

**LEARNING FROM THE LEADER: THE EUROPEAN UNION’S
RENEWABLE ENERGY MANDATES AS A BLUEPRINT FOR
AMERICAN ENVIRONMENTAL FEDERALISM**

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INTRODUCTION

As the United States steps more fully into the twenty-first century, it is undoubtedly at the forefront of international energy and environmental debates.¹ This is first because, well-deserved

* The contents, analysis, and opinions of this Article are the author’s own and cannot be attributed to any organization, institution, or governmental body.

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criticisms notwithstanding, it ranks among the more environmentally progressive nations,² but more so because the United States has, until recently, been the greatest polluter³ and remains by far the largest consumer of petroleum.⁴ It is accordingly impossible to have a meaningful discussion about climate change, or any other pressing international environmental issue or subissue, without discussing and involving America.⁵ And it is in light of its two-sided preeminence—i.e., as both a leading cause of the global climate problem and an audible (if reticent) voice for addressing that problem—that the United States’ apparent inability to enact comprehensive climate change legislation, including renewable energy measures,⁶ reveals itself to be alarming and potentially catastrophic.

There are, of course, immediate and domestically oriented reasons why the United States should have passed climate change and renewable energy legislation long ago, with national security in the form of “energy independence” featuring near or at the top of the list.⁷ In order to reduce U.S. dependence on foreign oil we must,

1. See, e.g., *A Sort of Progress*, THE ECONOMIST, Dec. 16, 2010, <http://www.economist.com/node/17732849/print> (noting that the Kyoto Protocol is “absurd” and its possible “extension moot” because “the world’s largest carbon emitters, China and America, are not bound by [it]”).

2. See generally Stacy J. Silveira, *The American Environmental Movement: Surviving Through Diversity*, 28 B.C. ENVTL. AFF. L. REV. 497 (2001) (analyzing the strength of the environmental movement in the United States); Benjamin K. Sovacool, *The Best of Both Worlds: Environmental Federalism and the Need for Federal Action on Renewable Energy and Climate Change*, 27 STAN. ENVTL. L.J. 397, 406-15 (2008) (explaining the five eras of environmental regulation in American history).

3. See John Vidal & David Adam, *China Overtakes U.S. as World’s Biggest CO₂ Emitter*, THE GUARDIAN, June 19, 2007, <http://www.guardian.co.uk/environment/2007/jun/19/china.usnews>.

4. According to the C.I.A. World Factbook, the United States consumed 19.15 million barrels of oil per day (“bbl/day”) (2010 estimate), compared to 13.68 million bbl/day for the entire European Union (2010 estimate), and 9.4 million bbl/day attributed to Chinese consumption (2011 estimate). *The World Factbook*, CENT. INTELLIGENCE AGENCY, <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2174%20rank.html> (last visited Jan. 9, 2013).

5. See Bill Emmott, *Europe’s for Wimps. Tough Guys Go East*, THE SUNDAY TIMES (London), July 27, 2008, at 19 (“Without American participation, Kyoto was pretty meaningless.”).

6. Characterized most simply, climate change legislation can take one of two primary forms, pollution or emissions restrictions, or clean energy requirements. The former focuses on outputs and the latter on inputs. This Article will focus on inputs, or clean energy sources, but that is not to diminish the importance of controlling climate change causing outputs.

7. The catchphrase, “energy independence,” which can be traced back to the Nixon Presidency following the 1973-1974 OPEC Oil Embargo, has come to be arguably the strongest political impetus behind what movement there is toward comprehensive, federal energy and climate change legislation. See Emeka Doruigbo, *Oil, Turmoil, and a Texas Export for Energy Security*, 37 T. MARSHALL L. REV. 231,

among other efforts, switch to renewable energy sources. This is also a lesser included yet critical step in combating greenhouse gas (“GHG”) emissions, and thus climate change, though the issue is more persuasive and politically palatable in current American discourse when framed within national security rhetoric. In fact, every President since Richard Nixon has called for it in some form,⁸ with President Jimmy Carter announcing in 1977 that the fight for energy independence was the “moral equivalent of war.”⁹ Nothing has really changed since then, however, and whereas the United States imported 31% of its petroleum in 1970, it imported 75% in 2005,¹⁰ and in 2009, renewable energy sources satisfied just 8% of national demand.¹¹

The U.S. legislature has been essentially inert on umbrella climate change legislation, which would presumably—indeed, necessarily—include renewable energy initiatives to satisfy both national security interests and GHG emissions reduction goals.¹² In 2009 the U.S. House of Representatives did pass the American Clean Energy and Security Act of 2009—by a narrow vote of 219 to 212¹³—

236-37 (2012). For example, in 2007 Congresswoman Nancy Pelosi introduced legislation to “[m]ov[e] the United States toward greater energy independence and security, develop[] new innovative technologies, reduc[e] carbon emissions, creat[e] green jobs, protect[] consumers, increase[] clean, renewable energy production, and moderniz[e] our energy infrastructure.” *New Direction for Energy Independence, National Security, Consumer Protection Act*, H.R. 3220, 110th Cong. (1st Sess. 2007).

8. See, e.g., Steve Stein, *Breaking the Oil Habit*, 138 POL’Y REV. 53, 53 (2006).

9. See David Biello, *Jimmy Carter Urges Energy Reform, Again*, SCI. AM. BLOG (May 12, 2009, 6:05 PM), <http://www.scientificamerican.com/blog/post.cfm?id=jimmy-carter-urges-energy-reform-ag-2009-05-12>; Matthew L. Wald & Edmund L. Andrews, *Call to Cut Foreign Oil Is a Refrain 35 Years Old*, N.Y. TIMES, Feb. 1, 2006, at A16.

10. See Jean-Paul Rodrigue, *Petroleum Production, Consumption and Imports, United States, 1949-2009*, HOFSTRA UNIV., <http://www.people.hofstra.edu/geotrans/eng/ch5en/appl5en/usoil.html> (last visited Jan. 9, 2013).

11. U.S. ENERGY INFO. ADMIN., RENEWABLE ENERGY CONSUMPTION AND ELECTRICITY PRELIMINARY STATISTICS 2009, at 1 (2010), available at <http://www.eia.gov/FTP/ROOT/renewables/prerends09.pdf>.

12. It is beyond debate both that renewable energy sources are critical for America’s long-term national security and for GHG emissions reductions, which are crucial for battling climate change. See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 36-39 (2007), available at http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf (detailing the unmistakable connection between GHG emissions and climate change); OFFICE OF MGMT. & BUDGET, CREATING THE CLEAN ENERGY ECONOMY OF TOMORROW (2011) (articulating the Obama Administration’s intent to “Undertake a Comprehensive Approach to Transform our Energy Supply and Slow Climate Change,” “Boost Development of Clean Energy on Federal and Tribal Land,” and “Invest in the Understanding of Climate Change and Its Impacts”).

13. American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (1st Sess. 2009); see also John M. Broder, *House Backs Bill, 219-212, to Curb Global Warming*, N.Y. TIMES, June 27, 2009, at A1.

which would have been similar to the cap-and-trade system utilized in the European Union's Emissions Trading System ("EU ETS"),¹⁴ but the bill died after failing to pass in the U.S. Senate.¹⁵

Why has Congress failed to take affirmative steps toward comprehensive energy and environmental legislation? Of course, politics has a great deal to do with it.¹⁶ Additionally, as this Article explores, part of the problem is the nature of environmental damage when addressed under the purview of the American federalist structure; climate change is a global concern that an individual American constituent will encounter only locally, if at all (weather being fundamentally distinct from—though related to—climate)¹⁷. Likewise, the authority of the U.S. Congress to meddle in local affairs is expressly limited by the federal Constitution.¹⁸ Unless regulation of environmental matters falls within an enumerated power delegated by the Constitution to Congress, the legislature cannot lawfully act on that issue.¹⁹ Further, the U.S. Supreme Court has not been supportive of environmental causes in recent years.²⁰ In fact, what few regulatory advances have been accomplished in the climate change arena—e.g., the new GHG emissions rules for light

14. See *Emissions Trading System (EU ETS)*, EUR. COMMISSION, ec.europa.eu/clima/policies/ets/index_en.htm (last updated Jan. 4, 2013).

15. Kenneth P. Green & Ben Eisen, *The Problem with Putting a Price on Carbon*, CALGARY HERALD, Mar. 16, 2012, at A21.

16. Displaying what most consider sound reason, some commentators consider science and politics as occupying utterly different realms and have expressed bafflement at the subjugation of hard scientific facts to political posturing. See, e.g., Mario Osava, *Climate Change: Scientific Fact, Not Political Issue*, IPS-TERRAVIVA (Dec. 18, 2009), <http://www.ips.org/TV/copenhagen/climate-change-scientific-fact-not-political-issue/> ("Climate change is a fact, not an issue. Politics can only decide on how to handle the phenomenon."); *Political Interference with Climate Change Science Under the Bush Administration, December 2007*, COUNC. ON FOREIGN REL., http://www.cfr.org/publication/15079/political_interference_with_climate_change_sciences_under_the_bush_administration_december_2007.html (last visited Jan. 9, 2013) ("[T]he Bush Administration has engaged in a systematic effort to manipulate climate change science and mislead policymakers and the public about the dangers of global warming.").

17. See, e.g., *What's the Difference Between Weather and Climate?*, NASA (Feb. 1, 2005), http://www.nasa.gov/mission_pages/noaa-n/climate/climate_weather.html.

18. See U.S. CONST. amend. X ("The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.").

19. *Id.*

20. See, e.g., Adam Liptak, *Environmental Groups Find Less Support from Justices*, N.Y. TIMES, July 4, 2009, at A10 ("The Supreme Court heard five environmental law cases in the term that ended Monday, and environmental groups lost every time. It was, said Richard J. Lazarus, a director of the Supreme Court Institute at Georgetown University Law Center, 'the worst term ever' for environmental interests."). *But see* *Massachusetts v. EPA*, 549 U.S. 497 (2007) (siding with a challenge to the EPA's refusal to regulate GHG emissions).

duty vehicles issued by the U.S. Environmental Protection Agency (“EPA”)²¹—were and continue to be subject to constitutional challenges that chill, if not immobilize, the apparatus of government with regard to substantive, federal environmental or energy legislation.²² And given that any climate change law will necessarily be expansive to be effective and hopefully efficient, constitutional challenges are inevitable.²³

And yet, putting the United States to shame, ambitious clean energy legislation *has* been enacted by other quasi-federalist government structures with complex political landscapes: the European Union, boasting an arguably even more complicated and impressing form of federalism—by virtue of, *inter alia*, the fact that the “federal” government can (in specific contexts) impose supranational legislation on fully sovereign nations—has committed to reducing its GHG emissions by 20% (relative to 1990 levels) by 2020,²⁴ and has recognized that “[e]nergy accounts for 80% of all

21. Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, 75 Fed. Reg. 25,323, 25,323-728 (May 7, 2010) (to be codified at 40 C.F.R. pts. 85, 86, and 600; 49 C.F.R. pts. 531, 533, 536, 537, and 538). The Final Rule took effect on January 2, 2011, and at the time of writing, opponents were litigating fiercely against it but had failed to secure a stay. *See* Alexa Jay, “Climategate” Lives on in Federal Court Challenges to EPA Greenhouse Gas Regulations, CLIMATE SCI. WATCH (Nov. 16, 2010), <http://www.climate-science-watch.org/2010/11/16/climategate-lives-on-in-federal-court-challenges-to-epa-greenhouse-gas-regulations/> (tracking and summarizing the massive EPA GHG regulations litigation).

22. For example, even though the Supreme Court essentially ruled in *Massachusetts v. EPA* that the EPA could not refuse to regulate carbon dioxide and GHG emissions when those compounds had been determined to be pollutants, Representative Fred Upton, chairman of the House Energy and Commerce Committee, wrote in a December 28, 2010 op-ed that EPA GHG emissions regulation “represents an unconstitutional power grab.” *See* Fred Upton & Tim Phillips, Op-Ed, *How Congress Can Stop the EPA’s Power Grab*, WALL ST. J., Dec. 28, 2010, at A15.

23. JONATHAN H. ADLER, WHAT HAPPENS WHEN ENVIRONMENTAL LAW MEETS THE CONSTITUTION (2005), available at <http://www.abanet.org/environ/committees/constlaw/Adlerpresentation.pdf> (“The expansive reach of environmental regulation makes constitutional challenges to such laws inevitable.”).

24. *See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Supporting Early Demonstration of Sustainable Power Generation from Fossil Fuel*, at 11, COM (2008) 13 final (Jan. 23, 2008); *Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/87/EC so as to Improve and Extend the Greenhouse Gas Emission Allowance Trading System of the Community*, at 2, COM (2008) 16 final (Jan. 23, 2008); *Proposal for a Decision of the European Parliament and of the Council on the Effort of Member States to Reduce Their Greenhouse Gas Emissions to Meet the Community’s Greenhouse Gas Emission Commitments Up to 2020*, at 2, COM (2008) 17 final (Jan. 23, 2008); *Proposal for a Directive of the European Parliament and of the Council on the Geological Storage of Carbon Dioxide and Amending Council Directives 85/337/EEC, 96/61/EC, Directive 2000/60/EC, 2004/35/EC, 2006/12/EC and Regulation (EC) No 1013/2006*, at 2, COM (2008) 18 final (Jan. 23, 2008); *Proposal for a Directive of the European*

greenhouse gas (GHG) emission in the EU; it is at the root of climate change and most air pollution.”²⁵ Accordingly, via the April 23, 2009, Renewable Energy Directive, it set a 20% renewable energy source target for the European Union as a whole, and binding country-specific targets for renewable energy’s proportion of gross final energy consumption for each E.U. Member State.²⁶ These targets are to be actualized through means selected by each Member State itself.²⁷ So, for example, Germany’s European Commission-ordered 2020 renewable energy target is 18%, and it will achieve that goal (and more) through, inter alia, public and private sector increases in solar energy use, public sector decreases in consumption through building efficiency standards and weatherization, and economic incentivization of private sector innovation and adoption of clean energy technologies, amounting to a 15.5% renewable energy share in the heat/cooling sector, a share of 38.6% in electricity, and a share of 13.2% in transport.²⁸ This illustrates, as discussed below in detail, how each E.U. Member State gets to exercise its sovereignty over the means chosen to combat climate change under the Renewable Energy Directive while the ends—20% emissions reduction by 2020—are sensibly controlled by the “federal” European government.²⁹ Not only does this permit heightened flexibility, efficiency, and effectiveness, as well as accounting for the supranational nature of the climate change problem, but it also permits multimember initiatives and third-country offsets, and leaves intact the legislative discretion of the individual countries.³⁰

And it is working. The European Union’s renewable energy mandate has resulted in a current and projected 6% average annual increase in renewable energy’s share of total energy consumption,

Parliament and of the Council on the Promotion of the Use of Energy from Renewable Sources, at 2, COM (2008) 19 final (Jan. 23, 2008); see also *Greenhouse Gas Control Policies in the European Union*, ENCYCLOPEDIA OF EARTH (May 7, 2012, 1:38 PM), http://www.eoearth.org/article/Greenhouse_Gas_Control_Policies_in_the_European_Union#endnote_4.

25. *Communication from the Commission to the European Council and the European Parliament: An Energy Policy for Europe*, at 3, COM (2007) 1 final (Oct. 1, 2007).

26. Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the Promotion of the Use of Energy from Renewable Sources and Amending and Subsequently Repealing Directives 2001/77/EC and 2003/30/EC, 2009 O.J. (L140) 28, 29 [hereinafter *Renewable Energy Directive*].

27. *Id.*

28. *National Renewable Energy Action Plan*, FED. MINISTRY FOR THE ENV’T, NATURE CONSERVATION AND NUCLEAR SAFETY OF GER. (Aug. 4, 2010), [http://www.erneuerbare-energien.de/en/unser-service/mediathek/downloads/detailview/artikel/national-renewable-energy-action-plan?tx_ttnews\[backPid\]=246](http://www.erneuerbare-energien.de/en/unser-service/mediathek/downloads/detailview/artikel/national-renewable-energy-action-plan?tx_ttnews[backPid]=246).

29. See *Renewable Energy Directive*, *supra* note 26, at 28-29.

30. *Id.*

which puts the continent on track to exceed the 20% renewables target to be reached by 2020.³¹

Looking at the relative success of the European Union's tackling of climate change through clean energy policy, one must wonder what the United States can learn to improve its own energy outlook and do its share to limit climate change.³² In so wondering, this Article poses two intertwined questions and proposes a solution based on the European Union's approach: First, how should climate change (and therein renewable energy) legislation be crafted to both (a) most efficiently and effectively address the mounting GHG problem and (b) survive the inevitable constitutional challenges? Second, as a practical matter, how can climate change legislation, perhaps a so-called U.S. Climate Change Act, be made attractive to the American people to a degree that lawmakers would be willing to enact it? The answer suggested is that American federalism need not be incompatible with comprehensive renewable energy legislation if the European model—an aggregate emissions cap and/or renewable energy or energy efficiency targets, realized through means left to states to determine—is adopted. Moreover, flexibility in the means by which states can implement such a policy would make such measures local in effect and focus, and therefore politically palatable; such measures could be tailored to the geographic or jurisdictional subdivision so that the benefits would accrue locally.

The Article proceeds as follows: first is a discussion of why environmental issues present unique difficulties for the legislative and political processes, and specifically the local versus global effects dichotomy in the context of our federalist structure. This is not an exhaustive discussion, as the complexities of legislating in the

31. See *Renewable Energy Production Must Grow Fast to Reach the 2020 Target*, EUR. ENV'T AGENCY (Oct. 7, 2011, 10:10 AM), <http://www.eea.europa.eu/highlights/renewable-energy-production-must-grow>. Though data is not yet available to show whether meeting renewables targets is producing the desired reduction in GHG emissions (though it can scientifically be presumed to be doing so), the EEA's 2010 assessment of the European Union's progress toward meeting its Kyoto GHG emissions reduction targets concluded that it was on track to meet its international obligations under that protocol. See European Env't Agency, *Tracking Progress Toward Kyoto and 2020 Targets in Europe*, at 30-32, No. 7/2010 (2010), available at <http://www.eea.europa.eu/publications/progress-towards-kyoto/>.

32. This is, of course, a two-way street. Though the United States is very much lagging behind Europe. The European Union does stand to learn from certain initiatives first conceived and implemented in U.S. states. For example, California has implemented the Low-Carbon Fuel Standard, which is “[a]n alternative policy which aims to encourage adoption of a broader range of clean alternatives such as natural gas, electricity or hydrogen-based technologies,” and is currently being considered by the European Union. D. Rajagopal et al., *Emissions and Energy Security: Comparing Clean Fuel Mandates and Fuel Carbon Standards 1-3* (unpublished manuscript), available at <http://www.webmeets.com/files/papers/WCERE/2010/1571/rajagopal%20AERE%20Montreal%20rfs%20and%20lcfs.pdf>.

climate change arena have been well-explored elsewhere.³³ Second, the European Union's clean energy mandate is analyzed in the context of the quasi-federal European government structure. The third discussion is the central thrust of this Article: by using the European Union's flexible clean energy mandate as a blueprint for domestic legislation, the United States could enact a comprehensive Climate Change Act within the established parameters of our own form of federalism, and in a way that would both pass constitutional muster and effectively tackle the GHG emissions problem, as well as overcome much of the political opposition by grounding reform locally, rather than globally. However, having recognized the template with which such a Climate Change Act could be crafted, the exact shape and content of that legislation are left for others, hopefully a future American Congress, to hammer out.

I. ENVIRONMENTAL LAW VERSUS AMERICAN POLITICS

There are concrete, formidable, psychological, and incentive-based obstacles to the political realization, implementation, and

33. See, e.g., ADLER, *supra* note 23, at 13; Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U.L. REV. 1097 (2009); Holly Doremus & W. Michael Hanemann, *Of Babies and Bathwater: Why the Clean Air Act's Cooperative Federalism Framework Is Useful for Addressing Global Warming*, 50 ARIZ. L. REV. 799 (2008); Kirsten Engel, *State and Local Climate Change Initiatives: What Is Motivating State and Local Governments to Address a Global Problem and What Does This Say About Federalism and Environmental Law?*, 38 URB. LAW. 1015 (2006) [hereinafter Engel, *Initiatives*]; Kirsten H. Engel, *Whither Subnational Climate Change Initiatives in the Wake of Federal Climate Legislation?*, 39 J. FEDERALISM 432 (2009) [hereinafter Engel, *Subnational*]; Daniel A. Farber, *Climate Change, Federalism, and the Constitution*, 50 ARIZ. L. REV. 879 (2008); Michael G. Faure & Jason Scott Johnston, *The Law and Economics of Environmental Federalism: Europe and the United States Compared*, 27 VA. ENVTL. L.J. 205 (2009); Kathryn Harrison & Lisa McIntosh Sundstrom, *The Comparative Politics of Climate Change*, 7 GLOBAL ENVTL. POLITICS 1 (2007); Lisa Heinzerling, *Climate, Preemption, and the Executive Branches*, 50 ARIZ. L. REV. 925 (2008); Alice Kaswan, *A Cooperative Federalism Proposal for Climate Change Legislation: The Value of State Autonomy in a Federal System*, 85 DENV. U. L. REV. 791 (2008); James R. May, *Climate Change, Constitutional Consignment, and the Political Question Doctrine*, 85 DENV. U. L. REV. 919 (2008) [hereinafter May, *Climate Change*]; James R. May, *Of Happy Incidents, Climate, Federalism, and Preemption*, 17 TEMP. POL. & CIV. RTS. L. REV. 465 (2008) [hereinafter May, *Incidents*]; Hari M. Osofsky, *The Future of Environmental Law and Complexities of Scale: Federalism Experiments with Climate Change under the Clean Air Act*, 32 WASH. U. J.L. & POL'Y 79 (2010); Jedediah Purdy, *The Politics of Nature: Climate Change, Environmental Law, and Democracy*, 119 YALE L. J. 1122 (2010); Carol M. Rose, *Federalism and Climate Change: The Role of the States in a Future Federal Regime—An Introduction*, 50 ARIZ. L. REV. 673 (2008); DOUGLAS S. EISINGER, *SMOG CHECK: SCIENCE, FEDERALISM, AND THE POLITICS OF CLEAN AIR* (2010); Sovacool, *supra* note 2, at 397; Jared Snyder & Jonathan Binder, *The Changing Climate of Cooperative Federalism: The Dynamic Role of the States in a National Strategy to Combat Climate Change*, 27 UCLA J. ENVTL. L. & POL'Y 231 (2009); Vivian E. Thomson & Vicki Arroyo, *Upside-down Cooperative Federalism: Climate Change Policymaking and the States*, 29 VA. ENVTL. L.J. 1 (2011).

enforcement of sweeping climate change and renewable energy legislation in the United States.³⁴ These roadblocks fall into two primary categories: (1) attitudes born of obstacles that are inherent in the nature of environmental regulation because of the chasm between individual perspective (i.e., the local effects of environmental damage) and environmental reality (i.e., the global cause of environmental damage); and (2) political and ideological hostility to environmental regulation in particular or federal regulation in general.³⁵ In effect, however, both of these categories combine into the same antipathy; much of the American populace is opposed to climate change legislation because it would feel the burden without the benefit, or because it does not approve of the federal government meddling at the local level.³⁶ Essentially, the benefits of broad environmental laws are not generally felt by individual constituents to a degree necessary to justify the costs in the eyes of the average voter.³⁷

First, American skepticism about climate change is, sadly, increasing and increasingly pervasive. While 83% of Americans

34. *The Economist* has a wonderful, if flippant, breakdown of the reasons why Americans are resistant to accepting the reality of climate change and then dealing with it:

Psychological: The consequences of climate change are too awful to contemplate. Therefore, we're denying the issue, as we used to deny monsters in the room by hiding under the blanket. If you don't look at it, it can't look at you.

Economic: The costs of a large-scale effort to fight global warming are too steep to bear. Therefore, we're trying to ignore the issue, or pretending it doesn't exist, or we believe that the economy (including development) is more important.

Political: The fact that Democrats are always hammering on about climate change and Republicans aren't suggests that this is a political issue, not a scientific one. This creates a feedback loop: if climate change were real, why is it so polarising? Because it's so polarising, it must be slightly suspicious.

Epistemological: Why should we believe in climate change? Where's the evidence? All we know is what scientists say, and scientists are sometimes wrong. And don't even get me started on Al Gore.

Metaphysical: God isn't going to let millions of people die in an epic drought.

Erica Grieder, *Why Don't Americans Believe in Global Warming?*, ECONOMIST BLOG (Feb. 8, 2011, 8:03 PM), http://www.economist.com/blogs/democracynamerica/2011/02/climate_change.

35. *See id.*

36. *See id.*

37. *Id.*

believe that the earth is undergoing climate change, less than 71% believe human behavior has contributed more than a negligible amount, and only 14% of Republicans attribute the phenomenon to human activity.³⁸ And, in fact, these numbers have been falling in recent years.³⁹ The consequence is that climate change legislation will not be politically palatable for a statistically large percentage of Americans unless the environmental benefits are tangential to other purposes and outcomes.

Second, many Americans are resistant to federal government in general, particularly to environmental regulation. “States Rights” is the battle cry of those who consider the Tenth Amendment of the Constitution⁴⁰ to be paramount over constitutional provisions that vest Congress (and others) with power.⁴¹ The ideology is aggressively hostile to federal encroachment into any and all arenas of authority traditionally enjoyed by states, and as “environmental protection” is not included in the Constitution’s list of enumerated Congressional powers, it therefore falls within the purview of states’ rights. Moreover, to be effective, climate change legislation would need to reach farther and deeper into local activity than most federal regulations have done before, and, as a result, it will no doubt encounter stronger and wider opposition than less imposing statutes.

Third, for Americans who are not opposed on principle, there nonetheless remains the perception of a lack of an apparent problem that calls for broad legislative attention.⁴² Explained succinctly, “the distance in space and time between the acts that contribute to climate change and its final effects is much greater than human causal perception and the conjoined sense of responsibility evolved to contemplate, meaning instinct draws us toward incomprehension and indifference.”⁴³ In other words, we have trouble connecting our daily commute to the vehicle emissions that produce the global warming that creates melting glaciers in the Arctic. This means that, even assuming acknowledgement of the climate change problem, the cost-benefit ratio for the average citizen seems to fall heavily on the

38. See *Reuters/Stanford/Ipsos Environmental Poll*, IPSOS (Sept. 16, 2011), <http://www.ipsos-na.com/news-polls/pressrelease.aspx?id=5337> (summarizing the climate change opinion poll).

39. See, e.g., Suzanne Goldenberg, *Fewer Americans Believe Global Warming Is Caused by People*, THE GUARDIAN (London), Oct. 22, 2009, at 22.

40. See U.S. CONST. amend. X.

41. See generally John O. McGinnis & Ilya Somin, *Federalism vs. States’ Rights: A Defense of Judicial Review in a Federal System*, 99 NW. U. L. REV. 89 (2004) (describing the political ideology of the States’ Rights Doctrine).

42. See, e.g., Thomas Lowe et al., *Does Tomorrow Ever Come? Disaster Narrative and Public Perceptions of Climate Change*, 15 PUB. UNDERSTANDING OF SCI. 435, 435-38 (2006) (discussing the scientific research behind the public’s apathy about climate change).

43. Purdy, *supra* note 33, at 1135.

negative side, as the burden will be felt locally while the benefits are dispersed internationally to fix a problem. This makes climate change poised to be the “externality that [eats] the world.”⁴⁴

The practical and legislative consequences of this local versus international problem of scale are addressed below, in Section II, but the psychological effects are critical in understanding hostility to climate change legislation, especially in the United States: because the citizenry will “absorb the full cost of any [climate change] measure it adopts, but will receive only a fraction of the globally distributed benefit,”⁴⁵ and may not believe in human-caused climate change anyway, a comprehensive statute to address the problem will need to be braced and fortified with selling points that can sooth at least some of the political opposition and overcome at least some of the cognitive dissonance.

II. FEDERALISM AND THE PROBLEM OF ENVIRONMENTAL GOVERNANCE

A. *Environmental Law Versus American Federalism*

Environmental regulation at the federal level is extremely complicated, difficult to enact, hard to implement, and sometimes hard to justify within the context of multilevel—“multiscalar”⁴⁶—government (i.e., federalism). There are several primary reasons for this that span the legal, political (discussed above), and practical. First, the U.S. Constitution does not say, on its face, that Congress has the authority to regulate in the environmental sphere, which raises the issue of constitutionality of federal climate change and renewable energy legislation. Second, as a practical matter, there is a divide between cause and effect in many environmental problem situations, where causes are national or even global aggregations, but effects are local, or vice versa. This creates an “ends versus means” dissonance that hinders popular support for environmental regulation, and also leads to questions over which level of government is properly situated to address the problem most efficiently, effectively, and feasibly.⁴⁷ Third, as previously mentioned, politically, the United States is currently far towards the “States Rights” end of the political ideology spectrum, which makes

44. *Id.* at 1132.

45. *Id.*

46. This is a term apparently coined by Hari M. Osofsky. See Osofsky, *supra* note 33, at 80.

47. See *id.* at 87-94 (discussing how battles over the Clean Air Act regarding climate change regulations, such as the EPA’s emissions limits, “involve a conflict over which levels of government should address the problem of climate change”); Jonathan H. Adler, *Jurisdictional Mismatch in Environmental Federalism*, 14 N.Y.U. ENVTL. L.J. 130, 155-56 (2005).

unpalatable to most politicians the enactment of any federal legislation that purports to regulate states' traditional arenas of control. And environmental regulation in particular is antithetical to the politics of certain interest groups and their representatives.

To illustrate the difficulties, take the case of sulfur dioxide ("SO₂"), better known as acid rain. Of course, there is an inherent dissonant mismatch in the way we as individuals—and therefore as a nation—experience the cause and effect of environmental damage. The "cause" of acid rain, for example, is generalized atmospheric pollution that we, at the individual level, can rarely trace to a source more tangible than, say, invisible auto emissions.⁴⁸ The result is that the act of thinking broadly about environmental challenges is a difficult one because we understandably perceive the effect only with local foci. Cognitively, we have trouble using inductive reasoning when our experience of the problem is inherently local but the causal factor is essentially global and effectively intangible. This makes federal action *seem* inappropriate and overreaching in many environmental contexts.

Our own individual failings of perspective are, of course, not the only problem with federal-level governance intended to fix a problem that is apparently local in its manifestation. There is also one of fit, or in other words, proportionality and suitability—i.e., at which level should environmental law be promulgated, implemented and enforced? Returning to acid rain, it would naturally seem to make more sense to address the problem of acid rain in, say, Milwaukee, Wisconsin, with a legislative or regulatory effort instituted by Milwaukee, because of its superior understanding of local issues, where the tangible problem seems to be occurring. The use of federal environmental regulation in such a context again can seem "paradoxical,"⁴⁹ at least with respect to environmental problems that are truly local in both cause and effect.

But, of course, acid rain is caused by the aggregation of SO₂ in the atmosphere, and Milwaukee's SO₂ will have come, in part, from other states. Those foreign states lack an incentive to regulate SO₂

48. Automobile emissions are just one of many contributing factors in the creation of acid rain, but the link between the two is no longer controversial. *See, e.g.*, OFFICE OF MOBILE SOURCES, U.S. ENVTL. PROT. AGENCY, EPA 400-F-92-007, AUTOMOBILE EMISSIONS: AN OVERVIEW 2 (1994), available at <http://www.epa.gov/omswww/consumer/05-autos.pdf> (explaining that car exhaust includes nitrogen oxides, which contribute to the formation of acid rain).

49. *See* Faure & Johnston, *supra* note 33, at 209 (arguing "that fundamental political-economic incentives account for the otherwise economically counter-intuitive focus of such federal environmental regulation on pollution problems that are largely intra-jurisdictional," and "centralized environmental regulation has had such a paradoxical focus on essentially local environmental problems, instead of evolving in response to global problems as one might assume, because there are inherent pressures for regional protectionism and redistribution within a political system").

emissions in their own jurisdictions when the acid rain is falling in Milwaukee—why would they incur an economic burden to benefit a different state? However, Milwaukee (or, more likely, Wisconsin) will be unable to prevent the damaging rain without cooperation from the other contributing sources' jurisdictions. Thus, federal regulation is necessary to solve a problem with local effect but transboundary causes in order to prevent the outsourcing of environmental externalities.

And yet, the prospect of federal regulation throws up another collection of hurdles to solving the acid rain problem. For example, if the actual sources of SO₂ are power plants in Michigan, automobile emissions in Illinois, and factories in Minnesota, the United States will be ill-equipped to craft a law that accounts for such a variety of contributing factors without imposing a flat cap or ban on SO₂. But an inflexible, blanket regulation is unlikely to be the most effective response, and certainly will not optimally balance the costs of compliance in each state with the benefit that will apparently accrue only to Wisconsin. Moreover, even assuming that congressional capping of SO₂ emissions would pass constitutional muster without proof of broader detriment to interstate commerce than localized acid rain in Milwaukee, politicians from other states will have a difficult time selling the legislation to their own constituents, who are unaffected by the environmental problem and will therefore be disinclined toward shouldering the costs of another state's acid rain.

Acid rain is a microcosm of climate change with respect to the challenges posed to shaping, enacting, and implementing comprehensive legislation. The sources of GHG emissions are ubiquitous and universal, but the cause is their aggregation at an atmospheric level, far removed from the daily perspective of individual voters to whom any related legislation must be justified. And while the Gulf Coast may feel the calamity of climate change in the form of more frequent and more ferocious hurricanes, the State of Washington may experience no discernable impact at all. Thus, federal regulation is required so that costs are shared—and in recognition that everyone, everywhere is in fact contributing to GHG emissions—but state and local governments must be able to configure implementation in a way that takes account of regional or jurisdictional variety.

The resulting federalist environmental legislation must also be constitutional, however; Congress must rely on valid authority in enacting comprehensive climate change and renewable energy law, and it must not exceed that authority.⁵⁰ So, before addressing the politics and substance of federal climate change law, it is necessary to explore why such law, in any form, presents concerns of

50. See U.S. CONST. amend. X.

congressional overreaching, and what the constitutional sources of authority are that could support Congress' promulgation of sweeping climate change and renewable energy reforms.

B. American Federalism

The United States is, of course, a federalist entity defined by a "relationship and distribution of power between the national and regional governments within" its "system of associated governments with a vertical division . . . into national and regional components having different responsibilities."⁵¹ This two-tiered governmental division of power was instituted and is enshrined in the U.S. Constitution through the enumeration of specific powers delegated to the federal government. It is reinforced by the Tenth Amendment⁵²: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people."⁵³ In short, "the powers of the [federal] legislature are defined, and limited" to that which has been either granted clearly in the text or through interpretation of the Constitution by courts.⁵⁴

There are numerous hotbed areas in constitutional law where the extent of federal legislative authority is being battled out—e.g., whether the individual mandate in the 2010 Patient Protection and Affordable Care Act passes constitutional muster⁵⁵—and there is a multiplicity of analyses as to whether a constitutional right to a clean environment exists, for example, as a substantive due process right.⁵⁶ There are, however, only a few constitutional provisions relevant to a discussion of Congress' authority vis-à-vis environmental legislation—i.e., the "how" of regulation rather than the "what"—and while there is sufficient precedent for its authority not to be ultimately contentious,⁵⁷ there has been enough litigation over

51. BLACK'S LAW DICTIONARY 625, 627 (7th ed. 1999) (defining "federal" and "federalism," respectively).

52. See, e.g., Adler, *supra* note 47, at 134 n.6 (citing THE FEDERALIST NO. 45, at 292 (James Madison) (Clinton Rossiter ed., 1961)).

53. U.S. CONST. amend. X.

54. See *Marbury v. Madison*, 5 U.S. 137, 176 (1803).

55. See *Nat'l Fed'n of Indep. Bus. v. Sebelius*, 132 S. Ct. 2566, 2576 (2012).

56. See, e.g., Ronald E. Klipsch, *Aspects of a Constitutional Right to a Habitable Environment: Towards an Environmental Due Process*, 49 IND. L.J. 203, 206 (1974). See generally TIM HAYWARD, CONSTITUTIONAL ENVIRONMENTAL RIGHTS 1-22 (2005); Daveed Gartenstein-Ross, *An Analysis of the Rights-Based Justification for Federal Intervention in Environmental Regulation*, 14 DUKE ENVTL. L. & POL'Y F. 185, 191-98 (2003).

57. See, e.g., *Pennsylvania v. Union Gas Co.*, 491 U.S. 1, 13-23 (1989) (upholding Congress' authority under the Commerce Clause to enact the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which provides for private party suits against states for clean up cost recovery). See

federal attempts at environmental regulation to make clear that Congress will have to navigate the amorphous parameters of federalism carefully when it finally begins shaping renewable energy and climate change laws. And while Congress' authority to regulate environmental matters is established, comprehensive climate change legislation will necessarily affect all sectors of the economy and all aspects of life, from product manufacturing to private consumption patterns to taxation and subsidy rules, in an unprecedented way. Such expansive federal involvement in apparently local matters will undoubtedly face more numerous and more substantive federalism challenges than environmental statutes of smaller scope.⁵⁸

With that in mind, a brief discussion of the guiding principles of American federalism relevant to prospective climate change legislation—i.e., the Commerce Clause, Spending Clause, Supremacy Clause, and the Nondelegation Doctrine—follows in order to set the constitutional stage.

1. The Commerce Clause

The bulk of environmental federal legislation is promulgated under Congress' authority to regulate interstate commerce.⁵⁹ Article I, Section 8, clause 3 of the Federal Constitution, the Commerce Clause, provides that Congress may “regulate Commerce with foreign Nations, and among the several States, and with the Indian tribes.”⁶⁰ Precisely what action this constitutional provision authorizes Congress to take is at best guesswork and the U.S. Supreme Court has oscillated over the years from a narrow reading to a broad one—with Justice Brennan going so far as to write that “[i]t would be difficult to overstate the breadth and depth of the commerce power”⁶¹—and back again.⁶²

Certainly, the constitutional delegation of power in the

generally ADLER, *supra* note 23, at 3-4.

58. For example, the Supreme Court wrestled with numerous challenges to GHG emissions litigation as a threshold issue before reaching the merits of any such suit in *American Electric Power Co. v. Connecticut*, 131 S. Ct. 2527, 2535 (2011).

59. See CRAIG N. JOHNSTON ET AL., *LEGAL PROTECTION OF THE ENVIRONMENT* 37, 47 n.6 (2d ed. 2007) (citing the Clean Air Act, Clean Water Act and portions of the Endangered Species Act); Elaine Bueschen, *Do Isolated Wetlands Substantially Affect Interstate Commerce?*, 46 AM. U. L. REV. 931, 935 (1997) (noting that the Clean Water Act was enacted pursuant to the Commerce Clause).

60. U.S. CONST. art. I, § 8, cl. 3.

61. *Pennsylvania v. Union Gas Co.*, 491 U.S. 1, 20 (1989), *overruled by Seminole Tribe of Florida v. Florida*, 517 U.S. 44 (1995).

62. See *United States v. Morrison*, 529 U.S. 598, 611 (2000) (requiring a clearly established empirical nexus between interstate commerce and the conduct targeted for federal regulation); *United States v. Lopez*, 514 U.S. 549, 559 (1995) (adding a “substantial effects” on interstate commerce requirement for congressional authority to regulate matters related to interstate commerce).

Commerce Clause is considerable, but it is definitely not limitless.⁶³ It grants Congress the authority to regulate the channels, instrumentalities, persons or things in or of interstate commerce, as well as “those activities having a substantial relation to interstate commerce, i.e., those activities that substantially affect interstate commerce,”⁶⁴ when there is a sufficient economic nexus between the conduct being regulated and said substantial effect.⁶⁵ And “even if [the regulated] activity be local and though it may not be regarded as commerce, it may still, whatever its nature, be reached by Congress if it exerts a substantial economic effect on interstate commerce.”⁶⁶ However, while the Supreme Court asserts that it “ha[s] never required Congress to legislate with scientific exactitude,”⁶⁷ as the nexus between the activity being regulated and interstate commerce attenuates, several factors ought to be present for that regulation to be sustained under the Commerce Clause: (1) the activity in question must be an “economic endeavor”;⁶⁸ (2) if the legislation regulates noneconomic activity of an intrastate variety it should have a “jurisdictional element” that restricts its reach to those parts of that activity that are interstate in their effect;⁶⁹ (3) in order to help the judicial review process, Congress should make findings of fact that support its assertion of regulatory authority by demonstrating the substantial effect the targeted activity has on interstate commerce;⁷⁰ and (4) the relationship between the regulated activity and its substantial effect on interstate commerce must be reasonably direct and close, because “the but-for causal chain must have its limits in the Commerce Clause area.”⁷¹

In practice, the Supreme Court has upheld most but certainly not all environmental legislation as within Congress’ Commerce Clause authority to promulgate. Keystone environmental legislation, the Clean Air Act of 1963 (“CAA”),⁷² the Comprehensive

63. See *Morrison*, 529 U.S. at 608 (“[E]ven under our modern, expansive interpretation of the Commerce Clause, Congress’ regulatory authority is not without effective bounds.”).

64. *Lopez*, 514 U.S. at 558-59 (citation omitted).

65. See *Morrison*, 529 U.S. at 617-18.

66. *Wickard v. Filburn*, 317 U.S. 111, 125 (1942).

67. *Gonzales v. Raich*, 545 U.S. 1, 17 (2005).

68. *Morrison*, 529 U.S. at 611.

69. *Id.* at 612.

70. See *id.* (“While ‘Congress normally is not required to make formal findings as to the substantial burdens that an activity has on interstate commerce,’ the existence of such findings may ‘enable us to evaluate the legislative judgment that the activity in question substantially affects interstate commerce, even though no such substantial effect is visible to the naked eye.’” (quoting *Lopez*, 514 U.S. at 562-63)).

71. *Id.* at 616 n.6.

72. Pub. L. No. 88-206, 77 Stat. 392 (codified as amended at 42 U.S.C. §§ 7401-7671q (2006)).

Environmental Response, Compensation, and Liability Act of 1980 (“CERCLA”),⁷³ the Resource Conservation and Recovery Act of 1976 (“RCRA”),⁷⁴ the Clean Water Act of 1972 (“CWA”),⁷⁵ and others, have survived constitutional scrutiny, but not without aggressive challenges and judicial whittling away of their scope and power.

Recently, in 2001, the Supreme Court struck down a U.S. Army Corps of Engineers (“ACE”) interpretation—known as the Migratory Bird Rule⁷⁶—of the CWA that functionally extended ACE jurisdiction to include intrastate waters, such as ponds.⁷⁷ The case, *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*,⁷⁸ turned on the definition of “navigable waters,” but the Court commented that arguments asserting the ACE regulation fell within Congress’ regulatory powers under the Commerce Clause “raise[d] significant constitutional questions.”⁷⁹ Additionally, CERCLA, arguably the most controversial of environmental statutes because of its strict, retroactive, and joint and several liability provisions, has had its scope narrowed via Supreme Court interpretation in recent years.⁸⁰ The Clean Air Act⁸¹ and Safe Drinking Water Act,⁸² among others, have also been challenged as congressional overreaching on multiple occasions, though they have been upheld as constitutional thus far.⁸³

73. Pub. L. No. 96-510, 94 Stat. 2767 (codified as amended at 42 U.S.C. §§ 9601-9675 (2006)).

74. Pub. L. No. 94-580, 90 Stat. 2795 (codified as amended at 42 U.S.C. §§ 6901-6922k (2006)).

75. Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. §§ 1251-1376 (2006)).

76. 51 Fed. Reg. 41,217 (Nov. 13, 1986).

77. *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng’rs*, 531 U.S. 159, 164-66 (2001).

78. *See id.*

79. *Id.* at 172-73.

80. *See, e.g., Burlington N. & Santa Fe Ry. Co. v. United States*, 129 S. Ct. 1870 (2009) (narrowing the definition on an “arranger” of hazardous waste transport or disposal, and broadening availability of cost “apportionment” as an alternative to joint and several liability).

81. 42 U.S.C. §§ 7401-7671q (2006); *see, e.g., EPA v. Brown*, 431 U.S. 99 (1977); *Brown v. EPA*, 521 F.2d 827 (9th Cir. 1975); *Arizona v. EPA*, 521 F.2d 825 (9th Cir. 1975); *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1975); *Virginia ex rel. State Air Pollution Control Bd. v. Train*, 521 F.2d 971 (D.C. Cir. 1975); *District of Columbia v. Train*, 521 F.2d 971 (D.C. Cir. 1975); *Pennsylvania v. EPA*, 5000 F.2d 246 (3d Cir. 1974); *see also Arlan Gerald Wine, Enforcement Controversy Under the Clean Air Act: State Sovereignty and the Commerce Clause*, 8 TRANSP. L.J. 383 (1976).

82. Pub. L. No. 93-523, 88 Stat. 1660 (codified as amended at 42 U.S.C. § 300f (2006)).

83. *See, e.g., Nebraska v. EPA*, 331 F.3d 995 (D.C. Cir. 2003); *see also Jamie Y. Tanabe, Comment, The Commerce Clause Pendulum: Will Federal Environmental Law Survive in the Post-SWANCC Epoch of “New Federalism”?*, 31 ENVTL. L. 1051 (2001); *cf. Cass R. Sunstein, Is the Clean Air Act Unconstitutional?*, 98 MICH. L. REV. 303

In *EPA v. Brown*,⁸⁴ the Supreme Court was asked to strike down as beyond Congress's authority, and therefore also the EPA's, an EPA regulation requiring states to pass certain transportation laws intended to implement the CAA. At issue was not the constitutionality of the CAA itself, but instead whether the EPA could force a state to make use of its own legislative apparatus and processes to achieve a federal goal under the CAA.⁸⁵ Essentially every Circuit Court of Appeal that heard the underlying challenges in various states struck down the EPA regulation as unconstitutional legislative overreaching.⁸⁶ Almost certainly, the Supreme Court would also have invalidated the EPA rule, because the federal government cannot "commandeer" state government,⁸⁷ but the EPA conceded that its regulation required fixing, so the question was mooted before the Supreme Court could agree.⁸⁸

In short, Congress cannot "cross[] the line distinguishing encouragement from coercion."⁸⁹ Thus, while it can mandate, say, a plastics recycling rate of 60% for every state, it cannot reach into the states' own government to make them pass such a law themselves.

2. Spending Clause

If Congress does not choose to regulate an activity directly pursuant to its Commerce Clause authority, or if it lacks the authority to do so in the given situation, it may nonetheless achieve the same result indirectly through its control over the purse strings of the federal budget. As long as the line between encouragement and commandeering of state government is not crossed,⁹⁰ Congress may constitutionally incentivize the taking of certain actions on the part of states through the setting of conditions on federal expenditures and budgetary allocations.⁹¹

Known as the Spending Clause, Article I, Section 8, clause 1 of the federal Constitution empowers Congress to "lay and collect [t]axes . . . to . . . pay the [d]ebts and provide for the common

(2000).

84. 431 U.S. 99 (1977).

85. *See id.*

86. *See Wine, supra* note 81, at 387-400.

87. *See New York v. United States*, 505 U.S. 144, 146 (1992) (upholding the Low-Level Radioactive Waste Policy Amendments Act of 1985's monetary incentive of rewarding states for housing interstate waste by permitting the charging of increasing surcharge fees, but striking down the "take title" provision that forced state ownership over said waste as a penalty for noncompliance with the Act).

88. *Brown*, 431 U.S. at 104.

89. *New York*, 505 U.S. at 175.

90. *See id.*

91. *See* U.S. CONST. art. I, § 8, cl. 1.

[d]efense and general [w]elfare of the United States.”⁹² Prerequisites to the receipt by states of federal monies must be (1) for the “general welfare”;⁹³ (2) sufficiently clear and unambiguous as to “enabl[e] the States to exercise their choice knowingly, cognizant of the consequence of their participation”;⁹⁴ and (3) the conditions placed on the funding must be reasonably related—i.e., “bear some relationship”⁹⁵—to the purpose of that funding program.⁹⁶

The Spending Clause has been used to achieve environmental ends before, and notably in contexts in which Commerce Clause authority clearly falls short for want of a sufficient nexus between interstate commerce and the activity being regulated.⁹⁷ To be constitutional, Spending Clause legislation requires a lesser relationship between the ends and means. For example, whereas nonnavigable intrastate waters cannot be reached under Commerce Clause authority,⁹⁸ Congress can condition the states’ receipt of CWA program funds on state regulation of such waters.⁹⁹ As another example, Congress has limited funds available to states for highway and transportation projects where states have not achieved CAA air quality standards.¹⁰⁰

3. Nondelegation

In shaping legislation, Congress has considerable leeway to make use of the various executive and independent federal agencies.¹⁰¹ For example, Congress can instruct the Department of Energy (“DOE”) to institute a funding scheme for renewable energy development loans, and then leave it to the DOE to determine the “what,” “how,” “who,” and “when,” provided that the “why” is articulated sufficiently that it constitutes an “intelligible principle” constraining the agency’s actions.¹⁰² Called the Nondelegation Doctrine, this “intelligible principle” limitation is an inference that

92. *Id.*

93. *Helvering v. Davis*, 301 U.S. 619, 640 (1937) (citing U.S. CONST. art. I, § 8, cl. 1).

94. *South Dakota v. Dole*, 483 U.S. 203, 207 (1987) (quoting *Pennhurst State Sch. & Hosp. v. Halderman*, 451 U.S. 1, 17 (1981)).

95. *New York*, 505 U.S. at 167.

96. *Dole*, 483 U.S. at 207, 209.

97. See Denis Binder, *The Spending Clause as a Positive Source of Environmental Protection: A Primer*, 4 CHAP. L. REV. 147, 161-62 (2001).

98. See *Solid Waste Agency of N. Cook Cnty. v. U.S. Army Corps of Eng’rs*, 531 U.S. 159, 162 (2001).

99. Binder, *supra* note 97, at 161.

100. See 42 U.S.C. § 7509(b)(1)(A) (2006); 42 U.S.C. § 7410(m) (2006).

101. See generally Paul R. Verkuil, *The Purposes and Limits of Independent Agencies*, 1988 DUKE L.J. 257 (1988), for an explanation of the difference.

102. See Sunstein, *supra* note 83, at 330-40 (explaining and criticizing the Nondelegation Doctrine).

because the Constitution vests legislative authority in the body Congress, that authority cannot be delegated.¹⁰³ Congress may not “simply avoid[] a choice which [is] both fundamental for purposes of the statute and yet politically so divisive that the necessary decision or compromise [is] difficult, if not impossible, to hammer out in the legislative forge.”¹⁰⁴

For the most part, the Nondelegation Doctrine is little impediment to Congress, and regulatory agencies are indeed tasked with and authorized to create regulatory law rather than legislative, though both are binding. But the Doctrine has been invoked to challenge broad federal legislation in recent years, including the CAA. In the most relevant example, *Whitman v. American Trucking Associations*,¹⁰⁵ the Supreme Court faced the question of whether the CAA was an unconstitutional delegation of congressional power to the EPA of the authority to set national air quality standards.¹⁰⁶ The CAA tasked the EPA to set “ambient air quality standards the attainment and maintenance of which in the judgment of the [EPA] Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health.”¹⁰⁷ The Circuit Court of Appeals for the District of Columbia held that the “requisite to protect the public health” language failed to give the EPA adequate guidance or put sufficient restriction on its power.¹⁰⁸ Ultimately, the Supreme Court disagreed.¹⁰⁹

Given the Supreme Court’s holding in *Whitman* that the CAA is not unconstitutionally vague in its delegation to the EPA, the Nondelegation Doctrine would not seem to be an issue for environmental legislation that leaves some decision making up to states. It must be kept in mind, however, because the broader the decision making left to entities other than Congress itself, the greater the chance the legislation may be deemed unconstitutional.

4. Supremacy and Preemption

Once Congress has acted, whether directly under the Commerce

103. *See id.* at 331 (“The motivating idea is that Article I, Section 1, [of the Constitution] vests legislative power in the Congress and that this vesting cannot be waived, even if Congress and the public want to do so.”).

104. *Indus. Union Dep’t v. Am. Petrol. Inst.*, 448 U.S. 607, 687 (1980) (Rehnquist, J., concurring).

105. 531 U.S. 457, 472-73 (2001).

106. *Id.* at 472-73.

107. 42 U.S.C. § 7409(b)(1) (2006); *see also Whitman*, 531 U.S. at 472.

108. *Am. Trucking Ass’ns v. EPA*, 175 F.3d 1027, 1034 (D.C. Cir. 1999) (per curiam); *see also Daniel J. White, The Nondelegation Doctrine Revisited: Whitman v. American Trucking Associations*, 71 U. CIN. L. REV. 359, 360-61 (2002) (explaining the Circuit Court’s opinion).

109. *Whitman*, 531 U.S. at 475-76.

Clause or indirectly under the Spending Clause, states are subject to that law, may be forced to comply with it, and may be preempted from taking their own actions on the same subject. This trump power arises under the Supremacy Clause of the Constitution,¹¹⁰ which provides that when the several states of the nascent United States organized into a federal union and “empower[ed] Congress to regulate commerce,” they “necessarily surrendered any portion of their sovereignty that would stand in the way of such regulation.”¹¹¹

In practice, this means that when Congress has exercised its authority to legislate in a constitutionally compatible way, states must do what they are told, even when the federal law encroaches on states’ rights.¹¹² This is true even if Congress has not expressly stated that it intends its law to fully control the field; implied preemption of state action can arise when federal action indicates a congressional intent to occupy the legislative space around a given issue. An additional form of preemption, conflict preemption, occurs when state action conflicts or would conflict with the efficacy or purpose of a federal law.

Historically, Congress has not wielded its preemption power in the environmental realm, opting instead to either respect states’ traditional authority over local environmental affairs or to establish a cooperative federal-state regime—e.g., the Clean Air or Water Acts. Nonetheless, for obvious reasons, the power to lay down supreme law is critical in accomplishing a goal requiring legislation of a broad or intrusive nature, such as a hypothetical Climate Change Act. And, to back it up, the federal government has broad enforcement power, ranging from withholding funding conditioned on compliance, to slapping individual state administrators with civil—and in some cases even criminal—charges for violating federal laws.¹¹³ Moreover,

110. U.S. CONST. art. VI, cl. 2 (“This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.”).

111. *Parden v. Terminal Ry. of Ala. Docks Dep’t*, 377 U.S. 184, 191-92 (1964), *overruled by* *Coll. Sav. Bank v. Fla. Prepaid Postsecondary Educ. Expense Bd.*, 527 U.S. 666, 667 (1999).

112. *See, e.g., Ex parte Virginia*, 100 U.S. 339, 346 (1879) (“[I]n exercising her rights, a State cannot disregard the limitations which the Federal Constitution has applied to her power. . . . Nor can she deny to the general government the right to exercise all its granted powers, though they may interfere with the full enjoyment of rights she would have if those powers had not been thus granted. Indeed, every addition of power to the general government involves a corresponding diminution of the governmental powers of the States. It is carved out of them.”).

113. *See generally* Jason Blackberg et al., *Environmental Crimes*, 38 Am. Crim. L. Rev. 607. (2001) (discussing the enforcement of American federal environmental regulations by means of possible criminal prosecution). *But see* Faure & Johnston, *supra* note 33, at 222-25 (discussing how infrequently liability is imposed under

much of American federal environmental law delegates enforcement power and duties to states,¹¹⁴ whereupon states and state officials, in their official capacities, can be held liable for failing to carry out their enforcement obligations.¹¹⁵

III. EUROPEAN “FEDERALISM” AND THE RENEWABLE ENERGY MANDATE

Much though it will understandably make an environmentally-minded American cringe to read, it is most definitely the European Union that has, as a legal matter—and also arguably at a cultural level—properly championed environmental responsibility.¹¹⁶ Not only does it have emission trading, energy efficiency standards, carbon capture and sequestration incentives, renewable energy sourcing requirements, and a multiplicity of pollution controls, but its efforts descend as far into minutia as targeted ecodesign parameters and specific recycling for individual products.

This breadth and depth notwithstanding, the poster child of European environmental policy is still the overarching commitment to a reduction in overall GHG emissions by 20% (relative to 1990 levels) by 2020,¹¹⁷ which the European Union is now contemplating

American federal environmental law).

114. See, e.g., Clean Water Act, 33 U.S.C. § 1319(g)(6) (2006); see also Julia A. Glazer, *The Clean Water Act Enforcement Provision: What Constitutes Diligent Enforcement Under Comparable State Law*, 23 N. KY. L. REV. 129, 129 (1995).

115. 33 U.S.C. § 1319(g)(6); Glazer, *supra* note 114, at 129; L.A. Dehihns, III, *Defining and Implementing Effective Federal/State Local Relationships: The U.S. Experience*, INT’L NETWORK FOR ENVTL. COMPLIANCE AND ENFORCEMENT, <http://www.inece.org/1stvol1/dehihns.htm> (last visited Jan. 11, 2013).

116. See, e.g., Avery Fellow, *U.S. Companies Lagging Behind European Counterparts on Sustainability*, Report Says, BLOOMBERG (May 4, 2012), http://news.bna.com/ieln/IELNWB/split_display.adp?fedfid=26004912&vname=inernotallissues&fn=26004912&jd=26004912&lf=eml&emc=ieln:ieln:110; see also Atle Midttun, *The Greening of European Electricity Industry: A Battle of Modernities 3* (2012) (unpublished manuscript), available at <http://www.bi.edu/CenterFiles/Centre%20for%20Corporate%20Responsibility/Green%20Growth%2016.03.2012/20120315%20The%20greening%20of%20European%20electricity.pdf?epslanguage=en> (describing Europe as a “green hegemon on the global arena”).

117. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions*, at 11, COM (2008) 13 final (Jan. 23, 2008); *Proposal for Directive of the European Parliament and of the Council Amending Directive 2003/87/EC so as to Improve and Extend the Greenhouse Gas Emission Allowance Trading System of the Community*, at 2, COM (2008) 16 final (Jan. 23, 2008); *Proposal for a Decision of the European Parliament and of the Council on the Effort of Member States to Reduce Their Greenhouse Gas Emissions to Meet the Community’s Greenhouse Gas Emission Commitments Up to 2020*, at 2, COM (2008) 17 final (Jan. 23, 2008); *Proposal for a Directive of the European Parliament and of the Council on the Geological Storage of Carbon Dioxide and Amending Council Directives 85/337/EEC, 96/61/EC, Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC and Regulation (EC) No 1013/2006*, at 2, COM (2008) 18 final (Jan. 23, 2008); *Proposal for a Directive of the European Parliament and of the Council on the Promotion of the Use of Energy from Renewable*

increasing to a goal of 30%.¹¹⁸ Energy plays a big role in both the problem and the solution: “Energy accounts for 80% of all greenhouse gas (GHG) emission in the EU; it is at the root of climate change and most air pollution.”¹¹⁹ Tackling energy issues specifically—in terms of shifting to renewable sources (supply-side focus), as well as increasing energy efficiency and reducing energy consumption (demand-side focus)—has accordingly been a primary focus, but it is actually merely a “part[] of the package of measures needed to reduce greenhouse gas emissions” and thereby combat climate change.¹²⁰ The cohesive climate and energy package uses energy efficiency and clean energy sourcing to achieve overall GHG emissions targets,¹²¹ and is familiarly referred to as the 20-20-20 Plan.¹²² However, for the purposes of this Article, only Directive 2009/28/EC on the Promotion of the Use of Energy from Renewable Sources (“Renewable Energy Directive” or “the Directive”),¹²³ which enacted the European Union’s binding clean energy thresholds for Member States, will be explored, as it serves both as an example of European climate change legislation and as a model of legislation that could overcome American constitutional and political obstacles to achieving a comprehensive climate change law itself.

Below, Subsection III.A outlines the quasi-federalist structure of the European Union, and Subsection III.B details the European Union’s climate change policy with a firm focus on the renewable energy mandate. Drawing upon the discussion of American federalism and politics in Sections I and II above, Section IV then explains why this legislative regime is such a potentially potent model for the United States, analyzing the constitutionality, the efficacy and the political palatability of an American federal renewable energy mandate and GHG emissions reduction scheme.

Sources, at 2, COM (2008) 19 final (Jan. 23, 2008); see also *Greenhouse Gas Control Policies in the European Union*, *supra* note 24,.

118. Press Release, European Union, Climate Change: Questions and Answers on the Communication Analysis of Options to Move Beyond 20% Greenhouse Gas Emission Reductions and Assessing the Risk of Carbon Leakage, MEMO/10/215 (May 26, 2010).

119. *Communication from the Commission to the European Council and the European Parliament: An Energy Policy for Europe*, at 3, COM (2007) 1 final (Oct. 1, 2007).

120. Renewable Energy Directive, *supra* note 26, at 16.

121. *Id.*

122. *The EU Climate and Energy Package*, EUR. COMMISSION, http://ec.europa.eu/clima/policies/package/index_en.htm (last updated Sept. 10, 2012).

123. *Id.*

A. *The European Union's Form of "Federalism"*¹²⁴

Unlike U.S. states, European Member States are sovereign nations, but they have delegated certain powers by agreement to a centralized government—the European Union. At its most simplified, the European Union is built on three principles: supranationalism, intergovernmentalism, and subsidiarity.¹²⁵ The first two are both linked and generally opposing; supranationalism is the joining together of sovereign nations under an umbrella authority to which agreed upon powers are given, or with which they are shared, and intergovernmentalism is the principle that decision making at that umbrella level is the combined decision making of the component governments, rather than that of an autonomous higher authority.¹²⁶ The relationship between the Member States is thus inherently collaborative, periodic disputes notwithstanding. The subsidiarity principle, on the other hand, essentially advises that governance should take place at the most local level, with higher levels of government, such as the European Union, taking a subsidiary role in governance and governing.¹²⁷ These fundamental principles make for an equilibrium, if a delicate and evolving one, between the authority of the European Union and the sovereignty of the twenty-seven (soon to be twenty-eight with the accession of Croatia) European Member States, and they are preserved in the various E.U. treaties, most recently the Lisbon Treaty.¹²⁸

The European Union is thus very much a creature of statute, more so than a country whose government is limited by a constitution, because that country would exist just as fully without its constitution whereas there is no European Union absent the Member States' agreement to submit in part to a communal government.¹²⁹ The supranational European Union is limited to acting within its areas of competence, as provided for in the treaties

124. "Federalism" is not a welcomed term in many discussions of European Union structure or functioning, but it is nonetheless an apt descriptor. Cf. Thomas C. Fischer, Commentary, *An American Looks at the European Union*, 19 EMORY INT'L L. REV. 1489 (2005) (comparing American and European federalism).

125. See D. Urwin, *The Community of Europe*, in EU LAW: TEXT, CASES, AND MATERIALS 7, 25 (Paul Craig & Grainne de Burca eds., 4th ed. 2008).

126. See *id.* at 7-35 (detailing the history of tension between these two concepts). See generally Bóka Evá, Discussion Paper: Rethinking European Supranationalism in a Historical Perspective (2008) (unpublished manuscript), available at <http://www.ivan-herman.net/Eva/2008/DiscussionPaper.pdf>.

127. See generally Giuseppe Martinico, *Dating Cinderella: On Subsidiarity as a Political Safeguard of Federalism in the European Union*, 17 EUR. PUB. L. 649-50 (2011).

128. Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community, Dec. 13, 2007, 2007 O.J. (C 306) 1 [hereinafter Treaty of Lisbon].

129. *Id.*

that established it.¹³⁰ Competence over environmental policy was formally granted to the Union in 1986 via the Single European Act.¹³¹ Energy policy competence, however, long remained a matter of arguing that internal market powers—those that arose from the original economic integration thrust of European unification, are necessary to achieve economic integration, and which are comparable to the U.S. Commerce Clause in their general purpose and flexibility—extended to energy policy.¹³² It was not until the Treaty on the Functioning of the European Union (“TFEU”)¹³³ was amended in 2009 by the Lisbon Treaty that a distinct competence was added to European Union charter legislation to allow for its authority over energy matters. Since the Lisbon Treaty took force in 2009, Article 191 of the TFEU provides for competence to legislate concerning environmental affairs,¹³⁴ and Article 194 grants competence over energy governance.¹³⁵ However, both arenas of authority are curbed by the power and autonomy retained by Member States: Article 193 permits more stringent environmental measures than Community law prescribes,¹³⁶ and Article 194(2) preserves national sovereignty over “the conditions for exploiting . . . energy resources, [the] choice between different energy sources and the general structure of . . .

130. *Id.*

131. *The Single European Act*, EUR. COMMISSION, http://europa.eu/legislation_summaries/institutional_affairs/treaties/treaties_singleact_en.htm (last updated Oct. 26, 2010).

132. Gerda Falkner, *EU Policies in the Lisbon Treaty: A Comparative Analysis* 11 (Inst. for European Integration Research, Working Paper No. 03/2008), available at <http://eif.univie.ac.at/downloads/workingpapers/wp2008-03.pdf> (stating that the EU’s energy policy revolved around other objectives and policy areas for more than fifty years); CLIENTEARTH, *THE IMPACT OF THE LISBON TREATY – AN ENVIRONMENTAL PERSPECTIVE* 19 (2010), available at <http://www.clientearth.org/reports/clientearth-briefing-lisbon-treaty-march-2010.pdf> (explaining that EU’s energy policy objectives included the “functioning of the energy market” and the promotion of efficient and renewable forms of energy).

133. Consolidated Version of the Treaty on the Functioning of the European Union art. 15, Sept. 5, 2008, 2008 O.J. (C 115) 47 [hereinafter TFEU].

134. *Id.* at 132-33.

135. *Id.* at 134-35 (“1. In the context of the establishment and functioning of the internal market and with regard for the need to preserve and improve the environment, Union policy on energy shall aim, in a spirit of solidarity between Member States, to: (a) ensure the functioning of the energy market; (b) ensure security of energy supply in the Union; (c) promote energy efficiency and energy saving and the development of new and renewable forms of energy; and (d) promote the interconnection of energy networks. 2. . . . Such measures shall not affect a Member State’s right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply, without prejudice to Article 192(2)(c).”).

136. *See id.* at 134 (“The protective measures adopted pursuant to Article 192 shall not prevent any Member State from maintaining or introducing more stringent protective measures.”).

energy supply.”¹³⁷ The result is akin to concurrent jurisdiction in these areas.

The European Union’s own relatively strict doctrine of nondelegation of legislative discretion, known as the Meroni Doctrine, has also impacted this carefully negotiated balance of distinct or shared powers.¹³⁸ The Doctrine is named after the famous (or infamous) 1958 case decided by the Court of Justice for the European Communities (“ECJ”),¹³⁹ *Meroni & Co. Industrie Metallurgiche SpA v. High Authority of the European Coal & Steel Community*,¹⁴⁰ which, in addition to setting down strict criteria for the type of agency to which authority can be delegated, essentially held that there can be no “transfer of responsibility” in a delegation.¹⁴¹ In other words, the European Commission cannot delegate law-making authority, i.e., any “discretionary power,” to an agency, because the institutional balance of power between Member States and the European Union is a delicate and negotiated one that cannot be cast aside without formal amendment of the Union’s treaties.¹⁴² “[C]learly defined executive powers” may, however, be permissibly delegated.¹⁴³ This means that while a European agency can be tasked with implementing legislation it can never make law via regulations or standards, unlike a U.S. regulatory agency, because that is a discretionary legislative activity.

As explained by Professor Robert Schütze, this delicate balance of power between the European Union and Member States “include[s] two tests. The first may be called the *national insufficiency test*. The Community could only act where the objectives of the proposed action could not be sufficiently achieved by the Member States.”¹⁴⁴ The second is “a *comparative efficiency test*,” whereby “[t]he Community should not act unless it could *better* achieve the objectives of the proposed action.”¹⁴⁵ As a theoretical matter, this maximizing of efficiency and effectiveness by localizing

137. *Id.* at 135.

138. See Stefan Griller & Andreas Orator, *Everything Under Control? The “Way Forward” for European Agencies in the Footsteps of the Meroni Doctrine*, 35 EUR. L. REV. 3, 15-21 (2010) (discussing the *Meroni Doctrine*).

139. The original official name of the ECJ was the Court of Justice for the European Communities. This was changed in the Treaty of Lisbon to the Court of Justice for the European Union. See Treaty of Lisbon, *supra* note 128, at 42. It is commonly referred to, however, as the European Court of Justice, or the “ECJ.”

140. Case 9/56, *Meroni & Co., Industrie Metallurgiche, S.p.A. v. High Auth. of the European Coal and Steel Cmty.*, 1958 E.C.R. 133.

141. *Id.* at 152.

142. *Id.*

143. *Id.*

144. ROBERT SCHÜTZE, FROM DUAL TO COOPERATIVE FEDERALISM: THE CHANGING STRUCTURE OF EUROPEAN LAW 250 (2009).

145. *Id.*

comparative advantages in the appropriate level of government should produce the best possible results, in the same way that perfect price discrimination should maximize profits absolutely.

As practical matter, of course, nothing is ever so simple, and in many situations European Member States have to be cajoled into agreement or greater haste, even concerning matters that have been expressly delegated to the European Union to govern. And even assuming agreement, enforcement and infringement actions are frequently required to bring recalcitrant national governments into minimum compliance.¹⁴⁶ A fair portion of infringement cases that are opened by the European Commission concern environmental noncompliance of various forms.¹⁴⁷

Judicial review and enforcement have also been critical and evolving issues in the European Union, with obvious ramifications for the balance of “federalism.” Article 260(2) of the TFEU, which the Lisbon Treaty amended, grants the European Commission the power to refer cases of ongoing Member State noncompliance to the ECJ following initial infringement proceedings.¹⁴⁸ The ECJ can then impose a “lump sum or penalty payment” judgment on the noncompliant Member State.¹⁴⁹ This financial penalty, though laborious to reach because of the various stages of a full infringement proceeding, is essentially the only concrete enforcement power the European Union has outside of the procedural bringing of infringement proceedings itself.¹⁵⁰ The power to seek lump sum sanctions and penalty payments was instituted in 2002 as part of the treaty revision process because the absence of any

146. See Brian Jack, *Enforcing Member State Compliance with EU Environmental Law: A Critical Evaluation of the Use of Financial Penalties*, 23 J. ENVTL. L. 73, 74 (2011) (noting that at the end of 2009, the European Commission’s Environment Directorate General had 451 open infringement cases against Member States for noncompliance with E.U. environmental obligations).

147. *Id.*

148. TFEU, *supra* note 133, at 161 (“1. If the Court of Justice of the European Union finds that a Member State has failed to fulfill an obligation under the Treaties, the State shall be required to take the necessary measures to comply with the judgment of the Court. 2. If the Commission considers that the Member State concerned has not taken the necessary measures to comply with the judgment of the Court, it may bring the case before the Court after giving that State the opportunity to submit its observations. It shall specify the amount of the lump sum or penalty payment to be paid by the Member State concerned which it considers appropriate in the circumstances. If the Court finds that the Member State concerned has not complied with its judgment it may impose a lump sum or penalty payment on it.”).

149. *Id.*

150. See Jack, *supra* note 146, at 94 (“In giving the Court power to enforce compliance with its judgments, the Treaty on [sic] European Union finally closed a long running legal vacuum in EU law.”); see also EU LAW: TEXT, CASES, AND MATERIALS, *supra* note 125, at 428-59 (discussing the full enforcement procedure and availability of penalties in the European Union).

hard compliance inducing mechanism was recognized to be a huge problem in European law.¹⁵¹

*B. The European Union's Climate Change Policy and Renewable Energy Mandate*¹⁵²

From the perspective of the United States, what makes the European Union's climate change policy, the 20-20-20 Plan, instructive is that it balances "federal" and "state" authority in a way that this Article argues could well serve as a blueprint for America's own tackling of climate change and renewable energy within the context and confines of American federalism. The Renewable Energy Directive, which entered into force on April 23, 2009, is only one of the 20s in that Plan, but it illustrates the European approach sufficiently for the purposes of this analysis to be considered by itself.

The structure of the Renewable Energy Directive, both standing alone and as operating within a quasi-federalist—i.e., supranational and intergovernmental—government, is notable for its flexibility. Such flexibility is somewhat typical (though to lesser degrees in most other contexts) of the European Union's approach to intergovernmental governance,¹⁵³ and is likely the hallmark of a lack of the full enforcement power enjoyed by a proper federal government as well as the Member State sovereignty over environmental and energy matters enshrined in Articles 193¹⁵⁴ and 194¹⁵⁵ of the TFEU, respectively.

The Directive operates by setting binding targets for energy from renewable sources¹⁵⁶ for each Member State to achieve for their

151. Jack, *supra* note 146, at 94.

152. The Renewable Energy Directive is treated in this Article as though it is exclusively concerned with the 20% European Union target renewable energy share, and the corresponding Member State renewable energy targets. The Directive, however, also sets a 10% target for all Member States for the percentage of renewable energy sourcing in transport. *See* Renewable Energy Directive, *supra* note 26, at 17. This is ignored herein because, though the transportation target is valuable for environmental reasons, analysis of it would follow the exact same course as analysis of the 20% target.

153. There are numerous European directives and regulations that incorporate an element of flexibility for Member States to employ in implementing the legislation.

154. TFEU, *supra* note 133, at 134 ("The protective [environmental] measures adopted pursuant to Article 192 shall not prevent any Member State from maintaining or introducing more stringent [environmental] protective measures. Such measures must be compatible with the Treaties. They shall be notified to the Commission.").

155. *Id.* at 134-35.

156. The definition of "energy from renewable sources" is "energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases." Renewable Energy Directive, *supra* note 26, at 27.

percentage of overall national energy consumption¹⁵⁷—ranging from a 10% renewables share in Malta to 49% in Sweden—which collectively will lift the average renewable share across the European Union to approximately 20% by 2020.¹⁵⁸

The reason for the different targets for each Member State is stated to be that “[t]he starting point, the renewable energy potential and the energy mix of each Member State vary.”¹⁵⁹ Specifically, the total 20% was shared between “Member States on the basis of an equal increase in each Member State’s share weighted by their GDP, modulated to reflect their starting points, and by accounting in terms of gross final consumption of energy, with account being taken of [each] Member States’ past efforts with regard to the use of energy from renewable sources.”¹⁶⁰ Of course, politics and intensive negotiations are another factor to which some of the individual national targets can be attributed.

Under the Renewable Energy Directive each Member State is obligated to “introduce measures effectively designed to ensure that the share of energy from renewable sources equals or exceeds” their national targets.¹⁶¹ Yet the Directive leaves a huge amount of decision making to Member States themselves. For example, they may exceed the targets,¹⁶² they may opt to encourage use of other Member States’ renewable energy to achieve their own targets or enter into joint projects,¹⁶³ and most importantly, it is entirely up to them which “support scheme” they use to implement the Directive.¹⁶⁴ Member States may employ

[A]ny instrument, scheme or mechanism . . . that promotes the use of energy from renewable sources by reducing the cost of that energy, increasing the price at which it can be sold, or increasing, by means of a renewable energy obligation or otherwise, the volume of such energy purchased. This includes, but is not restricted to, investment aid, tax exemptions or reductions, tax refunds, renewable energy obligation support schemes including those using green certificates, and direct price support schemes including feed-in tariffs and premium payments.¹⁶⁵

Additionally, the type or types of renewable energy to be promoted is up to Member States’ own determination.¹⁶⁶ For some,

157. *Id.* at 28.

158. *See id.* at 28, 46-47.

159. *Id.* at 18.

160. *Id.*

161. *Id.* at 28.

162. *Id.*

163. *Id.*

164. *Id.*

165. *Id.* at 27.

166. *Id.* at 28.

solar might be the best option, whereas others might find wind or hydrothermal to be better choices. Of course, this flexibility to determine national energy sourcing complies with Article 194 of the Lisbon Treaty, which provides in pertinent part that E.U. policies not “affect a Member State’s right to determine the conditions for exploiting its energy resources, its choice between different energy sources and the general structure of its energy supply.”¹⁶⁷

Thus, targets are to be realized through means selected by each Member State itself and reported to the European Commission in a “national renewable energy action plan” (“NREAP”), all of which were due by June 30, 2010.¹⁶⁸ Updated progress reports are due every two years, and ad hoc reports are due if a Member State falls behind its target attainment trajectory.¹⁶⁹ These trajectories are intended to provide Member States with guidance in their efforts and pace, and are used as benchmarks to ensure that any country falling behind can be brought up to compliance speed in time to meet the 2020 deadlines. Most of the financing for renewable energy development and infrastructure projects came, and is to come, from the private sector, though there are European public funds and financial programs that may contribute, such as the European Union’s Strategic Energy Technology Plan.¹⁷⁰

The Directive sets down various rules for calculating renewable energy shares and GHG emissions, but consistent with the European Union’s general lack of enforcement power over the sovereign Member States, it does not provide for enforcement by the European Commission save for the ability to “if appropriate, propose corrective action”¹⁷¹ when a Member State falls behind. Member States have domestic enforcement power, of course, to ensure that their citizens are complying with their obligations under national law’s implementation of the Renewable Energy Directive, but the European Union cannot enforce national law. Of course, the European Commission can institute infringement proceedings for noncompliant Member States, but the process is cumbersome and procedurally heavy.¹⁷² And the number of infringement proceedings

167. TFEU, *supra* note 133, at 134-35.

168. Renewable Energy Directive, *supra* note 26, at 28-29. See *National Renewable Energy Action Plans*, EUR. COMMISSION, http://ec.europa.eu/energy/renewables/action_plan_en.htm (last visited Jan. 11, 2013), for a full collection of Member State NREAPs.

169. Renewable Energy Directive, *supra* note 26, at 28-29.

170. See CILLIAN DONNELLY ET AL., ENDS EUROPE, RENEWABLE ENERGY EUROPE 8 (Natia Weekes ed., 2010), available at <http://www.ends europe.com/docs/100930a.pdf>.

171. Renewable Energy Directive, *supra* note 26, at 42-43.

172. See Stuart Hohnen, *The 2009 EU Renewables Directive—How Binding is “Binding”?*, EU ENERGY POLICY BLOG (Sept. 13, 2010), <http://www.energypolicyblog.com/2010/09/13/the-2009-eu-renewables-directive->

that have been initiated indicate the compliance, and therefore enforcement, problem: since the Renewable Energy Directive took force on April 23, 2009, the European Commission has brought infringement actions against Greece, Italy, Poland, Finland, France, and the Czech Republic, almost a quarter of the countries in the European Union.¹⁷³

In spite of the lack of enforcement power—or, indeed, the need for enforcement—the Renewable Energy Directive has been a strong success. The targets have and will continue to contribute to decreasing the European Union’s dependence on imported energy and to reducing greenhouse gas emissions. In fact, all Member States are expected to achieve their targets, and sixteen are anticipated to exceed them: Austria, Bulgaria, the Czech Republic, Denmark, France, Germany, Greece, Hungary, Latvia, Malta, the Netherlands, Poland, Slovenia, Slovakia, Spain, and Sweden.¹⁷⁴ Cumulatively, Europe foresees exceeding the 20% renewable energy goal by as much as 4%.¹⁷⁵

The environmental benefits are, of course, tremendous, but the European Union can also boast job growth, technological innovation, increased energy security, and in the long run, probably lower energy prices too. And this has been achieved without command-and-control federal regulation or the power to order Member States toward specific national energy policies, or indeed, the ability to force them to comply, save for wielding financial penalties and embarrassment.¹⁷⁶

IV. USING THE EUROPEAN UNION’S RENEWABLE ENERGY MANDATES AS A BLUEPRINT FOR AMERICAN CLIMATE CHANGE LEGISLATION

Climate change cannot be addressed either by the federal government acting alone or the multitude of state and local governments acting independently. It simply will not work; the federal government is ill-equipped to micromanage at a state and local level in the way necessary to sufficiently reduce GHG

[%E2%80%93how-binding-is-%E2%80%98binding%E2%80%99/\(explaining](#) the problem of weak enforcement options for the Renewable Energy Directive and summarizing the traditional EU enforcement options for noncompliant Member States).

173. See *Enforcing EU Energy Law*, EUR. COMMISSION, http://ec.europa.eu/energy/infringements/proceedings/renewables_en.htm (last visited Jan. 11, 2013 (listing all infringement actions)).

174. EUROPEAN RENEWABLE ENERGY COUNCIL, MAPPING RENEWABLE ENERGY PATHWAYS TOWARDS 2020, at 6 (2011) [hereinafter EREC], available at http://www.repap2020.eu/fileadmin/user_upload/Roadmaps/EREC-roadmap-V4_final.pdf; see also DONNELLY ET AL., *supra* note 170, at 2.

175. EREC, *supra* note 174, at 12.

176. DONNELLY ET AL., *supra* note 170, at 12.

emissions, and state and local governments are definitionally unable to regulate the conduct of other states, their component parts, or the behavior of their citizens.¹⁷⁷ Moreover, notwithstanding broad environmental legislation that has passed constitutional muster in the past, e.g., the Clean Air and Water Acts, comprehensive climate change legislation—including renewable energy mandates—will necessarily be so broad and affect so many aspects of socioeconomic life that constitutional challenges are inevitable.¹⁷⁸ And those constitutional challenges will have greater merit by virtue of the sweeping scope of any future climate change legislation. Furthermore, a substantial percentage of the American populace is unlikely to accept congressional intervention at a local level—which is necessary to combat climate change—for a global problem that does not have immediate, tangible, and visible effects locally.¹⁷⁹ Taking these issues in hand, this section of this Article proposes U.S. climate change legislation based on the European Unions' flexible renewable energy mandates, and explores why the European approach could serve as a blueprint for a U.S. Climate Change Law that would be (1) constitutional, (2) effective, and (3) politically viable.

A. *Constitutionality*

As explained above, a U.S. Climate Change Act will necessarily need to fall within the enumerated powers of Congress to survive constitutional challenges. Thus, the first question is whether the Commerce Clause extends to cover such a broad federal statute, and second, failing that, whether it could be achieved under the Spending Clause.

The Commerce Clause is not controversial in its authorization of Congress's activity in the environmental zone as a general matter.¹⁸⁰

177. This is by no means a novel observation. Numerous commentators have discussed the need for a federal-state partnership to tackle renewable energy and climate change concerns. See, e.g., Adler, *supra* note 47, at 172-73 ("cooperative federalism"); Osofsky, *supra* note 33, at 80-83 ("diagonal," "multiscalar," or "dynamic" federalism); Sovacool, *supra* note 2, at 397-98 ("interactive federalism"); Kaswan, *supra* note 33, at 814 ("cooperative federalism"); Snyder & Binder, *supra* note 33, at 246-47 ("collaborative partners"); Carlson, *supra* note 33, at 1099 ("iterative federalism"); Doremus & Hanemann, *supra* note 33, at 800 ("cooperative federalism"). See generally Robert D. Cooter & Neil S. Seigel, *Collective Action Federalism: A General Theory of Article I, Section 8*, 63 STAN. L. REV. 115 (2010) (discussing constitutionally permissible collective action federalism).

178. See ADLER, *supra* note 23, at 1-2.

179. Adler, *supra* note 47, at 134-37.

180. See, e.g., Farber, *supra* note 33, at 914 ("It would be especially ironic to decide that some aspects of the climate change problem were outside of federal jurisdiction."). But see Tanabe, *supra* note 83, at 1053 ("The next decade will be challenging for federal environmental law in light of the Supreme Court's recent federalism

The ongoing strength of the CAA, CWA, CERCLA, and others in American environmental law is itself *prima facie* evidence that the federal government can legislate constitutionally in this area. With respect to climate change, however, the primary complication from a constitutional perspective will be the sheer breadth of any such legislation, regulating, as it must, many or most aspects of society at least indirectly. To be effective, it will have to control our travel, migration, and transportation; our food production, location, and consumption; our product development, manufacture, and disposal; not to mention instituting a host of reporting and other informational requirements that will be necessary to monitor the Climate Change Act's progress and intended and unintended consequences.¹⁸¹ This breadth and precision will run the risk of regulating activities that, while clearly affecting climate change and therefore interstate commerce, lack the sufficient nexus with economic activity to fall within Commerce Clause reach.

However, it is important to note that expansive and imposing U.S. environmental legislation requiring state cooperation has successfully been enacted at the federal level before; the Clean Air Act¹⁸² is the most prominent example.¹⁸³ Whereas most broad environmental laws had operated essentially as “command-and-control” legislation—i.e., mandatory environmental standards imposed by the federal government—the CAA “focused on aggregate emissions levels rather than individual sources, placed an aggregate cap on emissions of pollutants such as sulfur dioxide and nitrogen oxide, and gave polluters extensive flexibility in choosing whether and how to reduce emissions from specific sources, allowing them to trade pollution credits among each other.”¹⁸⁴ More importantly for the purposes of this Article, the CAA set national ambient air quality standards by setting limits for stationary and mobile air pollution sources, and for ozone, which states implemented through policies of their own choosing.¹⁸⁵ And the CAA has been upheld not only as constitutional, but as one of the greatest success stories in environmental law.¹⁸⁶ In keeping, a U.S. Climate Change Act that resembles the European Renewable Energy Directive would likely be

decisions.”).

181. See generally Richard S. J. Tol, *The Economic Effects of Climate Change*, 23 J. ECON. PERSPECTIVES 29 (2009), available at <http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.23.2.29>.

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

183. See Osofsky, *supra* note 33, at 81-82 (“[T]he [CAA] has long served as an example in scholarly and policy federalism discourse—the regulatory demands posed by climate change raise critical issues about the future of multiscalar governance.”).

184. Sovacool, *supra* note 2, at 413.

185. §§ 7401-7671q.

186. See, e.g., Sunstein, *supra* note 83, at 307.

constitutional if it set standards at the national level and then left states to implement them via their own policies.

In addition to the strong arguments about the effects of climate change on interstate commerce, which will mirror and expand upon the rationale supporting the CAA, and which themselves will likely justify congressional climate change action, one Commerce Clause justification for federal control over the climate change legal arena is that, given the depth and breadth such legislation will need to be effective, it is necessary to prevent confusion and instability amongst the states in the form of discordant laws.¹⁸⁷ “In a unified national economy,” such as the United States, “the existence of a multitude of differing state environmental laws can impede the flow of commerce, imposing costs not only on consumers in the regulating jurisdiction but on consumers and firms elsewhere.”¹⁸⁸ Consistency is necessary to protect interstate commerce, and the Supreme Court has recognized this to be a valid reason for congressional action that preempts states from meddling in the same area of regulation.¹⁸⁹ This is not to say that different states cannot have different approaches to a problem, as the CAA shows us, and much like the different European member States. But the federal government ought to prevent one state from offloading its environmental externalities onto another state by requiring that they be addressed internally. This is what a flexible mandate for GHG emissions and/or renewable energy sourcing would accomplish; it would level the national playing field while leaving policy making up to states.

There is the possibility that the parts of a climate change statute that seek to regulate all aspects of economic and social behavior that contributes to GHG emissions would be struck down as beyond the Commerce Clause’s purview. For example, the federal government cannot reach so far into local affairs as to ban the use of wood burning fireplaces in private homes, even though that activity produces GHG emissions.¹⁹⁰ Under Supreme Court doctrine, this would clearly be outside Congress’ power to regulate interstate commerce or things that affect such commerce.¹⁹¹ Nor could Congress force states to institute such a law without running afoul of the anti-commandeering parameters on federal legislation.¹⁹² The Renewable Energy Directive’s flexible mandate approach would protect a U.S. Climate Change Act against this concern without compromising the

187. Farber, *supra* note 33, at 896-900.

188. *Id.* at 892.

189. *See* *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824); Kaswan, *supra* note 33, at 802.

190. Farber, *supra* note 33, at 913.

191. *Id.*

192. *Id.* at 914.

efficacy of the law as a GHG emissions reduction instrument, however, because it would be left up to states to choose and craft measures regulating such localized activity.¹⁹³

Also, whereas the Nondelegation Doctrine may be at issue if Congress instructs the EPA, or another subordinate institution or government, to *take measures to combat climate change, or increase their renewable energy sourcing percentage*, if the U.S. Climate Change Act follows the European Renewable Energy Directive there should be no problems of over-delegation. As long as the Act includes an “intelligible principle” that guides those implementing the law, it will pass constitutional muster.¹⁹⁴ The Directive includes set national mandates per Member State, gives each a trajectory with which to guide and measure their progress, specifies what constitutes renewable energy and how it should be valued and measured, and requires that they submit NREAPs for approval and monitoring by the European Commission.¹⁹⁵ In the United States, the CAA shares many of these traits, and climate change legislation could include the remainder.¹⁹⁶ Thus, for example, it could also dictate what constitutes renewable energy sourcing, how to measure GHG emissions and emission reductions, and what kind of financial incentive support systems can be put in place to nudge industry and individuals toward innovation and compliance. Moreover, a firm state-by-state target on either GHG emission reductions or renewable energy sourcing would arguably in-and-of itself constitute the requisite intelligible principle.¹⁹⁷

Finally, the U.S. Climate Change Act, like the Renewable Energy Directive in Europe, need not preempt additional state environmental action. Article 193 of the TFEU permits European Member States to take more stringent environmental measures than Community law requires,¹⁹⁸ and American climate change legislation can and should leave states the discretion to exceed the flexible mandate targets set at the federal level. Not only does this help to preserve state sovereignty in the U.S. federal system, but it also permits states to continue acting as laboratories for policies. The CAA itself grew out of a California initiative that sought to curb pollution in that state, and California’s right to diverge from the CAA has been preserved as a consequence.¹⁹⁹ If U.S. states, like European

193. *See id.* at 913-14.

194. *See* Sunstein, *supra* note 83, at 330-31.

195. Renewable Energy Directive, *supra* note 26, at 27-29.

196. *See* 42 U.S.C. § 7407 (2006) (detailing the process through which “nonattainment areas” are to reach “attainment”).

197. *See* Sunstein, *supra* note 83, at 330-31.

198. TFEU, *supra* note 133, at 134.

199. *See, e.g.*, Carlson, *supra* note 33, at 1109-28 (detailing the history of California’s clean air legislation); Engel, *Initiatives*, *supra* note 33, at 1017 (discussing

Union Member States, are permitted to innovate and experiment, they may well generate substantial breakthroughs in climate change science and technology. However, it must be remembered that Congress may constitutionally preempt state action where it deems such a strong approach necessary to achieve its legitimate policy goals.²⁰⁰

Second, returning to the wood burning fireplace example, even if Congress failed to constitutionally justify this requirement as a federal law, and given that it cannot force states to adopt it directly, it could nonetheless incentivize states to enact it through its Spending Clause power.²⁰¹ In this way, the federal government could nudge states, local governments, companies, and individual towards climate-friendly behavior if necessary.²⁰² But the value of the European Renewable Energy Directive as a template for American climate change legislation is that such micromanagement by the federal government is entirely avoided. The hypothetical Climate Change Act itself could be incentivized through financial conditions and funding, however. Thus, the federal government could match state renewable energy infrastructure funds conditional upon states submitting the U.S. equivalent of NREAPs on time, or hitting certain interim GHG emissions reduction targets, or instituting stringent vehicle emissions standards.

In sum, the combination of the firm top-down targets and the full flexibility as to implementation that the Renewable Energy Directive combines could be a very useful model for the United States to follow. It would protect states' rights and sovereignty, while working within the bounds of congressional authority under the Constitution.

B. Efficacy

Whether U.S. climate change and renewable energy legislation, modeled on the European Union's, works can be considered from the perspective of legislative and compliance success and also from that of scientific and environmental success. Both will, of course, have a great deal to do with the ways in which states implement the Climate Change Act, as well as the ability of the federal government to enforce compliance.

First, and simply, the legal efficacy of binding but flexible federal emissions and renewable energy mandates should be total, given the power of the Supremacy Clause, and the evidence that the relevant history of the CAA provides. Once enacted—assuming that its taking

California's continuing tendency to have stricter pollution standards than the CAA).

200. See *Rice v. Sante Fe Elevator Corp.*, 331 U.S. 218, 230 (1947).

201. See Farber, *supra* note 33, at 913-14; U.S. CONST. art. I, § 8, cl. 1.

202. See Farber, *supra* note 33, at 913-14 (explaining ways the federal government may encapsulate state activities into a federal scheme).

effect is not unduly delayed by constitutional challenges—states will not have the option of not complying with the provisions thereof because the American Constitution gives the federal government a legislative trump power. By way of precedent, the CAA was enacted in 1963, and while it has weathered a few court battles,²⁰³ it has been a rampant success.²⁰⁴ In 2000, a peer-reviewed study concluded that the CAA accrued \$22 trillion in benefits in its first twenty years in force.²⁰⁵ The EPA figures suggest that the CAA saves 45,000 lives per year.²⁰⁶ These days, few claim that the CAA is not well within Congress's Commerce Clause power, and state compliance is visible. In the case of noncompliance, the EPA has the power under the CAA to revoke the delegation of decision-making authority to the state and assume control of the state implementation program.²⁰⁷ A comparable scheme to the European Renewable Energy Directive would share structural and outcome similarities to the CAA, and both would be the enforceable supreme law of the land.

Second, regarding scientific and environmental efficacy, Professor Schütze's explanation of European federalism as balancing respective advantages of competency by including two tests, the national insufficiency and the comparative efficiency tests,²⁰⁸ applies equally to the United States' form of federalism. As American commentators have noted, "[a] federal constitution ideally gives the central and state governments the power to do what each does best Congress is not generally better at regulating economic activity, and the states are not generally better at regulating noneconomic activity."²⁰⁹ Climate change is, of course, both economic and noneconomic; the causes are a product of economic activity and industrialization, and the problem is inherently noneconomic. The ensuing "collective action problem"²¹⁰ thus requires a multiscalar, multijurisdictional approach, such as the European Union's Renewable Energy Directive.

However, in Europe, the *Meroni* Doctrine prevents a multiscalar

203. See, e.g., *Whitman v. Am. Trucking Ass'ns, Inc.*, 531 U.S. 457, 462 (2001); *Am. Trucking Ass'ns v. EPA*, 175 F.3d 1027 (D.C. Cir. 1999) (per curiam).

204. See Lisa Heinzerling, *The Clean Air Act and the Constitution*, 20 ST. LOUIS U. PUB. L. REV. 121, 121-22 (2001) (detailing the successes of the CAA); Sunstein, *supra* note 83, at 307-09 (same).

205. Heinzerling, *Clean Air Act*, *supra* note 204, at 121-22.

206. Sunstein, *supra* note 83, at 307.

207. 42 U.S.C. § 7413 (2006); 40 C.F.R. § 67.15 ("If the Administrator determines that a State with a program approved under § 67.13 is not administering the program in conformity with the requirements of the Act . . . he shall withdraw the delegation of authority to the State.").

208. See Schütze, *supra* note 144, at 250.

209. Cooter & Seigel, *supra* note 177, at 118.

210. *Id.*

approach that involves any more than the two layers of government, the Member States and the European Union, because intermediary federal agencies are not permitted to exercise discretionary authority.²¹¹ In the United States, by contrast, Congress can tell the EPA that it wants a clean and healthy environment via good air quality, and then the EPA can determine—with great deference from courts when exercising its discretion—what the terms “healthy environment” and “good air quality” mean and what the best way of achieving them is.²¹² The EPA, as an expert institution, is obviously better positioned to set those definitions and standards than a federal legislative body. In the European Union, such standard setting, including permissible pollution levels, cannot generally be delegated to an agency because it is not a mere executive power, but rather involves discretionary legislative action.²¹³ So, if the Renewable Energy Directive successfully manages to harness the comparative advantages of both the European Union and its Member States to tackle climate change, a comparable but even more precise division of labor and expertise in a U.S. Climate Change Act ought to similarly maximize efficiency and effectiveness.

In fact, the United States’ form of federalism may well render a flexible European Union-styled approach to state-federal climate change legislation *more* effectively in the United States than it has been under European Union federalism. This is because, as discussed above, the European Union lacks proper enforcement ability—i.e., it can sanction member states with infringement proceedings and penalty payments for failure to comply with Community law, but methods of implementation and enforcement of the substance of directives rest upon the discretion of Member States themselves as sovereign entities.²¹⁴ Indeed, this weakness in the European Union governmental system is a primary point of criticism for commentators analyzing the efficacy of European federalism.²¹⁵ In the United States, conversely, the federal government wields enforcement power through the EPA, backed up by the Department of Justice. Thus, not only can the federal government bring enforcement actions against states for failure to comply with federal law, but it can also sue state officials and, further, private entities, as it can under CERCLA.²¹⁶ Moreover, Congress can employ preemption

211. Griller & Orator, *supra* note 138, at 15-21.

212. See 42 U.S.C. §§ 7401, 7403 (2006).

213. See Griller & Orator, *supra* note 138, at 22-24.

214. Faure & Johnston, *supra* note 33, at 264-65, 272-73 (discussing the enforcement limitations of the European Union).

215. See, e.g., Jack, *supra* note 146, at 74-94; Ludwig Kramer, *Thirty Years of EC Environmental Law: Perspectives and Prospectives*, 2 Y.B. EUR. ENVTL. L. 155, 181-82 (2002).

216. See, e.g., 42 U.S.C. §§ 9601-9657 (2006).

power where necessary,²¹⁷ which provides a legal foundation of enforceability that the European Union lacks, especially in the environmental and energy contexts where the TFEU grants Member States considerable authority to set different or stronger domestic policies than Union-wide law sets.

Of course, however, enforcement is always a local affair; purely federal enforcement will be radically inadequate to accomplish the goals of overarching climate change legislation. As with the CAA, enforcement must also be a state and local concern, and ideally, the U.S. Climate Change Act will include citizen suit provisions akin to that in the CAA. Other commentators have catalogued the pros and cons of lower-level enforcement or regulation of environmental standards exhaustively, but a few facts are worth mentioning with specifics. State and local governments were historically the first to venture into the realm of environmental regulation.²¹⁸ The manpower disparity between state and local governments' environmental agencies compared to the EPA is massive. As of 2001, the EPA employed less than one-third of the 60,000 people working for its state and local counterparts.²¹⁹ And where states are tailoring their compliance regimes to fit the physical situation and economic needs of their own population, their officials are naturally in a far better position to assess, oversee, and enforce those regimes. In sum, if the European Union is on target to exceed its goal of sourcing 20% of its energy consumption from renewables,²²⁰ then the United States should have little trouble accomplishing the same once the mandate is enacted.

Additionally, the way in which the European Union has tailored the flexible mandates in the Renewable Energy Directive to fit the situation on the ground in each Member State will also be valuable in the United States because of the differences between the fifty U.S. states. For example, "while concentrations of GHGs may be relatively uniform throughout the planet's atmosphere, emissions of GHGs are not," and they are not consistent even between states.²²¹ The average Wyoming citizen produces approximately 90% more GHG than the average New Yorker.²²² And Wyoming is heavily coal dependent for

217. U.S. CONST. art. VI, cl. 2.

218. Adler, *supra* note 47, at 155-56 ("In the six years following publication of Rachel Carson's *Silent Spring*—arguably the book most responsible for awakening the nation's environmental consciousness—states with air pollution laws increased from sixteen to forty-six." (citations omitted)); Sovacool, *supra* note 2, at 400 ("Prior to the late 1960s, American environmental regulation consisted of a medley of state laws, local ordinances, and common law nuisance protections.").

219. Adler, *supra* note 47, at 156.

220. EREC, *supra* note 174, at 12.

221. Snyder & Binder, *supra* note 33, at 235.

222. *Id.*

its power generation and is landlocked, whereas New York has vast coastlines. New York, therefore, could curb its emissions and introduce more renewable energy by building wind farms at sea, whereas Wyoming might require nuclear capacity increases and carbon capture and sequestration expansion. The beauty of the European Union's approach, which would hold true when applied to the United States, is that such differences are built into the mandates themselves in the level at which they are set and in the flexibility granted to Member States to make these priority determinations themselves. This maximizes efficiency and effectiveness both in theory and in practice.

C. Political Palatability

American climate change legislation modeled on the European Union's Renewable Energy Directive will likely find safe passage through the perils of constitutional review in some form—i.e., the Spending Clause if not the Commerce Clause—as discussed above. But to become law it will have to be voted for by American politicians, which means it will have to be something the average American constituent can be made to support, or at least not vehemently oppose.²²³ Yet the consequences of climate change are clearly not sufficiently imminent or frightening to accomplish this; climate change “so far lacks the charismatic or terrifying images that give an issue ‘salience’—centrality and power in the public mind.”²²⁴ This means that in order to have the populace swallow the burden, the legislation will need to bestow tangible benefits at the state and local level that permit politicians to claim they are helping their constituents by voting for it and to which those constituents can attribute such benefits. As the Renewable Energy Directive illustrates, however, the beauty of a top-down flexible mandate is that local governments can tailor their compliance to generate local jobs and development, leaving environmental protection as a derivative benefit and giving politicians the ability to sell environmental legislation as good for the local economy.²²⁵

The opening paragraph of the preamble to the Renewable Energy Directive sets forth the justifications and benefits to be derived from the “control of European energy consumption and the increased use of energy from renewable sources,” which, “together with energy savings and increased energy efficiency, constitute important parts of the package of measures needed to reduce

223. Harrison & Sundstrom, *supra* note 33, at 6 (“An important motive for a politician in any democracy is that of re-election.”).

224. Purdy, *supra* note 33, at 1134.

225. See Renewable Energy Directive, *supra* note 26, at 16.

greenhouse gas emissions . . .”²²⁶ These factors, it continues, “have an important part to play in promoting the security of energy supply, promoting technological development and innovation and providing opportunities for employment and regional development,”²²⁷ as well as creating a stable and standardized investment environment.²²⁸ In other words, promoting efficient renewable energy combats climate change while presenting considerable economic opportunities to Europe. Presumably, it was the recognition of these benefits that achieved Union-wide agreement to binding renewable energy targets, and certainly “[o]ut of this has emerged a vibrant European renewable energy industry.”²²⁹ On February 13, 2012, the European Commission announced that the renewable energy industry broke the one million jobs threshold in 2010, boasting 1.144 million people employed in the sector and a 25% surge in employment from 2009 to 2010.²³⁰ And job growth has come hand in hand with increased energy security; as the proportion of European energy consumption from renewable sources has risen—e.g., gross consumption of renewable energy rose between 2009 and 2010 by 10.2% compared with a 2.1% rise in overall gross energy consumption²³¹—less demand (proportionally) is placed on imported petroleum, which decreases Europe’s vulnerability to both natural and political disruptions and price hikes. Admittedly, however, what Europe has yet to see are reduced consumer energy prices.²³²

In the United States, comparable legislation for climate change would allow individual states to select their own renewable energy development priorities, such that they could be tailored to the economic needs of the state. For example, Michigan’s largest city,

226. *Id.*

227. *Id.*

228. *Id.* at 17.

229. Midttun, *supra* note 116, at 12.

230. Newer numbers are not yet available, as evaluation and reporting is, naturally, retrospective. See OBSERVER, THE STATE OF RENEWABLE ENERGIES IN EUROPE: 11TH EUROBSERVER REPORT 173 (Alain Liébard ed., 2011), available at <http://www.eurobserv-er.org/pdf/barobilan11.pdf>; see also *Europe Hits 1 Million Jobs in Renewable Energy but Discontent Remains*, RTCC (Feb. 13, 2012), <http://www.rtcc.org/business/europe-hits-1-million-jobs-in-renewable-energy-but-discontent-remains/>; *European Renewable Energy Sector Breaks Through the 1 Million Job Level*, CLICKGREEN (Feb. 13, 2012), <http://www.clickgreen.org.uk/analysis/business-analysis/123175-european-renewable-energy-sector-breaks-through-the-1-million-job-level.html>.

231. *The State of Renewable Energies in Europe*, THEBIOENERGYSITE (Feb. 13, 2012), <http://www.thebioenergysite.com/news/10462/the-state-of-renewable-energies-in-europe>.

232. See *Half-yearly Electricity and Gas Prices, First Half of Year, 2009-2011*, EURO. COMMISSION, http://epp.eurostat.ec.europa.eu/statistics_explained/index.php?title=File:Half-yearly_electricity_and_gas_prices_first_half_of_year_2009-2011_%28EUR_per_kWh%29.png&filetimestamp=20111124164017 (last visited Jan. 11, 2013) (detailing EU and Member State statistics for 2009, 2010, and 2011 electricity pricing).

Detroit, had a 13.2% unemployment rate in July 2011.²³³ In such a context, investment in wind power generation plants and the accordant job growth should be a relatively easy sell to the local population provided that doing nothing, and therefore spending that money on other things, is not an option because of the federal mandate. If France (population approximately 65 million²³⁴) employs over 20,600 people in its wind energy sector,²³⁵ then Michigan (population approximately 10 million²³⁶) could reasonably advertise that its wind energy sector would employ at least 3,000 people. Not that reality is ever this simple, but if the wind sector were largely centralized around Detroit, a job increase could make a senator or congressman look like a hero at home. Furthermore, a federal renewable energy (or broader) mandate would likely come with budgetary incentives for states, such as federal matching investments, which would allow a politician to claim that he brought money into the state. And, of course, local businesses would receive lucrative wind energy infrastructure construction and development contracts.²³⁷ In essence, this approach would help cure the problem of individuals feeling only the burden of climate change legislation by localizing the benefits at a state or city level.

Additionally, and as mentioned previously, one strand of currently dominant political ideology in the United States adheres strongly to the “States Rights” mantra, which glorifies the Tenth Amendment of the Constitution and decries federal encroachment into all arenas of authority traditionally enjoyed by states.²³⁸ While environmental regulation is very much within the authority of the U.S. federal government—a proposition clearly evidenced by the passage and survival of the CAA, CWA, CERCLA, and others—concurrent with the fifty states, climate change legislation in the form of a flexible mandate grants as much leeway to the states as possible to craft their own policies. If the legislation sets GHG emission limits in the form of a statewide target, say a 10% reduction from a given base year, states will be able to select whether that is

233. Economic News Release, U.S. Bureau of Labor Statistics, U.S. Dep’t of Labor, Civilian Labor Force and Unemployment by State and Metropolitan Area (Oct. 30, 2012), <http://www.bls.gov/news.release/metro.t01.htm>.

234. *Data: France*, THE WORLD BANK, <http://data.worldbank.org/country/france> (last visited Jan. 11, 2012).

235. See OBSERVER, *supra* note 230, at 119.

236. *State & County QuickFacts: Michigan*, U.S. CENSUS BUREAU, <http://quickfacts.census.gov/qfd/states/26000.html> (last visited Jan. 11, 2012).

237. Cf. Harrison & Sundstrom, *supra* note 33, at 8 (questioning “whether . . . US policy-makers were genuinely uncertain about causal mechanisms of global climate change or merely questioned climate science as a strategy to defend powerful business interests” in the build up to the rejection of the Kyoto Protocol by the United States).

238. See generally McGinnis & Somin, *supra* note 41, at 90 (describing the political ideology of the States’ Rights Doctrine).

best accomplished via vehicle standards, carbon capture and sequestration efforts, switching from coal power plants to nuclear, or other approaches. If the legislation requires a 10% renewable energy share, just as in the European Union, states will be able to choose what type of renewable energy to promote, and whether to do so via tax breaks, subsidies, sanctions, or otherwise. States' rights advocates will grumble regardless, but the flexibility of the European approach would go far to leave local environmental decision making in the hands of the states and municipalities, while accomplishing federal environmental goals.

Also, enhanced national security, even in the form of energy security, may still be a selling point. In Europe, energy security is a critical issue. In 2008, the European Union imported approximately 50% of its energy needs, with projections for 2030 at 65%, of which 30% of imported petroleum and 50% of natural gas will come from Russia.²³⁹ In 2009, total energy imports cost Europe €355.15 billion.²⁴⁰ This dependency on foreign imports is dangerous for the European Union—a reality that the not-too-distant Russia-Europe energy crisis hammered home.²⁴¹ Consequently, energy security was a substantial impetus in the passage of the Renewable Energy Directive, and every resulting increase in domestically generated renewable energy is a valuable reduction in the risk.²⁴² This is, of course, a situation that the United States faces given its massive and growing energy consumption,²⁴³ replete with the rhetoric that energy independence is the “moral equivalent of war.”²⁴⁴ The energy security benefits of renewable energy and climate change legislation may thus be called upon in persuading the American populace.²⁴⁵

239. PAUL BELKIN, CONG. RESEARCH SERV., RL 33636, REPORT FOR CONGRESS: THE EUROPEAN UNION'S ENERGY SECURITY CHALLENGES i (2008).

240. Zoë Casey, *EU Energy Import Bill Amounted to €355 Billion in 2010*, EURO. WIND ENERGY ASS'N BLOG (Oct. 3, 2011), <http://blog.ewea.org/2011/10/eu-energy-import-bill-amounted-to-e355-billion-in-2010/>.

241. See Miriam Elder & Bruno Waterfield, *Energy Crisis in Europe Faces as Putin Cuts Gas Supply*, DAILY TELEGRAPH (London), Jan. 6, 2009, at 1.

242. See, e.g., *EU Renewable Energy Policy*, EURACTIVE.COM (Aug. 2, 2007), <http://www.euractiv.com/energy/eu-renewable-energy-policy-links dossier-188269> (“The decision was motivated by concerns about security of supply and environmental protection.”).

243. See generally KEITH CRANE ET AL., RAND CORP., IMPORTED OIL AND U.S. NATIONAL SECURITY (2009), available at http://www.rand.org/pubs/monographs/2009/RAND_MG838.pdf.

244. See, e.g., Biello, *supra* note 9; Wald & Andrews, *supra* note 9.

245. Of course, this is a justification and argument that has been tried at various junctures in the U.S. energy debate. See, e.g., Sheila Hayter, *Energy Independence Helps*, 7 INNOVATION, no. 5, 2009, <http://www.innovation-america.org/energy-independence-helps> (“Renewable energy leads to homeland security. While some may not see the direct link, the Department of Homeland Security is working to increase homeland security through energy independence. A continuing reliance on foreign oil

Finally, it must be admitted that a segment of the American populace is fundamentally opposed to environmental legislation. For those hold outs, it cannot reasonably be hoped that they will support any form of climate change or renewable energy legislation. Nonetheless, the nonenvironmental benefits that flexible, state-implemented legislation will permit to accrue in state-specific ways may potentially weaken their opposition. And perhaps the percentage of Americans who rigorously oppose climate change legislation is smaller than one thinks: one poll in 2011 found that 83% of Americans want clean energy legislation.²⁴⁶

CONCLUSION

Climate change must be addressed in the United States. Ideally, this would take the form of a comprehensive act that mandated GHG emission reductions, increased energy efficiency, greater renewable energy sourcing, and a myriad of other adaptation and mitigation approaches—i.e., a U.S. Climate Change Act. However, the federal structure of the United States makes such broad legislation difficult, though not impossible. As Professor Jonathan Adler explains:

The expansive reach of environmental regulation makes constitutional challenges to such laws inevitable. Environmental regulation arguably represents the most ambitious and far-reaching assertion of federal authority. The very premise of much environmental regulation is that ubiquitous ecological interconnections require broad, if not all-encompassing, federal regulation. This premise is in profound tension with the notion that the U.S. Constitution creates a federal government of limited and enumerated powers.²⁴⁷

Yet, the European Union has accomplished this feat. And though it boasts explicit competence in environmental and energy arenas, though also explicitly curbed by Member State sovereignty in those areas, the European Union lacks the sovereign enforcement power of the U.S. federal government. That U.S. enforcement ability, if combined with the flexible mandates the Europe Union has employed, would not only be constitutional, but it might achieve environmental success above and beyond even Europe has attained. It would thus be well worth America's while to learn a little from the leader in using law to battle climate change.

and traditional energy supplies leaves the U.S. vulnerable to natural and human threats to energy continuity.”).

246. Ben Jervey, *83 Percent of Americans Want Clean Energy Legislation*, GOOD ENV'T (Feb. 8, 2011), <http://www.good.is/post/83-percent-of-americans-want-clean-energy-legislation/>.

247. ADLER, *supra* note 23, at 1.