1991).

33. For additional information on environmental incentive-based controls, see Hahn & Stavins, *supra* note 23, at 7-20.

discussion of each market-based mechanism therefore includes an analysis of the constitutional problems posed by the attendant market barriers under current dormant Commerce Clause jurisprudence. Table 1 summarizes the various market-based regulatory approaches discussed in greater detail in the sections that follow.

**TABLE 1**  
**Market-Based Regulatory Approaches That May Be Used**  
**to Offset the Adverse Environmental Impacts of Electricity**  
**Restructuring Legislation**

<b>Mechanism</b>	<b>Description</b>
Marketable Permits to Pollute or to Exploit a Natural Resource	Tradable license to harm the environment by discharging pollution or otherwise exploiting a natural resource.
Marketable Proof of Satisfaction of an Obligation to Improve the Environment	Tradable proof of satisfaction of a regulatory obligation to improve the quality of the environment. For example, a renewable portfolio standard, which requires that an energy supplier obtain a certain percentage of its portfolio from renewable resources, may be satisfied by tradable renewable energy credits.
Environmental Externality Values, or Adders	Additional costs reflecting the environmental impacts of electricity production added to the traditionally considered costs of producing electricity. Environmental externality values are used in Integrated Resource Planning to determine the source of additional electricity supply.
Emissions, Portfolio or Generation Performance Standard	Uniform emissions standard applicable to the production of all electricity sold within the state.
System Benefits Charges	Surcharge imposed upon energy users assessed on a per-kilowatt basis. Surcharge revenues are used to subsidize renewable energy generators as well as energy efficiency and low-income energy provision programs.
Emission or Effluent Taxes	Per unit tax upon the pollution discharged by firms. Such taxes may be imposed directly upon polluting facilities themselves (emissions or effluent tax) or upon consumers, based upon the amount of pollution emitted in producing purchased goods (consumption tax).

### A. Marketable Harms: Tradable Permits to Pollute

Tradable emissions programs are quickly becoming the solution of choice to the pollution problems posed by the electricity industry. Today's best known emissions trading program, the federal Clean Air Act's sulfur dioxide credit trading scheme, applies almost exclusively to electric utilities fired by fossil fuels.<sup>34</sup> Demonstrating the increasing popularity of such programs, the U.S. Environmental Protection Agency recently granted a petition by Northeastern states to curb emissions from fossil fuel generating facilities in the Midwest and South.<sup>35</sup> The EPA intends to subject those sources specifically identified as contributing to harmful air pollution conditions in other states to a cap and trade program for nitrogen oxide emissions.<sup>36</sup> Under such a program, the nitrogen oxide emissions of the collectively identified electric utilities and other polluting sources will be subject to an emissions cap, though individual sources could emit varying levels of nitrogen oxide, depending upon how many pollution permits they purchase from or sell to one another.<sup>37</sup>

Emissions trading is also being implemented or has been proposed at the local, state, and regional levels. For instance, the metropolitan emissions trading scheme, RECLAIM, was designed to control levels of nitrogen oxides and ozone in the Los Angeles area.<sup>38</sup> Illinois has implemented a tradable scheme for several air pollutants,<sup>39</sup> and a few states have implemented

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34. Clean Air Act §§ 401-416, 42 U.S.C. §§ 7651-7651o (1994).

35. See Findings of Significant Contribution and Rulemaking on Section 126 Petitions for Purposes of Reducing Interstate Ozone Transport, 64 Fed. Reg. 28,250 (May 25, 1999) (granting the § 126 Clean Air Act petition of eight Northeastern states requesting that EPA make a finding that certain major stationary sources of criteria pollutants in upwind states contribute significantly to nonattainment conditions, or interfere with the maintenance of attainment, in the petitioning states).

36. See *id.* at 28,308.

37. See *id.* at 28,309.

38. RECLAIM stands for "Regional Clean Air Incentives Market." See South Coast Air Quality Management District (SCAQMD), Regional Clean Air Incentives Market, Summary Recommendations (Spring 1991); Vivien Foster & Robert W. Hahn, *Designing More Efficient Markets: Lessons from Los Angeles Smog Control*, 38 J. L. & ECON. 19, 24 (1995); Evan Goldenberg, Comment, *The Design of an Emissions Permit Market for RECLAIM: A Holistic Approach*, 11 UCLA J. ENVTL. L. & POLY 297, 298 (1993). RECLAIM has been highly successful. The program is expected to cut nitrogen oxide emissions in Southern California by 80% over 10 years, and save about \$58 million annually compared to traditional forms of regulatory controls. See Open Market Trading Rule for Ozone Smog Precursors, 60 Fed. Reg. 39,668, 39,670 (U.S. EPA, 1995).

39. See In the Matter of: Emission Reduction Market System, Adoption of 35 Ill. Admin. Code 205 and Amendments to 35 Ill. Admin. Code 106, No. R97-13, 1996 Ill. Env. LEXIS 848 (Dec. 5, 1996).

effluent trading schemes with varying levels of success.<sup>40</sup> At the regional level, the Ozone Transport Commission, a consortium of twelve Northeastern states created by statute,<sup>41</sup> is about to launch a nitrogen oxide emissions trading program to control ground-level ozone.<sup>42</sup>

The prospect of more states and localities implementing their own independent emissions trading programs thus raises the question of whether and how a state can maintain regulatory authority over environmental quality within its own borders once it chooses to embody that authority in objects of commerce that may then be subject to broader market forces. Of course, a state can always intentionally expand the size of its trading market by entering into an interstate compact with one or more other states.<sup>43</sup> Under such a compact, which must be ratified by Congress, sources located within the participating states could freely trade emissions credits with each other. A state may worry, however, that even if it decides against joining such a compact, its jurisdiction may nevertheless become part of a larger emissions trading market without its consent. This could happen if emissions credits generated out-of-state could be used in-state and vice-versa. In either case, a state would lose some measure of control over the quality of its territorial environment and may thus wish to prevent interstate emissions credits trades.

Although no court has yet been asked to decide the issue, the considered answer is that a state may maintain its authority to control the quality of its environment by prohibiting interstate trades in emissions credits. As a type of license created by the state, an emissions credit from one state cannot authorize polluting activity in another state; no state can authorize an activity in another state.<sup>44</sup> As government licenses, pollution

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40. See Alexandra Teitz, *Assessing Point Source Discharge Permit Trading: Case Study in Controlling Selenium Discharges to the San Francisco Bay Estuary*, 21 *ECOLOGY* L.Q. 79, 87 (1994). For example, Wisconsin's Fox River program allows companies to trade the right to discharge pollutants to increase biological oxygen demand. See *id.*

41. The Ozone Transport Commission was created by Congress in the 1990 Amendments to the Clean Air Act. 42 U.S.C. § 7511(c) (1994).

42. NORTHEAST STATES FOR COORDINATED AIR USE MANAGEMENT (NESCAUM), *ISSUES IN THE DEVELOPMENT OF AN EMISSIONS TRADING PROGRAM* (1992); see also Michael C. Naughton, *Establishing Interstate Markets for Emissions Trading of Ozone Precursors: The Case of the Northeast Ozone Transport Commission and the Northeast States For Coordinated Air Use Management Emissions Trading Proposals*, 3 *N.Y.U. ENVTL. L.J.* 195, 233 (1994).

43. See U.S. CONST. art. I, § 10, cl. 3.

44. I reach this conclusion only because I am convinced that the territoriality

principle trumps the dormant Commerce Clause, which would otherwise require that states be required to recognize the validity of emissions credits generated out-of-state. The territoriality principle arguably trumps the dormant Commerce Clause because the former is integral to the concept of state sovereignty, a principle which the Supreme Court has recently elevated in importance to our federal structure of government. See *Alden v. Maine*, 1999 WL 412617 (U.S. S.Ct., June 23, 1999) (dismissing employees' federal Fair Labor Standards suit against their state employer because Congress lacks the power to abrogate states' sovereign immunity in federal court).

If the territoriality principle did not trump the dormant Commerce Clause, I believe state restrictions upon interstate trades in emissions credits would be barred by the dormant Commerce Clause. This is because tradable credits would seem to be, and indeed must be, articles of interstate commerce. The following explains this in more detail. First, by rendering emissions credits marketable and tradable, states eliminate the significance of the identity of the owner of the credit. With respect to trades between persons in-state, an emissions credit is no different than a refrigerator or a VCR: the state is similarly uninterested in the identity of the article's owner. For a state to restrict only trades between in-state and out-of-state sources appears facially discriminatory. Second, it can also be argued that states must be restrained in their discretion to recognize what is or is not an article of commerce. If they have this power, they would be able to circumvent the dormant Commerce Clause by conveniently finding that the thing in question is not an "article of interstate commerce." Indeed, the Court in *Philadelphia v. New Jersey* appears to have been suspicious that New Jersey was attempting precisely such a ploy. See 437 U.S. 417, 621-25 (1978). New Jersey had argued that, because municipal solid waste spreads disease and death, it was not a legitimate object of commerce and hence banning its import could not possibly violate the dormant Commerce Clause. See *id.* The Court rejected this argument with the apparently broad holding that "all objects of interstate trade merit Commerce Clause protection; none is excluded by definition at the outset." *Philadelphia v. New Jersey*, 437 U.S. at 622. The potential universe of articles subject to the Court's free trade mandate would not be unlimited, however, because Congress may exempt certain objects from dormant Commerce Clause scrutiny under its affirmative power to regulate interstate commerce. See U.S. CONST. art. I, § 8. Moreover, because the scope of Congress' affirmative powers under the Commerce Clause and the scope of commerce subject to the dormant Commerce Clause are coextensive, articles of trade lying outside the scope of Congress's affirmative power would also lie outside the scope of the dormant Commerce Clause. See *Philadelphia v. New Jersey*, 437 U.S. at 622-23 (rejecting a "two-tiered" definition of commerce that would distinguish between that subject to the positive and negative Commerce Clauses).

The principle that a state lacks the authority to define the nature of objects its authority over which is circumscribed by the Constitution has been recognized by others with respect to the Takings Clause, where the Court has recognized an implied due process limitation upon the generally recognized right of states to define the contours of "property." See *Webb's Fabulous Pharmacies, Inc. v. Beckwith*, 449 U.S. 155, 164-65 (1980) (holding that interest accrued on a county-registered interpleader fund was property subject to the Takings Clause despite a state statute to the contrary because the state could not circumvent the Takings Clause by recharacterizing property as something else); *Logan v. Zimmerman Brush Co.*, 455 U.S. 422, 430-33 (1982) (striking down as inadequate under the Due Process Clause a state limitation on when a cause of action arose for a violation of an employment discrimination claim). Several commentators have recognized that such a restriction is necessary to prevent states from undermining the Fifth Amendment guarantee. See Richard H. Fallon, Jr., *Some Confusions About Due Process, Judicial Review, and Constitutional Remedies*, 93 COLUM. L. REV. 309, 313, 359 (1993) (constitutional due

permits should possess no validity outside their state of origin and thus should not be considered articles of commerce subject to the Commerce Clause.<sup>45</sup> A state therefore may exercise control over the size of its emissions trading market by limiting the market to their territorial borders or expanding it to include the territory of other states, subject to the agreement of the other states and of Congress.

### B. Marketable Goods: Tradable Green Product Purchase Obligations

A second type of market-based environmental regulation involves marketing the obligation to improve the environment, as opposed to the right to harm it. While marketable permit schemes trade *rights* to take action (in the present context, to exploit the environment), marketable obligation schemes trade *requirements* to take action, such as to improve the environment by providing environmental public goods.<sup>46</sup> Such obligations could range from a tradable obligation among paper producers to include a certain level of postconsumer content in recycled paper

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process must apply to state choices as to what it will recognize as a protected property right or else "states could evade their constitutional obligations by refusing to recognize that protected property interests even existed"); *id.* at 359-62; Jack M. Beermann, *Government Official Torts and the Takings Clause: Federalism and State Sovereign Immunity*, 68 B.U. L. REV. 277, 307-08 (1988) ("It would be fundamentally at odds with the principles underlying the takings clause to allow states to condition entitlements on the right to destroy the entitlement . . . . If states were allowed to build immunities into the definition of property, then no takings claim could ever succeed without the state's consent.").

45. This is because pollution permits are best viewed as state licenses that authorize a particular activity—the discharge of pollution. Such permits, which, depending upon the state's program, may be issued by the state or by a polluting entity, constitute a right to be exempted from a government enforcement action for having exceeded permissible emission levels; the bearer of the credit is entitled to a pass from a government compliance action. Indeed, a polluter *cannot* pollute more than some allowable level without this license or pass to pollute more.

46. One of the best known marketable obligation programs is New Jersey's incentive-based program for the provision of housing for those with low and moderate incomes. Under this program, a municipality is allowed to transfer to another municipality up to 50% of its obligation, imposed under a series of now-famous New Jersey Supreme Court decisions, *Southern Burlington County N.A.A.C.P. v. Township of Mount Laurel*, 336 A.2d 713, 727-28 (1975), to provide a fair share of the affordable housing needed in the State. See Brent Haddad, *Putting Markets to Work: The Design and Use of Marketable Permits and Obligations*, 6 OECD SERVICE DE LA GESTION PUBLIQUE 6, 37-40 (Apr. 15, 1997). Between 1988 and 1995, 40 fair share transfers have occurred, representing an investment of \$8.5 million to refurbish 4,180 units of substandard housing. See *id.* at 40. In most of the trades, a wealthier suburban neighborhood has paid a poorer urban neighborhood to fulfill its fair share obligation by transferring cash to the urban neighborhood to pay for the refurbishment of substandard or abandoned rental units in apartment complexes. See *id.* at 38.

to a tradable obligation among car manufacturers to use low-polluting fuels. A renewable portfolio standard implemented through a system of tradable renewable energy credits is one such marketable obligation scheme for increasing reliance on renewable power in a cost-effective manner. The issues that arise with respect to state implementation of a renewable portfolio standard demonstrate why states might be motivated to restrict the geographic scope of a credit market involving consumer goods. But such restrictions raise Commerce Clause problems that are successfully avoided in the context of marketable emission permit schemes.

Renewable portfolio standards<sup>47</sup> are designed to make renewables competitive with other sources of energy in the long run.<sup>48</sup> A renewable portfolio standard requires that a specified percentage of the energy in a retailer's portfolio be derived from renewable power sources.<sup>49</sup> When a renewable portfolio standard is implemented through a tradable obligation scheme, a retailer can demonstrate compliance by proving ownership of renewable energy credits rather than the actual renewable-derived power. Under one suggested format, a renewable energy credit would be created when a qualifying renewable-energy resource is used to generate one kilowatt of electricity.<sup>50</sup> Renewables generators

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47. Useful explanations of how a renewable portfolio standard works can be found in RENEWABLES WORKING GROUP, RENEWABLES WORKING GROUP REPORT TO THE CPUC, No. 500-96-008 (Aug. 1996); ALLIANCE TO SAVE ENERGY ET AL., *supra* note 12, at 39-40; *Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation*, 161 PUB. UTIL. REP. 4TH (PUR) 217, 258 (1995) (opinion by California Public Utilities Commission proposing adoption of a renewable portfolio standard in California); SMELOFF & ASMUS, *supra* note 6, at 195-98 (explaining issues governing the implementation of an RPS in California); Nancy A. Rader & Richard B. Norgaard, *Efficiency and Sustainability in Restructured Electricity Markets: The Renewables Portfolio Standard*, ELEC. J. 37, 43-46; RYAN WISER ET AL., CALIFORNIA RENEWABLE ENERGY POLICY AND IMPLEMENTATION ISSUES: AN OVERVIEW OF RECENT REGULATORY AND LEGISLATIVE ACTION 3-4 (Ernest Orlando Lawrence Berkeley National Laboratory LBNL-39247; UC-1321, Sept. 1996); American Wind Assn., *The Mechanics of a Renewables Portfolio Standard Applied at the State Level* (Nov. 1997) <<http://www.awea.org/policy/rpsmechste.html>>.

48. See Haddad, *supra* note 46, at 43 (One benefit of the RPS is that it treats renewable-resource generators, whose electricity is currently above the market price, not as charity cases, but as competitive enterprises striving to lower their costs and make the RPS unnecessary.).

49. See, e.g., NEV. REV. STAT. § 704.989(3) (Michie 1998) ("A system of credits must provide that: (a) Credits are issued for renewable energy resources for each kilowatt hour of energy which it produces."); Rader & Norgaard, *supra* note 47, at 43.

50. Hence, for example, if a renewable portfolio standard is established at five percent and a retailer sells 100,000 kWhs in a given year, the retailer would need to possess 5,000 renewable energy credits at the end of the year. See American Wind Ass'n, *supra* note 47, at 3.

could sell these credits separately to energy retailers or bundled together with the actual renewable power each credit represents.<sup>51</sup> Energy retailers could decide for themselves whether to invest in renewable energy projects that generate credits or simply to purchase credits on a spot market. The state's only enforcement obligations would be to certify the credits and to ensure that every firm possessed a sufficient number of credits at the end of the year.<sup>52</sup>

In terms of efficiency, a renewable portfolio standard has many advantages over competing methods for encouraging renewable energy. A renewable portfolio standard avoids direct funding by government agencies, which can be administratively burdensome, time consuming, and inefficient. Importantly, under a renewable portfolio standard, no particular renewable energy project is guaranteed a place in the market. Instead, each project must continually compete to ensure a high volume of energy sales and hence a high volume of credits generated. Such competition is altogether lacking under a government system that dispenses one-time monetary awards to individual renewable generators. Furthermore, a renewable portfolio standard encourages least-cost compliance, because retailers can determine for themselves whether it is cheaper to operate a renewables generating facility, thereby generating their own credits and selling excess credits to other buyers, or simply to buy credits on the open market.<sup>53</sup>

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51. Where an energy retailer purchases renewable energy credits together with the actual kilowatt hours that the credits represent (also known as a "bundled" sale), the number of credits held by the retailer will reflect the amount of renewable kilowatt hours in the retailer's energy portfolio. However, where an energy retailer purchases credits separate from kilowatt hours (known as an "unbundled" sale), the number of credits held by the retailer will not necessarily correspond to the actual amount of renewable kilowatt hours in the retailer's fuel mix. Nevertheless, even where credits sales are unbundled, the number of credits held by all of the state's retail energy suppliers will, in the aggregate, equal or exceed the amount of renewable kilowatt hours of power sold by renewables generators to the retail suppliers in the aggregate.

52. The role of state government under a renewable portfolio standard is limited to certifying renewable energy credits, monitoring compliance, and imposing penalties, if necessary. See Rader & Norgaard, *supra* note 47, at 43-44. Thus the renewable portfolio standard is extremely similar to a marketable emissions credit program. The primary difference is that the renewable portfolio standard rests upon a tradable certificate of proof demonstrating partial satisfaction of an obligation to generate one kilowatt hour of renewable power, as opposed to a tradable license to pollute a ton of a particular pollutant. Both presuppose government regulators will define the relevant environmental parameter, be it that emissions should not exceed current levels or that ten percent of the state's total electrical supply should consist of renewable energy.

53. See *id.* In its Annual Energy Outlook 1998, the Department of Energy's

To date, renewable portfolio standards have been enacted as part of the electricity restructuring legislation or procedures of six states: Maine,<sup>54</sup> Nevada,<sup>55</sup> Arizona,<sup>56</sup> Massachusetts,<sup>57</sup> Connecticut,<sup>58</sup> and New Jersey,<sup>59</sup> several of which authorize implementation through a tradable credit scheme.<sup>60</sup> In addition,

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Information Administration estimates that a national renewable portfolio standard would have a minimal impact upon the price of energy. Taking into consideration the speculative nature of any prediction of the future cost of energy, the Department predicts that a national 5% renewable portfolio standard would increase the cost of energy by 0.1 cent per kilowatt hour and a 10% standard by 0.2 cent per kilowatt hour. See *Climate Change: DOE Estimates Carbon Reductions from Renewable Energy Mandates*, DAILY ENV'T REP. (BNA) (Dec. 19, 1997).

54. See ME. REV. STAT. ANN. tit. 35, § 3210 (West 1998). The Maine renewable portfolio standard requires 30% renewable energy, the highest percentage of renewable power found in any state's standard thus far. However, this is probably because Maine includes as renewable resources biomass and hydroelectric power, either or both of which is omitted from the definition of renewables in the standards enacted by other states.

55. See NEV. REV. STAT. § 704.989(3)(Michie 1998) (establishing a renewable portfolio standard starting at 0.2% of the total amount of electricity annually consumed by Nevada customers starting in 2001 and increasing by 0.2% on a biannual basis until the standard reaches a total of 1.0%).

56. See ARIZ. ADMIN. CODE. § R14-2-1609 (1996) (establishing a standard of 0.5% renewables in 1999, increasing by 0.2% each subsequent year until the standard reaches 1% and maintaining the 1% standard from 2003 to 2012).

57. See 1997 Mass. Acts, Ch. 164, § 11F(a) (establishing a standard, effective Dec. 31, 1999, equal to the existing percentage of kilowatt-hour sales to Massachusetts consumers from renewable resources and increasing 1% of sales by December, 2003, and increasing an additional 0.5% of sales per year in each subsequent year until December 31, 2009).

58. See 1998 Conn. Acts 98-28, § 25 (establishing a 1999 renewable mandate of between 1 and 5.5% of a retailer's portfolio, depending on the class of renewables and increasing to between 6 and 7% in 2009). Two other states have had near misses in terms of enacting a renewable portfolio standard. In 1997, the Vermont Senate passed a renewable portfolio standard, but the Act failed to pass the State House. Electric Industry Restructuring and Electric Price Stabilization Act, S.62, § 8026 (Vt., 1997). A 1996 Order of the California Public Utilities Commission called for the adoption of a State RPS. See *Order Instituting Rulemaking on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation*, D. 95-12-063 (December 20, 1995), modified by D. 96-01-009 (January 10, 1996), 166 P.U.R. 4th 1 (1996). However, the California legislature rejected the RPS in favor of a subsidy-like mechanism for promoting renewable power within the state. See CAL. PUB. UTIL. CODE. § 331-381 (WEST 1996). The workings of this subsidy-like mechanism, properly termed a "system benefits charge" is discussed *infra* Part I.D.

59. See New Jersey Electric Discount & Energy Competition Act § 38(b)(2) (bill text available at <[http://www.njleg.state.nj.us/9899/Bills/s0500/7\\_i1.htm](http://www.njleg.state.nj.us/9899/Bills/s0500/7_i1.htm)>) (establishing a beginning renewable portfolio standard of 2.5% of the total of all renewable kilowatt hours sold to New Jersey customers and increasing the standard to 4% by 2012).

60. The renewable portfolio standards enacted by Nevada, New Jersey, Connecticut, and Arizona all authorize, either explicitly or implicitly, state regulators to implement the standard through a tradable credit scheme. See NEV. REV. STAT. § 704.989(3) (Michie 1998) ("In establishing the portfolio pursuant to this section, the

the Clinton Administration's proposed federal electricity industry restructuring legislation<sup>61</sup> and several restructuring bills previously introduced in Congress<sup>62</sup> contain renewable portfolio standards. These federal legislative proposals, nearly all of which also provide for a system of tradable credits, lay the foundation for a future federal renewable portfolio standard implemented according to a marketable permit system.

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commission may establish a system of credits pursuant to which an electric utility and alternative seller may comply with the provisions of this section.”). See New Jersey Electric Discount and Energy Competition Act § 38(b)(2) (“An electric power supplier or basic generation service provider may satisfy the requirements of this subsection by participating in a renewable energy trading program approved by the board in consultation with the Department of Environmental Protection.”); 1998 Conn. Acts 98-28, § 25(a) (“An electric supplier may satisfy the requirements of this subsection by participating in a renewable energy trading program approved by the state.”); ARIZ. ADMIN. CODE R14— 2-1609 (providing that retailers who produce or purchase solar kilowatt hours in excess of its portfolio requirement may save or bank the excess kilowatts for use in future years and providing that any eligible solar kilowatt hour may be “sold or traded to any Electric Service Provider” subject to the state’s solar portfolio standard).

61. See Comprehensive Electricity Competition Act (submitted to Congress on April 15, 1999) <<http://home.doe.gov/policy/ceca.htm>>. This latest Clinton Administration electricity restructuring bill establishes a sizable federal minimum energy portfolio standard: by 2010, 7.5% of electricity sales must be generated from nonhydroelectric renewable resources. States may establish more stringent portfolio standards if they wish, but energy retailers must comply with the federal standard at a minimum. See *id.* § 402. As with many of the state renewable portfolio standards, an energy supplier may comply the federal standard by purchasing renewable energy credits from renewable energy producers or from other suppliers. See *id.*

62. See H.R. 4798, 105th Cong. § 115 (1998) (introduced by Rep. Kucinich) (the percentage of renewable power in each energy retail supplier’s fuel mix must, by the year 2000, equal the amount of renewable energy dispatched in the United States as of December 1997— roughly 2%— and must increase by roughly 1% each succeeding year); S. 2287, 105th Cong. § 302 (1998) (introduced by Sens. Murkowski and Bumpers) (the percentage of renewable power in each energy retail supplier’s fuel mix must, starting in 2002-04, equal the total amount of renewable power dispatched in the United States as of that date, and in no case may be less than 5.5% between 2010 and 2015); S. 687, 105th Cong. (1997) (introduced by Sen. Jeffords) (requiring a graduated national renewables portfolio standard for nonhydro renewables that rises at 1% per year to 20% by the year 2020); S. 237, 105th Cong. § 110 (1997) (introduced by Sen. Dale Bumpers) (requiring retail energy suppliers to comply with a tradable obligation scheme requiring that 5% of their portfolios consist of renewable power starting in 2003); H.R. 655, 105th Cong. § 113 (1997) (introduced by Rep. Dan Shaefer) (requiring a renewables portfolio standard that mandates retail supplier’s portfolio’s consist of 2% renewable power starting in 2001 and increasing to 3% in 2005 and 4% in 2010).

### 1. *The Benefits of Renewable Power in the Restructuring of the Electricity Industry*

In the headlong rush to deregulate the electricity industry, many energy experts fear that the nation's commitment to fostering greater reliance on renewable energy will fall by the way side.<sup>63</sup> At the same time, many policy analysts conclude that *increased* reliance upon renewable power could bring many benefits. First, greater reliance on renewable power is critical to stemming such threats as global warming.<sup>64</sup> This global-cooling benefit inures to society as a whole, and, indeed, to future generations.

Another key benefit of renewable power is a corresponding reduction in the local and regional concentrations of sulfur dioxide, nitrogen oxide, carbon monoxide, and particulates emitted by the nation's fossil-fuel-fired electric utilities.<sup>65</sup> Third, by diversifying an energy retailer's portfolio, investment in renewable power carries with it considerable price stability benefits.<sup>66</sup> Finally, because renewable power generation is

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63. See Rader & Norgaard, *supra* note 47, at 39-40; BRENNAN ET AL., *supra* note 6, at 125; Ralph Cavanagh, *Electricity Shopping Can Be a Bad Deal*, N. Y. TIMES, June 12, 1994, at C11; Lee & Darani, *supra* note 12, at 28-37 (analyzing the effect of competition upon the portion of the future energy demand supplied by renewable power).

64. See ALLIANCE TO SAVE ENERGY ET AL. *supra* note 12, at 2-4, 38-40 (increased reliance upon renewable energy one of several recommendations for reducing local pollution as well as global warming); JOHN J. BERGER, CHARGING AHEAD: THE BUSINESS OF RENEWABLE ENERGY AND WHAT IT MEANS FOR AMERICA 16-17 (1997) ("If global warming is indeed the menace that the vast majority of scientists believe, then efficiency and renewables are not just our best hope; they are the world's *only* hope.")

65. The primary localized environmental benefit of tapping renewable resources for energy is cleaner air. Power generation from hydro-electric, geothermal, solar and wind resources produces few or no emissions of nitrogen and sulfur oxides. Even biomass produces regional air benefits due to the low sulfur content of the woody waste used as fuel. Biomass may also produce local air quality benefits if open (uncontrolled) burning of wastes is avoided. Where renewable power is substituted for fossil fuels, smog and acid rain are correspondingly reduced. See, e.g., BERGER, *supra* note 73, at 3-4. To capture this air quality benefit, what matters is the location of the displaced fossil fuel sources. As long as the renewable power used to satisfy the renewable portfolio standard is located somewhere within the physical, multistate market in which polluting fossil fuel generators that would otherwise satisfy this energy demand are located, the standard should result in a net benefit in regional air quality.

66. Investments in renewable power provide protection against energy price fluctuations, especially those that might affect the market in fossil fuels. Where energy retailers hold a diverse portfolio of fuel sources, the consuming public is

known to be labor-intensive, the region surrounding a renewable power plant benefits from added jobs and economic activity.

Despite a doubling in the nation's renewable energy supply since 1973,<sup>67</sup> significant market barriers inhibit the development and commercialization of renewable energy in a competitive electricity market. The major benefits of renewable power—reduced threat of global warming, cleaner air, price stability, and reduced regulatory risk<sup>68</sup>—are public goods, goods that exhibit both consumption indivisibility and nonexcludability.<sup>69</sup> Because no individual consumer who purchases renewable power captures the full benefit of the clean air generated by the purchase, renewable power will not be supplied in quantities equal to the full value of its societal benefits. Those who do not pay for the renewable energy still enjoy the benefits of renewable power by free-riding on the renewable power purchases of others. In the past, this free-riding problem was overcome through a host of supportive federal and state programs<sup>70</sup> that are unlikely

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protected against the price risks associated with any particular fuel type. Price risks can result from direct fuel price increases or from indirect price increases that result from strengthened environmental regulations (such as a carbon tax). See Rader & Norgaard, *supra* note 47, at 40; BERGER, *supra* note 73, at 3 (Because renewables do not use fossil fuels—most are entirely fuel free—they are largely immune to the threat of future oil or gas shortages and fossil fuel price hikes.). A resource that is somewhat more expensive in the short run, but which has little or no risk of future price volatility, may be more valuable than a resource that is less expensive in the short run but which has a greater risk of price volatility. For example, the value of the price stability benefits that would be attributable to a renewables portfolio standard in California, were California to enact a RPS, was estimated to be \$137 million annually. See RENEWABLES WORKING GROUP, *supra* note 47, at 57.

67. See ALLIANCE TO SAVE ENERGY ET AL., *supra* note 12, at 23. Domestic renewable energy now accounts for approximately 10% of domestic primary energy supply, or 8% of consumption. Approximately 45% of this supply comes from hydroelectric power, while the rest consists of wind, solar, and biomass. The largest growth in renewable energy since 1973 has come from biomass facilities. See *id.*

68. See Rader & Norgaard, *supra* note 47.

69. See, e.g., TOM TIETENBERG, NATURAL RESOURCE ECONOMICS 51 (4th ed. 1996).

70. Two initiatives deserve the most credit for building the renewable power base that currently exists in the United States. One is the Public Utility Regulatory Policies Act (PURPA) of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (codified in scattered sections of 15 U.S.C. and 16 U.S.C.). Under PURPA, utilities were required to purchase electricity produced by small nonutility cogeneration and renewable energy facilities, also known as qualifying facilities (QFs). PURPA required that utilities enter into long term contracts for the purchase of QF power at the utility's avoided cost level which, at the time the contracts were agreed upon, reflected the high prices that characterized the energy crisis. Largely due to PURPA, the percentage contribution of nonutility generating facilities (including renewables) to total electric capacity rose from 5% in 1984 to 50% in 1993. See Nancy A. Rader & Ryan H. Wisner, *Strategies for Promoting Wind Power: A Review and Analysis of State-Level Policy Options* 3 (Aug. 1997 draft) (Prepared for the National Wind Coordinating Committee). The second major initiative was the advent of Integrated Resource Planning (IRP) by state utility

to continue once the electricity industry is deregulated.<sup>71</sup>

## 2. *The Downside of a Renewable Portfolio Standard: Leaking Environmental and Economic Benefits*

In the future, an energy retailer will become increasingly able to satisfy the minimum renewable purchase obligation required by a state's portfolio standard through the purchase of credits obtained from renewables generators.<sup>72</sup> Where implemented in

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commissions during the late 1980s and early 1990s. Under IRP planning, state public utility commissions were required to look at the direct and indirect costs of various supply, as well as demand-side (energy efficiency), options to meeting local energy needs. Because of the focus upon social costs of energy choices, including environmental costs, IRP processes tended to favor additional investments by utilities in energy from renewable energy sources. See *id.* at 4.

71. Other market barriers to renewable power are the capital-intensive nature of renewables and the unevenness of the energy resource playing field after decades of monopoly-based support of other types of energy. Renewable power demands high upfront costs attributable to equipment and construction (though lower down-the-road fuel costs). See, e.g., MICHAEL BROWER, COOL ENERGY: RENEWABLE SOLUTIONS TO ENVIRONMENTAL PROBLEMS (1994), at 27 (noting that while a solar power plant may cost \$2,500 to \$3,000 per kilowatt of capacity to build, a conventional power plant may cost from \$400 to \$1,200 per kilowatt; similarly, while a solar water heater may cost \$2,500 to purchase and install, a conventional water heater costs no more than \$800. Solar technologies, however, cost very little to operate, whereas conventional technologies require fuel, which is paid for throughout the life of the product). As a result, the risk premiums placed upon capital presently and certainly in a more competitive market will disproportionately disadvantage renewables. See Rader & Norgaard, *supra* note 47, at 40, col. 3. See also BRENNAN ET AL., *supra* note 6, at 125 (Companies using renewable resources may be paying twice as much in taxes as those using fossil fuel technologies, because capital and construction are taxed heavily relative to operating and maintenance expenses.); BROWER, *supra* at 27 (our tax system tends to penalize capital-intensive renewable energy investments because, while businesses must pay sales tax on capital equipment as well as taxes on investment profits, operating expenses, including fuel costs, can be wholly deducted). Yet another market barrier facing renewables in deregulation is the unevenness of the playing field facing renewables vis-à-vis other energy sources. To take just one example, experience with the deregulation of the telephone industry demonstrates that advertising will be the key to gaining market share. Yet renewable power faces an immediate disadvantage in this regard vis-à-vis traditional energy sources since traditional energy sources have had the support of local energy providers who already have tremendous name recognition. See *id.*

72. Despite legislative provisions authorizing tradable renewable power credits, it appears that only one state, Arizona, is currently implementing its renewable portfolio standard through such a scheme. See ARIZ. ADMIN. CODE R14-2-1609(I) (1998) (providing that electricity retailers may save, bank, or trade solar kwh purchased in excess of the state's solar portfolio standard for use in future years). State implementation of tradable credit schemes has thus far been stymied by two related concerns: (1) the consistency of a tradable credit scheme with emerging rules for the supplier's disclosure, or tracking, of the environmental and other characteristics of the energy in its fuel mix, and (2) fear that a tradable credit scheme will allow suppliers to use the same renewable-generated kilowatt hours to satisfy more than one state's renewable portfolio standard, essentially "double-counting" the

this manner, a renewable portfolio standard presents the risk that energy retailers might engage in interstate trade in renewable energy credits. Thus, for example, an energy retailer in Maine might satisfy Maine's renewable portfolio standard by purchasing energy credits from a wind generator in California.

Unlike state-issued marketable emission permits, generator-issued renewable energy credits should be valid in any other state using a tradable credit scheme to implement a renewable portfolio standard. Energy credits do not authorize particular

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renewable resources that they possess. However, methods exist to overcome both of these concerns and hence they should not pose barriers to state adoption of renewable credit trading schemes.

To understand the first issue, consistency of tradable credits and tracking schemes, one must first understand what tracking is and how it is performed. "Tracking" refers to methods of disclosing, to consumers, the source of the kilowatt hours they purchase from retail electricity suppliers along with other pertinent information related to the environmental, labor, and other impacts resulting from the electricity's generation. See THE NATIONAL COUNCIL ON COMPETITION AND THE ELECTRIC INDUSTRY SYNTHESIS REPORT: A SUMMARY OF RESEARCH ON INFORMATION DISCLOSURE Section 2(D). (Draft April 1998) (last updated 6/22/98)

<<http://www.rapmaine.org/synthesis/SNY2.html>>; William Spratley, *Using Tradable Tags for Resource Disclosure* (May 30, 1997)

<<http://www.spratley.com/ncei/0004/1.html>>. There are two basic methods for tracking electrons: the energy contract, or "transactions" approach, and the tagging approach. Under a transactions approach, information about the characteristics of the energy is generated at the same time the energy is generated and such information is passed along with the kilowatts as they are bought and sold by successive entities. See *id.* Under the tagging approach, information about the characteristics of the power is provided through the tradable credit exclusively and does not accompany the purchase and sale of the power itself. While a tagging approach is consistent with a scheme of tradable credits, the transactions approach is less so (though it might be made consistent with a tradable credit scheme). Although the tracking system endorsed by the New England Governor's Conference does not presently contemplate states' use of a tradable credit program to implement a renewable portfolio standard, with additional work, the system could be modified to be compatible with such a scheme. See New England Governor's Conference, Inc., *New England Tracking System* (Oct. 1998) <<http://www.envfutures.com/>>.

The second barrier to state adoption of marketable renewable credit systems, the double-counting problem, is also capable of resolution, although not without cooperation among the states adopting a renewable portfolio standard. The double-counting problem arises where states adopt different rules for demonstrating compliance with their renewable portfolio standard. Where one state allows compliance through submission of tradable credits and another through the retailer's possession of a requisite percentage of renewable kilowatt hours in its fuel mix, a retailer who buys bundled credits and power from a renewables generator might use the credits to satisfy one state's renewable portfolio standard and use the actual kilowatt hours to comply with the other state's standard. (The same double-counting could occur when power and credits are not bundled.) States could avoid this problem by requiring that retailers comply with their renewable portfolio standard exclusively through the possession of credits. Barring this perhaps unlikely agreement, states could raise their renewable portfolio standard to take into account the possibility that retailers can use both credits and power to satisfy renewable standards.

conduct but rather demonstrate proof of the purchase of renewable power, much like a sales receipt. A Maine energy retailer's possession of energy credits produced by a California wind power generator does not authorize the retailer to perform any activity in Maine that would otherwise be prohibited. Instead, the Maine retailer is using its possession of credits generated in California to demonstrate its satisfaction of Maine's renewable portfolio standard. Absent a nonconformity between the out-of-state credits and Maine's credits, the mere fact that a retailer's credits originated out-of-state should not affect the retailer's ability to use such credits to satisfy a different state's renewable portfolio standard.

Unrestricted interstate trading in renewable energy credits could, however, discourage a state from adopting a renewable portfolio standard implemented through a tradable energy credit system. If an energy retailer in Maine purchases energy credits from a California wind power generator and uses them to satisfy its obligations under Maine's renewable portfolio standard, numerous problems could result. For example, given that wind-derived power currently exceeds the costs of fossil-fuel-derived power, energy users in Maine could be forced to pay higher energy costs to support the generation of renewable power being produced in California, while California residents would enjoy the geographically localized benefits associated with renewable power production, including cleaner air and jobs. Consequently, a trading mechanism becomes less attractive.

Granted, the residents of Maine benefit from the reduced risk of global warming attributable to a greater reliance upon nonpolluting, renewable fuels.<sup>73</sup> This public good, however, is unlikely to encourage Maine to enact a renewable portfolio standard. As long as some other state is supporting renewable power, residents in all other states receive this benefit at no cost. An economically rational state politician would therefore prefer to free ride on the reduction of global warming by other states and

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73. Renewable power generation does not produce carbon emissions that cause global climate change. Because renewable power can displace fossil fuel generation whose emissions are a primary cause of global warming, renewable power helps reduce further warming. Although biomass resources must be regrown to create a net carbon benefit, biomass generation can displace rotting biomass which produces methane, a more destructive greenhouse gas. The global benefit of renewables in terms of reducing emissions that contribute to global warming accrues irrespective of the location of the renewable or the fossil fuel generator since global warming is a product of the aggregate amount of carbon emitted by anthropogenic sources into the atmosphere and hence is not affected by the exact location of renewables generators or the fossil fuel plants whose energy it is replacing.

instead spend her constituency's tax dollars on measures guaranteed to bring benefits her constituents are otherwise unable to obtain.<sup>74</sup>

### 3. *Restricting Interstate Commerce in Marketable Goods*

The above analysis indicates that a state's willingness to implement a renewable portfolio standard through a system of tradable energy credits is likely to hinge upon the state's ability to capture the available environmental and economic benefits associated with renewable power production. To retain the tradable energy credit mechanism and yet capture a benefit other than that of reducing global warming, a state might specify that only the following will satisfy an energy retailer's renewable power purchase obligation under the state standard: (1) the energy credits generated by *in-state* renewable power producers (in-state credit generation restriction); or (2) energy credits representing renewable power that is sold to end-use consumers in the enacting state (in-state power sale restriction). A state might adopt a third alternative in the form of incentives to retailers who comply with the standard through purchases of renewable energy from in-state renewables generators. Each of these restrictions provides advantages for the enacting state but raises distinct Commerce Clause issues.

#### a. *In-State Energy Credit Generation Restriction*

Of the options listed above, a state gains the greatest economic benefits by restricting the source of credits allowed under its renewable portfolio standard to credits generated by in-state renewable power producers. Under such a restriction, energy retailers must purchase credits from in-state renewables companies, either directly from such companies or from other suppliers. The restriction thus subsidizes in-state renewables companies, thereby fostering jobs and other economic benefits for the state. The degree to which an in-state credit generation restriction will benefit the state's environment depends, however, upon whether the restriction reduces the generating capacity of

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74. Many people do, of course, derive personal satisfaction from having done something good for the environment in supporting a clean energy technology. While this is no doubt a sufficient payback for some voters, and indeed is the motivation behind green marketing programs, economic theory dictates that it is not a sufficient payback for many others and hence cannot be relied upon to ensure the provision of a public good, such as clean air, in sufficient (or in economic jargon, efficient) amounts. For a more detailed discussion of green marketing, see *infra* Part II.

local fossil fuel fired plants.<sup>75</sup> To date, only Nevada has enacted a renewable portfolio standard with an in-state credit generation restriction.<sup>76</sup>

Two aspects of an in-state credit generation requirement merit scrutiny: (1) the restriction imposes a burden upon multi-state firms that wish to do business within the state; and (2) the restriction facially discriminates against credits generated by out-of-state renewable power producers solely on the basis of their geographic origin. Because states frequently impose threshold requirements upon companies conducting business in-state, and courts generally allow states considerable latitude in doing so,<sup>77</sup> the first aspect of the restriction does not pose serious problems. Far more problematic is the second.

Under the landmark case *Philadelphia v. New Jersey* and a host of subsequent decisions, the Court has held such facial discrimination to be "virtually *per se*" invalid.<sup>78</sup> The Court

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75. Even if an in-state credit generation requirement results in renewables generators displacing some of the power that would otherwise be supplied to state residents by nearby fossil-fuel plants, this will only translate into environmental benefits if the fossil-fuel plants reduce their generating capacity rather than simply generating the same amount of energy (and hence emissions) and selling a larger portion of their energy output to out-of-state customers.

76. See NEV. REV. STAT. § 704.989(7) (Michie 1998) (defining "renewable energy resources" under the state renewable portfolio standard to mean "wind, solar, geothermal and biomass energy resources in this state that are naturally regenerated"; defining "renewable energy system" to mean "an energy system in this state that utilizes renewable energy resources to produce electricity") (emphasis added). A California legislative committee debated, but ultimately rejected, such a requirement. See Senate Conference Committee on Electric Industry Restructuring and PUC/CEC Reform (Aug. 10-12, 1996).

77. The significance of the burden would be analyzed under the Court's test for facially neutral burdens upon interstate commerce. See *Pike v. Bruce Church*, 397 U.S. 137, 145 (1970).

78. See *Philadelphia v. New Jersey*, 437 U.S. 617, 624 (1978). The Court now treats *Philadelphia v. New Jersey* as the flagship case referring to state regulations that discriminate against interstate commerce on their face and *Pike v. Bruce Church*, 397 U.S. at 145 as the leading case for facially nondiscriminatory regulations that nevertheless burden interstate commerce. The Court has been quite virulent in its attacks upon facially-discriminatory state legislation. See, e.g., *Wyoming v. Oklahoma*, 502 U.S. 437, 455 (1992) (invalidating Oklahoma statute requiring that Oklahoma coal-fired utilities burn a mixture of coal containing at least 10% Oklahoma-mined coal for discriminating to protect Oklahoma's coal industry); *New Energy Co. of Indiana v. Limbach*, 486 U.S. 269, 274, 278-81 (1988) (invalidating Ohio's provision of a tax credit against the Ohio motor fuel sales tax for each gallon of Ohio ethanol (or ethanol from a state granting a reciprocal tax advantage) as a facially discriminatory measure designed to protect Ohio ethanol producers); *Bacchus Imports, Ltd. v. Dias*, 468 U.S. 263, 270-73 (1984) (invalidating a 20% excise tax imposed on sales of liquor at wholesale, but exempting certain Hawaii-produced alcoholic beverages as a discriminatory measure designed to aid the Hawaii liquor industry); *Boston Stock Exch. v. State Tax Comm'n*, 429 U.S. 318, 330-31

reasons that such a harsh rule is necessary to the smooth functioning of the national market: The rule ensures that a product's market share is attributable solely to the workings of the market and not to the product's geographic origins.<sup>79</sup> Yet, an in-state credit generation restriction is difficult to distinguish from the Oklahoma-coal purchase requirement struck down in *Wyoming v. Oklahoma*.<sup>80</sup> Of special note, the Court has refused to recognize an exception to this *per se* ban upon economic protectionism for struggling local industries.<sup>81</sup> Thus an argument that an in-state credit generation restriction is

(1977) (striking down a New York statute imposing a higher tax on transfers of stock occurring outside the state than on transfers involving a sale within the State as discriminatory and protectionist of New York stockbrokers); *Baldwin v. G.A.F. Seelig, Inc.*, 294 U.S. 511, 524 (1935) (striking down a New York statute excluding out-of-state milk purchased at levels below the New York mandated price as blatant protectionism of New York dairy farmers); *Alliance for Clean Coal v. Bayh*, 72 F.3d 556, 560 (7th Cir. 1995) (invalidating nearly identical Indiana statute); *Alliance for Clean Coal v. Miller*, 44 F.3d 591, 596 (7th Cir. 1995) (invalidating Illinois statute providing incentives to electric utilities who provide for compliance with 1990 federal Clean Air Act without decreasing use of Illinois coal); *Fort Gratiot Sanitary Landfill, Inc. v. Michigan Dep't of Natural Resources*, 504 U.S. 353, 361 (1992) (striking down as facially discriminatory a Michigan law authorizing counties who complied with solid waste planning requirements to ban disposal of out-of-state waste); *Chemical Waste Management, Inc. v. Hunt*, 504 U.S. 334, 342 (1992) (invalidating Alabama statute imposing an additional fee solely upon imported hazardous waste as facially discriminatory). Ironically and somewhat inconsistently, the Court *does* permit a state to promote its own industry through general revenue subsidies, though such subsidies also constitute facial discrimination for the purpose of economic protectionism. *See, e.g., New Energy*, 486 U.S. at 278. The subject of permissible subsidies under the dormant Commerce Clause will be discussed *infra* at Part I.E.1.

79. *See Philadelphia v. New Jersey*, 437 U.S. at 627; *see also id.* at 626 (the evil of protectionism can reside in legislative means as well as legislative ends). There are several direct analogies between an in-state energy credit generation restriction and New Jersey's ban upon the importation of out-of-state garbage that was struck down in *Philadelphia v. New Jersey*. First, both legislative acts halt interstate trade altogether, and are thus as disruptive to interstate commerce as discriminatory tariffs. *See West Lynn Creamery, Inc. v. Healy*, 512 U.S. 186, 193 (1994) ("In fact, tariffs against the products of other States are so patently unconstitutional that our cases reveal not a single attempt by any State to enact one. Instead, the cases are filled with state laws that aspire to reap some of the benefits of tariffs by some other means."); *cf. Regan supra* note 15, at 1094-95 (noting that the quintessential instrument of protectionism is the protective tariff, a duty on imports of a certain good imposed for the purpose of securing a greater share of the home market for domestic producers of the good). Second, and more importantly, the state is employing facial discrimination to achieve a particular legislative end: guaranteeing the totality of the environmental and economic benefits associated with increased production of renewable power.

80. 502 U.S. at 452-55.

81. *See Bacchus*, 468 U.S. at 272 ("[W]e perceive no principle of Commerce Clause jurisprudence supporting a distinction between thriving and struggling enterprises under these circumstances. . . . In either event, the legislation constitutes 'economic protectionism' in every sense of the phrase.").

necessary in order to foster<sup>82</sup> a state's fledgling renewables industry is unlikely to garner much judicial sympathy in the context of a Commerce Clause challenge.

Nevertheless, the motivation behind an in-state credit generation restriction differs from the economic protectionism driving most cases of facial discrimination. A state enacts an in-state credit generation restriction to prevent the hemorrhage of economic and environmental benefits attributable to its decision to foster renewable power through a flexible, market-based mechanism, rather than an inflexible regulatory requirement. Were a state to simply mandate that retailers serving state customers achieve a minimum percentage of renewable power, the geographic limitations of the power transmission system<sup>83</sup> would limit a retailer's renewable power purchases to state or regional generators, thereby guaranteeing the state the potential economic and environmental benefits of a healthy renewable power industry. Thus state implementation of a tradable credit scheme is solely for the benefit of the retailers, as it provides them with the option of supporting renewable power without changing the percentage of renewable power in their fuel mix. The in-state credit generation restriction ensures that retailers purchase credits from local, rather than far distant, renewables generators and thus retains for the state the benefits of the renewables portfolio standard while permitting the greater efficiency of a tradable obligation scheme. Hence the Commerce Clause problem arises only because of the state's adoption of a flexible market-based compliance mechanism.

Under the Court's current case law, a state's laudable motive for facial discrimination is unlikely to affect the outcome of a Commerce Clause challenge. Only one facially discriminatory state law has managed to survive the Court's rigid test under an exception for regulation directed toward a legitimate concern for health or safety which could not be met in a less discriminatory manner.<sup>84</sup> Neither of the two lines of analysis suggested by that

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82. In *Bacchus*, the Court also rejected as irrelevant the State's argument that its intent in exempting locally produced alcoholic beverages from a state tax was not to discriminate against foreign products, but rather only to promote a local industry. *See id.* ("[I]t is irrelevant to the Commerce Clause inquiry that the motivation of the legislature was the desire to aid the makers of the locally produced beverage rather than to harm out-of-state producers.").

83. *See, e.g.,* Richard J. Pierce, *The Anti-Trust Implications of Energy Restructuring*, 12 NAT. RES. & ENVT. 269, 272 (Spring 1998) (discussing factors affecting the distances that electricity may be cost-effectively transmitted within each one of the nation's ten electricity grids).

84. The Court has repeatedly advertised the existence of this exception for

case, *Maine v. Taylor*, would appear applicable here, however.<sup>85</sup>

*b. In-State Power Sale Restriction*

An in-state power sale restriction requires that all of the renewable-based energy that a retailer uses to satisfy a state's renewable portfolio standard be sold to or made available to state customers.<sup>86</sup> When enacted as part of a tradable credit scheme

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legitimate health and safety regulation. See, e.g., *Philadelphia v. New Jersey*, 437 U.S. at 624 ("The crucial inquiry, therefore, must be directed to determining whether [the law at issue] is basically a protectionist measure, or whether it can fairly be viewed as a law directed to legitimate local concerns, with effects upon interstate commerce that are only incidental."); *Oregon Waste Systems v. Department of Environmental Quality*, 511 U.S. 92, 101 (1994) (substantially the same); *Hughes v. Oklahoma*, 441 U.S. 321, 337 (1979) (substantially the same); *C & A Carbone v. Town of Clarkstown*, 511 U.S. 383, 394 (1994) (substantially the same). But only in one case, *Maine v. Taylor*, has the Court actually applied this exception to uphold a facially discriminatory regulation. 477 U.S. 131, 149 (1986) (state ban upon the import of out-of-state baitfish was justified by the need to protect native baitfish species from parasite infestation).

85. 477 U.S. at 141 (upholding a Maine ban enacted for the alleged purpose of protecting native baitfish species from contamination by parasites prevalent in non-native species and protecting the State's aquatic ecology from the unpredictable effects resulting from the introduction of nonnative baitfish species). A state might attempt to use *Maine* to argue that the geographic-based discrimination in the in-state credit generation requirement is simply a shortcut for distinguishing between two different articles of commerce. In *Maine v. Taylor*, Maine successfully argued that its facial discrimination against imported baitfish simply recognized that baitfish contaminated by parasites (nearly all nonnative species) were different from baitfish not contaminated by parasites (all native species) and hence Maine was not really discriminating against out-of-state baitfish, but rather only contaminated baitfish. See *id.* Under this interpretation, the "no less discriminatory alternatives" prong of the Court's facial discrimination test is simply a more probing analysis of whether the state law is really discriminatory. Nevertheless, this argument is not open to a state attempting to justify an in-state credit generation requirement because the state's use of geography to distinguish between valid and invalid energy credits cannot be seen as a proxy for some nongeographic distinguishing characteristic such as infection. In contrast to baitfish, which comes in at least two varieties—infected and uninfected—renewable energy credits come in just one. Cf. *Philadelphia v. New Jersey*, 437 U.S. at 629 ("The harms caused by waste are said to arise after its disposal in landfill sites, and at that point, as New Jersey concedes, there is no basis to distinguish out-of-state waste from domestic waste."). A state might also try to use *Maine v. Taylor* to argue that no alternative exists that realizes both the state's goals of increasing renewable resource-based energy and its desire to implement that goal through a flexible tradable credit scheme. In *Maine*, the state successfully argued that no nondiscriminatory methods existed to effectuate its legitimate goal of protecting native baitfish from parasite contamination. See 477 U.S. at 146. But a nondiscriminatory alternative to a state's in-state credit generation requirement arguably does exist—a state can garner many of the benefits of increased reliance upon renewable power and employ a market-based tradable energy credit scheme if it restricts qualifying credits to those representing power sold to in-state consumers. This nondiscriminatory alternative is discussed *infra* Part I.B.3.b.

86. For example, Maine restricts the renewable resources that a retailer may

that implements a state's renewable portfolio standard, such a restriction limits energy credits satisfying a state's renewable power mandate to those representing renewable energy sold to in-state consumers.<sup>87</sup> Such a restriction ensures that the state's renewable portfolio standard will foster the renewable power industry within the geographic region serving its energy customers and hence prevents the leakage of the environmental and economic benefits of the standard to distant regions.<sup>88</sup> For the enacting state, such a restriction may be just as effective in capturing the potential environmental and economic benefits of renewable power generation as an in-state credit generation restriction. First, the state is assured of the price stability benefits of a more diverse energy portfolio.<sup>89</sup> Second, to the extent that the portfolio standard displaces fossil-fuel capacity within the same geographic region, the state will reap the same clean air benefits from the in-state sale restriction as from the in-state credit generation restriction. The in-state sales requirement assures that the renewable power represented by

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count toward the state's renewable portfolio standard to renewable power that can physically be delivered to the New England Power Pool from which Maine receives its electricity. ME. REV. STAT. ANN. tit. 35, § 3210 (West 1998) ("As used in this section, the term 'renewable resource' means a source of electrical generation that generates power that can physically be delivered to . . . the New England Power Pool."). A similar in-state sale restriction can be found in an electricity restructuring bill pending before the Vermont legislature. See An Act Relating to Electric Utility Regulatory Reform, H. 663, § 219f (Vt. 1998) (available at: <<http://www.leg.state.vt.us/docs/1998/bills/intro/H-663.HTM>>) (renewable portfolio standard is satisfied by utility sales in Vermont that are generated by renewable technologies) (emphasis added).

87. To get a better understanding of how an in-state sales restriction would work, consider the following example. Suppose three states, A, B, and C, adopt a renewable portfolio standard applicable to all energy retailers selling power within their respective jurisdictions and furthermore implement the standard through a system of tradable energy credits. Suppose further that State A has adopted an in-state sale restriction. Suppose a retailer who provides electricity to State A approaches a wind power generator located in State C to purchase renewable energy credits necessary to satisfy State A's renewable mandate. Suppose the wind generator offers the retailer credits representing electricity sold by the wind company to a customer in State A as well as credits representing electricity sold to customers in State B. Under State A's in-state sales restriction, only the credits representing power sold to customers in State A will satisfy the energy retailer's obligations under State A's renewable portfolio standard.

88. Of course, advances in technology could eliminate the degree to which the in-state sales restriction limits the outflow of a state's renewable portfolio standard when implemented through a tradable credit regime. As transmission technology improves, generators will be able to service end-use customers located further away. Thus, despite the restriction, a state that implements its renewables mandate through a tradable credit system would still risk losing the economic and environmental benefits of the mandate to distant states

89. ALLIANCE TO SAVE ENERGY ET AL., *supra* note 12, at 42-43.

the credits originates from renewable power plants located within distances from which power can reasonably be transmitted. While the jobs fostered by the portfolio standard may not be created in-state, they will occur within the region that transmits power to the state, which may benefit the residents of the enacting state. Finally, because it lacks a facially discriminatory provision, the in-state power sale restriction circumvents the potential Commerce Clause problems associated with the in-state credit generation restriction. Any renewable power generator, regardless of its location, can generate qualifying credits if it is able to send power through the electricity transmission grid to end-use consumers within the state.

While it may not discriminate against out-of-state renewable power generators, the in-state sales restriction may result in hardships upon out-of-state consumers. Because every sale of power by a renewables generator creates independently salable renewable energy credits, the restriction increases the value, to generators, of sales to in-state consumers. The restriction could therefore inflate the price of renewable power for out-of-state consumers as generators account for the fact that no salable credits are generated by sales to out-of-state consumers.

Although out-of-state consumers are protected by the Commerce Clause,<sup>90</sup> the burden imposed upon them by an in-state sales restriction is not likely to be considered a constitutional violation. First, the in-state sale restriction does not facially discriminate against out-of-state consumers, and thus, to the extent it imposes a burden upon them, it would have to be considered excessive in order to trigger Constitutional protection. Second, the restriction does not appear to violate the degree of protection that the Supreme Court has said is owed to out-of-state consumers. According to the Court, the Commerce Clause prohibits states only from forcing out-of-state consumers to "surrender whatever *competitive* advantages they may possess"

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90. See, e.g., *Brown-Forman Distillers Corp. v. New York State Liquor Auth.*, 476 U.S. 573, 580 (1986) ("Economic protectionism is not limited to attempts to convey advantages on local merchants; it may include attempts to give local consumers an advantage over consumers in other States."). See also *New England Power Co. v. New Hampshire*, 455 U.S. 331, 339 (1982) (striking down a New Hampshire order "designed to gain an economic advantage for New Hampshire citizens at the expense of New England Power's customers in neighboring states"); *Pennsylvania v. West Virginia*, 262 U.S. 553, 590-93 (1923) (striking down a West Virginia law that would curtail the supply of gas into neighboring states in part because of the effects of such a law upon gas consumers in other states). *But cf.* *Sporhase v. Nebraska*, 458 U.S. 941, 957 (1982) (public ownership of ground water supports a limited preference for state residents over nonresidents in the utilization of the ground water resource).

over in-state consumers.<sup>91</sup> For example, a state cannot prohibit producers from later selling a product to out-of-state consumers at a lower price than the producer is currently charging for the product in-state.<sup>92</sup> Hence, the Commerce Clause would not appear to protect out-of-state consumers from the price consequences of producers taking advantage of legitimate business opportunities provided within a particular state, such as the opportunity to profit from both energy and credit sales by selling renewable power to consumers in states with renewable portfolio standards.

*c. Incentives for Investment in In-State Industries*

A third method of retaining the benefits of a renewable power portfolio standard without giving up a tradable credit implementation scheme is to supply energy retailers with incentives for investing in a state's renewable power industry. Such incentives might range from subsidies and tax credits to regulatory relief. For example, Arizona grants credits against its solar portfolio requirement to any energy retailer that installs, owns, or invests in an Arizona solar electric power plant or in solar power generating equipment manufactured in Arizona.<sup>93</sup> Such incentives are similar to investment tax credits and job-creation credits used widely by states to lure businesses to their territory.<sup>94</sup>

A state's incentives for investment in its renewable power industry are thus likely to raise the same set of Commerce Clause issues as location incentives generally. The

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91. *Brown-Forman*, 476 U.S. at 580 (emphasis added).

92. See *Brown-Forman*, 476 U.S. at 583 (emphasis added) (striking down a New York price statute that required distillers to affirm that they would not make future sales of liquor in any other state at a price lower than the sale price posted in New York).

93. See ARIZ. ADMIN. CODE R14-2-1609(D) - (K) (1998). Arizona requires that, as of Jan. 1, 1999, any electric service provider selling electricity within Arizona must derive .2% of the total retail electricity the retailer sells competitively, from solar energy resources installed on or after Jan. 1, 1997. However, a retailer is eligible for an "extra credit multiplier" that it may use to meet the .2% mandate if it (1) installs a solar electric power plant in Arizona; (2) uses Arizona-manufactured items in installing a solar electric power plant; (3) contributes to the installation of a solar electric generator on the premises of an Arizona electricity customer; or (4) owns or makes a significant investment in a solar electric manufacturing plant located in Arizona. See *id.*

94. See generally Peter D. Enrich, *Saving the States From Themselves: Commerce Clause Constraints on State Tax Incentives for Business*, 110 HARV. L. REV. 377, 382-89 (1996) (describing various innovations in state tax policy designed to encourage business to locate within the state).

constitutional validity of state location incentives is a matter of intense debate<sup>95</sup> and little case law.<sup>96</sup> The problem arises because such incentives typically give financial breaks to businesses that locate or patronize other businesses in state, while denying such breaks to competing businesses. On the one hand, such incentives would appear to discriminate against interstate commerce, both facially and in effect, by preferring in-state investment over out-of-state investments and by reducing the costs of doing business within the state.<sup>97</sup> On the other hand, the Court has affirmed a state's power to encourage local industry through the grant of subsidies,<sup>98</sup> and individual justices have indicated that "tax credits" and "tax breaks" are similarly permissible.<sup>99</sup>

A careful reading of the case law and the work of commentators reveals some general principles relevant to the constitutionality of state investment incentives, including those intended to foster a state's renewable power industry. First,

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95. See *id.* at 131; Dan T. Coenen & Walter Hellerstein, *Suspect Linkage: The Interplay of State Taxing and Spending Measures in the Application of Constitutional Antidiscrimination Rules*, 95 MICH. L. REV. 2167 (1997); Walter Hellerstein, *Commerce Clause Restraints on State Tax Incentives*, 82 MINN. L. REV. 413 (1997); Philip M. Tatarowicz & Rebecca F. Mims-Velarde, *An Analytical Approach to State Tax Discrimination Under the Commerce Clause*, 39 VAND. L. REV. 879 (1986).

96. Very few Supreme Court cases address the constitutionality of state tax or other location incentives under the Commerce Clause. One commentator believes this is attributable, among other things, to the fact that challenging a state location incentive places the natural plaintiff for such a suit—a multistate business that chooses to locate someplace other than the state offering the incentive—in an awkward position because it may be the beneficiary of a similar incentive program in another state. See Enrich, *supra* note 125, at 409-12. Supreme Court cases that are nonetheless relevant to parsing the constitutionality of state location incentives include: *Boston Stock Exchange v. State Tax Commission*, 429 U.S. 318 (1977), which invalidated a provision of the New York securities transfer tax for transfers of shares made on a New York stock exchange; *Bacchus Imports, LTD. v. Dias*, 468 U.S. 263 (1984), which invalidated an exemption from a Hawaiian liquor excise tax for certain alcoholic beverages distilled in Hawaii from native fruits; and *Westinghouse Electric Corp. v. Tully*, 466 U.S. 388 (1984), which invalidated a New York income tax credit for products shipped from New York that increased or decreased depending upon whether New York's share of the company's exports grew or shrank.

97. Thus state location incentives would appear to violate the Court's prohibition upon state laws that facially discriminate against interstate commerce. See *supra* Part I.B.3.a. (concerning facial discrimination under in-state credit generation restriction).

98. See *infra* text accompanying notes 181-82.

99. See, e.g., *Hughes v. Alexandria Scrap*, 426 U.S. 794, 816 (1967) (Stevens, J., concurring) ("Whether [a state's] encouragement takes the form of a cash subsidy, a tax credit, or a special privilege intended to attract investment capital, it should not be characterized as a 'burden' on commerce."); *Chemical Waste Management, Inc. v. Hunt*, 504 U.S. 334, 349-52 (1992) (Rehnquist, C.J., dissenting) (suggesting that a state may provide tax breaks to domestic industries that generate hazardous wastes).

commentators conclude, and the case law seems to support, that incentives that simply reduce the burden of a state tax or requirement on the same product, investment, or activity that the state seeks to promote are not constitutionally suspect. Thus, for example, incentives that reduce property taxes or sales taxes on items manufactured in-state are probably valid. Similarly, it should be constitutionally acceptable for a state to reduce a sales or property tax otherwise applicable to purchases of electricity from in-state renewables generators, of equipment from in-state manufacturers of renewable energy generating parts, or of land intended to be used for installation of a renewable energy generating plant. Such incentives are valid because they do not place competing businesses that fail to utilize the incentive at a disadvantage by subjecting them to a greater state tax or regulatory burden. Instead, companies spurning such incentives are simply not subject to the property or sales tax in the first place.<sup>100</sup>

In contrast, commentators conclude, and, again, the case law is in accord, that incentives designed to relieve a company from a tax or other burden *unconnected* to the activity promoted by the incentive are constitutionally suspect.<sup>101</sup> An example of such a problematic incentive is a state income tax credit proffered to businesses that create a certain number of new jobs. Companies that do business in the state that do not hire state residents will pay higher taxes; companies that do will not. Under this view, a state incentive that reduces an energy retailer's burden in meeting a regulatory requirement other than, for example, a sales or property tax triggered by an energy, equipment, or land sale, is constitutionally suspect because

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100. See Enrich, *supra* note 125, at 446-47 (concluding that "any tax incentive that reduces a tax imposed only on account of the very in-state activity that triggers the benefit" is constitutionally valid); Walter Hellerstein & Dan T. Coenen, *Commerce Clause Restraints on State Business Development Incentives*, 81 CORNELL L. REV. 789, 806-07, 829-34 (1996) (concluding that tax incentives, such as property and sales tax exemptions, that are framed as exemptions from additional state tax liability, rather than exemptions from existing state tax liability, constitute a significant category of tax incentives that should escape invalidation under the Commerce Clause).

101. See *Boston Stock Exchange*, 429 U.S. at 335 (Commerce Clause prohibits state tax laws that discriminate between two types of interstate transactions so as to favor local commercial interests over out-of-state interests); *Westinghouse Electric*, 466 U.S. at 404-07 (New York franchise tax unconstitutionally discriminates against out-of-state sales by promoting intrastate transactions); see also Hellerstein & Coenen, *supra* note 100, at 825-34 (concluding that state sales and similar transaction tax exemptions, credits, or refunds are constitutionally suspect when they are tied to an in-state activity that is separate from the in-state purchase of property or services on which the tax is levied).

such a regulation discriminates against retailers who fail to make a similar investment but are still fully obligated to meet the initial requirement. Hence an incentive that makes it easier for retailers that purchase in-state renewables to satisfy the state's renewable portfolio standard may be problematic, because it discriminates against retailers that must satisfy the portfolio but wish to do so by purchasing out-of-state renewables.

A few caveats with respect to the above distinction are necessary. First, it is useful to remember that the Supreme Court has yet to decide this issue, though the distinction is in accord with past precedents. Second, for a state incentive to be constitutionally objectionable, it must discriminate against a class of businesses based upon the failure of the businesses in the class to take advantage of the incentive. Hence if, for example, businesses take advantage of the incentive for reasons independent of its existence, then it is difficult to see how the incentive discriminates (or, indeed, who would challenge the incentive). Thus if retailers generally purchase in-state renewable power, then relief from the burdens of the state's renewable portfolio standard for retailers that purchase in-state renewable power would not appear discriminatory. Finally, a state's use of subsidies to encourage businesses to site or remain in-state is generally constitutionally unobjectionable.<sup>102</sup>

### *C. Environmental Externality Values and Emissions Portfolio Standards*

Rather than encourage the creation of environmental public goods such as clean air through the creation of markets for environmental goods (for example, renewable energy credits) or harms, (for example, emissions permits), some states address the environmental costs of electricity production more directly. Under one approach, environmental externality valuation, state regulators consider the externalized costs of power generation in deciding how to meet electricity demand. Under a second approach, known as an emissions portfolio standard, states restrict electricity sales to electricity generated in compliance with minimum emissions limitations. Although slightly different, these two approaches are grouped together here because they raise similar concerns under the Commerce Clause.

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102. See *infra* Part I.D.2.

### 1. *Use of Environmental Adders in the Electricity Resource Planning Process*

Adjusting the price of goods so that it reflects the costs that its production or disposal imposes upon the environment corrects the market failure that permits many goods to be sold at artificially low prices. Once corrected, the price mechanism can be used to produce efficient quantities of the good in question. The incorporation of environmental adders in pricing various electricity supply options constitutes one example of such "social costing" of goods.<sup>103</sup>

#### a. *Environmental Adders*

Environmental adders, which can be either positive or negative, are shadow prices representing the harm of a given type of energy resource—coal, gas, nuclear, solar—to the environment. Environmental adders are literally added to the price of electricity, which is usually based solely on capital and operating costs. Once adders are applied to various energy options under consideration by state utility commissions, regulators conducting integrated resource planning can properly choose the lowest-cost method of meeting increased demand. For example, as a result of environmental adders that factor in the costs to human health and the environment of air pollutants, the per kilowatt cost of a new coal-fired utility may exceed that of a new wind facility, even though the direct operating costs of the wind facility exceed those of the coal-fired plant. The public

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103. See generally UNITED STATES GENERAL ACCOUNTING OFFICE, GAO/RCED-95-187, *ELECTRICITY SUPPLY: CONSIDERATION OF ENVIRONMENTAL COST IN SELECTING FUEL SOURCES* (1995) (hereinafter GAO Report); Karen Palmer & Hadi Dowlatabadi, *Implementing Social Costing in the Electric Utility Industry*, 4 ENERGY & ENVT. 197 (1993); Timothy J. Brennan & Karen Palmer, *Comparing Costs and Benefits of Diversification by Regulated Firms*, 6 J. REG. ECON. 115 (1994); Dallas Burtraw et al., 'Second-Best' Adjustments to Externality Estimates in Electricity Planning with Competition, Resources for the Future, Discussion Paper No. 96-04 (Oct. 1995); Richard Rosen et al., *Promoting Environmental Quality in a Restructured Electric Industry* (Tellus Institute Report No. 95-056, Dec. 15, 1995); Stephen S. Bernow et al., *Valuation of Environmental and Human Health Risks Associated With Electric Power Generation: A Discussion of Methods and a Review of Greenhouse Gas Studies* (Tellus Institute Report No. 94-202, Nov. 14, 1994); Bernard S. Black & Richard J. Pierce, Jr., *The Choice Between Markets and Central Planning in Regulating the U.S. Electricity Industry*, 93 COLUM. L. REV. 1339, 1400 (1993); Eugene M. Trisko, *Environmental Externalities: Thinking Globally, Taxing Locally*, 131 PUB. UTIL. FORT. 52 (1993).

utility commissions of at least twenty-five states and the District of Columbia require the consideration of externalities in utility resource planning decisions.<sup>104</sup>

The manner in which states measure and apply environmental adders varies widely. While a majority of the states that have adopted adders implement them quantitatively, others appraise them qualitatively.<sup>105</sup> Most states following a quantitative method add a fixed percentage to the unit price of energy generation; the percentage represents the environmental cost of that method of electricity generation. Thus, for example, regulators might add dollars per unit of pollution produced, for example, \$20.14 per pound of nitrogen oxides. This dollar amount is calculated on the basis of either the marginal cost of pollution control<sup>106</sup> or, in a few states, a damage function that takes account of the type of fuel used and the geographic area affected by the generator's emissions.<sup>107</sup> Although it produces a more accurate assessment of the environmental costs of electricity production,<sup>108</sup> difficulties in collecting and assessing

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104. See GAO Report, *supra* note 103, at 10.

105. See *id.* States employing externality values on a qualitative basis generally list the types and rates of emissions and pollutants from the various energy resource options being considered, distinguish them on the basis of categories ranging from "no" to "substantial impact," and then subjectively factor this information into the resource planning process. See *id.* at 12. States that currently use a quantitative approach, or have used such an approach in the past, include California, Minnesota, Nevada, New York, Oregon, Vermont, Wisconsin, and Iowa. See *id.* at 14-15.

106. This is the approach currently followed by Vermont and Nevada. See VT. STAT. ANN. tit. 30, § 218C; Black & Pierce, *supra* note 103, at 1423 (Nevada's adders use values developed by the Tellus Institute, which are based upon marginal compliance costs). New York first adopted a compliance cost approach, though it later abandoned this approach (and ultimately, its use of adders) in favor of a damage approach. See GAO Report, *supra* note 103, at 23, 25. Prior to a Commonwealth Supreme Court decision striking down the State PUC's use of adders, Massachusetts had adopted and was in the process of implementing, compliance cost-based adders. See DEPARTMENT OF ENERGY, ENERGY INFORMATION ADMINISTRATION, ELECTRICITY GENERATION AND ENVIRONMENTAL EXTERNALITIES: CASE STUDIES vi, 33, 37, 44 (Sept. 1995).

107. This is the approach followed by Minnesota, Oregon and Nevada. See *Re Quantification of Environmental Costs*, 174 PUR (4th) 516, \*14 (Minn. Pub. Util. Comm'n 1996); 119 Pub. Util. Rep. 4th (PUR) 257, 268 (Nev. Pub. Serv. Comm'n 1991); 142 Pub. Util. Rep. 4th (PUR) 465, 474-75 (Or. Pub. Util. Comm'n 1993); see also Margaret Tortorella, Note, *Will The Commerce Clause "Pull the Plug" on Minnesota's Quantification of the Environmental Externalities of Electricity Production?*, 79 MINN. L. REV. 1547 (1995). Prior to setting aside its use of externality values in the wake of a rapid movement toward restructuring, California applied adders to five pollutants, all of which were calculated using a damage approach. See GAO Report, *supra* note 103, at 19 (adders for nitrogen oxide, sulfur oxide, particulate matter, reactive organic gases and carbon).

108. See Alan Krupnick et al., *The Social Benefits of Social Costing Research*, RESOURCES FOR THE FUTURE 9 ("A major lesson learned from the recent social costing

information about the environmental impacts of electricity production have discouraged all but a few states from adopting the damage-function approach.<sup>109</sup>

Externality valuation methods have numerous drawbacks.<sup>110</sup> First, unlike some of the other incentive-based environmental regulatory mechanisms used to address the environmental impacts of the electricity industry, externality valuation presupposes the existence of a centralized regulatory authority. For example, a public utility commission would apply adders to various alternatives for energy production and then decide, based on the new price, which generation alternative it should follow to meet electricity demand. Environmental adders may therefore be of limited use once the electrical utility industry is fully restructured and market forces, rather than public utility decisionmakers, choose between generation alternatives. Furthermore, because some states use a mixed system (where regulated utilities supply the energy needs of residential consumers, while large industrial users contract directly with wholesale suppliers) during the transition to a restructured market, adders can be circumvented by new electricity suppliers that come on-line as independent wholesale generators.<sup>111</sup> Second, so far only the social and environmental costs of emissions have been quantified. Thus states using a

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research is that the damage function approach can provide reasonable, internally valid, transparent, and replicable estimates of many important site-specific damages along environmental and nonenvironmental pathways and is superior to other approaches."); Trisko, *supra* note 103, at 52 ("Most economists agree that marginal control costs are not suitable proxies for sound estimates of marginal environmental damages. Control costs say nothing about the environmental effects of an additional pound of emissions.").

109. One methodology frequently cited for deriving harm-based environmental adders is found in a 1990 study by the Pace University Center for Environmental and Legal Studies. PACE UNIV. CENTER FOR ENVTL. LEGAL STUD., ENVIRONMENTAL COSTS OF ELECTRICITY (1990). *But see* Black & Pierce, *supra* note 103, at 1422-24 (criticizing the Pace methodology).

110. For a scathing critique of environmental adders, see Black & Pierce, *supra* note 103, at 1398-1425.

111. See BRENNAN ET AL., *supra* note 6, at 121; *see also* Black & Pierce, *supra* note 103, at 1403. Consequently, some have suggested that states should adopt "social cost dispatching," a method by which the social and environmental costs of electricity would be taken into account even under competitive conditions within the electricity industry. See BRENNAN ET AL., *supra* note 6, at 121-22. Under the dispatching variation, the power dispatcher adjusts the wholesale cost of power, depending upon specific information provided by the generator concerning the environmental impacts of that form of power generation. Because generators could enter contracts for power independently of a system operator, this form of social costing could only work under the "Poolco" approach, under which a centralized dispatcher regulates the sales of power between wholesalers and consumers.

quantitative approach to externality valuation fail to account for the non-polluting environmental impacts of electricity production, such as the habitat destruction potential of large-scale hydroelectric facilities.<sup>112</sup> Finally, because adders are applied only to new power sources, they arguably create perverse incentives in the electricity planning process by failing to internalize the environmental costs of older facilities. Thus, adders could have the effect of increasing overall environmental harm by making power from older, more polluting facilities appear cheaper.<sup>113</sup>

*b. Environmental Adders and Imported Power*

Ever since federal legislation was enacted to encourage utilities to purchase power from independent power wholesalers,<sup>114</sup> electricity has been an interstate industry. A sizable fraction of the power sold by even regulated electrical utilities is generated out-of-state.<sup>115</sup> As a result, when regulators debate various alternatives to meeting increased electricity demand, one or more choices may involve importing power from out of state. The option to import power may place states using environmental adders calculated according to a damage function in something of a dilemma. If the state ignores the environmental impacts of out-of-state power and hence does not calculate an adder for such power, it may give out-of-state energy sources an advantage over in-state sources in the planning process.<sup>116</sup> Many state regulators will want to avoid

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112. See *id.* at 13.

113. See Black & Pierce, *supra* note 103, at 1403; see also BRENNAN ET AL., *supra* note 6, at 121 ("The relatively modest nature of the adders relative to the cost of generation has not led to a dramatic reordering of investment plans."). Also, adders will raise the cost of electric power supplied by utility relative to that provided by other energy sources. This may induce consumers to switch from electric power to direct burning of fuel, a shift that some claim will generally reduce the environmental gains from adders. See Black & Pierce, *supra* note 103, at 1406.

114. See *supra* note 70 (describing PURPA).

115. See FERC Order No. 888, *supra* note 6.

116. While doubtless unpopular with the in-state utility, a state might have an incentive to structure its adders in this manner if the state's own plants are highly polluting and the state wishes to export the pollution generated by its own electricity needs to other states. The state would benefit from the loss of pollution, discounted by any positive economic benefits also lost from reduced in-state power production. See Black & Pierce, *supra* note 103, at 1415. This discriminatory use of adders to export pollution would appear antithetical to the whole idea of *internalizing* the environmental impacts of a state's energy resource supply decisions and, in any case, would invite retaliatory adders by other states. See *id.* at 1415 (noting that other states might retaliate if a state, in an effort to export pollution, employs adders that favor out-of-state producers).

placing their own in-state electricity suppliers at a disadvantage and thus will want to apply environmental adders to all supply options, regardless of the geographic origin of the power.<sup>117</sup> Where a damage approach is used,<sup>118</sup> the size of the adder varies according to the location of the generator. This renders the calculation of adders for out-of-state generation complex, but no more so than for generators found at several different in-state locations.

A state using a damage approach must also decide whether to use the same criteria for assessing damage to the extraterritorial environment as it does for the in-state environment or whether the preferences of the out-of-state residents should be considered.<sup>119</sup> Some states circumvent this valuation question by considering only those damages resulting from the generation of imported power that actually impact the environment of the importing state.<sup>120</sup> Nevertheless, such an approach still places in-state power generators at a disadvantage vis-à-vis out-of-state generators. Due to their more remote location, the size of the adder of an out-of-state generator will

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117. States which apply adders to imported power, or did at one time, include California, Minnesota, Vermont, and Wisconsin. See CALIFORNIA ENERGY COMMISSION, P104-92-001, ELECTRICITY REPORT, 58-60 (Jan. 1993); *Re Quantification of Environmental Costs*, 174 PUR at \*14; Telephone interview with David Iliff, Senior Energy Analyst, State of Wisconsin, on Sept. 25, 1997. Both Minnesota and California (when it applied adders) use a damage approach to calculate the adders applicable to importer power. This may strain the already-thin capacity of science and economics to correlate environmental impacts with various electricity resource options. See E-mail message from Steve Bernow, Tellus Institute, to the author, Aug. 11, 1997 ("Regarding tracking the social costs of imported power, . . . [i]t is easiest for carbon emissions, which are just fuel dependent, as opposed to other pollutants which also depend on plant-specific control equipment. It is even more complex if you wish to then track the air dispersion, deposition and impacts of the incremental pollution. . . . This is all possible in principle, difficult in practice. . . ."); Telephone interview with Jim Hofsis, Senior Electricity Specialist, California Energy Commission, Electricity Resource Assessment Office, Aug. 12, 1997 (concluding essentially the same). Cf. Oliver A. Houck, *The Regulation of Toxic Pollutants Under the Clean Water Act*, ENVTL. L. REP. (Envtl. L. Inst.) 248-250 (1991) (scientific uncertainty regarding the environmental effects of toxic pollutants led to agency paralysis in establishing damage-based air and water discharge standards which ultimately convinced Congress to abandon the damage approach in favor of technology-based standards).

118. Interview with Jim Hofsis, California Energy Commission, Aug. 12, 1997.

119. This issue was raised in the context of California's effort to apply environmental adders to imported power. See *id.*

120. This is the approach followed by the State of Minnesota. See *Re Quantification of Environmental Costs*, 174 PUR (4th) 516, WL pg. 14 (1996) (applying adders to sources between 0 and 200 miles from the Minnesota borders and basing the adders for such sources upon the source's impact on the Minnesota environment).

still be smaller than that of an in-state generator.

## 2. Emissions Portfolio Standards

Emissions portfolio standards<sup>121</sup> are state standards specifying maximum emissions levels for the generation of electricity purchased by state consumers. To date, at least three states—Massachusetts, Connecticut and New Jersey—have authorized the implementation of emission portfolio standards as part of their electricity restructuring laws.<sup>122</sup> As the name implies, emissions portfolio standards can be structured to apply to retailers on a portfolio basis, meaning that a retailer can determine compliance by considering its entire portfolio of energy sources, rather than each source separately.<sup>123</sup> Alternatively, a state might allow for the purchase and trade of offsetting emissions credits so as to more efficiently distribute the costs of complying with the state performance standard.<sup>124</sup>

In the context of deregulation, emissions portfolio standards are designed to prevent the generally cheaper and dirtier coal-fired generators from taking over a large share of the electricity market. Northeastern states fear that deregulation will allow the 150 existing Midwestern coal-fired plants to take over a portion of the Northeastern electricity market and contribute to already unhealthy levels of air pollution while doing so.<sup>125</sup> Midwestern plants have a significant advantage over Northeastern plants in the deregulated electricity market: electricity in the Northeast costs as much as twice that of electricity produced in the Midwest.<sup>126</sup> Furthermore, the emissions of many of the

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121. Emissions portfolio standards sometimes referred to as "generation performance standards."

122. See, e.g., An Act Concerning Electric Restructuring § 24, Conn. Pub. Acts 98-28 (enacted April 29, 1998); New Jersey Electric Discount & Energy Competition Act § 38(b)(2) (establishing a beginning renewable portfolio standard of 2.5% of the total of all renewable kilowatt hours sold to New Jersey customers and increasing the standard to 4% by 2012); see also, e.g., Justin M. Nesbit, *Commerce Clause Implications of Massachusetts' Attempt to Limit the Importation of "Dirty" Power in the Looming Competitive Retail Market for Electricity Generation*, 38 B.C. L. REV. 811, 832-33 (1997) (discussing Commerce Clause issues related to Massachusetts' then-proposed emissions portfolio standard).

123. Massachusetts' legislation specifies that its emission portfolio standard is to apply to electrical generating facilities on a portfolio basis. See Mass Act § 142N.

124. See Conn. Act § 24.

125. See BRENNAN ET AL., *supra* note 6, at 117-18.

126. See Nesbit, *supra* note 122, at 827. For instance, New Jersey's average electricity rate is 10.5 cents a kilowatt hour, nearly 50% higher than the national average. See Anthony S. Twyman, *State Hammering Out Deregulation Details: Law's Passage Still Leaves Rates Up in the Air*, THE STAR-LEDGER, Feb. 3, 1999, available in

Midwestern utilities are grandfathered under the Clean Air Act and thus are not subject to the more stringent emissions standards applicable to newer plants.<sup>127</sup> Emissions portfolio standards may prevent Midwestern utilities from selling power in the Northeast, because Midwestern coal plants may be unable to meet the new standards.

### 3. *Commerce Clause Issues Posed by Environmental Adders and Emissions Portfolio Standards*

State implementation of environmental adders and emissions portfolio standards may work to the disadvantage of out-of-state energy producers. For example, retailers may determine that the cost of importing power, given environmental adders, is significantly higher than the cost of generating the power domestically. Similarly, an out-of-state generator's emissions may exceed those permissible under an emissions portfolio standard. Aggrieved out-of-state power producers may thus challenge either program as an unconstitutional barrier to interstate commerce under the dormant Commerce Clause.

In such a challenge, the key issue will be whether the environmental adder or emission portfolio standard is facially discriminatory or neutral. Even if facially neutral, however, the mechanism may yet impose an undue burden upon interstate commerce or may violate the doctrine against extraterritorial state regulation.

Both emissions portfolio standards and environmental adders pass the test for facial neutrality. An emissions portfolio standard that applies the same performance standard to the power generated by in-state and out-of-state facilities is clearly facially neutral. An environmental adder that is calculated according to the costs of compliance is also facially neutral because compliance costs constitute an unvarying, geographically neutral criterion. Adders based on damage measures may *appear* facially discriminatory because the price of power varies according to factors unique to the geography of the power generator. But, a damage-based adder is also facially nondiscriminatory because the adder is calculated according to a constant, nondiscriminatory set of criteria, regardless of whether the generator is located within or outside the state.<sup>128</sup>

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1999 WL 2952424.

127. See ALLIANCE TO SAVE ENERGY, *supra* note 12, at 38.

128. Thus although a damage adder may raise the cost of power generated by out-of-state coal plants, it is the use of coal rather than biomass, for instance, that is

Because neither an environmental adder nor an emissions portfolio standard is facially discriminatory, both are subject only to the *Pike v. Bruce Church* test for facially neutral laws that excessively burden interstate commerce. Consider the following scenarios, assuming initially that State A experiences a sharp increase in energy demand and that its options for meeting this demand consist of importing power from generators in State B, all of which happen to be coal-fired utilities, or purchasing power from more expensive in-state renewables generators. In the first scenario, once State A's adder is applied to these options, State A's utility is forced to purchase power from in-state renewables because the adder makes renewable power cheaper than fossil-fuel-derived power. In the second scenario, State A has an emissions portfolio standard that prevents the in-state sale of the out-of-state fossil-fuel-derived energy because such energy fails to comply with the State's standard. In both scenarios, State A will end up purchasing domestic energy.

Under *Pike*, the question is whether the state's interest in reducing the environmental costs of electricity generation justifies the discriminatory *effect* resulting from the application of each regulatory mechanism to the mix of power sources. The Court has indicated that nondiscriminatory burdens upon interstate commerce imposed to protect the state's own environment will be given some measure of deference.<sup>129</sup>

Hence, to ensure that its interest in environmental protection is afforded proper weight in the context of the *Pike* balancing test, a state should base its adder or emission portfolio standard upon the protection of its *own* territorial environment, as opposed to the environment generally or the territorial environment of another state. In several cases, the Supreme Court has indicated that a state does not have a legitimate interest in protecting nonresidents or the territory of another

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responsible for the power's higher cost. Nevertheless, if a state, knowing that all out-of-state power came from dirty sources and all in-state power came from clean sources, decided as a shorthand measure to raise the cost of all out-of-state power, the adder would be facially discriminatory. Indeed, under a charitable reading, this is precisely the scenario in *Maine v. Taylor*. See *supra* notes 84-88 and accompanying text. However, if the state could demonstrate that the difference between clean and dirty power sources corresponded to the in-state and out-of-state categories used in its regulation, the state's adder law would probably be upheld under the logic of *Maine*.

129. See, e.g., *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 473 (1981) (upholding state ban upon the sale of milk in plastic containers based upon state's purpose of reducing solid waste despite fact that ban would result in diverting business from out-of-state plastic container manufacturers to in-state pulp-based cardboard manufacturers).

state from harm. In *C & A Carbone*, for instance, the Court rebuffed a town's argument that the interstate burdens imposed by its flow control law were justifiable because the law would divert solid waste away from out-of-state landfills where it might cause harm to human health and the environment in those states.<sup>130</sup> To sanction such an argument, the Court stated, would illegitimately extend the town's police power beyond its jurisdictional bounds.<sup>131</sup>

Significantly, the Court seems likely to find unconstitutional any regulation that seeks to reduce harms occurring outside the regulator's jurisdiction (for example, leaking solid waste landfills or undercapitalized corporate takeovers), regardless of whether

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130. 511 U.S. at 393.

131. See *id.* In a second, non-environmental case, *Edgar v. MITE Corporation*, 457 U.S. 624 (1982), the Court struck down an Illinois law requiring that any takeover bid of a multinational corporation having a certain minimal connection with the state be first registered with a state official. Corporations covered by the Act were those (1) of which 10% of the class of equity securities subject to the offer were owned by shareholders located in Illinois; or (2) for which any two of the following three conditions were met: the corporation had its principal executive office in Illinois, was organized under the laws of Illinois, or had at least 10% of its stated capital and paid-in surplus represented within the state. See *id.* at 627. The Court held that, in comparison to the burden imposed by the registration requirement upon interstate commerce (a burden capable of blocking a nationwide tender offer) Illinois' purported interest was weak. Although recognizing the legitimacy of the state's interest in protecting Illinois' investors, the Court stated that "the State has no legitimate interest in protecting nonresident shareholders." *Id.* at 644. Thus in *MITE Corp.*, the Court concluded that, "[i]nsofar as the Illinois law burdens out-of-state transactions, there is nothing to be weighed in the balance to sustain the law." *Id.*; see also *Clover Leaf Creamery*, 449 U.S. at 456.

Echoes of the Supreme Court's localism are also found in international trade law, where at least one international panel has exhibited a similar reluctance to interpret an international trade agreement to tolerate trade barriers resulting from state protection of the extraterritorial environment. In the course of deciding a challenge to a United States' dolphin protection law, a General Agreements on Tariffs and Trade (GATT) panel rejected the United States' argument that the law's burden upon international trade in tuna was justified by the United States' concern for the dolphins in the eastern tropical Pacific Ocean. GATT DISPUTE SETTLEMENT PANEL REPORT ON U.S. RESTRICTIONS ON IMPORTS OF TUNA, Aug. 16, 1991, 30 I.L.M. 1594, 1619-20 (1991). Not long after the first panel rendered this decision, a second GATT panel, reviewing a challenge to a different aspect of the same United States' law, held that the same GATT exception was not limited to the environment encompassed within the acting nation's territorial jurisdiction. See GATT DISPUTE SETTLEMENT PANEL REPORT ON U.S. RESTRICTIONS ON IMPORTS OF TUNA, June, 1994, 33 I.L.M. 839, 890-95 (1994). Nevertheless, because the second panel ended up concluding that the United States' extraterritorial protective acts were invalid under both exceptions because they were ineffective in the absence of the enforcement of similar trade-burdening measures by other nations, *id.* at 894, 898, its decision was nearly as disapproving of extraterritorial environmental protection as that of the first panel. In and of themselves, unilateral environmental protection measures will seldom result in the protection of a common international resource, but may constitute an important first step in achieving international protection.

the act that causes such harm originates inside the regulator's territory (for example, the *generation* of solid waste or the *takeover offer*). In Part III of this Article, I will argue that the Court's application of the extraterritoriality principle in the context of the *Pike* balancing test is thus overbroad; a state *does* have a legitimate interest in preventing extraterritorial harms caused by actions originating within its territory. Therefore a state's regulation of in-state actions triggering such extraterritorial harms should not violate the Commerce Clause. For present purposes, however, it suffices to point out the Court's parochial understanding of what constitutes a legitimate state interest in environmental protection and to note that, because of this parochial understanding, a state is well advised to base its environmental adder<sup>132</sup> or renewable portfolio standard<sup>133</sup> upon the need to reduce in-state environmental

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132. Minnesota's environmental adder is an example of how a state might apply its environmental adder to electricity imported from out-of-state and yet be consistent with the Court's apparent insistence that state environmental regulation be based upon the protection of the state's own territorial environment. Minnesota calculates its adder based only upon environmental damage to the State of Minnesota. Minnesota quantifies the costs of the most significant byproducts of generation of EPA's six criteria pollutants plus mercury and carbon dioxide. See *Re Quantification of Environmental Costs*, 174 Pub. Util. Rep. (PUR) (4th) 516, \*14 (1996). In 1993, Minnesota enacted an environmental externalities statute that required its Public Utilities Commission to quantify and establish a range of environmental costs associated with each method of electricity generation "to the extent practicable." MINN. STAT. § 216B.2422 (1994). With the exception of the values adopted for carbon dioxide, the Minnesota Public Utilities Commission decided to quantify only the costs of environmental damage that occurred within Minnesota itself and that which occurred close to the State's borders. Accordingly, the Commission quantified the values of emissions emanating from within Minnesota and within 200 miles of Minnesota's boundaries. Emissions originating from generating facilities beyond the 200 miles are deemed to be zero. See *id.* Although it recognized that emissions generated within another state can do environmental damage in Minnesota, the PUC determined that, because the level and amount of such damage was a function of distance, at some point generating facilities located outside Minnesota would fail to cause damage to the Minnesota environment. The PUC chose 200 miles as a reasonable cutoff point for facilities whose emissions were unlikely to have an impact on Minnesota. See *Re Quantification of Environmental Costs*, 174 Pub. Util. Rep. (4th) at \*14. Minnesota's approach will result in internalizing the costs of both imported and in-state power in states which do not import power from location further distant than some minimal radius from the state's borders (such as 200 miles). Where a state receives power from locations beyond this range, however, the Minnesota scheme would still place in-state generators at a competitive disadvantage vis-à-vis in-state generators.

133. Connecticut has done an admirable job in specifying that the purpose of its emissions portfolio standard is to protect the state's own territorial environment. See Conn. Acts § 24 ("Such standards shall, to the greatest extent possible, be designed to improve air quality in this state and to further the attainment of the National Ambient Air Quality Standards promulgated by the United States Environmental Protection Agency.").

harms. Failure to do so may render the state law vulnerable to constitutional attack under the *Pike* balancing test.

The Court also considers extraterritorial regulation, in and of itself, to be a *per se* violation of the Commerce Clause.<sup>134</sup> As a general matter, the principle against extraterritorial regulations prohibits states from extending their regulatory authority to control activities occurring in other states.<sup>135</sup>

As a result, a state should not only base its added or standard upon the protection of its own environment but should also specify that it seeks to regulate only the *in-state* generation, sale, or transfer of electrical power and not the *out-of-state* generation, sale, or transfer of power.<sup>136</sup> Nothing in the Court's case law prevents a state from regulating the price of electricity sold in-state, even if the electricity was first generated out-of-state.

Although one commentator has suggested that

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134. See *Healy v. Beer Inst.*, 491 U.S. 324, 336 (1989) (Commerce Clause precludes application of a state statute to commerce taking place wholly outside the state's borders); *Cotto Waxo Co. v. Williams*, 46 F.3d 790, 793, 793 n.3 (8th Cir. 1995) (stating that a state regulation is *per se* invalid when it has an "extraterritorial reach" and positing that "extraterritorial reach" may be a special example of "directly" regulating interstate commerce in the same manner as facially discriminatory regulation, though the Supreme Court has not clarified the point). Nevertheless, one noted dormant Commerce Clause scholar, Donald Regan, contends that extraterritorial regulation is not a dormant Commerce Clause issue. See Donald H. Regan, *Siamese Essays: (I) CTS Corp. v. Dynamics Corp. of America and Dormant Commerce Clause Doctrine; (II) Extraterritorial State Legislation*, 85 MICH. L. REV. 1865, 1869, 1873 (1987).

135. See *Healy v. Beer Inst.*, 491 U.S. 324, 338, 338 (1989); *Brown-Forman Distillers Corp. v. New York State Liquor Auth.*, 476 U.S. 573, at 582 (1986); *Edgar v. MITE Corp.*, 457 U.S. 624, 644 (1982); *Baldwin v. G.A.F. Seelig, Inc.*, 294 U.S. 511, 522 (1935).

136. See *Cotto Waxo Co.*, 46 F.3d at 794 (Minnesota statute prohibiting the in-state sale of petroleum-based sweeping compounds does not constitute extraterritorial regulation because the Act governs only in-state sales and is indifferent to sales occurring out-of-state). Neither the Connecticut nor the Massachusetts emissions portfolio standard is completely unambiguous on this point. The Massachusetts provision states that its department of telecommunications and energy is to "promulgate rules and regulations to adopt and implement for fossil fuel-fired electric generation facilities uniform generation performance standards of emissions. . . ." Mass. Acts § 142N. Connecticut's legislation is similarly ambiguous. Its legislation reads that the standard "shall apply to electric suppliers' generation facilities located in North America and shall limit the amount of air pollutants. . . ." Conn. Acts § 24. The scope of both acts is sufficiently broad to authorize the regulation of the actual emissions of out-of-state electrical generating plants. While only the actual exercise of such authority should be considered cause for challenge, a state is obviously safer if it limits its emission standard to the in-state sale or transfer of power, whether produced in-state or out-of-state.

environmental adders constitute extraterritorial regulation,<sup>137</sup> case law does not appear to support this conclusion. Environmental adders do not require that an entity alter its behavior within another state. Instead, adders merely require that the price of electricity sold in-state reflect the environmental damage that is caused by the production of that electricity wherever it occurs. In cases in which regulations were struck down based upon an extraterritorial effect, the terms of the statute controlled the manner in which parties conducted business activities within the jurisdiction of other states. For example, in *Brown-Forman Distillers v. New York State Liquor Authority*,<sup>138</sup> New York prevented distillers from selling liquor in other states at a price greater than that which they had committed to sell their liquor in New York.<sup>139</sup> *Healy v. Beer Institute*<sup>140</sup> concerned a similar price affirmation statute. The Illinois statute struck down in *Edgar v. MITE, Corp.*, conditioned the acceptance of tender offers by multinational companies incorporated in other states upon the registration of such offers in Illinois.<sup>141</sup>

An emissions portfolio standard is also distinguishable from the price affirmation statutes struck down as unconstitutional in *Brown-Forman* and *Healy*. First, The Court has distinguished between retrospective and prospective laws, affirming the former while invalidating the latter.<sup>142</sup> A price affirmation statute is

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137. See Tortorella, *supra* note 107, at 1574-75 (arguing that, in quantifying the costs of pollution generated by out-of-state electrical utilities within Minnesota's territory, Minnesota's environmental externality regulations constitute prohibited extraterritorial regulation). Although I believe the application of a state's adders to out-of-state electricity generators that results in burdening interstate commerce presents a risk of being held invalid under the *Pike* test, for the reasons discussed in the text I disagree that the simple application of the state's adders to out-of-state generators constitutes prohibited extraterritorial state regulation.

138. 476 U.S. 573 (1986).

139. *Id.* at 576. The New York law required that distillers doing business in the state file a schedule of their prices a month in advance and that they commit to not sell liquor to any wholesaler in any other state at a price less than the price appearing on the schedule during the month covered by the filed schedule.

140. 491 U.S. 324 (1989).

141. See *MITE*, 457 U.S. at 640-43.

142. Compare *Joseph E. Seagram & Sons, Inc. v. Hostetter*, 384 U.S. 35 (1966) (upholding New York law requiring distillers to affirm that prices during a given month were no higher than the lowest price at which the liquor had been sold anywhere else during the previous month), with *Brown-Forman*, 476 U.S. at 582 (striking down New York law forbidding distillers from selling liquor, in the future anywhere else at a price higher than the price the distiller posted as its future price in New York). In *Brown-Forman*, the Court stated that it did not necessarily attach constitutional significance to the distinction between prospective and retrospective statutes, though it declined to consider the issue further. See 476 U.S. at 584 n.6.

prospective, preventing a distiller from changing its prices in other states after it has posted its prices in the regulating state. Conversely, an emissions portfolio standard is retrospective, conditioning the sale of electricity upon the generator's prior compliance with certain emissions limits during the electricity's production. The standard does not control future conduct in other states, but merely conditions current conduct within its own state upon the occurrence of certain past actions in another state. A firm may choose to alter its conduct to meet an emissions portfolio standard, but it is equally free not to do so. Under a standard so constructed, a state does not "project its legislation' into other States and directly regulat[e] commerce therein."<sup>143</sup>

Second the purpose of an emissions portfolio standard differs significantly from that of a price affirmation statute. The thinly veiled purpose of a price affirmation statute is to prevent a producer from charging less for its product in another locality; such a statute thereby constitutes a type of economic protectionism because it deprives producers of a market advantage. In contrast, an emissions portfolio standard allows producers to charge whatever price the market will bear in any state in which they care to sell, but restricts in-state sales to those products produced in accordance with certain environmental standards. Thus the price affirmation statute deprives a producer of a price advantage for a like product, while the emissions standard deprives a producer of the market share it would obtain were it to sell nonconforming products. While the former is clearly a purpose condemned under the dormant Commerce Clause,<sup>144</sup> the latter is not.

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As Donald Regan has noted, this does not necessarily mean that retrospective price affirmation laws are legal, but just that they do not constitute unconstitutional extraterritorial regulation. See Regan, *supra* note 15, at 1905-06. The case of *Baldwin v. G.A.F. Seelig*, 294 U.S. 511 (1935), concerned a retrospective price affirmation law and it was struck down as unconstitutional. In *Baldwin*, New York conditioned the sale of milk upon the milk's being previously purchased (whether in-state or out-of-state) at the New York minimum price. This law was struck down, not because it regulated extraterritorially, but because it was clearly enacted for the purpose of protecting in-state milk producers from out-of-state competition. See *Baldwin*, 294 U.S. at 527.

143. See *Brown-Forman*, 476 U.S. at 584.

144. See *id.* at 580 ("While a State may seek lower prices for its consumers, it may not insist that producers or consumers in other States surrender whatever competitive advantages they may possess."); *New England Power Co. v. New Hampshire*, 455 U.S. 331, 338 (1982); *Schwegmann Brothers Giant Super Markets v. Louisiana Milk Comm'n*, 365 F. Supp. 1144 (M.D. La. 1973), *aff'd*, 416 U.S. 922 (1974).

### D. System Benefits Charges

Surcharges raise funds necessary to encourage more environmentally sensitive alternatives to current economic activities by taxing the users of environmentally harmful alternatives. In the context of electricity industry restructuring, environmental advocates are encouraging states to implement a surcharge, or system benefits charge, upon customer utility bills to raise funds that can be dispensed as subsidies for renewable energy and energy efficiency programs.<sup>145</sup> Prior to deregulation, such a surcharge was unnecessary because public utility commissions supported such programs through ratemaking.

A system benefits charge is a per kilowatt charge imposed upon all electricity consumers within the state. The electricity burdened by the charge includes both electricity generated within the state and that imported from out-of-state sources. States that have enacted a systems benefit charge to support energy efficiency or renewable energy programs include Arizona, California, Connecticut, Illinois, Maine, Massachusetts, Montana, New Jersey, New York, and Rhode Island.<sup>146</sup> As with the renewable portfolio standard a state's primary interest lies in supporting its own in-state renewables industry. It is only rational that the state will use the funds collected through the surcharge to subsidize in-state industries exclusively. Indeed, this is exactly how California has structured its system benefits charge.<sup>147</sup> The funds collected from California's surcharge are

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145. See, e.g., ALLIANCE TO SAVE ENERGY ET AL., *supra* note 12, at 38-39; Rader & Wiser, *supra* note 70, at 22.

146. See David Nichols, *SBC's With Restructuring and Without*, 7 Energy Perspectives: Newsletter of the Energy Group at Tellus Institute 4-5 (March 1999) <<http://www.tellus.org/enpers71.html>>; William A. Spratley, *Solar Mandate? Like It or Not, Consumers Pay*, 136 FORTNIGHT 54, 56 (1998) (updated description of the size of state system benefit charges and the planned uses for the money collected). Because it supports environmentally beneficial goods and services through a publicly administered subsidy, the systems benefit charge is a less desirable method of funding renewables, from an efficiency perspective, than the renewables portfolio standard discussed earlier. See Rader and Norgaard, *supra* note 47, at 46-47 ("Publicly administered programs are not likely to foster the kind of 'ingenuity dynamic' that is created with a market standard."). The renewables portfolio standard provides renewables generators with an incentive to operate as efficiently as possible. The more cheaply they generate electricity, the more energy credits they will have to sell to energy retailers. No such incentive accompanies the system benefits charge.

147. In California, moneys received from the surcharge are to be used to provide "in-state benefits," including the "[i]n-state operation and development of existing and new and emerging renewable resource technologies." CAL. PUB. UTIL. 1890 § 383(b)(3) (West 1996). Prior to being distributed, the moneys received are to be placed in a special subaccount of the Energy Resources Programs Account of the California

segregated and then distributed by a state agency to existing and new renewables generators and to programs for energy efficiency, electricity for low-income families, and research and development.<sup>148</sup> This structure raises constitutional problems, however, because the surcharge is based upon total electricity usage. Given that some of this electricity originated out-of-state, passing the benefit of the surcharge only to in-state renewables generators advantages in-state producers over out-of-state producers.

### 1. *Suspect Linkage Between Nondiscriminatory Taxing and Discriminatory Spending Programs*

Depending upon how it is structured by a given state, a system benefits charge can bear a distinct likeness to the tax and rebate subsidy invalidated by the Supreme Court on dormant Commerce Clause grounds in *West Lynn Creamery v. Healy*.<sup>149</sup> Because of this similarity, a state imposing a system benefits charge should be careful to construct the regulation in a manner that would allow a court to distinguish it from a *West Lynn*-like subsidy.

*West Lynn* placed important restrictions on the Court's generally permissive attitude to state schemes to subsidize their own industries.<sup>150</sup> In *West Lynn*, the Court considered the constitutionality of a Massachusetts statute that imposed two tools of local finance widely recognized as valid when viewed in isolation: a nondiscriminatory tax and a state subsidy.<sup>151</sup> The tax was imposed on both in-state and out-of-state milk dealers, and the subsidy was distributed solely to state dairy farmers. In a seven to two decision, the Court held that these two otherwise innocuous regulations, when combined, constituted a protective tariff, which the Court labeled a "patently unconstitutional" state

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Energy Resources Conservation and Development Commission. See *id.*

148. See CAL. PUB. UTIL. CODE. (AB 1890) § 383(a).

149. 512 U.S. 186 (1994).

150. See *New Energy Co. of Ind. v. Limbach*, 486 U.S. 269, 278 (1988) ("The Commerce Clause does not prohibit all state action designed to give its residents an advantage in the marketplace, but only action of that description in connection with the State's regulation of interstate commerce. Direct subsidization of domestic industry does not ordinarily run afoul of that prohibition; discriminatory taxation . . . does."); *Camps Newfound/Owatonna, Inc. v. Town of Harrison, Maine*, 520 U.S. 564, 593 (1997) (quoting same); *C & A Carbone*, 511 U.S. at 384 (suggesting that the respondent Town could have ensured the long term survival of its recycling facility through a subsidy derived from general taxes or municipal bonds).

151. See Coenen & Hellerstein, *Suspect Linkage*, *supra* note 95.

regulation.<sup>152</sup> The Court reasoned that the subsidy essentially negated the tax for the in-state milk dealers, while leaving the out-of-state dealers to feel the full effect of the tax.<sup>153</sup> The Court reconciled its holding in *West Lynn* with its oft-cited support for general revenue, or cash, subsidies by limiting its holding to state subsidies that work as a rebate to in-state members of the multi-state industry that is taxed.<sup>154</sup>

Like the scheme struck down in *West Lynn*, the system benefits charge combines a nondiscriminatory tax upon electricity usage with a subsidy to in-state electricity producers—renewables generators. Thus, like the tax and rebate scheme invalidated in *West Lynn Creamery*, the system benefits charge advantages in-state electricity generators at the expense of out-of-state generators.<sup>155</sup> Because a system benefits

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152. 512 U.S. at 193-96.

153. See *id.* In a similar case, *Bacchus Imports v. Dias*, 468 U.S. 263, 272 (1984), the Court struck down a Hawaii liquor tax that exempted from its scope certain locally-produced alcoholic beverages. With the exception of two alcoholic beverages, the tax, imposed upon sales of liquor at wholesale, applied to liquors produced both in-state and out-of-state. The Court held that both the purpose and effect of the tax was discriminatory because the legislature had intended to aid the fledgling Hawaii liquor industry and the effect of the tax was to advantage the exempted liquors vis-à-vis their competitors produced in other states.

154. *Id.* at 2214 (“The pricing order in this case, however, is funded principally from taxes on the sale of milk produced in other States. . . . The pricing order thus violates the cardinal principle that a State may not ‘benefit in-state economic interests by burdening out-of-state competitors.’”); see also Hellerstein & Coenen, *supra* note 100, at 838 (arguing that “courts should strike down only those subsidies that operate, like the program in *West Lynn Creamery*, as discriminatory de facto rebates of an identifiable state tax”); cf. Peter D. Enrich, *Saving the States From Themselves: Commerce Clause Constraints on State Tax Incentives for Business*, 110 HARV. L. REV. 377, 442 (1996) (agreeing with Court’s practice of applying harsher scrutiny to tax-related benefits for industry and its indication that cash subsidies should receive little or no scrutiny). Not all Justices, however, nor all commentators display as much comfort with the Court’s distinction between general revenue subsidies and the industry-specific tax and subsidy schemes. See *West Lynn Creamery*, 512 U.S. at 208-09 (Scalia, J., joined by Thomas, J., concurring) (claiming that almost all subsidies funded from general revenues are unconstitutional according to the majority’s formula since they “almost invariably include monies from use taxes on out-of-state products”); see also Note, *Functional Analysis, Subsidies, and the Dormant Commerce Clause*, 110 HARV. L. REV. 1537, 1539-40 (1977) (disagreeing with the Court’s criteria for valid and invalid subsidies and arguing that subsidies should generally not be held to violate the Commerce Clause “unless accompanied by an industry-specific tax unjustified by the negative externalities that the industry imposes on the state”); Christopher R. Drahozal, *On Tariffs v. Subsidies in Interstate Trade: A Legal and Economic Analysis*, 74 WASH. U. L.Q. 1127, 1168 (1996) (agreeing with the Court’s criteria for valid and invalid subsidies but arguing that it would be better justified if founded on the Import-Export Clause of the Constitution rather than the Commerce Clause).

155. For this reason, the system benefits charge is distinguishable from the waste management tax upheld in *Zenith/Kremer Waste Systems, Inc. v. Western Lake*

charge is likely to increase demand for retail energy packages featuring in-state renewables suppliers, out-of-state renewables generators suffer the most as a result of the surcharge.

Four arguments can be made that the tax and rebate scheme at issue in *West Lynn*, and the cases and principles that supported the decision, are in fact distinguishable from the form and purpose of a system benefits charge. All four arguments ultimately fail, although the risk of invalidation under the dormant Commerce Clause is quite low.

First, unlike the Massachusetts milk scheme, a system benefits charge is not intended to benefit in-state renewables at the expense of out-of-state electricity generators. Instead, the program is intended to benefit renewables at the expense of *all* non-renewable sources of electricity without regard for their geographic origin. Nevertheless, the *effect* of the system benefits charge may be to benefit in-state renewables generators at the expense of out-of-state renewables. Despite the claims of some commentators that the Court is interested only in discriminatory purpose,<sup>156</sup> the Court has long stated that invalid economic protectionism may be based on *either* discriminatory purpose or effect.<sup>157</sup> At the very least, the existence of such an effect would subject a system benefits charge to the *Pike* test of evenhandedness for regulation that imposes a burden upon interstate commerce.

Second, it might be argued that the discriminatory effect of a system benefits charge is so minimal that it does not trigger a constitutional violation. The Court has made clear that, in the absence of competition between the allegedly advantaged and disadvantaged producers, no Commerce Clause violation exists.<sup>158</sup> If in-state renewables, favored by the system benefits

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*Superior Sanitary District*, 572 N.W. 2d 300 (Minn. 1997). In *Zenith/Kremer Waste Systems*, the Minnesota Supreme Court upheld a scheme whereby a municipal waste disposal firm imposed a waste management tax upon waste district residents in order to subsidize its waste disposal activities and thereby charge reduced tipping fees. The tax allowed the facility to win business away from out-of-state waste processors through its subsidized tipping fees. See *id.* at 303.

156. See Regan *supra* note 15, at 1092-93.

157. See *Bacchus*, 468 U.S. at 270; *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 471 n.15 (1981) ("A court may find that a state law constitutes 'economic protectionism' on proof either of discriminatory effect . . . or of discriminatory purpose."); see also Enrich, *supra* note 154, at 457-58 n.444 (arguing state business location incentives should be struck down under the Commerce Clause whenever their purpose or effect is to distort the decisions of economic actors in favor of in-state expenditures and eschewing attempts to corner the Court into finding that the Commerce Clause is violated only by laws manifesting a discriminatory intent).

158. See *General Motors Corp. v. Tracy*, 419 U.S. 278, 299 (1997) (tax exemption

charge, are not competitive with out-of-state sources of energy, no discrimination results from the charge and no violation exists.

While the competition is unlikely to be great, there is no reason to suspect that in-state renewables will not compete with out-of-state renewables, assuming out-of-state renewables generators supply the state market.<sup>159</sup> The Court has stated that a discriminatory effect can exist whenever there is "some competition" between a local and an out-of-state good.<sup>159</sup> Thus it would appear that the importation of some renewables-based energy would satisfy this threshold. Even if no renewable energy is imported, in-state renewables are likely to compete with other sources of out-of-state energy and, in the not too distant future, with all forms of energy. In *Bacchus Imports, Ltd. v. Dias*, the Court invalidated a tax exemption for Hawaiian-produced liquors, even though the liquors had no non-Hawaiian counterpart, because the liquors competed with other types of liquors that were produced out-of-state.<sup>160</sup>

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provided by state to local gas distribution companies and not to gas producers and independent marketers did not violate Commerce Clause because the two types of entities serve different markets and hence do not compete with one another); *State of Alaska v. Arctic Maid*, 366 U.S. 199, 204 (1961) (imposition of higher tax on salmon taken from territorial waters by freezer ships and frozen for canning outside the state than tax on same salmon frozen by on-shore cold storage facilities and sold on domestic fresh-frozen market upheld upon finding that freezer ships and cold storage facilities served different markets and hence did not compete with one another); see also Paul E. McGreal, *The Flawed Economics of the Dormant Commerce Clause*, 39 WILLIAM & MARY L. REV. 1191, 1216-22 (1998) (arguing that competition between in-state and out-of-state commerce constitutes a "first principle" of dormant Commerce Clause jurisprudence). In *West Lynn Creamery*, however, the Court departed from the competition principle because the nondiscriminatory tax at issue was levied against milk dealers, while the subsidy with which it was coupled was given to milk producers, neither of which are in direct competition with one another. See 512 U.S. at 214-16 (Rehnquist, C.J. and Blackmun, J., dissenting). The Court ignored this distinction, maintaining that the important point was that the choice of dairy farmers ensured that in-state producers would benefit from the subsidy and thus posed a danger to the national market. See *id.* at 197.

159. *Bacchus*, 468 U.S. at 271.

160. See *id.* at 269 ("Neither the small volume of sales of exempted liquor nor the fact that the exempted liquors do not constitute a present 'competitive threat' to other liquors is dispositive of the question whether competition exists between the locally produced beverages and foreign beverages; instead they go only to the extent of such competition."). Given that the in-state renewables receiving the system benefits charge are likely to compete at least somewhat with renewables and other forms of energy generated out-of-state, perhaps the more important distinguishing aspect of the system benefits charge scenario is the minimal nature of the advantage given to in-state renewables. In many states the majority of the energy consumed is generated within the state and thus the majority of the funds raised by the systems benefit surcharge will come from charges on power originating within the state and will be transferred to only a subset of the in-state industry consisting of renewables generators. Also, unlike the broadscale effect of subsidizing Massachusetts dairy

Third, it might be argued that a system benefits charge is immune from a Commerce Clause challenge because it is paid for by in-state energy consumers; thus an in-state interest group bears the burden of the tax rather than some out-of-state party. The Court, however, repudiated a similar argument in *West Lynn*, finding it irrelevant that only in-state milk consumers paid the price increase attributable to the milk tax and subsidy scheme. The Court pointed out that state taxes are ordinarily paid by in-state businesses and consumers and yet a tax scheme that discriminates against out-of-state products is clearly unconstitutional.<sup>161</sup> Indeed, because a state's taxing jurisdiction encompasses primarily in-state consumers and businesses, even a blatantly discriminatory state tax would have to be levied solely upon in-state taxpayers.<sup>162</sup> *West Lynn* indicates that the important factor under the Commerce Clause is the effect of the tax scheme on the competitive position of in-state versus out-of-state businesses in an integrated interstate market, rather than the identity of the group that actually pays the subject tax.<sup>163</sup> When evaluating a system benefits charge, a court will look at the competitive position of in-state and out-of-state renewables generators. In-state renewables companies arguably compete in the same market as out-of-state renewables companies, and yet only the in-state renewables generators reap any advantage from

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farmers, benefiting in-state renewables is unlikely to disadvantage much more of the out-of-state power market than the subset of out-of-state renewables.

161. See *West Lynn Creamery*, 512 U.S. at 203; see also *Bacchus*, 468 U.S. at 272.

162. See *West Lynn Creamery*, 512 U.S. at 203 ("This argument, if accepted, would undermine almost every discriminatory tax case. State taxes are ordinarily paid by in-state businesses and consumers, yet if they discriminate against out-of-state products, they are unconstitutional.").

163. See *id.* at 204. The First Circuit has applied *West Lynn Creamery* to strike down a tax and rebate scheme involving a tax collected from in-state consumers. See *Cumberland Farms v. LaFaver*, 33 F.3d 1 (1st Cir. 1994) (striking down a Maine statute imposing a consumer tax upon all packaged fluid milk sold in-state regardless of the origin of the milk and distributing the proceeds of the tax solely to in-state dairy farmers). Furthermore, as if to underscore the absurdity of according any distinction to the significance of the particular party who pays the surcharge (as opposed to who bears the economic burden of the surcharge), the *West Lynn* Court posed the following rhetorical question in *dicta*: "Is it possible to doubt that if Massachusetts imposed a higher sales tax on milk produced in Maine than milk produced in Massachusetts that the tax would be struck down, in spite of the fact that the sales tax was imposed on consumers, and consumers do not compete with dairy farmers?" *West Lynn Creamery*, 512 U.S. at 203. *But cf. Zenith/Kremer Waste Systems*, 572 N.W.2d at 305 ("It is constitutionally significant that the waste management tax is levied on residents and occupants of the district rather than the waste haulers because it demonstrates that the focus, purpose, and reach of the tax is entirely local.").

the system benefits charge. Thus, the system benefits charge could be considered constitutionally suspect despite the fact that only residents actually pay the charge at issue.

Fourth, perhaps the most promising tack for distinguishing a system benefits charge from the tax rebate-type legislation at issue in *West Lynn Creamery* is to attack the assumption, implicit in the analysis above, that the subsidy to in-state renewables generators is somehow linked to the system benefits charge and hence that the effect of the two must be considered together. If delinked, a system benefits charge consists merely of a charge levied upon all commercial and residential energy users within the state and a wholly separate subsidy to in-state renewables generators. Considered independently, the two parts are surely constitutional. In fact, because the entities subject to the charge are more or less co-extensive with a state's taxpaying population, the charge is arguably equivalent to a constitutional general revenue tax, and the payment to renewables generators is nothing more than an ordinary state subsidy to local businesses. The Court has frequently stated that, although a state may not regulate in a manner that favors intrastate commerce, it may favor local businesses through general revenue subsidies.<sup>164</sup>

Although the Court has yet to establish criteria for when a seemingly innocuous tax and subsidy should be considered linked for constitutional analysis, two commentators recently suggested their own framework.<sup>165</sup> Dan Coenen and Walter Hellerstein argue that suspect linkage between a taxing and a spending measure should turn on the application of five factors: internalization, simultaneity, scope, correlation, and policy responsiveness.<sup>166</sup> According to Coenen and Hellerstein's formula, a given state's energy charge and in-state renewables subsidy may not actually be linked and hence could survive a constitutional challenge. Whether the two measures trigger such a presumption may depend upon the particulars of a state's legislation.

According to Coenen and Hellerstein's definition, internalization requires that the subsidy be applied directly to the tax payment, in the way that a tax credit directly reduces tax liability. The renewables subsidy is an outright payment rather than a credit applied to reduce the system benefits charge, and

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164. See text accompanying notes 273-297.

165. See Dan T. Coenen & Hellerstein, *Suspect Linkage*, *supra* note 95, at 2195.

166. See *id.*

thus is not internalized.<sup>167</sup>

When payments do not exhibit internalization, Coenen and Hellerstein maintain that linkage can be presumed only when two of the three factors, simultaneity, scope, and correlation, exist.<sup>168</sup> Simultaneity refers to the relationship between the timing of the regulatory enactment of the two measures.<sup>169</sup> As currently enacted by state legislatures, a system benefits charge and an in-state renewables subsidy satisfy simultaneity because the two are usually enacted in the same legislation.

Scope assesses the class of beneficiaries and victims of the legislation. Linkage is more likely when the class of persons disadvantaged by the regulations corresponds to a class protected by the Commerce Clause (such as producers engaged in interstate commerce), while the class advantaged corresponds to persons lacking such protected status (such as persons engaged in intrastate commerce).<sup>170</sup> The scope of a system benefits charge and that of an in-state renewables subsidy do not correlate perfectly, however. Only in-state renewables generators, and not all in-state energy generators, receive the benefits of the subsidy. Hence the winners and losers of the two measures, considered together, do not neatly correspond to the classes of parties of significance under the dormant Commerce Clause.<sup>171</sup> The system benefits charge and renewables subsidy do not, then, satisfy the scope criterion.

Coenen and Hellerstein's correlation criterion is less easily analyzed because it embraces several different forms of connectedness between a taxing and a spending measure: (1) durational correlation (the payment measure operates only as long as the taxing measure stays in effect); (2) computational correlation (the tax and spending measure exhibits a mathematical correlation); and (3) source-based correlation (the tax is the source of the proceeds for the spending measure or the payments are determined as a function of tax receipts).<sup>172</sup> "Some or all" of these connections may be present in a given case; if two

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167. See *id.* at 2198.

168. See *id.*

169. See *id.* at 2198. Of all of Coenen and Hellerstein's criteria, this is the least well-explained, though perhaps the most intuitive.

170. See *id.* at 2199.

171. Hence the system benefits charges and in-state renewables subsidies would be considered "under-universal" according to Coenen and Hellerstein's criteria because the subsidy is provided to only a portion of the in-state residents subject to the charge.

172. See *id.* at 2200-01.

out of the three are found, the correlation is strong.<sup>173</sup> While it is probable that a state's system benefits charge will have the same duration as its in-state renewables subsidy, the extent to which the two measures exhibit computational and source-based correlation will depend upon the specifics of the state law.

The final factor, policy responsiveness, cuts against finding linkage in the case of the system benefits charge. This factor asks whether the regulation was passed to appease politically powerful in-state interests. The analysis is similar to that undertaken by the Court to ferret out political process defects.<sup>174</sup> A political process defect is indicated where a regulation benefits in-state interests represented in the legislative process at the expense of out-of-state interests not so represented.<sup>175</sup> In *West Lynn*, the Court was obviously suspicious that dairy farmers, the most powerful of the in-state groups that would ordinarily be expected to oppose the milk tax, had been mollified by the subsidy.<sup>176</sup> That sort of payoff is the paradigmatic political process defect. In the case of a system benefits charge, however, powerful in-state interest groups such as coal-fired utility companies are potentially harmed and yet do not receive any portion of the collected tax. Such interest groups would be expected to oppose legislation instituting a system benefits charge. Consequently, the enactment of a charge is unlikely to manifest a political process defect.<sup>177</sup> Nevertheless, the Court has not uniformly upheld laws where an in-state interest is

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173. *See id.*

174. *See id.* at 2215.

175. *See, e.g., Southern Pac. Co. v. Arizona*, 325 U.S. 761, 768 n.2 (1945) ("[T]he Court has often recognized that to the extent . . . the burden of state regulation falls on interests outside the state, it is unlikely to be alleviated by the operation of those political restraints normally exerted when interests within the state are affected."); *Minnesota v. Clover Leaf Creamery Co.*, 449 U.S. 456, 473 n.17 (1981) ("The existence of major in-state interests adversely affected . . . is a powerful safeguard against legislative abuse."); *see also Raymond Motor Transportation, Inc. v. Rice*, 434 U.S. 429, 444 n.18 (1978) (noting that deference is properly accorded state highway regulations because "their burden usually falls on local economic interests as well as other States' economic interests, thus insuring that a State's own political processes will serve as a check against unduly burdensome regulations"); *South Carolina State Highway Dep't v. Barnwell Bros.*, 303 U.S. 177, 185 n.2 (1938).

176. *See* 512 U.S. at 200.

177. *See South Carolina State Highway*, 303 U.S. at 187 (1938) ("The fact that [the regulations] affect alike shippers in interstate and intrastate commerce in large numbers within as well as without the state is a safeguard against their abuse."); *Kassel v. Consolidated Freightways Corp.*, 450 U.S. 662, 676-78 (1981) (invalidating state regulations banning double tractor trailers from highways where ban contained exemptions for intrastate commerce to the advantage of domestic trucking companies).

burdened along with an out-of-state interest. For example, the Court struck down a Hawaiian tax in *Bacchus* despite the fact that some local liquors paid the tax that also fell heavily upon foreign liquors.<sup>178</sup> Thus, Coenen and Hellerstein's first, second, and fourth factors do not apply here and the third, while possibly met, will be highly fact specific and thus linkage can be avoided.

In sum, a state's combined enactment of an energy surcharge and an in-state renewables subsidy can be distinguished from the milk tax and rebate scheme struck down in *West Lynn Creamery*. Such a regulatory combination, however, still poses some risk of being invalidated under the dormant Commerce Clause. The exact risk will vary according to the particulars of the individual state law. Perhaps the best that can be said is that, although a system benefits charge may be invalidated under the Court's precedents, the risk of that outcome is low. The following discussion assumes the state is risk averse and wishes to gain the benefits of a system benefits charge without incurring any constitutional risk.

## 2. *Correcting for the Suspect Linkage Problem*

Should a state wish to reduce the risk that its renewables legislation will be invalidated under the dormant Commerce Clause, it might consider pursuing options other than the combined energy surcharge and in-state renewables subsidy discussed above. For example, a state might provide in-state renewable energy companies with a straightforward subsidy funded by general tax revenues rather than with funds generated through an energy surcharge. Although the constitutionality of such a strategy has never been tested in the crucible of an actual case, the Court has stated repeatedly that a state may prefer its own residents and businesses in the distribution of subsidies funded from its general revenues.<sup>179</sup> The Court clearly believes that subsidies have the same distorting impact upon market transactions as forbidden discriminatory regulations, tariffs, and tax exemptions.<sup>180</sup> Nevertheless, the Court has stated, but not

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178. See 468 U.S. at 265.

179. See *Camps Newfound/Owatonna, Inc. v. Town of Harrison*, 520 U.S. 564, 593 (1997); *West Lynn Creamery*, 512 U.S. at 210-11 (Scalia, J., concurring in judgment); *C & A Carbone*, 511 U.S. at 384; *New Energy Co. v. Limbach*, 486 U.S. 269, 278 (1988); see also *Enrich*, *supra* note 154, at 442-43 (1996); *Hellerstein & Coenen*, *supra* note 100, at 846-48.

180. See *New Energy Co.*, 486 U.S. at 278 (remarking that a state's cash subsidy program was "no less discriminatory" and "no less effective in conferring a commercial advantage over out-of-state competitors" than a prohibited sales tax

yet held, that such subsidies are an exercise of the state police power with which it will not interfere. Thus a state that proposes to support renewable power through a general revenue subsidy would probably be following a safe strategy under the dormant Commerce Clause.

A state might also distribute funds from a system benefits charge to both in-state and out-of-state renewables generators selling to end-use customers within the state. An out-of-state generators' portion of the charge could be determined according to the amount of energy it contributed to the state's total renewable energy mix. The state could continue to rely upon an energy consumption surcharge to subsidize renewable energy, but by distributing subsidies to all renewables generators that sell within the state, a Commerce Clause challenge would be forestalled. Such an approach might even facilitate a state's clean air goals: renewables generators that are close enough to sell to in-state customers are probably also close enough to have some beneficial effect on the enacting state's air quality.

#### E. Pollution Taxes

Emissions taxes have long held appeal to environmental regulators interested in incentive-based mechanisms.<sup>181</sup> From an efficiency standpoint, the ideal tax is an emission tax set at a level where the marginal social cost of pollution control equals the marginal cost of the damage caused by the pollution.<sup>182</sup> Emissions taxes, however, might be based on other measurements such as the level necessary to achieve a particular level of environmental protection (the stabilization of carbon dioxide levels at 1990 levels by the year 2000, for example). Such taxes could also be set to raise funds that could be invested to prevent or mitigate environmental damage.<sup>183</sup>

Emission taxes may seem very similar to environmental adders.<sup>184</sup> Both force energy producers to internalize the costs of their emissions, and both thus force energy prices to reflect the true cost of energy production. Emission taxes, however, are arguably superior. Once in place, emission taxes do not need a great deal of regulatory oversight, while adders depend on the

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exemption).

181. See BAUMOL & OATES, *supra* note 21, at 348.

182. See GAINES & WESTIN, TAXATION FOR ENVIRONMENTAL PROTECTION, *supra* note 32.

183. See Helm & Pearce, *supra* note 30.

184. See *supra* Part I.C.1.

ongoing involvement of a centralized decision maker. Thus emission taxes can be applied regardless of whether wholesale or even retail competition has been introduced in a state's electrical industry.<sup>185</sup> As a result of these advantages, pollution-charge schemes are used in several European nations<sup>186</sup> and have been proposed on both the national<sup>187</sup> and state level<sup>188</sup> in the United States.

### 1. Facility Emissions Taxes and Consumption Taxes

Taxes upon polluting emissions can be constructed in two ways. First, a tax can be imposed upon actual polluting facilities based on the amount of pollution such facilities emit (facility emissions tax). Because the purpose of an emissions tax is to assess a charge upon the actual release of pollutants, the best tax structure imposes taxes directly on the polluting entities themselves.<sup>189</sup> Such a tax is easily calculated. Second, a tax can be levied on consumers on the basis of the pollution released in producing the goods purchased (consumption tax). A consumption tax, unlike a facility emissions tax, requires estimates of all of the pollution emitted in the process of

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185. See BRENNAN ET AL., *supra* note 6, at 121.

186. See Hahn & Stavins, *supra* note 23, at 7.

187. In 1993, the Clinton Administration proposed a broad-based BTU tax. The proposal met strong opposition, however, and was modified before a bill was introduced in Congress. The House of Representatives passed the Administration's bill with modifications as the Omnibus Budget Reconciliation Act. H.R. 2264, 103rd Cong., 1st Sess. (1993). The Senate passed a version of the same bill, but replaced the BTU tax with a 4.3 cent per gallon motor fuels tax. S. 1134, 103rd Cong., 1st Sess. (1993). The Conference Committee adopted the Senate version and it was this version that passed both Houses of Congress in August, 1993. See Richard L. Ottinger & William B. Moore, *The Case for State Pollution Taxes*, 12 PACE ENVTL. L. REV. 103, 112 (1994); Dawn Erlandson, *The BTU Tax Experience: What Happened and Why It Happened*, 12 PACE ENVTL. L. REV. 173, 176 (1990).

188. Maryland and Minnesota have considered adopting a carbon tax, though neither state ultimately enacted such a measure. See Frank Muller & J. Andrew Hoerner, *Greening State Energy Taxes: Carbon Taxes for Revenue and the Environment*, 12 PACE ENVTL. L. REV. 5, 44, 53 (1994). Recently, New York approved a tax credit to promote the residential use of solar energy. See *New York: Legislature Approves Tax Credit to Promote Residential Solar Energy Use*, 160 DAILY ENVT. REP. A-4 (Aug. 19, 1997). See generally *New England: Regional Inventory of Green Taxes Shows Diverse Policies, Objectives*, 9 DAILY ENVT. REP. B-2 (Jan. 14, 1997). Energy taxes are being given more serious consideration in Europe than in the United States, though proposals for such taxes have met substantial resistance in Europe as well. See Commission Proposal for a Council Directive Introducing a Tax on Carbon Dioxide Emissions and Energy, 1992 O.J. (C 196) 1; see also *European Union: European Commission Delays Plans to Introduce New Energy Tax Directive*, 30 DAILY ENVT. REP. A-9 (Feb. 13, 1997).

189. See Muller & Hoerner, *supra* note 188, at 50 n.111.

producing a good, including the pollutants that are released when each component of the good is manufactured. Given the numerous industrial processes involved in the production of a single good such as a car, computer, or pesticide, the administrative burden of assessing the costs of emissions caused by a product's manufacture will often be prohibitive.<sup>190</sup>

The choice between a facility emissions tax and a consumption tax could have significant implications for competition between industrial firms located in different states. If a state were to impose only a facility emissions tax, for example, it would disadvantage its own industries vis-à-vis imported goods because a state is limited to taxing only the plants located within its territory. In order to ensure a level playing field for its own industries, a state might supplement this emissions tax with a consumption tax upon imported goods. Even so, in-state facilities might be at a disadvantage unless the state provided a rebate upon the emissions taxes paid by manufacturers on the pollution emitted in the production of goods for export. Without such a rebate, the company's exported goods might be subject to double taxation should the state receiving the goods itself have a consumption tax. In sum, a state might rationally structure a carbon taxing scheme by either enacting a consumption tax upon all goods, whether produced in-state or imported, or as a combination of an emissions tax applicable to goods produced and sold in-state and a consumption tax applicable solely to imported goods. Under the latter, hybrid approach, goods produced in-state, but exported out-of-state, would not be taxed in-state and in-state industries would receive a rebate for emissions attributable to the production of goods exported.

## 2. *Hybrid Emissions, Consumption Taxes, and the Constitution*

Unfortunately, there is a significant possibility that such a hybrid tax scheme would be considered unconstitutional under the dormant Commerce Clause's complementary tax doctrine. In general, this doctrine is permissive, allowing an import tax that

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190. See *id.* at 34. To reduce administrative costs, a state might structure a carbon consumption tax upon the good's incorporation of particular goods for which the associated carbon emissions is generally known or could be readily obtained. One simple way of constructing a carbon consumption tax would be to impose a per-pound or per-ton tax on the most energy-intensive materials used widely in the manufacture of goods. Thus a state might establish a per pound tax for cement, aluminum, or steel, based upon national and regional data on the carbon fuels used to create such goods. See *id.*

complements a local tax and thereby reduces the anticompetitive effects of local taxes.<sup>191</sup> While older cases are fairly lenient in finding taxes on unrelated activities to be complementary,<sup>192</sup> more recent decisions require that the activities that are subject to the different taxes be nearly identical.<sup>193</sup> The Court has increasingly held that, in addition to complete complementarity, a tax must also have internal consistency. A tax has internal consistency if, when "applied by every jurisdiction, there would be no impermissible interference with free trade."<sup>194</sup> A tax lacks internal consistency if an interstate entity would be subject to multiple tax burdens as a result of the two taxes.<sup>195</sup> Under this doctrine, the Court has invalidated the combination of a manufacturing tax upon domestic goods and a wholesale tax on imported goods because, assuming all states impose a tax on manufacturers, producers of exported goods would have to pay both a manufacturing tax and a wholesale tax.<sup>196</sup>

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191. See *Henneford v. Silas Mason Co.*, 300 U.S. 577, 584 (1937) (Cardozo, J.) (rejecting the claim that a state's imposition of a use tax upon goods purchased out-of-state and a sales tax upon goods purchased in-state constituted discriminatory taxation under the Commerce Clause); *Oregon Waste Systems, Inc. v. Dep't of Env'tl. Quality*, 511 U.S. 93, 102 (1994) ("Though our cases sometimes discuss the concept of the compensatory tax as if it were a doctrine unto itself, it is merely a specific way of justifying a facially discriminatory tax as achieving a legitimate local purpose that cannot be achieved through nondiscriminatory means."); see also Walter Hellerstein, *Complementary Taxes As a Defense to Unconstitutional State Tax Discrimination*, 39 TAX LAW 405, 457 (1986) ("[T]he complementary tax doctrine is not a coherent set of principles consistently applied. Rather it is a cluster of ideas loosely associated with the proposition that an apparently discriminatory tax will withstand constitutional scrutiny if counterbalanced by a complementary exaction that eliminates the apparent discrimination.").

192. See *Interstate Busses Corp. v. Blodgett*, 276 U.S. 245 (1928) (gross receipts tax and mileage tax deemed complementary); *Hinson v. Lott*, 75 U.S. (8 Wall.) 148 (1868) (same for a tax on bringing liquor into the state and tax on manufacturing); see also Philip M. Tatarowicz & Rebecca F. Mims-Velarde, *An Analytical Approach to State Tax Discrimination Under the Commerce Clause*, 39 VAND. L. REV. 879, 909 (1986).

193. See *Maryland v. Louisiana*, 451 U.S. 725, 759-60 (1981) (tax on first use of natural gas brought into state not considered complementary to state's severance tax on natural gas); *Armco*, 467 U.S. at 642-43 (wholesale gross receipts tax not considered a compensating tax for a manufacturing tax); *Tyler Pipe Indus. Inc. v. Washington State Dep't of Revenue*, 483 U.S. 232, 242-44 (1987) (wholesale tax and manufacturing tax not complementary); *Oregon Waste Systems*, 511 U.S. at 102-06 (general tax revenues collected from residents not a complementary tax to specific surcharge imposed on imported solid waste).

194. *Armco*, 467 U.S. at 644.

195. See *Muller & Hoerner*, *supra* note 188, at 38.

196. As Justice Scalia has pointed out, however, this problem is not limited to noncomplementary taxes but applies even where a state imposes a consistent tax which clashes with the consistent tax imposed by another state. See *Tyler Pipe Indus., Inc. v. Washington State Dep't of Revenue* 483 U.S. 232, 258-59 (Scalia, J.,

Because a consumption tax upon imported goods is unlikely to be considered complementary to a state emissions tax imposed upon local manufacturers, a court may well strike down the consumption tax component of a state's hybrid tax scheme as facially discriminatory. A consumption tax and an emissions tax rely upon different tax bases. Whereas a consumption tax is imposed upon consumers based upon a good's embodied pollution discharges, an emissions tax is assessed upon manufacturers and reflects a firm's total polluting emissions. Thus the two taxes are not identical enough to satisfy the Court.

Finally, while the emissions of in-state manufacturers can be measured with a fair amount of accuracy, a state is unlikely to have similar information about the manufacturers of imported goods. A state would therefore be likely to set its consumption tax using estimates of the emissions normally involved in producing certain materials, such as plastic, steel, aluminum, and glass. This approach would mean that foreign companies that pollute below the estimates used in the consumption tax would be disadvantaged vis-à-vis an equally low-polluting in-state manufacturer.<sup>197</sup> The effect of imposing a hybrid emissions/consumption tax is thus potentially to discriminate against interstate commerce.

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concurring in part and dissenting in part). So, for example, an internal consistency problem would arise if State A imposed a tax on manufacturing and State B imposed a tax upon wholesales; a company manufacturing only in State A would pay just the manufacturing tax while a company manufacturing in State A and selling in State B would pay both a manufacturing and a wholesaling tax. See *id.*

197. See Muller & Hoerner, *supra* note 188, at 39.

**TABLE 2**  
**State Incentives to Incorporate Trade Barriers Into Market-Based Regulatory Approaches and Their Constitutional Validity**  
**(A Summary of Part I)**

Regulatory Approach	Potential Disadvantage	Trade Barrier(s) to Overcome the Disadvantage	Constitutionally Validity
<p><b>Marketable Permits to Pollute or Exploit a Natural Resource</b></p> <p>Tradable license to harm the environment by discharging pollution or otherwise exploiting a natural resource.</p>	<p>I. In-state polluters might purchase pollution permits generated out-of-state and attempt to use such permits to authorize emissions in-state. The use of pollution permits generated both in-state and out-of-state could result in an excessive amount of pollution, rendering the jurisdiction a pollution hot spot, imposing pollution costs locally, while benefits are enjoyed elsewhere.</p> <p>II. Alternatively, in-state polluters might sell pollution permits to out-of-state sources for out-of-state use, potentially depleting the state's supply of permits and rendering the state a pollution cold spot.</p>	<p>State prohibition upon the in-state use of marketable pollution permits generated by other state or local governments.</p> <p>State prohibition upon the use of its own issued pollution permits to authorize polluting activity within the territory of another state.</p>	<p>Likely valid, and also probably unnecessary. An automatic market barrier to the in-state use of out-of-state pollution permits already exists because, absent one state's agreement, another state may not authorize polluting activity in another state. Hence, pollution permits generated out-of-state are not valid to authorize polluting activity in-state.</p> <p>A restriction specifying that state-issued pollution permits are limited to in-state use is unnecessary because, absent the importing state's specific authorization, such credits could not be used in any other state to legalize polluting activity.</p>

Regulatory Approach	Potential Disadvantage	Trade Barrier(s) to Overcome the Disadvantage	Constitutionally Validity
<p><b>Marketable Satisfaction of an Obligation to Improve the Environment</b></p> <p>Tradable proof of satisfaction of a regulatory obligation to improve the quality of the environment. An example of such an obligation is a renewable portfolio standard which requires that a minimum percentage of an energy supplier's portfolio be derived from renewable resources. Tradable renewable energy credits constitute tradable proof of satisfaction of a renewable portfolio standard.</p>	<p>The local environmental and economic public goods will be lost to other states if businesses are able to satisfy the obligation by patronizing out-of-state businesses or conducting particular activities out-of-state.</p>	<p>A. State requirement that the activity necessary to generate tradable proof of satisfaction of an obligation to improve the environment occur in-state.</p> <p>B. State requirement that the state benefit from the activity satisfying the tradable obligation.</p> <p>C. State provision of incentives to invest in in-state activities or industries generating the environmental or economic public goods. Two options for structuring the incentive are:</p> <p>1.) A reduction in a tax or liability associated with the activity that triggers the tax or liability.</p>	<p>A. Probably invalid. Such a restriction probably violates the Commerce Clause because it facially discriminates against out-of-state producers.</p> <p>B. Valid. Requiring a state nexus to the activity satisfying the tradable obligation would probably survive a Commerce Clause challenge because it achieves an important state goal while burdening commerce only slightly.</p> <p>C. The Supreme Court has yet to address the constitutional validity of state location incentives and thus any predictions on this topic are tenuous. Nevertheless, commentators, backed up by the case law that does exist, seem to agree on the following:</p> <p>1.) Such an incentive is unlikely to pose a constitutional problem. Businesses that fail to take advantage of the incentive are not discriminated against because they are not subject to the tax or liability at all.</p>

Regulatory Approach	Potential Disadvantage	Trade Barrier(s) to Overcome the Disadvantage	Constitutionally Validity
<p><b>Marketable Satisfaction of an Obligation to Improve the Environment—continued</b></p>		<p>2.) A reduction in a tax or liability associated with a regulatory requirement <i>unconnected</i> to the activity the state seeks to foster by granting the reduction.</p> <p>D. State subsidization of the in-state activities or businesses, it seeks to promote because of the public good environmental or economic benefits so generated.</p>	<p>2.) Such an incentive might be <b>unconstitutional</b> based on the fact that businesses that fail to take advantage of the incentive are subject to a higher tax or liability with respect to the unconnected activity than businesses that take advantage of the incentive. This could be considered discriminatory and hence unconstitutional.</p> <p>D. Valid. The Supreme Court has endorsed the general constitutionality of state government subsidy of local industries.</p>

Regulatory Approach	Potential Disadvantage	Trade Barrier(s) to Overcome the Disadvantage	Constitutionally Validity
<p><b>Environmental Externality Values, or Adders</b></p> <p>Additional costs reflecting the environmental impacts of electricity production tacked on to the traditionally-considered costs of producing electricity. Environmental externality values are used in integrated resource planning to determine the source of additional electricity supply.</p>	<p>Where a state imports energy in addition to utilizing energy generated in-state, application of environmental externality values solely to power generated in-state may raise the cost of in-state generated electricity relative to (under-priced) electricity imported from out-of-state.</p>	<p>No market barrier is involved here. Instead, to create a level playing field, states may apply the same environmental externality values to both power generated in-state and that generated out-of-state.</p>	<p>Valid. So long as the environmental externality values, whether based on a cost of control approach or a damage-to-the-environment approach, are (1) applied uniformly to the power produced in-state and out-of-state and (2) damage-based adders are based upon the impact of the electricity generating option upon the environmental health and safety of the state's own residents and territorial environment, applying externality values to both in-state generated and imported power should not pose a constitutional problem.</p>
<p><b>Emissions Portfolio or Generation Performance Standard</b></p> <p>Emissions or environmental performance standard applicable to the generation of electricity sold by energy retailers to state consumers.</p>	<p>I. The emissions portfolio standard is itself a mechanism by which a state with more stringent emissions standards for electricity production may overcome the potential disadvantage of free interstate trade in electricity produced according to less stringent emissions standards.</p>	<p>A. Application of state emissions standards to both in-state and out-of-state electricity producing facilities that generate electricity for sale in state.</p> <p>B. State prohibition upon the purchase of an electricity product where the product was produced according to emissions standards less stringent than the state's own emissions standards for electricity production. Rather than a purchase prohibition, the state might place a tax upon electricity products produced in excess of the state's emissions standard.</p>	<p>A. <b>Invalid.</b> While a state may regulate the emissions of in-state electricity generating facilities, it may not regulate the emissions of out-of-state facilities.</p> <p>B. <b>Valid.</b> So long as the prohibition is expressed as a prohibition upon the in-state purchase (or the addition of a surcharge to the in-state purchase) of electricity products produced in excess of the state's uniform emissions standard and indicates why the standard is necessary to protect the state's own environment and the health and safety of its residents, such a prohibition or surcharge should be valid.</p>

<b>Regulatory Approach</b>	<b>Potential Disadvantage</b>	<b>Trade Barrier(s) to Overcome the Disadvantage</b>	<b>Constitutionally Validity</b>
<p><b>System Benefit Charge</b></p> <p>Surcharge imposed on electricity users on a per-kilowatt basis. Surcharge revenues are used to subsidize renewable energy generators as well as energy efficiency and low-income energy provision programs.</p>	<p>Where a state imports electricity from out-of-state, a system benefit surcharge levied on consumer electricity bills will result in taxing both in-state and imported power. As a result, states must decide whether out-of-state renewable energy companies as well as in-state renewable energy companies should receive disbursements from collected surcharge funds. States have the most to gain from distributing funds solely to in-state renewable companies because they benefit from the successful operation of such companies.</p>	<p>A. State enacts legislation authorizing the collection of a surcharge on all energy consumed in-state (whether generated in-state or out-of-state) and directs that collected funds be distributed to in-state renewable generators as well as to energy efficiency, low-income programs, etc.</p>	<p>A. <b>Possibly invalid.</b> The simultaneous enactment of a system benefits charge levied upon the consumption of both domestic and imported power and a rebate mechanism that distributes surcharge funds solely to in-state renewable generators could be considered sufficiently similar to a discriminatory tariff to be held invalid under <i>West Lynn Creamery v. Healy</i>.</p>
		<p>B. State enacts legislation authorizing the collection of a surcharge on all energy consumed in-state (whether generated in-state or out-of-state) and directs that collected funds be distributed to both in-state and out-of-state renewable generators based upon their respective in-state energy sales (as well as to energy efficiency, low income programs, etc.)</p>	<p>B. <b>Valid.</b> This could not be considered similar to a discriminatory tariff.</p>
		<p>C. State enacts legislation authorizing the collection of a surcharge on all energy consumed in-state (whether generated in-state or out-of-state) and directs that collected funds be deposited in general revenues. Pursuant to wholly separate legislation or regulations, the state distributes a cash subsidy from general revenues solely to in-state renewable companies.</p>	<p>C. <b>Valid.</b> The distribution of funds from general revenues pursuant to a regulation wholly distinct from that authorizing will probably shield this scheme from constitutional attack.</p>

Regulatory Approach	Potential Disadvantage	Trade Barrier(s) to Overcome the Disadvantage	Constitutionally Validity
<p><b>Emission Tax</b></p> <p>Per unit tax upon pollution discharged. Emissions taxes may be imposed directly upon polluting facilities themselves (emissions tax) or upon consumers, based upon the amount of pollution emitted in producing purchased goods (consumption tax).</p>	<p>An emissions tax may place in-state producers at a financial disadvantage vis-à-vis foreign producers. Because an emissions tax can be assessed only on in-state producers, imported goods and services may be cheaper relative to domestic goods and services.</p>	<p>A. State enactment of a hybrid tax consisting of an emissions tax applicable solely to in-state producers and a consumption tax applicable solely to imported goods. The state would give in-state producers a rebate equal to taxes paid upon emissions generated to produce goods for export.</p> <p>B. State enactment of a pure consumption tax applicable to both domestic and foreign-produced goods.</p>	<p>A. Probably invalid. A hybrid tax would probably run afoul of the dormant Commerce Clause's complementary tax doctrine because a consumption tax upon imported goods is not likely to be considered complementary to a state emissions tax on local manufacturers.</p> <p>B. Valid. Although administratively burdensome, a pure consumption tax would not appear to violate the complementary tax doctrine.</p>

## II

## OPTIONS FOR STATE RETENTION OF THE BENEFITS OF INCENTIVE-BASED ENVIRONMENTAL REGULATION

States have many options for retaining the environmental or economic benefits of an incentive-based mechanism while deregulating their electricity industries. As the preceding sections suggest, many of these options are constitutionally permissible. Others, however, unavoidably burden interstate trade and hence could be struck down under the dormant Commerce Clause under either the test for regulation that is facially discriminatory or the test for regulation that is facially neutral and yet places an excessive burden on interstate trade.

Application of these tests reveals that state market-based environmental legislation may be invalidated under the dormant Commerce Clause in at least three situations. First, a state acts unconstitutionally if it creates a marketable permit or obligation scheme and employs facial discrimination to retain the environmental public goods for its own residents. A state might, for example, restrict its energy credit program to renewables generators located within its boundaries. Second, a state violates the dormant Commerce Clause if it requires that the environmental costs of economic activity be internalized, and such internalization results in a significant discriminatory effect against out-of-state producers. Mechanisms such as nondiscriminatory environmental externality values, emissions portfolio standards, and hybrid emissions and consumption taxes raise such problems. Third, a state might unconstitutionally divert funds generated through a nondiscriminatory tax to a subset of local industry, as with a system benefits charge used to subsidize in-state renewables generators.

A state probably does not act unconstitutionally if it takes a less burdensome approach. For example, a state might restrict the legal value of a tradable environmental permit according to the location of the ultimate use of the permit (for example, limiting renewable energy credits that satisfy a renewable portfolio standard to credits that are sold to in-state consumers). Similarly, a state might subsidize environmentally sensitive industries through general tax revenues, rather than through a system benefits charge. A state might thus implement some of the incentive-based options in a manner that minimizes the constitutional risk. Nevertheless, these approaches are not foolproof, and a state may still fear constitutional challenges to

such regulations.

For this reason, many policymakers wish to adopt a nonregulatory approach to reduce the environmental threats of electricity deregulation. Green marketing is such an approach. Through green marketing, corporations encourage consumers to patronize environmentally sensitive products by using standard marketing techniques to emphasize a good's environmental advantages. Green marketing is premised on the idea that fully informed consumers will switch to less polluting and habitat-destroying products. As a consequence, it is believed, producers will shift their purchases away from environmentally destructive production processes and toward environmentally benign processes because environmental consciousness will be more profitable.<sup>198</sup> Green marketing thus moves environmental protection away from the realm of government regulation to individual choice in the marketplace.

Many large electricity companies are pursuing green marketing as a business strategy. At least twelve United States electric utilities support renewable power generation through "green pricing,"<sup>199</sup> and another thirty have considered, or are planning to offer, such an option.<sup>200</sup> Nevertheless, fewer than twenty megawatts of renewable electricity are currently supported through green pricing programs.<sup>201</sup> Perhaps more promising are the green marketing proposals of electricity retailers in states that have already deregulated their electricity industry. Deregulated retailers might be expected to market green power more aggressively than would a monopolistic public utility.<sup>202</sup>

Unfortunately, economics and equity prevent the successful substitution of green marketing for state incentive-based environmental regulation. As a stand-alone mechanism to

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198. General sources on green marketing include WALTER CODDINGTON, ENVIRONMENTAL MARKETING: POSITIVE STRATEGIES FOR REACHING THE GREEN CONSUMER (1993); KEN PEATTIE, GREEN MARKETING (1992); ENVIRONMENTAL LABELING IN OECD COUNTRIES, OECD 1991 UNIPUB.

199. Under green pricing programs, consumers pay a premium to support a utility's purchase of renewable power, which it simply adds to its total energy portfolio.

200. See Steve Pickle & Ryan Wiser, *Green Power Marketing Boosting Demand for Renewables*, 132 PUB. UTIL. FORT. 30, 31 (1997); see also Edward A. Holt, *Green Pricing and Lessons Learned* 3-9 (Prepared for 1996 ACEEE Summer Study, Pacific Grove, California, Aug. 25-31) (describing various green pricing programs and their implementation, including green tariffs, fixed monthly payments, green shares, green equity, green wheeling, and shared savings); Rader & Wiser, *supra* note 70, at 92.

201. See Pickle & Wiser, *supra* note 200, at 31.

202. See *id.*

reduce the harmful environmental impacts of electricity production, green marketing suffers from numerous drawbacks.<sup>203</sup> The first problem is that the benefits of renewable power, clean air, for instance, are public goods. Hence consumers have little incentive to purchase renewable power, given that they can enjoy (that is, free-ride off of) this clean air benefit when renewable power is purchased by others. The result of the free-riding activity associated with purchases of public goods such as renewable power is that the good will be under-supplied in relation to its net social benefits. The simple economic lesson here is that renewable power will be under-supplied if its support is left solely to the workings of the market.

Various pilot programs intended to test the demand for green power have demonstrated this basic law of economics. Although as many as seventy percent of residential customers claim that they are willing to pay more for renewable power, utility green pricing programs typically draw less than three percent of residential customers and an even smaller percentage of commercial customers.<sup>204</sup> In a Massachusetts electric retail competition pilot program, residents were offered a choice between various energy options, some of them consisting of green power sources, and were provided with complete and comparable information about each option. Only four percent of eligible residential customers chose to participate in the Massachusetts pilot program. Of the four percent who enrolled, thirty-one percent chose a green option. Overall then, slightly more than one percent of eligible consumers subscribed to a green power option.<sup>205</sup> In short, while people support clean energy, they have little incentive to purchase it out of their own pocketbook, since they can always enjoy its benefits if it is purchased by someone *else*.

Green marketing also raises equitable considerations. First, because the benefits of green energy are public goods, all of

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203. See generally Nancy A. Rader & William P. Short III, *Competitive Retail Markets: Tenuous Ground for Renewable Energy*, 11 *ELECTRICITY J.* 72 (1998).

204. See Pickle & Wiser, *supra* note 200, at 30; see also *Utilities Hope It's Easy Being Green in State*, S.F. *CHRON.*, Mar. 25, 1997 (reporting that a national survey by Cambridge Reports/Research International indicates that 60% of consumers would be willing to spend \$6 or more extra per month for electricity from less harmful sources; similarly a 1996 California survey by Fairbank, Maslin, Maullin & Associates found that 30% of residents said that they would be very willing to pay 10% more for energy from clean sources other than nuclear or coal).

205. See Rader & Wiser, *supra* note 70, at 98. The authors point out that, because the respondents were self-selected, the 31% subscription rate probably represents an exaggerated green response. See *id.*

society gains from the purchasing decisions of a subset of environmentally conscious consumers. Thus, those who are willing to pay for environmental benefits subsidize a clean environment for those who are not. Second, industrial energy purchases have the largest environmental impacts (simply as a result of their larger energy demand), but green marketing appeals are not likely to make much of a difference in corporate decision making. To date, interest in environmentally friendly electricity is found primarily among residential consumers.<sup>206</sup> Because it relies solely on individual choice to shape the energy market, green marketing ensures that residential consumers will pay to offset the environmental harms caused by the largest electricity consumers. Not only is funding for renewable power likely to decrease in such a scenario, but it is plainly inequitable for those least responsible for the environmental problems of electrical production to pay for the environmental restorative measures of those who are most responsible.<sup>207</sup> For that reason, green marketing can be seen as a reversal of the principle endorsed by most environmental groups—the polluter pays principle.<sup>208</sup> Despite this reversal, several prominent environmental organizations are promoting green marketing as a key component of their strategy to combat the possible adverse environmental impacts of electricity deregulation, prompting a vigorous debate within the environmental community.<sup>209</sup>

The above criticisms all assume a green marketing mechanism that is functioning perfectly. But for a market to be efficient, consumers must have access to complete and accurate information concerning the goods being traded. Generators must inform consumers about the source of the energy offered as well as the impacts of its generation upon the environment. Obtaining such information is extremely difficult. In promotional literature, electricity companies stress their reliance upon

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206. See Rader & Short, *supra* note 264, at 75.

207. See Leslie Lamarre, *Utility Customers Go For The Green*, 22 EPRI J. 6 (1997) (critics of green pricing programs for electricity are concerned about the free-rider problem inherent in relying upon customer preferences to support clean energy investments).

208. See, e.g., ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY 47-48 (2d ed. 1996).

209. See Nancy Rader, GREEN BUYERS BEWARE: A CRITICAL REVIEW OF "GREEN ELECTRICITY" PRODUCTS (Public Citizen Critical Mass Energy Project, Oct. 1998) (arguing that the purchase of most green electricity products on the market will have no positive impact on the environment because they consist primarily of renewable energy products that are already being provided by regulated utilities and paid for by captive ratepayers).

renewable power and their record of environmental leadership.<sup>210</sup> Many of the claims of green marketers, however, may be misleading, and purchasers of green energy may provide no net improvement in environmental quality.<sup>211</sup>

Given these controversies, consumer groups are advocating truth-in-advertising laws specifically related to the green marketing claims made by retailers of electricity.<sup>212</sup> Such laws would supplement the Federal Trade Commission's general restrictions upon green marketing claims.<sup>213</sup> States are beginning to respond. Recently, California passed a law requiring that entities offering electric services disclose accurate, reliable and easy-to-understand information on the generation attributes of the electricity they propose to sell.<sup>214</sup> Under this law, electricity suppliers must disclose this information to all potential end-use consumers "in all product-specific written promotional materials" distributed to consumers through print

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210. See The Regulatory Assistance Project et al., *Full Environmental Disclosure for Electricity: Tracking and Reporting Key Information*, Report Prepared for the National Council on Competition and the Electric Industry, Table 1 (May 1997 Draft).

211. For instance, Synapse Energy Economics, Inc. downplays the significant negative impacts of hydroelectric power upon fishery resources and river ecology, stating: "There's no perfect way to produce electricity. There's always an impact on the earth's resources. That's why [we] rely heavily on renewable energy sources, like hydroelectric power, that offer the environmentally sound form of electric generation." Memorandum from Michael Stoddard, Esq. to Lew Milford, Joe Chaisson, Conservation Law Foundation, 18 (Feb. 28, 1997) (on file with author).

212. See Elliot Burg, *Power Play: Environmental Marketing by Deregulated Electric Companies—Risks and Opportunities*, 1998 NAAG CONSUM. PROTEC. REP. 1, 4 (1998). Advocates of full disclosure claim that the characteristic of the energy purchased by an individual consumer can be tracked despite the complexity of the modern electricity system (which often collects power into pools that are then distributed to customers) by following the flow of dollars into the system. The Regulatory Assistance Project, *supra* note 210, at Attachment B; Rader & Wiser, *supra* note 70, at 107. For an overview of the role of government in the protection of the consumer, see Richard J. Barber, *Government and the Consumer*, 64 MICH. L. REV. 1203 (1966); IAIN RAMSAY, *CONSUMER PROTECTION TEXT AND MATERIALS* (1989).

213. See 16 C.F.R. Pt. 260 (Guides for Use of Environmental Marketing Claims). To give an example, the FTC's guidelines consider it "deceptive" within the meaning of the Federal Trade Commission Act (FTCA), to "misrepresent, directly or by implication, that a product or package offers a general environmental benefit" and thus, to survive challenge, any broad assertion of an environmental benefit must be substantiated. 16 C.F.R. § 260.7(a). Section 5 of the FTCA declares unlawful all "unfair deceptive acts or practices in or affecting commerce." 15 U.S.C. § 45(a)(1).

214. See CAL. PUB. UTIL. CODE §§ 398.1, 398.3 (West 1997) (effective Jan 1, 1998, requiring that each generator "shall report to the system operator electricity generated in kilowatt hours by hour by generator, the fuel type or fuel types and fuel consumption by fuel type by month on an historical recorded quarterly basis"); *id.* § 398.4 (requiring that "every retail supplier that makes an offering to sell electricity that is consumed in California shall disclose its electricity sources" and specifying the information that must be provided).

or electronic media.<sup>215</sup> Moreover, several attorneys general recently urged states to adhere to consumer protection green marketing guidelines in electric industry restructuring legislation.<sup>216</sup>

Other proposals include certification programs in which sellers of green energy compete for a seal or other stamp of approval from regulators.<sup>217</sup> Certification programs call for a state agency or private organization to verify that the type and percentage of renewable power being advertised by retail sellers corresponds to the characteristics of their actual renewable power supplies.<sup>218</sup> Green power certification programs are now being implemented in several states.<sup>219</sup> California has enacted one of the most aggressive of such programs. Under California's electricity restructuring law, the state is required to "implement a process for certifying eligible renewable resource providers."<sup>220</sup> Customers who purchase certified renewable resources gain earlier access to the deregulated market.<sup>221</sup> Certification programs advance not only consumer right-to-know objectives but also the marketing goals of retail sellers by assuring customers of the true greenness of the products they purchase.<sup>222</sup>

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215. *Id.* § 398.4(b).

216. See *Attorneys General Endorse Principles on Electric Industry Restructuring*, 6 ANDREW'S ELECTROMAGNETIC FIELD LITIG. 9 (May 1998).

217. Green seal programs in areas other than electricity have been widely adopted, as demonstrated by popular familiarity with the dolphin-safe tuna icon on cans of tunafish. For an overview of domestic and international green certification programs, see Eric W. Orts, *Reflexive Environmental Law*, 89 NW. U. L. REV. 1227 (1995).

218. See Rader & Wiser, *supra* note 70, at 107. Rader and Wiser suggest an innovative mechanism to ease the administrative burdens associated with a certification system. They propose that certification of renewable power be based upon a system of tradable credits which are generated when a renewable power producer sells energy into a power pool. These credits can be sold by renewable power producers to retail marketers who purchase generic power from the pool. The possession of the credit constitutes a certification of the green power claims of the retail seller without the retail seller having to contract with particular sources of power for some or all of their renewable power purchases. See *id.* at 107-08.

219. See *Deregulated Power: Cheaper But Dirtier?*, 100 TECH. REV. 17, 18 (1997) (Massachusetts, Rhode Island, and Vermont have all endorsed a plan to provide customers with information on the emissions potential of various energy supply options).

220. See CAL. PUB. UTIL. § 383(b)(2) (West 1996).

221. See *id.*

222. State regulation of green marketing claims does have a downside, however. Such regulation can provide a forum for states to discriminate against interstate commerce. States are naturally loathe to spend funds certifying green power generated in other states. Restricting state funds and efforts to the certification only of in-state renewable power should not violate the Commerce Clause, because such

Green marketing alone is thus an insufficient and, arguably, even inequitable method of addressing the environmental problems caused by the deregulated electricity market. If green marketing cannot provide the answer, is there any way to avoid the problems for incentive-based environmental regulation posed by the dormant Commerce Clause? The remainder of this Article attempts to answer this question. I will address the issue of whether the goals of the Clause are served by overturning incentive-based environmental regulations such as those discussed in Part I. If the invalidation of these regulations does not promote Commerce Clause purposes, the utility of incentive-based regulations argues for a different jurisprudence under the dormant Commerce Clause.

The following sections take issue with the Court's use of simplistic tests to further the purposes of the dormant Commerce Clause. Although the lack of a textual basis for the Court's authority to review state laws for trade burdens is itself extremely troubling,<sup>223</sup> the Court's adherence to rigid tests to

certification is best considered a type of state subsidy. States are allowed to favor their own residents with such subsidies. See *supra* Part I.D. and *infra* Part III.A.2. Nevertheless, the Commerce Clause would seem to prohibit a state from bestowing preferential treatment upon the customers of certified renewables when that preferential treatment discriminates against or burdens out-of-state producers. At least one state, California, has used its certification program to bestow precisely such a preference. Under the law, direct access to retail electricity suppliers is phased in, with all customers receiving direct access by January 1, 2002. Customers who purchase half of their electricity supply from "certified" *in-state* renewables, however, are preferentially "bumped to the head of the line" and receive direct access to retail suppliers *before* Jan 1, 2002. CAL. PUB. UTIL. § 383(b)(2) (West 1996). State green marketing regulations have also been attacked for violating First Amendment guarantees of free speech, though this challenge is weak and was rejected in one case expressly considering the claim.

222. See *Association of Nat'l Advertisers v. Lungren*, 44 F.3d 726 (9th Cir. 1994) (upholding, against a First Amendment attack, the constitutionality of a state law prohibiting manufacturer or distributor from falsely representing that its products are "ozone friendly," "biodegradable," "photodegradable," "recyclable," or "recycled"). A panel of the Ninth Circuit Circuit rejected the First Amendment claim on a 2-1 vote, though, with dissenting Judge John Noonan Jr. arguing the law should be struck down as an intrusion into the free speech rights of manufacturers and distributors. See *id.* at 737. The California general green marketing law challenged in *Ass'n of Nat'l Advertisers*, CAL. BUS. & PROF. CODE § 17508.5, was authored by Stanford law professor Byron Sher.

223. In this view, I have high-ranking company. See, e.g., *Tyler Pipe Indus., Inc. v. Washington State Dep't of Revenue*, 483 U.S. 232, 263 (1987) (Scalia, J., concurring in part and dissenting in part) ("The historical record provides no grounds for reading the Commerce Clause to be other than what it says— an authorization for Congress to regulate [c]ommerce."). Justice Scalia has since stated that he will enforce, on the basis of *stare decisis*, the dormant Commerce Clause in two situations: where a state regulation facially discriminates against interstate commerce and where a state law is indistinguishable from a state law previously

distinguish between valid and invalid state regulation of interstate commerce is potentially even more problematic. Such fealty is oftentimes met at the expense of the very interests the Court's reviewing role purports to protect: economic efficiency, interstate harmony, and a stronger union. Moreover, such inflexibility stifles state innovation where states seek to draw upon the advantages of the market in their regulatory approaches. Rather than rigid adherence to tests such as facial discrimination and internal consistency, therefore, the Court should undertake a more probing analysis of challenged state laws to determine whether they actually present a threat to the core values embodied in the dormant Commerce Clause.

In the sections that follow, I focus upon two tests that are employed by the Court to enforce the national market and that pose the greatest threat to the state market-based environmental mechanisms discussed in Part I: the Court's test for facial discrimination and its test for extraterritorial regulation. I explore the key principles supporting the Court's reviewing role under the dormant Commerce Clause. When the rationale of apparently unconstitutional environmental regulations is analyzed in light of these Commerce Clause principles, it becomes apparent that several of these regulations do not conflict with, and may even serve, the goals of the dormant Commerce Clause. The Court, I argue, misapplies the dormant Commerce Clause when it strikes down (1) facially discriminatory state regulations motivated by a state's desire to correct an environmental abuse caused by market failure through a market-based mechanism without losing the benefits of regulation; and (2) state regulation demanding that state decision makers take into account the environmental and health and safety impacts of their decisions upon the extraterritorial environment and out-of-state population. Where state regulation burdens interstate commerce for such purposes, the state acts to

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struck down on dormant Commerce Clause grounds. See *West Lynn Creamery*, 512 U.S. at 210 (Scalia, J., concurring in judgment). Recently, Justice Thomas also announced that he is prepared to abandon the "failed jurisprudence" of the negative Commerce Clause and resort to the Article I, § 10 Import-Export Clause for authority to check discriminatory state taxes upon interstate commerce. *Camps Newfound/Owatonna, Inc. v. Town of Harrison*, 520 U.S. 564, 609 (1997). See also Martin H. Redish & Shane V. Nugent, *The Dormant Commerce Clause and The Constitutional Balance of Federalism*, 1987 DUKE L.J. 569, 573 ("[N]ot only is there no textual basis to support recognition of [the dormant Commerce Clause], but . . . the dormant Commerce Clause actually contradicts, and therefore directly undermines, the Constitution's carefully established textual structure for allocating power between federal and state sovereigns.").

preserve, not undermine, the value of economic efficiency. Moreover, permitting states to retain the environmental and economic benefits that accrue from state investments will, in the long run, only enhance interstate harmony. Several such mechanisms that the current jurisprudence would find unconstitutional<sup>224</sup> should instead be accepted under the dormant Commerce Clause.

### III

#### REFORMING THE TESTS FOR IDENTIFYING UNCONSTITUTIONAL BURDENS UPON INTERSTATE COMMERCE

##### A. *Reforming the Facial Discrimination Test*

###### 1. *Incorporating Second Best Reasoning*

Principle One: Facially discriminatory state regulation should not be presumed invalid where the facial discrimination was motivated by the state's desire to use a market-based regulatory approach to correct a preexisting market failure involving natural resources without losing the economic and environmental benefits of the regulation in the process of doing so.

The facial discrimination test for unconstitutional burdens upon interstate commerce is, above all, designed to eliminate state economic protectionism.<sup>225</sup> Indeed, *Philadelphia v. New Jersey* announced that "the evil of protectionism can reside in legislative means as well as legislative ends."<sup>226</sup> Essentially, the facial discrimination test is a proxy for detecting economic protectionism. The facial discrimination test also reflects the modern Court's focus upon discrimination as the defining feature of economic protectionism.<sup>227</sup>

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224. For a summary of which market-based regulatory mechanisms would likely be considered constitutionally suspect under the Court's current dormant Commerce Clause jurisprudence, see Table 2, *supra*.

225. See Regan, *supra* note 15, at 1092 ("In the central area of dormant commerce clause jurisprudence, comprising what I shall call "movement of goods" cases . . . [the] Court has been concerned exclusively with preventing states from engaging in purposeful economic protectionism.").

226. 437 U.S. 617, 626 (1978).

227. The modern Court's reliance upon the distinction between discriminatory and nondiscriminatory regulations dates back to the leading case of Baldwin v. G.A.F. Seelig, 294 U.S. 511 (1935), in which the Court dispensed with doctrines that distinguished regulations based on the subject matter of the activity being regulated. See Michael E. Smith, *State Discriminations Against Interstate Commerce*, 74 CALIF. L. REV. 1203, 1205 (1986).

What is so terrible about state economic protectionism? According to a useful typology suggested by Donald Regan, three powerful objections can be raised to state economic protectionism: the "concept-of-union" objection, the "resentment/retaliation" objection, and the economic efficiency objection.<sup>228</sup> Regan defines the concept of union as the sense of a political union between the states. This value is violated by purposeful economic protectionism where the state's intent is to transfer certain profitable activities from foreign hands to local hands.<sup>229</sup> Such a state-administered profit grab cannot be justified as creating a national net gain, since no new wealth is created; all that has changed is the identity of the beneficiary.<sup>230</sup> Competition among states for such benefits destroys national unity.

The second objection responds to the vicious cycle of resentment and retaliation that is likely to result from state protectionism. While there is little evidence that the framers of the Constitution had reason to fear this (there being scant evidence of protectionism under the Articles of Confederation<sup>231</sup>), open hostility could break out among states in response to widespread protectionist behavior. The Commerce Clause is designed to avert such hostility.

The third objection, economic efficiency, is perhaps the most important because it applies to all state protectionism, regardless of whether it triggers a hostile reaction in other states. In the early cases in which the Court switched to the discriminatory/nondiscriminatory framework, the Court was primarily concerned with the impacts of discrimination upon the free competition between market actors to which the Court attributed the nation's healthy economy.<sup>232</sup> Economic efficiency,

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228. Regan, *supra* note 15, at 1112-13.

229. *See id.* at 1113.

230. *Id.* (state protectionism "takes away from the foreigners in order to give to local residents exactly what has been taken away").

231. *See* Kitch, *Regulation and the American Common Market in REGULATION, FEDERALISM, AND INTERSTATE COMMERCE* 17-19 (A. Tarlock ed., 1981) (arguing that there was little actual experience of protectionism by states under the Articles of Confederation); Regan, *supra* note 15, at 1114 n.55 (agreeing with Kitch after a "superficial survey of the standard and easily accessible primary and secondary sources"). *But cf.* Collins, *supra* note 15, at 57-58 (agreeing with Kitch that the framers' complaints of interstate exploitation cannot be verified by historical records, but arguing that Kitch's thesis is not well-supported and, in any case, abolition of the dormant Commerce Clause now would necessitate greater justification than a scanty historical record).

232. *See Baldwin*, 294 U.S. at 522 (Cardozo, J.) (stating that distinctions between direct and indirect burdens—a distinction preceding the Court's reliance upon

moreover, supports the Court's role in enforcing the dormant Commerce Clause because a single national entity is arguably better able to protect the national market against piecemeal acts of economic protectionism by the individual states.

Most commentators seem to agree that, although concern for economic efficiency may have had little to do with its origins, efficiency now explains much of modern dormant Commerce Clause jurisprudence.<sup>233</sup> Regardless of its now-prominent role,

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discriminatory and nondiscriminatory burdens—are irrelevant “when the avowed purpose of the obstruction, as well as its necessary tendency, is to suppress or mitigate the consequences of competition between the states”); *id.* at 527 (“Neither the power to tax nor the police power may be used by the state of destination with the aim and effect of establishing an economic barrier against competition with the products of another state or the labor of its residents. Restrictions so contrived are an unreasonable clog upon the mobility of commerce.”); *H.P. Hood & Sons v. DuMond*, 336 U.S. 525, 538-39 (1949) (“The material success that has come to inhabitants of the states which make up this federal free trade unit has been the most impressive in the history of commerce, but the established interdependence of the states only emphasizes the necessity of protecting interstate movement of goods against local burdens and repressions. We need only consider the consequences if each of the few states that produce copper, lead, high-grade iron ore, timber, cotton, oil or gas should decree that industries located in that state shall have priority. What fantastic rivalries and dislocations and reprisals would ensue if such practices were begun!”).

233. For commentators who argue efficiency is now an important value potentially furthered by the Court's reviewing role under the dormant Commerce Clause, see generally Collins, *supra* note 15, at 63-64 (economic efficiency is important in defining the doctrine's boundaries because doctrine arrays local lawmaking efficiencies against national market, but focus of framers' concerns was interstate commercial harmony rather than market efficiency); Julian N. Eule, *Laying the Dormant Commerce Clause to Rest*, 91 YALE L.J. 425, 434-35 (1982) (although Commerce Clause did not establish free trade as a fundamental constitutional value, free trade has persisted in judicial decisions as a result of the perceived necessity of a uniform system of commercial regulations for the preservation of national unity and tranquility); Donald Regan, *The Supreme Court and State Protectionism: Making Sense of the Dormant Commerce Clause*, 84 MICH. L. REV. 1091, 1122 (1986) (although framers did have some efficiency-related objections to interstate protectionism, their objections were much milder than the claims made by modern apostles of efficiency; some concern with efficiency underlies traditional concern in preventing states from engaging in purposeful economic protectionism); Dan T. Coenen, *State User Fees and the Dormant Commerce Clause*, 50 VAND. L. REV. 795, 826 (1997) (“[I]n keeping with the efficiency-driven concerns about the location of productive activity—the Court repeatedly has used the Commerce Clause to nullify state laws that ‘neutralize advantages belonging to the place of origin.’”); Mark P. Gergen, *The Selfish State and the Market*, 66 TEX. L. REV. 1097, 1107 (1988) (favoring dormant Commerce Clause principles that encourage efficient exploitation of natural resources). Commentators are split in their assessment of whether the principles used by the Court to guide its review of state laws under the dormant Commerce Clause are best constructed so as to further economic efficiency. Compare Lisa Heinzerling, *The Commercial Constitution*, 1995 SUP. CT. REV. 217, 220 (1995) (goal of economic efficiency has begun to play the dominant role in the Court's dormant Commerce Clause decisions though Court's nondiscrimination principle does not promote economic efficiency in individual cases because Court does not attempt a serious accounting of the benefits

several notable scholars argue that the Court should reformulate its interpretation of the Clause to dispense with efficiency notions altogether.<sup>234</sup> As the remainder of this Article will demonstrate, I do not agree that efficiency is the only or even the primary goal of judicial review under the dormant Commerce Clause, though to the extent that the Court insists upon retaining efficiency as a rationale for the judicial role, the current tests are ill-suited to achieve it.

The key here, however, is to define the inefficiency that the Court's role under the dormant Commerce Clause is designed to prevent. Although inefficiency could be defined in the narrow sense of a state regulation that diverts business from low-cost foreign producers to high-cost local producers,<sup>235</sup> this definition improperly assumes that the legal status quo prevailing before that state regulation was perfectly efficient. If the state regulation is intended to correct a market failure, the regulation may bring the market toward greater efficiency than existed under the status quo. Thus inefficiency is more accurately defined as a state regulation that diverts business from low-cost foreign producers and toward high-cost local producers and has neither the purpose nor the effect of correcting a preexisting market failure.

Theoretical support for this definition lies in the economic theory of the second best. This theory holds that, where failures within an economic system prevent efficiency conditions from

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and costs of laws that discriminate against interstate commerce), and Edward P. Lazarus, *The Commerce Clause Limitation on the Power to Condemn a Relocation*, 96 YALE L.J. 1343, 1362 n.33 (1987) (acceptability of inefficient state subsidy programs under the dormant Commerce Clause market participant doctrine demonstrates that doctrine does not require or accomplish efficiency), and Mark Tushnet, *Rethinking the Dormant Commerce Clause*, 1979 WIS. L. REV. 125, 142 (judicial concern for efficiency demonstrated in review of even nondiscriminatory burdens upon interstate trade should be expressed through revived substantive due process doctrine rather than dormant Commerce Clause), with Winkfield F. Twyman, Jr., *Losing Face But Gaining Power: State Taxation of Interstate Commerce*, 16 VA. TAX REV. 347, 434 (1997) (noting the net efficiency gains resulting from the enforcement of economic unionism through judicial review of state tax codes under the dormant Commerce Clause), and Daniel J. Gifford, *Federalism, Efficiency, The Commerce Clause, and the Sherman Act: Why We Should Follow a Consistent Free-Market Policy*, 44 EMORY L.J. 1227, 1228 (1995) (dormant Commerce Clause and Sherman Act share a common concern with furthering efficient allocation of society's resources and should thus be construed in a similar manner).

234. See Eule, *supra* note 233, at 438 (advocating alternative role of reinforcing political representation of affected groups); Jonathan D. Varat, *State "Citizenship" and Interstate Equality*, 48 U. CHI. L. REV. 487, 518 (1981) (arguing that the Framers adopted the Privileges and Immunities Clause and the Commerce Clause "primarily as an instrument of national unification").

235. See Regan, *supra* note 15, at 1122.

prevailing, eliminating all other market failures in the system may be undesirable. Instead, the proper calculus must be made on a case-by-case basis, assessing whether a new inefficiency actually makes the market more efficient.<sup>236</sup> Where a market already contains an inefficiency, the presence of additional inefficiencies may cancel out the effects of the first inefficiency. The result can be a more efficient market overall.

The efficiency-promoting objective of the dormant Commerce Clause, then, may not in fact be furthered if the Court strikes down all state regulation that facially discriminates against interstate commerce. Rather, the theory of the second best dictates that such regulations may actually increase the efficiency of the market. Invalidation of state regulation enhances economic efficiency only where *the market for the good regulated already fully internalizes all costs and benefits of the good*. Mechanically striking down state market barriers may detract from efficiency precisely because the costs and benefits of environmental goods and bads are *not* fully internalized.<sup>237</sup>

Unlike the test for facially neutral regulation,<sup>238</sup> the Court's

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236. See R. G. Lipsey & K. Lancaster, *The General Theory of Second Best*, 24 REVIEW OF ECONOMIC STUDIES 11 (1956-57); see also WALTER NICHOLSON, MICROECONOMIC THEORY 521 (5th ed. 1992).

237. Although not labeling his argument as such, Donald Regan essentially argues for the application of the theory of the second best when he states that a state law is inefficient only when it diverts business away from low-cost out-of-state producers without a "colorable cost-based justification." Regan, *supra* note 15, at 1117. The term "cost-based justification" is imprecise, however, and might easily apply to regulations for which there is no colorable efficiency argument. For example, a state regulation that prohibits entry of foreign goods is arguably cost based but may not increase social welfare. To his credit, Regan partially solves this problem later by expanding the scope of the justification for state regulation that affects business diversions beyond economic concerns to those which are justified in terms of a "federally cognizable benefit." *Id.* at 1118; see also *id.* at 1116 (arguing that the Oregon bottle law case, *American Can Co. v. Oregon Liquor Control Comm'n*, 517 P.2d 691 (Or. Ct. App. 1974), discussed *infra*, was not, despite its effect, inefficient in diverting business from low-cost foreign bottling companies to higher-cost in-state bottlers, because "the object of the law was to improve productive efficiency by correcting an inefficiency [litter from nonreturnable cans] that resulted from an external cost of the existing productive processes").

238. The *Pike* test can be applied in a manner that is consistent with the theory of the second best. For example, in *Minnesota v. Clover Leaf Creamery*, 449 U.S. 456 (1981), the likely effect of Minnesota's ban upon the retail sale of milk in plastic, nonreturnable, nonrefillable containers was to divert business from out-of-state manufacturers of plastic resin to in-state pulpwood processors. *Id.* at 728 ("Respondents point out that plastic resin, the raw material for making plastic nonreturnable milk jugs, is produced entirely by non-Minnesota firms, while pulpwood, used for making paperboard, is a major Minnesota product."). The Court upheld the law under the *Pike* test, however, stating that the burden upon interstate commerce was not "clearly excessive" in comparison to the state's interest in "promoting conservation of energy and other natural resources and easing solid

test for facial discrimination provides a reviewing court with no flexibility to shape outcomes consistent with the theory of the second best. Unless no nondiscriminatory alternatives exist, the Court *requires* that a facially discriminatory statute be held invalid, regardless of its purpose.<sup>239</sup> An example of the potentially tragic consequences of this inflexibility is found in *Philadelphia v. New Jersey*, the source of the Court's "virtually *per se*" test of invalidity.<sup>240</sup> In that case, New Jersey wanted to slow the tide of solid waste flowing into its landfills, delaying the day when it would be forced to turn open space into additional landfills or to develop other costly waste disposal alternatives.<sup>241</sup> New Jersey was probably also aware that landfills impose public health and environmental costs on local communities.<sup>242</sup> Based upon these facts, it is possible to construct several scenarios for New Jersey's waste import ban consistent with the theory of the second best.

New Jersey's import ban may actually have been the most efficient solution to the problem of safely disposing of solid waste if one of three conditions obtained. First, the (partially external)

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waste disposal problems." *Id.* at 729. Minnesota's ban upon plastic containers can be understood as a state effort to correct for the negative externalities accompanying the use of such containers—litter and excessive energy use. Although Minnesota's action in barring the sale of milk in such containers is itself inefficient (the law forced packaging companies to use higher-cost cardboard cartons instead of lower-cost plastic jugs), the theory of the second best asserts that this second inefficiency may correct the inefficiency caused by the negative externalities of litter and excessive energy use. Seen in this context, *Pike's* prohibition upon the imposition of excessive burdens upon interstate commerce provides the Court with the necessary flexibility to apply the theory of the second best and to uphold some state burdens upon interstate commerce that are designed to counter preexisting market failures.

Another case demonstrating the suitability of the *Pike* test to a second best efficiency analysis is a state court decision upholding an Oregon bottle bill. The bill required bottlers to package their drinks in returnable, multiple-use deposit bottles and was upheld upon a showing that the State's intent was to reduce litter. See *American Can Co.*, 517 P.2d at 702 ("Economic loss restricted to certain elements of the beverage industry must be viewed in relation to the broader loss to the general public of the state of Oregon which the legislature sought, by enactment of the bottle bill, to avoid. The availability of land and revenues for solid waste disposal, the cost of litter collection on our highways and in our public parks, the depletion of mineral and energy resources, the injuries to humans and animals caused by discarded pull tops, and the esthetic blight on our landscape, are all economic, safety and esthetic burdens of great consequence which must be borne by every member of the public.").

239. Cf. Heinzerling, *supra* note 233, at 242-51. Heinzerling argues that, because the Court "ignores benefits that an impartial efficiency analysis would take into account . . . it is impossible to conclude that in any given case the Court has promoted efficiency by invalidating a discriminatory law."

240. 437 U.S. 617, 626 (1978).

241. See *id.* at 625.

242. See *id.* at 630-31 (Rehnquist, J. and Burger, C.J., dissenting).

value of New Jersey's wetlands and other undeveloped areas saved by the ban on imported waste exceeded the benefits (for example, tipping fees) of building a new landfill. This scenario is not very hard to imagine; the true value of wetlands is known to be greater than market value alone and is widely dispersed over persons, generations, and time. Second, the costs of exporting New Jersey's own trash and disposing of it in alternative landfill sites was greater than the costs of diverting the imported wastes to alternative sites. This situation could well be true of the New Jersey trash collection and hauling business. Third, the waste import ban reduced waste disposal costs for New Jersey residents and thereby compensated residents living near such landfills for any adverse health and economic effects they sustained as a result of living near to the landfills. It is well known that a portion of the costs of a landfill are external to the fees charged for waste disposal and are borne by the communities surrounding the landfill in the form of the noise, dust, odor, and more serious health and environmental risks.<sup>243</sup> The ban on imported waste may thus have been more efficient by internalizing those external costs.

The Court, however, struck down New Jersey's waste import ban, finding that New Jersey could have extended the life of its landfills by reducing the flow of *all* waste into its landfills, rather than just out-of-state waste.<sup>244</sup> But this was assuming that extending the life of the landfill was New Jersey's primary goal. Reducing the flow of all waste to the State's landfills may not have fulfilled the State's goal had it been to fully internalize the environmental and social costs of landfilling solid waste.

The theory of the second best may also be applied directly to state restrictions upon interstate trade in environmental goods. For example, suppose, as discussed in Part I.B., that a state restricts the universe of energy credits satisfying its renewable portfolio standard to those renewable energy credits generated by in-state renewables companies and thus implicitly bars the importation of out-of-state credits. Under existing precedents, a court reviewing such legislation would likely strike down such a restriction as facially discriminatory. The Court's interest in efficiency, however, might counsel just the opposite result. With a renewables portfolio standard, a state is attempting to correct a

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243. For instance, 22% of the 850 sites on the Superfund National Priorities List in 1986 were formerly municipal solid waste landfills. See Solid Waste Disposal Facility Criteria, 53 Fed. Reg. 33,314, 33,319 (1988).

244. See *Philadelphia v. New Jersey*, 437 U.S. at 624.

market failure that leads to an insufficient supply of renewable power. Without a ban upon the imported renewable energy credits, a state risks the leakage of public goods to other states and is left with an inefficient level of such goods.<sup>245</sup>

These examples demonstrate that the Supreme Court's rule barring facially discriminatory state regulation may result in inefficiencies that could discourage states from implementing market-based regulations that foster the creation of environmental goods. The Court's doctrine contributes to the free-rider problem that encumbers the provision of public goods. This doctrine can force states into a classic Prisoner's Dilemma.<sup>246</sup> This array of choices is illustrated in Table 3.

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245. The theory of the second best applies similarly to state restrictions on interstate trades in emission credits. In the absence of such restrictions, one state might end up with an excessive number of pollution permits, while another state might end up with an emission credit shortage. The result would be inefficiency in both jurisdictions. In the state with an excessive number of credits, the hot spot state, the costs of the resulting high amounts of polluting emissions may exceed the economic benefits gained through their use. Similarly, in the state with a shortage of emissions credits, the cold spot state, the lack of pollution credits may inefficiently limit economic activities within the state. Consequently, the theory of the second best counsels that a state may enhance efficiency by barring or restricting interstate trade in emissions credits. As discussed in Part II.A., however, a constitutional problem is unlikely to arise when a state restricts interstate trade in emissions credits, because such credits are state licenses, not articles of commerce. In the case of emissions credits, then, Commerce Clause jurisprudence does not preclude efficiency.

246. In the traditional story that illustrates this principle of noncooperative game theory, two prisoners who are both accused of committing a crime are separately interrogated by the prosecutor. Each faces the same two choices during the interview: cooperate with each other by maintaining a silence about the crime, or defect by confessing joint involvement in the crime. Each prisoner is unable to consult with the other prisoner in determining what choice of action to follow. If both remain silent, the prosecutor will only have sufficient evidence to convict the two of a lesser crime for which there is a light sentence; however, if both confess, each is given a sentence of moderate severity. If one confesses but the other does not, the one who confesses is rewarded with release while the silent prisoner is punished with the harshest possible sentence. In the classic prisoner's dilemma, the punishments are arranged such that overall time served (the sum of the two jail terms) is the least severe if neither confesses. Because each has the possibility of getting a better deal—full release—if she confesses, and because each risks getting the most severe sentence if she remains silent, each follows her own self-interest and confesses. See SHAUN P. HARGREAVES HEAP & YANIS VAROUFAKIS, *GAME THEORY: A CRITICAL INTRODUCTION* 146-66 (1995); ERIC RASMUSEN, *GAMES AND INFORMATION* 17-18 (2d ed. 1994) (for explorations of the theoretical aspects of the Prisoner's Dilemma and its application in economics and the social sciences); ROBERT AXELROD, *THE EVOLUTION OF COOPERATION* 7-11 (1984); R. DUNCAN LUCE & HOWARD RAIFFA, *GAMES AND DECISIONS: INTRODUCTION AND CRITICAL SURVEY* 95 (1967). For a recent application of the Prisoner's Dilemma to state decision making, see Scott R. Saleska & Kirsten H. Engel, "Facts are Stubborn Things": *An Empirical Reality Check In the Theoretical Debate Over the Race-to-the-Bottom in State Environmental Standard-Setting*, CORNELL J. L. & PUB. POL'Y (forthcoming 1999).

Like the participants in a Prisoner's Dilemma, states barred from discriminating must either choose traditional modes of regulation and sacrifice the benefits of incentive-based regulation, or pursue incentive-based regulation while losing a portion of the benefits of such regulation to free-riding behavior by other states that cannot be excluded from their legislatively-created market. States thus have an incentive both to free-ride on the incentive-based regulation of other states and to refrain from implementing their own incentive-based regulations. Where the costs of free-riding equals the net benefit of the market-based regulatory approach, states will altogether lack the incentive to implement incentive-based regulations.

In contrast, were states permitted to impose trade barriers as part of a market-based regulatory regime, a more efficient solution could be reached. This situation is illustrated in Table 4. In this scenario, free riding is prohibited and hence states have an incentive to choose a market-based method of implementing their environmental objective: they will be able to retain the entirety of any environmental public goods created.

**Table 3**  
**Social Welfare Payoff to States A and B From Decision to**  
**Use or Not Use Market-Based Regulation**  
**Case 1: Trade Barriers Prohibited**

		State B	
		Market-based regulation	No market-based regulation
State A	Market-based regulation	A: Net Benefit <sup>247</sup> B: Net Benefit	A: Net Benefit minus Free-Ride Benefit <sup>248</sup> B: 0 + Free-Ride Benefit
	No market-based regulation	A: 0 + Free-Ride Benefit B: Net Benefit minus Free-Ride Benefit	A: 0 B: 0

**Table 4**  
**Social Welfare Payoff to States A and B From the**  
**Decision to Use or Not Use Market-Based Regulation**  
**Case 2: Trade Barriers Permitted**

		State B	
		Market-based regulation	No market-based regulation
State A	Market-based regulation	A: Net Benefit B: Net Benefit	A: Net Benefit B: 0
	No Market-based regulation	A: 0 B: Net Benefit	A: 0 B: 0

247. "Net Benefit" = net welfare benefit resulting from the implementation of the market-based regulation.

248. "Free-Ride Benefit" = benefit obtained by state free-riding on the public goods created by another state's incentive-based regulation.

The scenarios depicted in Tables 4 and 5 are not intended to illustrate every case in which states are barred from discriminating against interstate commerce when implementing incentive-based environmental regulation. Rather the scenario is intended to demonstrate that such inefficiencies *could* result. Hence the Court's *per se* rule of invalidity may sometimes lead to *greater* inefficiency than would the market barriers the Court now strikes down in the name of efficiency.

In summary, according to the theory of the second best, the Court's facial discrimination test will, in many cases, be inconsistent with the Commerce Clause's goal of efficiency. The cases for which this inconsistency exists will not be random, but will be precisely those cases involving economically external values or public goods. Thus the Court's current dormant Commerce Clause jurisprudence is an engine for targeting and destroying legitimate state attempts to preserve public goods such as environmental quality. Previously, this problem was limited to environmental problems that manifested themselves in the overuse of some commodity (for example, a natural resource) that itself moved in interstate commerce. As market-based regulatory approaches expand, however, making regulatory requirements themselves objects of commerce, the scope of dormant Commerce Clause destruction will likewise widen.

## 2. *Expanding the Market Participant Exception*

Principle Two: State discrimination against interstate commerce should not violate the dormant Commerce Clause if it is intended to prevent the state's loss of the physical environmental public goods generated by state consumer investments in industries maintaining environmentally sensitive production processes.

Some of the same flexibility achieved through recognition of the theory of the second best can be obtained by expanding the market participant exception to the dormant Commerce Clause. According to this exception, states do not violate the Constitution when they discriminate in their role as market participants, despite the degree to which their actions may be motivated by economic protectionism or may burden or discriminate against interstate commerce. In other words, where the state is acting in the same capacity as a private economic actor, it is afforded the same leeway as private actors in discriminating against the

objects of its largesse.<sup>249</sup> Thus discrimination should be permitted to ensure that the physical environmental improvements obtained by state consumer preference legislation are enjoyed by residents subject to the preference mandate, rather than being enjoyed by others.

As other commentators have noted, the market-participant exception contains a deep irony: while facial discrimination against interstate commerce via state regulation is *per se* invalid, facial discrimination against interstate commerce via the distribution of state subsidies or through the operation of state-owned or funded businesses is presumptively valid. The rationale underlying this seemingly bizarre distinction is that state residents are entitled to preference in the distribution of state funds. This reap what you sow theory is most strongly evident in the Court's toleration of state discrimination in the distribution of general revenue subsidies, but is also apparent in its decisions allowing states to exclude nonresidents from the enjoyment of the benefits of publicly funded activities and the allocation of publicly owned natural resources. The unmistakable message of these overlapping doctrines is to encourage state investment: if states are allowed to retain the benefits of their investments, they will invest more. The economic logic of this policy is sound. States are more likely to invest where the private sector will not invest, and encouraging state investment will thus provide needed goods and services that are unlikely to be provided by private market actors alone.<sup>250</sup>

The market participant doctrine is closely associated with the Court's toleration of state subsidies.<sup>251</sup> In *Reeves v. Stake*<sup>252</sup>

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249. The leading market participant cases are *Hughes v. Alexandria Scrap*, 426 U.S. 794 (1976), *Reeves v. Stake*, 447 U.S. 429 (1980), and *White v. Massachusetts Council of Constr. Employers, Inc.*, 460 U.S. 204 (1983).

250. In two of the market participant cases, *Reeves*, 447 U.S. at 429 and *Alexandria Scrap*, 426 U.S. at 794, the state poured its public capital into the existing private market only after the private market failed to adequately serve the needs of local residents. Thus in *Reeves*, South Dakota built the cement plant only after the only other in-state cement plant closed down and it became obvious that no other private cement producers had an incentive to build a plant in South Dakota. (All of the private producers were located out-of-state and were exploiting the scarcity of cement producers to make large profits.) See 447 U.S. at 432 n.1. Similarly, in *Alexandria Scrap*, the State developed the complicated legislative scheme of penalty and bounty provisions only after a legislative study determined that the growing aesthetic problem of abandoned automobiles was attributable to bottlenecks in the "scrap cycle." 426 U.S. at 796-97. Such bottlenecks could be cleared up only if wrecking companies were given an incentive to deliver abandoned vehicles to scrap processors. See *id.*

251. This toleration is clearly revealed in *Hughes v. Alexandria Scrap*, 426 U.S. at 794. In *Alexandria Scrap*, Maryland's participation in the private market consisted of

and *White v. Massachusetts Council of Construction Employers*,<sup>253</sup> the Court extended the state subsidy logic of *Alexandria Scrap v. Hughes* to situations where a state was truly acting like a private actor in the market.<sup>254</sup> Features common to the state and local government's actions in each of the three cases above demonstrate the salient aspects of the market participant

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distributing a subsidy to auto scrap processors in the form of a bounty payable upon their processing of an abandoned auto hulk. The Court upheld a Maryland law that channeled a disproportionate share of the state-funded bounties for the processing of abandoned vehicles to in-state metal scrap processors. See *id.* at 803-04. The law upheld rendered it more burdensome for out-of-state metal scrap processors to prove that the vehicle was actually abandoned, a condition imposed by the State for receipt of the bounty. Under the Maryland law, a scrap processor, regardless of its location in-state or out-of-state, was eligible for a bounty of \$16 upon its destruction of an abandoned vehicle formerly titled under Maryland law and its presentation to state authorities of documentation obtained from wreckers and other suppliers, demonstrating that the vehicle was truly abandoned. See *id.* at 798. Because the scrap processors shared the bounty with the suppliers, the bounty functioned as an incentive for suppliers to seek out abandoned vehicles and deliver them to processors for scrap metal, thus fulfilling Maryland's purpose of ridding the State of abandoned automobiles. Under an amendment to the law, the State imposed more exacting documentation requirements for receipt of the bounty upon out-of-state processors than in-state processors, with the effect that suppliers preferred to deliver their abandoned vehicles to in-state processors as opposed to out-of-state processors. See *id.* at 801-03. In rejecting the Commerce Clause challenge to the law, the Court held that the disadvantage experienced by the out-of-state processors vis-à-vis in-state processors in their competition for abandoned auto hulks was not a disadvantage that mattered since it was a consequence of Maryland's own preference for in-state processors when it entered the market for auto hulks as a purchaser. See *id.* at 809-10 (Nothing in the purposes animating the Commerce Clause prohibits a State, in the absence of congressional action, from participating in the market and exercising the right to favor its own citizens over others.). The Court thus turned to the age-old distinction between the state as regulator and the state as proprietor to distinguish between prohibited and nonprohibited discrimination against interstate commerce.

252. 447 U.S. 429 (1980).

253. 460 U.S. 204 (1983).

254. *Reeves* involved a state's preferences for residents when determining the priority to be given customers of the cement produced by a state-owned and operated cement plant. See 447 U.S. 429 (1980). The burden upon interstate commerce occasioned by the priority given residents by the South Dakota policy was justified, according to the Court, by numerous factors, among them being respect for state sovereignty, evenhandedness (affording states the same freedoms as private sellers in the marketplace), the difficulty of analyzing the subtle, complex, and politically-charged considerations raised by state proprietary action under the Commerce Clause, see *id.* at 438, and the desire to channel state benefits to the residents of the state supplying them. See *id.* at 442. In *Reeves*, the Court stated that striking down the resident preference for cement manufactured at the state-owned facility would discourage similar state projects and would deprive the state of the intended benefit of its foresight, risk, and industry. See *id.* at 446.

In *White*, the city government discriminated in its position as a purchaser of construction labor; the case involved a local ordinance requiring that construction firms hired by the city employ a work force, half of which consist of city residents. See 460 U.S. at 204.

doctrine.

First, in each case the state discriminated by choosing to infuse publicly owned capital, generated from tax dollars, into an existing market. Whether the government distributed that capital to purchase a service from a business, as in *White*, to build a manufacturing entity to produce goods that were then sold to others, as in *Reeves*, or to allocate funds to certain parties as an economic incentive to compel certain conduct, as in *Alexandria Scrap*, the economic opportunities at issue were created by the infusion of local tax dollars.

Second, the discrimination against interstate commerce was necessary to ensure that residents and in-state businesses—the primary taxpayers—profited from this infusion of state or local dollars.<sup>255</sup> The cases reveal that the Court balances two factors: the police power of the states to improve the conditions of their citizens through public expenditures as well as regulations and the accompanying right of states to tailor their expenditures so that resident tax dollars “work” for the benefit of residents.<sup>256</sup>

Commentators have offered a variety of rationales for the

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255. The importance of this factor is underscored in *Alexandria Scrap*, where the plaintiff out-of-state scrap processor argued in support of its equal protection claim that the state's purpose of ridding its own territory of abandoned hulks would be better served by conditioning the payment of the bounty upon proof of abandonment in Maryland while imposing the same standards of documentation for proof of abandonment upon both in-state and out-of-state processors. Where the location of the abandoned vehicle was equidistant, or closer, to an out-of-state processor, however, such a condition would not have had the additional benefit of directing most of the bounty money to in-state processors.

256. Thus in *Alexandria Scrap*, Maryland argued that its imposition of more burdensome documentation requirements upon out-of-state processors was necessary to ensure that the state's funds were used primarily to reduce the number of Maryland-titled hulks abandoned in Maryland, as opposed to other states. See 426 U.S. at 804. Although the state's interest in ridding its own territory of Maryland-titled hulks would be more directly served by amending the statute to condition the bounty upon a hulk's abandonment in Maryland, *id.* at 811, it would do so only at the cost of directing much of the state's bounty payments to out-of-state processors, which are more conveniently located to the suppliers who recover the hulks. By upholding the bounty law despite the existence of this less discriminatory and more efficacious alternative method of ridding the state of abandoned hulks, the Court recognized the right of states to channel the benefit of tax dollars devoted to improving the local environment to residents and in-state businesses. Thus the Court dispensed with its usual requirement that the state demonstrate the absence of nondiscriminatory alternatives for achieving the State's objectives. See, e.g., *Philadelphia v. New Jersey*, 437 U.S. at 626; *Pike*, 397 U.S. at 142. Although the Court did hold the relationship between the state's discrimination and its environmental purpose relevant to the out-of-state processors' Equal Protection Clause challenge, the Court held that the relationship that did exist satisfied a rational relationship test, all that applied in view of the fact that no fundamental interest was at stake.

constitutionality of discriminatory general revenue subsidies and the market participant exception. Most agree that when a state funds a particular program, the state may advantage residents and in-state businesses over their out-of-state counterparts.<sup>257</sup> The "reap what you sow" or "Lockean-labor desert" justification for the market participant exception, originally attributed to Laurence Tribe, is perhaps the most succinct articulation of this rationale,<sup>258</sup> though other commentators have articulated variations upon this general theme.<sup>259</sup>

The reap what you sow rationale explains what would otherwise be considered inconsistent outcomes in cases involving "downstream restraints,"<sup>260</sup> or provisions that restrict the post-contractual activities of a trading partner as a condition of the

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257. See Hellerstein & Coenen, *supra* note 100, at 845-46 ("This 'return of capital' rationale applies no less strongly to outright cash subsidies than to resident-favoring disposals of state resources in more orthodox 'marketplace' transactions.")

258. LAURENCE H. TRIBE, *CONSTITUTIONAL CHOICES* 146 (1985) (distinguishing the market participant doctrine as applying where a state creates a new market). *But cf.* Dan T. Coenen, *Untangling the Market-Participant Exemption to the Dormant Commerce Clause*, 88 MICH. L. REV. 395, 422 (1988) (criticizing Tribe's description of the principle underlying the market participant exception).

259. See Varat, *supra* note 15, at 529; Regan, *supra* note 15, at 1193-94; Coenen, *supra* note 258, at 421-25. Although Coenen takes issue with Varat's sole reliance upon this rationale, he agrees that this is a central justification for the market participant rule. As articulated by Tribe, this theory holds that a state has greater freedom to shape the beneficiaries of commerce when the state is creating commerce that would not otherwise exist than when it is intruding into a previously existing private market. In a similar fashion, Varat argues that state residents may, as a group, steer state resources back to themselves because they constitute the group responsible for creating the benefit in the first place. Regan asserts that market participant programs are, in fact, justified because they are usually in the nature of spending programs as opposed to tariffs or other discriminatory regulations. Coenen, who has written perhaps the most comprehensive analysis of the market participant exception, describes sowing and reaping as the "first and most basic" rationale for the market-participant rule. According to Coenen's common-sense explanation of this rationale, the exception is nothing more than a judicial recognition of the state as a trustee of the citizen's property, and the fact that one of the basic attributes of property is the right to exclude others. Hence, "it seems sensible that when a state government distributes state resources, it may—on behalf of all its citizens—pick and choose among proper recipients." Coenen, *supra* note 258, at 409; *see also* Hellerstein & Coenen, *supra* note 100, at 789. As Coenen himself notes, however, the "sowing and reaping" rationale is not foolproof. The chief difficulty stems from the fact nonresidents often pay state taxes and thus are arguably entitled to a share of the state's largess in the same manner as residents. As Coenen argues, however, nonresidents must take the "bitter with the sweet." Having escaped most of the state's taxes by eschewing residency, the nonresident can hardly complain when she is excluded from her full share of state benefits as to one particular program. See Coenen, *supra* note 258, at 425 (providing list of reasons why this is not a problem). Thus this underinclusiveness of the sowing and reaping rationale does not seriously undermine it as the most basic of the rationales for the market participant doctrine.

260. Coenen, *supra* note 258, at 463.

contract. In *White*, for example, the Court upheld a type of downstream restraint when it allowed the City of Boston to dictate that fifty percent of the work force of construction firms hired by the city consist of residents.<sup>261</sup> The work force restriction in *White* simply ensured that the state's tax dollars ended up in the pockets of the state's own residents. In other words, it was a condition of the state's infusion of new capital into the labor market.

On the other hand, the Court invalidated an Alaskan law requiring that purchasers of timber on state-owned lands process the timber in an in-state processing company prior to export.<sup>262</sup> This law was an attempt to capitalize upon a prior expenditure of state funds on the timbered lands. No new capital accompanied the state's processing restriction, however, and the restriction was not necessary for the state's own residents to benefit from the state's expenditure of public funds.<sup>263</sup> Alaska's regulation in *Wunnicke* thus bore a close resemblance to a prior state attempt to use its interest in mineral resources to expand employment and business opportunities for residents that ran afoul of the Privileges and Immunities Clause.<sup>264</sup>

Another example of the fit between the reap what you sow rationale and the Court's exceptions to the dormant Commerce Clause is found in decisions involving resident preferences for in-state natural resources. The Court's decisions in this area exhibit an abrupt shift from upholding such preferences because such resources were owned by the state's residents in common and thus could be reserved for their use under a proprietary

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261. See *White*, 460 U.S. at 214. This distinction complicates the analysis of the strength of any Commerce Clause challenge to any of a number of conditions being imposed by American cities upon their contractors that arguably impose an undue burden upon interstate commerce. Take, for example, San Francisco's attempt to condition receipt of city contracts upon a company's provision of the same benefits to domestic partners as currently enjoyed by the spouses of company employees. See *Going Beyond City Limits?*, BUS. WK. 98-99 (July 7, 1997). Under *White*, the condition would appear to fall within the exception with respect to city building or other contracts requiring the expenditure of city funds. With respect to the use of existing publicly-owned resources, such as a city-owned airport, however, the restriction would appear invalid.

262. *South-Central Timber, Inc. v. Wunnicke*, 467 U.S. 82 (1984).

263. Cf. LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 433-34 (2d ed. 1988) (distinguishing *Wunnicke* from *White*, *Reeves*, and *Alexandria Scrap* on the basis that "[t]he state legislation struck down in *Wunnicke* did not expend community tax revenues to create new commerce; rather, like the previously invalidated local-hire statute, the law sought to exploit existing commerce in natural resources that happened to be situated on state lands").

264. See *Hinklin v. Orbeck*, 437 U.S. 518 (1978).

exception to the Commerce Clause,<sup>265</sup> to rejecting such preferences upon unmasking the proprietary theory as a "legal fiction."<sup>266</sup> Under the reap what you sow rationale, the Court's about-face is explained by the fact the state's residents expended no capital upon the natural resources found within the state's borders; they merely had the good fortune to live within a governmental unit with jurisdiction over such resources.

Residents have a much stronger case for a preference where they have contributed, through tax dollars or otherwise, to purchasing or maintaining the resource they wish to reserve for themselves. Thus in *Sporhase v. Nebraska*, the Court upheld a resident preference in the distribution of groundwater upon finding that statewide conservation programs had contributed to the current surplus of groundwater.<sup>267</sup> Similarly, in *Baldwin v. Fish & Game Commission of Montana*, the Court upheld a Montana law charging nonresidents higher fees than residents for hunting licenses on the theory that residents had already contributed, through taxpayer-funded state programs, to maintaining the current herds of elk and other animals.<sup>268</sup>

To date, the Court has limited the market participant exception to instances where the activity is either state-owned (for example, the South Dakota-owned cement plant in *Reeves*<sup>269</sup>) or has been funded wholly out of public funds (for example, the public projects employing city construction workers in *White*<sup>270</sup>). Nevertheless, the market participant theory is supported by the

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265. Thus the Court upheld a ban upon the shipment of game birds out of state in *Geer v. Connecticut*, 161 U.S. 519 (1896), and a ban upon the planting of oysters in a state's tidelands by nonresidents in *McCready v. Virginia*, 94 U.S. 391 (1877).

266. See *Hughes v. Oklahoma*, 426 U.S. 794 (1976).

267. 458 U.S. 941 (1982).

268. 435 U.S. 371, 389 (1978) (finding the disparity in hunting fees between residents and nonresidents not irrational where "Montana, as a State, has made sacrifices in its economic development, and therefore in its tax base, in order to preserve the elk and other wildlife within the State"). *But cf. Oregon Waste Systems*, 511 U.S. at 99-102 (holding that the higher surcharge imposed upon the disposal of trash generated out-of-state than trash generated in-state violated the virtually *per se* rule against facial discrimination against interstate commerce despite Oregon's arguments that the respective contribution of residents and nonresidents were equivalent once taxpayer's contributions to land disposal services through general revenue taxes were taken into account).

269. 447 U.S. at 431-32

270. 460 U.S. at 209; see also *Wyoming v. Oklahoma*, 502 U.S. 437, 461 (1992) (rejecting Oklahoma's argument that its ownership of one utility in the state qualified it as a market participant and thus justified its regulation requiring private utilities to burn Oklahoma coal); *Chance Management v. South Dakota*, 97 F.3d 1107 (8th Cir. 1996) (state residency requirement justified by fact that State of South Dakota had a considerable ownership interest in the State lottery).

right of those responsible for a public investment to enjoy the benefits that such investment brings. That right supports a broader exception to the Commerce Clause than has been recognized in the past. In order to limit the scope of this exemption in a principled manner,<sup>271</sup> the exemption should apply only to that aspect of consumer preference legislation necessary to ensure that resident consumers enjoy the benefits of their consumer-based investment.

Residents of a particular jurisdiction might invest in an activity or industry in many ways, and only some of them require that funds be first routed through a public treasury. State and local residents might invest in particular activities or goods through their actions as individual consumers. Indeed, a healthy proportion of state general revenues are raised through sales and use taxes. It is not a significant stretch to argue that state regulations limiting residents to patronizing certain in-state activities or in-state produced goods might likewise be exempt from the Commerce Clause. The difference is only the route by which the money flows from residents' pockets to favored in-state industries. Under the mechanism now accepted by the Court, such money must first go to the state treasury for distribution to an in-state concern. Under an alternative funding mechanism, the regulatory choice as to which in-state activity or industry merits the state's patronage is made first through a consumer purchasing regulation, while the money is actually transferred as a result of individual consumer purchases.

Under the exemption just proposed, a variety of facially discriminatory, but nonetheless environmentally beneficial, consumer preference initiatives might successfully jump the hurdle of a Commerce Clause challenge. For instance, a renewable portfolio standard that expressly limits qualifying credits to those generated by in-state renewables generators would be valid, because such a restriction may be necessary for residents, who pay a premium for energy under a renewable portfolio standard, to gain the environmental and economic

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271. Indeed, the very fact that the legality of discriminatory consumer preference legislation is nearly compelled by the Court's current subsidy and market-participant precedents reveals that those cases only avoid undermining the anti-protectionism principle by the infrequency with which states distribute cash subsidies. See Regan, *supra* note 15, at 1194 (arguing that, because spending programs are a relatively expensive method of securing local benefits, they are less likely to proliferate and thus discriminatory state spending programs are less troublesome than discriminatory regulations).

benefits of the standard.<sup>272</sup>

### B. *Reforming the Extraterritoriality Test*

Principle Three: A state does not engage in prohibited extraterritorial regulation where it requires the state to take into account, in state actions affecting interstate commerce, the impacts of the state's actions upon the health and safety of another state's environment and population.

The extraterritoriality test limits state regulation to the persons and objects within a state's territorial boundaries.<sup>273</sup> According to the Court, "any attempt 'directly' to assert extraterritorial jurisdiction over persons or property would offend sister States and exceed the inherent limits of the State's power."<sup>274</sup> As these statements might suggest, the extraterritoriality principle is strong on federalism rhetoric and rather weak on specifics. Other than stating the obvious conclusion that interstate harmony is promoted when states stay out of each other's affairs, attempts to articulate the doctrine founder on the reality that nearly any action or regulatory step a state takes will have *some* extraterritorial effect. Problems in pinning down the meaning of the extraterritoriality doctrine are perhaps not surprising. Although the principle is traditionally considered a dormant Commerce Clause principle, it is better thought of as a general principle of federalism<sup>275</sup> that manifests itself in various doctrines requiring a certain nexus between the regulating state and the activity regulated.<sup>276</sup>

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272. It could also be argued that a location restriction is not necessary to ensure that the legislating states receive the public goods benefits of a renewable portfolio standard. What matters in ensuring that residents receive such benefits is that the renewable power that now makes up a portion of local energy retailers' portfolios displaces dirtier, or more polluting, power, the environmental effects of which local residents are exposed to. Requiring that the renewable power that satisfies the portfolio requirement be located within the state will not assure this displacement. Indeed, it can be argued that the best that can be done is to require that the power that forms the basis of tradable credits is sold into the legislating state, since that will at least tend to force a location change in types of power plants that reflects the portfolio standard.

273. See *Edgar v. MITE Corp.*, 457 U.S. 624, 642-43 (1982) (extraterritoriality principle prevents the application of a state statute "to commerce that takes place wholly outside of the State's borders").

274. *Shaffer v. Heitner*, 433 U.S. 186, 197 (1977).

275. See *Regan*, *supra* note 134, at 1887 (1987) ("The extraterritoriality principle should not be regarded as grounded in any particular clause of the Constitution, . . . it should be regarded as an inference from the structure of our system as a whole.").

276. Thus the extraterritoriality principle would seem to underlie both the "minimum contacts" requirement of the Due Process Clause of the Fourteenth Amendment, which limits the regulatory reach of state government to ensure

In two general categories of cases, the Court has properly limited this potentially unbounded principle in a manner that renders it a variant of the anti-protectionism principle and the strain of dormant Commerce Clause jurisprudence restricting state regulation of transportation. Thus, in the first category, the Court has invalidated state economic legislation that deprives multi-state businesses of an economic advantage resulting from their activities in competing jurisdictions.<sup>277</sup> In the second category, the Court has struck down state laws where the state's regulation of a primarily interstate activity threatens to derail the activity altogether; historically, such cases have involved transportation, but now involve other nationwide business activities.<sup>278</sup>

Occasionally, however, the Court has indicated that the principle bars a state from considering the extraterritorial effects of *its own* actions as a justification for imposing a nondiscriminatory burden upon interstate commerce.<sup>279</sup> Such an implication extends the extraterritoriality principle without warrant and is antithetical to the very concept of union upon which the principle is allegedly based. This extension also devalues environmental concerns: an important goal of environmental policy (and, obviously, economic efficiency) is to

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"fundamental fairness." See *International Shoe Co. v. Washington*, 326 U.S. 310 (1945) (minimum contacts for in personam jurisdiction); *Shaffer v. Heitner*, 433 U.S. 186, 212 (1977) (applying same minimum contacts requirements to in rem jurisdiction). The extraterritoriality principle would also seem to underlie the "substantial nexus" requirement of the dormant Commerce Clause, which limits a state's taxing authority to those activities having more than minimum contacts with the taxing jurisdiction in order to minimize state burdens upon interstate commerce. See *Quill Corp. v. North Dakota*, 504 U.S. 298, 313 (1992).

277. See *infra* text accompanying notes 135-144 (discussing *Baldwin v. G. A. F. Seelig*, 294 U.S. 511 (1935); *Brown-Forman v. New York Liquor Auto.*, 476 U.S. 573, 579 (1986); *United States Brewers Assn. v. Healy*, 692 F.2d 275 (2d Cir. 1982), *aff'd without opinion*, 464 U.S. 909 (1983)).

278. See *MITE Corp.*, 457 U.S. at 642. There may exist yet a third category consisting of cases in which the Court has struck down state taxes where the state lacks a sufficient nexus to the activity being taxed. See *Complete Auto Transit, Inc. v. Brady*, 430 U.S. 274, 279 (1977) (upholding state tax upon business of transporting motor vehicles in-state in view of plaintiff's failure to claim that activity lacked a substantial nexus with the taxing state); *Quill Corp. v. North Dakota*, 504 U.S. 298 (1992) (out-of-state mail order company which merely shipped products to state lacked a sufficient nexus with taxing state to justify tax); *Tyler Pipe Indus., Inc. v. Washington State Dep't of Revenue*, 483 U.S. 232, 249-50 (1987) (pipe company which shipped items manufactured elsewhere into state for sale sufficient to constitute "substantial nexus" with state to justify wholesale tax when augmented by the solicitation of in-state business by company's independent contractor); see also *Muller & Hoerner*, *supra* note 188, at 36-37 (discussing nexus requirement).

279. See *MITE Corp.*, 457 U.S. at 643-44; *C & A Carbone*, 511 U.S. at 392-93.

encourage economic actors to account for the full environmental costs of their actions. Consequently, states should be encouraged to consider the extraterritorial impacts of their actions, not to ignore them. After discussing the two categories of cases where the Court properly applies the extraterritoriality principle, I will demonstrate the ways in which the extraterritoriality doctrine should be reformed.

In the first category of cases, the Court has properly limited the scope of the extraterritoriality principle to bar state economic blackmail. The Court invalidated state restrictions on the in-state sale of goods originally purchased from out-of-state producers at prices below the state's own price. The Court reasoned that such restrictions denied out-of-state producers the economic benefit of their low-cost production methods. Thus in *Baldwin v. G.A.F. Seelig*, the Court struck down a New York law prohibiting the in-state resale of milk purchased out-of-state at a price below the state's minimum purchase price.<sup>280</sup> The statute attempted to protect domestic producers by depriving out-of-state milk producers that could produce cheaper milk of the benefits of this economic advantage.<sup>281</sup> Similarly, in *Brown-Forman* the Court struck down a New York price-affirmation law.<sup>282</sup> The law placed pressure upon distillers to raise the prices that they charged out-of-state wholesalers, thus denying them a portion of their out-of-state market share as a condition of retaining their New York sales.<sup>283</sup> Although the Court invoked the extraterritoriality principle in both cases, the states had not actually mandated that an out-of-state entity abide by their laws (if they had, that would have presented a simple nexus question). Instead, the states had exercised a sort of undue influence to pressure out-of-state businesses to give up economic advantages so that the states could protect in-state producers.<sup>284</sup> Thus the extraterritoriality principle in these cases is really a variant of the anti-protectionism principle.

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280. 294 U.S. at 527 (Cardozo, J.).

281. See *id.* at 527 ("Neither the power to tax nor the police power may be used by the state of destination with the aim and effect of establishing an economic barrier against competition with the products of another state or the labor of its residents. . . . They set up what is equivalent to a rampart of customs duties designed to neutralize advantages belonging to the place of origin.").

282. 476 U.S. at 575.

283. See *id.* at 583-84; see also *United States Brewers Ass'n v. Healy*, 692 F.2d 275 (2d Cir. 1982), *aff'd without opinion*, 464 U.S. 909 (1983) (striking down similar Connecticut law).

284. See *Seelig*, 294 U.S. at 524 ("One state may not put pressure of that sort upon others to reform their economic standards.").

In the second category of cases, the Court applied the extraterritoriality principle to strike down state laws that impose an excessive, and indeed perhaps insurmountable, burden upon what is essentially a national activity or transaction. In *Edgar*, the Court struck down a state law that might otherwise have prevented the take-over of a large multi-state company with stockholders all over the country.<sup>285</sup> It is not surprising that the *Edgar* Court cited the interstate railroad regulation case of *Southern Pacific Co. v. Arizona*.<sup>286</sup> In both cases, the question was whether a single state with a legitimate nexus to the national activity should be allowed to bootstrap its nexus to block the activity altogether or to render the activity excessively difficult or even dangerous.<sup>287</sup> The extraterritoriality principle thus continues an earlier doctrinal distinction between things inherently "national" and "local,"<sup>288</sup> which is still manifest in the modern dormant Commerce Clause cases involving national transportation networks.<sup>289</sup>

Although the Court's application of the extraterritoriality principle may be somewhat sprawling, it is not inconsistent with the dormant Commerce Clause's purpose to prevent economic protectionism and to protect multi-state activities. But when the extraterritoriality principle is applied to limit nondiscriminatory burdens upon interstate commerce, the principle is extended in a manner that not only undermines the very federalism values that underlie the extraterritoriality principle, but also is antithetical to principles of environmental protection.

As discussed above,<sup>290</sup> the Court has indicated that a state's concern for the effects of its activities upon the environment or the residents of other states is not a cognizable local interest to weigh against the national interest in unrestricted interstate trade. But unless a state is feigning concern to outweigh the national interest under a *Pike* balancing test, state concern for

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285. 457 U.S. at 642 ("Yet the Illinois law, unless complied with, sought to prevent MITE from making its offer and concluding interstate transactions not only with Chicago Rivet's stockholders living in Illinois, but also with those living in other States and having no connection with Illinois.").

286. *Id.* at 643 (citing *Southern Pac. Co. v. Arizona*, 325 U.S. 761, 775 (1945)).

287. See *MITE Corp.*, 457 U.S. at 643 ("The effects of allowing the Illinois Secretary of State to block a nationwide tender offer are substantial."); *Southern Pac.*, 325 U.S. at 775 (Arizona law restricting the length of trains crossing its territory made train operation more dangerous).

288. See Tushnet, *supra* note 11, at 126-27.

289. See *Regan*, *supra* note 15, at 1182 (Court goes beyond merely suppressing protectionism in transportation cases).

290. See *supra* note 147.

such effects would seem to promote the core federalism value of interstate harmony.<sup>291</sup> Concern for the impact of one's actions upon others is a fundamental tenet of good-neighborliness, both among persons and states.

Indeed, where a state's activities harm the environment, failure to accord weight to extraterritorial effects can have disastrous effects upon interstate relations. This is aptly demonstrated by the current acrimony between Northeastern and Midwestern states over the pollution-generating utilities located in the Midwest.<sup>292</sup> Before these recent "smog wars," harmony between the states was threatened by the "waste wars," in which states exported large quantities of waste for disposal in other states.<sup>293</sup> Prior to the preemption of such suits by federal statute,<sup>294</sup> the Court was required under original jurisdiction to adjudicate federal common law nuisance cases involving interstate pollution incidents that, "if [they] arose between independent sovereignties, might lead to war."<sup>295</sup>

Thus, to promote the interstate harmony values of the dormant Commerce Clause, states should be praised, not punished, when they consider the extraterritorial impacts of their activities; the Court should uphold the regulation despite an incidental burden upon interstate commerce.

A state's consideration of the extraterritorial impacts of its activities is also fundamental to theories of environmental protection. As discussed above, economists have shown that environmental problems are caused by market failures.

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291. For discussions of the central importance of promoting interstate harmony under the dormant Commerce Clause, see Regan, *supra* note 15, at 1113-14. See also Collins, *supra* note 15, at 64.

292. For example, smog in the northeast was so severe during the summer of 1997 that Maine, Massachusetts, New York and other states downwind of electric utilities located in the Midwest filed a petition with the Environmental Protection Agency under § 126(b) of the Clean Air Act, 42 U.S.C. § 7426(b), asking the agency to find that the utilities illegally interfere with their attempts to comply with the Clean Air Act. See John H. Cushman, Jr., *Northeast States Pressuring E.P.A. to Move on Smog*, N. Y. TIMES, Aug. 8, 1997, at A1. If EPA makes such a finding, the Act requires that the source or sources involved shut down within three months unless EPA requires them to comply with new, lower emissions. See CAA § 126(c); 42 U.S.C. § 7426(c). To say the least, Midwestern states were not pleased with the petition.

293. See, e.g., Margaret A. Walls & David Edelstein, *Dirty Words: Regional Conflicts in the Interstate Transport of Municipal Solid Waste*, RESOURCES FOR THE FUTURE 11 (1992).

294. See *City of Milwaukee v. Illinois*, 451 U.S. 304 (1981) (Illinois' federal common law nuisance action against the City of Milwaukee for the discharge of inadequately treated sewage preempted by the federal Clean Water Act).

295. *Missouri v. Illinois*, 200 U.S. 496, 518 (1906) (Holmes, J.); see also *Georgia v. Tennessee Copper Co.*, 206 U.S. 230 (1907).

Accordingly, the goal of most modern environmental regulation is to internalize the environmental impacts of activities. Such a goal is surely thwarted by a dormant Commerce Clause principle that prohibits the internalization of out-of-state environmental impacts.<sup>296</sup>

A reformed extraterritoriality principle has implications for the constitutional validity of emissions portfolio standards and environmental adders.<sup>297</sup> Were the Court to properly limit its interpretation of invalid extraterritorial regulation as suggested above, a state would be free to apply environmental adders that accounted for the impacts of electricity generation upon both the in-state and the extraterritorial environment. In doing so, a state could ensure that energy generated both in-state and out-of-state would compete on a level playing field. Consequently, states would not be discouraged from applying environmental adders under the fear that such adders, if applied only to in-state environmental impacts, would favor imported power over power generated in-state.

A reformed extraterritoriality principle also has implications for the constitutional validity of emissions portfolio standards. As interpreted presently, the extraterritoriality principle would require that a state's emission portfolio standard be based exclusively upon the environmental impacts of electricity generation in the enacting state. In establishing its emission portfolio standard under a reformed extraterritoriality principle, however, a state could account for the impacts of electrical generation upon the extraterritorial environment.<sup>298</sup>

### C. Summary

The desirability of state market-based environmental

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296. See Heinzerling, *supra* note 15, at 240-42 (Supreme Court ignores the environmental cost-internalization benefits of allowing states to consider the impacts of their actions upon outsiders).

297. See *supra* text accompanying notes 65-67 for a discussion of emission portfolio standards and environmental adders.

298. The implications of freeing states to value the extraterritorial impacts of their regulatory actions extends beyond the interstate context and applies to the global environment as well. In the long term, the most harmful emissions resulting from fossil fuel electricity production are greenhouse gases such as carbon dioxide. The global warming problem produced by carbon dioxide emissions demonstrates the extraterritorial impacts of carbon intensive production processes. Without the freedom to consider the extraterritorial effects of regulatory measures that burden interstate commerce in an effort to reduce global warming, states might be discouraged from enacting market-based measures to reduce global warming, such as applying environmental adders to greenhouse gases.

regulation warrants several reforms in the Court's current tests for identifying unconstitutional burdens upon interstate commerce. First, state market-based mechanisms that employ facial discrimination should not be presumed invalid where the discrimination is part of a state's attempt to correct for market failures that create or exacerbate environmental degradation and where the discrimination is necessary to prevent a state from losing to other jurisdictions the benefits associated with correcting a market failure. Second, the market participant exception should be expanded to encompass state legislation dictating particular consumer preferences and again designed to prevent the loss to other jurisdictions of public environmental goods. Finally, the rule prohibiting extraterritorial regulation should be expanded to allow state decision makers to consider the environmental costs of their decisions, regardless of whether these costs will be incurred within or without the state's territory.

#### CONCLUSION

In the rush to embrace market-based environmental regulations, policymakers and commentators often overlook the significant legal risks of adopting market-based environmental regulation as well as the constitutional impediments they face in attempting to remove that risk. In adopting market-based mechanisms, a state may transform environmental goods and harms into articles of commerce subject to Commerce Clause jurisprudence. Because environmental goods are, economically speaking, public goods (and thus embody one kind of market failure), free trade in such goods is likely to result in the loss to other jurisdictions of environmental and economic benefits from the state supplying them. States in such a position would rationally impose market barriers to prevent such loss. Some such barriers, however, would be considered illegal barriers to trade under current dormant Commerce Clause precedents. States may thus face the dilemma of either giving other states free environmental and economic benefits or not adopting a market-based regulatory standard at all.

Because states should have a way to achieve environmental protection efficiently, I have tried to suggest two ways to circumvent these Commerce Clause problems. The first consists of a list of alternative market-based environmental regulatory approaches that would allow states to retain environmental and economic benefits and would in all likelihood pass constitutional muster. States that are interested in adopting a renewable

portfolio standard but hope to retain for themselves the public goods benefits of renewable power should consider restricting the credits satisfying their standard to credits representing power sold to end-use consumers within the state. Similarly, states interested in subsidizing local producers of an environmentally sustainable product should probably not fund their subsidy through a surcharge on products produced by the local producers and their out-of-state counterparts, but rather should award portions of state tax revenues to producers or encourage the local industry to adopt green marketing programs.

More broadly, I propose a modification of existing Commerce Clause jurisprudence in the specific case of state environmental market-based regulation. This departure can be justified by the essential concerns underlying the interrelated dormant Commerce Clause doctrines. Because the trade barriers discussed above result from the state's completely rational efforts to prevent the distribution of free benefits to other jurisdictions, little within the essential purposes underlying the Commerce Clause doctrine justifies the invalidation of such barriers.

From a policy perspective, the argument for departing from such precedent is even more compelling. On equity grounds, it is surely unjust to prevent a state from adopting a market mechanism, a more efficient mechanism for achieving its environmental goals, merely because in doing so it seeks to avoid subsidizing benefits to other states. On economic grounds, it makes little sense to prevent such efficient environmental regulations. Environmental regulation is itself justifiable on economic grounds: it corrects market failures and ensures an adequate supply of public goods such as clean air and water.

The ideas in this Article should help states in their response to the environmental risks posed by the rapidly deregulating electricity industry. As a result of the restructuring now taking place, the traditional regulatory controls upon the highly polluting electricity industry are being dismantled. Unless the federal government chooses to regulate this area, traditionally subject to state control, states will likely turn to market-based mechanisms to achieve environmental goals.