

# Making the States Full Partners in a National Climate Change Effort: A Necessary Element for Sustainable Economic Development

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For at least a decade, states have exercised de facto national leadership on climate change policy development.<sup>1</sup> Through comprehensive planning, intensive fact-finding, and stakeholder-based consensus-building, they have developed and refined a broad range of laws and policies intended to advance climate, energy, and economic policy objectives simultaneously. The recommended portfolios of actions derived from this work, involving more than one-half of all U.S. states and regions, as well as the formal participation of more than 1,500 stakeholders and technical experts, show the potential of appropriately crafted measures to expand the economy and create jobs, reduce energy conflicts and improve energy security, build businesses and stimulate new investment, foster new technologies and management practices, protect households and businesses from high and fluctuating energy prices, and reduce emissions of greenhouse gases (GHGs) and other pollutants.

At the federal level, the United States is in the midst of a congressional debate about how to craft a national climate change program. Depending on its final resolution, this program could either displace or enhance state leadership and stakeholder consensus. Proposed federal cap-and-trade legislation, combined with other national measures, could substantially reduce GHG emissions by 2050. The U.S. House of Representatives narrowly passed a bill based on this policy architecture, the American Clean Energy and Security Act, in 2009 without Republican support. Several months later, the U.S. Senate Environment and Public Works Committee approved a similar bill along partisan lines. In May, Sens. John Kerry (D-Mass.) and Joseph I. Lieberman (I-Conn.) made public the discussion draft of a bill (that was prepared

with Sen. Lindsey O. Graham (R-S.C.)) that significantly departs from previous legislation approved in the House and the Senate Environment and Public Works Committee. Moreover, Sen. Jeff Bingaman (D-N.M.) introduced comprehensive energy legislation without a cap-and-trade system.

As of this writing, the passage of any of these bills is possible. Notably, these bills share the common desire to find alternate approaches to the Waxman-Markey Bill and U.S. Environmental Protection Agency (EPA) regulation and provide a limited role (if any) for state or regional climate change policy.

The Waxman-Markey Bill and Senate bills are based on recognition that GHG emissions urgently need to be reduced, the responsibility of the United States to do its fair share, and the opportunity to capture low-cost, high gain co-benefits (benefits other than GHG reductions, such as economic, energy, and environmental security). Until 2009, this country was the major historical contributor to the increased atmospheric concentrations of GHG emissions after the pre-industrial era. The United States is also expected to play a key international role in addressing this issue, as evidenced by its lead role at the December 2009 meeting of the conference of the parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen. China is now the major world emitter of GHGs, and developing nations are expected, in aggregate, to contribute 90% of the future growth in total GHG emissions under business as usual (BAU) projections. This trend heightens the perceived need in the Senate for all nations to reduce their GHG emissions and also for the United States to demonstrate leadership.

Proactive bills in the U.S. Congress, as well as actions by the president, indicate the need for a strong federal role for emissions management. However, the need to maintain and expand a meaningful role for states and localities

1. John Dernbach and the Widener University Law School Seminar on Global Warming, *Moving the Climate Debate From Models to Proposed Legislation: Lessons From State Experience*, 30 ELR 10933 (Nov. 2000), available at [http://works.bepress.com/john\\_dernbach/22](http://works.bepress.com/john_dernbach/22).

is not nearly as evident and could be an Achilles' heel for a federal program. Under these bills, the federal government would be responsible for the management of climate change responses, which departs from congressional precedent in the 1970s in response to environmental concerns. The "cooperative federalism" legislation of that period—the Clean Air Act (CAA),<sup>2</sup> the Clean Water Act (CWA),<sup>3</sup> the Resource Conservation and Recovery Act,<sup>4</sup> and the Surface Mining Control and Reclamation Act (SMCRA),<sup>5</sup> among others—did not federalize environmental law or create a federal environmental agency with plenary authority over rulemaking, program administration, permitting, and enforcement. Rather, it crafted a balanced compromise between state and federal authority borne of the practical need for institutional cooperation. The federal government was given the authority to promulgate national standards, to provide financial incentives to the states to improve the quality of their programs, and to authorize the states to keep implementing their programs, as long as they met federal standards. Frequently, the federal statutes of this era were modeled on existing state programs and were developed to preserve those programs and expand them to cover the nation.<sup>6</sup> As a result, states increased the number and quality of personnel enforcing their environmental programs and created a legal system in which the vast majority of permit decisions and enforcement actions are made by the states in coordination with both federal and local governments.

As we have previously demonstrated, Congress could employ a comprehensive approach to climate change that integrates all sectors of the economy and all levels of government (particularly the states), and uses a variety of price and non-price policy instruments to address climate change at the lowest possible cost and with the greatest co-benefits.<sup>7</sup> This Article elaborates and clarifies two aspects of this observation. Part I explains why states and localities need to be full partners in a national effort to address climate change at low cost and with large co-benefits. A large share of the lowest cost and highest co-benefit reduction actions are in areas that a federal cap-and-trade program or other purely federal measures will not easily reach and areas where the states have traditionally exercised their powers—including land use, building construction, transportation, and recycling. Economic recovery and expansion will require direct

state and local management of climate and energy actions to reach its full potential and efficiency. In addition, the need for continuity and flexibility in a decades-long national climate change effort will require localized innovation and implementation.

Part II describes in detail our proposed state climate action planning process. This state planning process—based on a proven template from actions taken by many states—provides an opportunity to achieve cheaper, faster, and greater emissions reductions than federal legislation or regulation alone would achieve. It would also realize macroeconomic benefits and noneconomic co-benefits and would make the national program more economically sustainable. Our proposal optimizes national commitments by transitioning from the states as leaders to the states as partners with the federal government for addressing climate change.

Comprehensive new federal legislation is not the only avenue available to the federal government on climate change. With the U.S. Supreme Court's 2007 decision in *Massachusetts v. Environmental Protection Agency*,<sup>8</sup> EPA has the authority to regulate GHGs as air pollutants under the CAA. EPA has begun to use that authority for both motor vehicles<sup>9</sup> and stationary sources.<sup>10</sup> EPA, along with other federal agencies,

8. 549 U.S. 497, 37 ELR 20075 (2007); 42 U.S.C. §§7401 et seq. (2006).
9. On December 15, 2009, EPA finalized findings that are necessary to regulate motor vehicle emissions under §202(a): (1) current and projected concentrations of six key GHGs in the atmosphere "threaten the public health and welfare of current and future generations;" and (2) "the combined emissions of these greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas air pollution that endangers public health and welfare." The findings require EPA to regulate GHGs from motor vehicles, but do not establish regulatory standards for motor vehicles. Endangerment and Cause or Contribute Findings for GHGs Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66496, 66496 (Dec. 15, 2009). On September 28, 2009, EPA and the U.S. Department of Transportation proposed a regulation to increase corporate average fuel efficiency (CAFE) standards to a fleetwide average of 35.5 miles per gallon by 2016. The government estimates that these proposed standards would reduce GHG emissions from the U.S. light-duty fleet by 21% by 2030 over business-as-usual level. Proposed Rulemaking to Establish Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards, 74 Fed. Reg. 49454 (Sept. 28, 2009). On April 1, 2010, EPA announced that this rule had been finalized. U.S. EPA, Regulations & Standards, <http://www.epa.gov/otaq/climate/regulations.htm> (last visited May 5, 2010).
10. Under the CAA, new and modified major sources must undergo prevention of serious deterioration (PSD) permitting. A PSD permit requires application of "best available control technology" (BACT) to limit emissions of "regulated new source review (NSR) pollutants." 40 C.F.R. §52.21(b)(50) (2006). EPA does not consider GHG emissions to be "regulated NSR pollutants" under the PSD program because GHG emissions have not, thus far, been subject to regulation requiring control under the CAA. But the final light-duty motor vehicle rule will trigger PSD applicability for GHG emissions. New power plants and major modifications of existing plants will then be subject to BACT requirements for carbon dioxide (CO<sub>2</sub>) and other GHGs. On Oct. 27, 2009, EPA proposed a "tailoring rule" to establish a 25,000-ton threshold for applying PSD rules to stationary sources of GHG emissions. Prevention of Significant Deterioration and Title V GHG Tailoring Rule; Proposed Rule, 74 Fed. Reg. 55292 (Oct. 27, 2009). EPA says the 25,000-ton threshold is needed to prevent thousands of sources—including schools, hospitals, and small businesses—from having to undergo PSD permitting because their emissions are greater than the 250-ton-per-year threshold that would otherwise apply for PSD. For sources emitting fewer than 25,000 tons, EPA proposes to delay a decision on applying PSD requirements for six years. After that, EPA could apply streamlined permitting requirements. *Id.* More recently, EPA Administrator Lisa Jackson announced that the final rule would likely apply initially only to facilities with significantly higher emissions than 25,000 tons. Steven D. Cook & John Sullivan, *Jackson Expects Tailoring Rule Threshold to Be "Substantially Above" 25,000-Ton Level*, DAILY ENV'T REP., Feb. 23, 2010, available

2. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

3. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

4. 42 U.S.C. §§6901-6992k, ELR STAT. RCRA §§1001-11011.

5. 30 U.S.C. §§1201-1328, ELR STAT. SMCRA §§101-908.

6. Robert B. McKinstry Jr. & Thomas D. Peterson, *The Implications of the New "Old" Federalism in Climate-Change Legislation: How to Function in a Global Marketplace When States Take the Lead*, 20 PAC. McGEORGE GLOBAL BUS. & DEV. L.J. 61, 67 (2007) [hereinafter *New "Old" Federalism*] (providing examples of federal laws based on state programs and mechanisms to incorporate state programs into federal regulatory regime); John C. Dernbach, *Implementation of the Surface Mining Control and Reclamation Act in Pennsylvania: A Decade Later*, in MOVING THE EARTH: COOPERATIVE FEDERALISM AND IMPLEMENTATION OF THE FEDERAL SURFACE MINING ACT 149, 149 (Uday Desai ed., 1993) (explaining that Pennsylvania legislation served as a model for the federal SMCRA).

7. Thomas D. Peterson et al., *Developing a Comprehensive Approach to Climate Change Policy in the United States: Integrating Levels of Government and Economic Sectors*, 26 VA. ENVTL. L.J. 227 (2008).

could expand use of existing authority to provide assurance of broad-based GHG management, even if comprehensive federal legislation directed specifically at the issue of climate change is not passed.<sup>11</sup> Federal agency actions, however, would not necessarily bring states and localities into full partnership with the federal government or optimize the use of jurisdictional capacity.

A national climate change program—whether it occurs through comprehensive legislation, piece-by-piece legislation, or application of the existing CAA and other federal agency authority—will occur in a context in which the most progressive states on climate change issues already exhibit greater technical sophistication and willingness to take serious action than they likely exhibited before the environmental statutes of the 1970s were adopted. The high level of state action on climate change over more than a decade is commonly explained as a response to the weak federal effort—a necessary effort to fill a vacuum. When the federal government finally intervenes in a comprehensive way, many have said, the state role can and should recede. States and localities, however, have acted to address climate change to forge federal-state cooperation, to advance their own interest in moving to the new clean energy economy, and to attain valuable co-benefits, such as human health protection. It is not clear why states should drop out of their major role in climate policy development and implementation. After all, the state role did not recede with the adoption of earlier federal environmental laws (when the states were less willing to take action, more prone to regulatory capture, and less sophisticated). It is thus difficult to see why the state role should recede with significant federal action on climate change.

## I. Why States Should Continue to Play a Major Role in the National Climate Change Effort

State actions relating to climate change are growing in sophistication and importance. States are redirecting their economies toward new energy development and job creation, using comprehensive climate change action plans to

identify and implement cost-effective measures that reduce GHG emissions and create other co-benefits. Some states are requiring the direct reduction of GHG emissions, while other states achieve GHG reductions as the byproduct of other policies. California's Global Warming Solutions Act sets a goal to reduce its GHG emissions to 1990 levels by 2020,<sup>12</sup> and California is working toward an ambitious economywide approach to implement that law, including a wide range of sector-based policies and measures, and an economywide cap-and-trade program.<sup>13</sup> Thirty-four states, covering two-thirds of the nation's population and economy, have developed or are in the process of developing comprehensive climate change plans, based on a balanced portfolio of measures to reduce GHG emissions in all economic sectors, using a combination of policy instruments.<sup>14</sup> Moreover, many states are advancing clean and renewable energy supplies, transportation improvements, waste recovery and recycling, and natural resource conservation through these plans as a means to jointly attain economic, energy, and environmental improvements. Many states are encouraging energy efficiency and conservation through tax incentives, home and business weatherization programs, new building codes, and other programs.<sup>15</sup>

Several states have been involved in regional cap-and-trade initiatives intended to script federal cap-and-trade policy. Ten northeastern and Mid-Atlantic states participate in the Regional Greenhouse Gas Initiative (RGGI), which developed a model rule to establish a cap-and-trade program for electric utilities.<sup>16</sup> The Western Climate Initiative (WCI) involves seven states and four Canadian provinces in a regional emissions cap for multiple economic sectors and a cap-and-trade system.<sup>17</sup> The Florida Legislature has directed

at [http://0-news.bna.com.libcat.widener.edu/deln/DELNWB/split\\_display.adp?fedfid=16337280&vname=dennotalissues&fn=16337280&jd=a0c2d2x5n2&split=0](http://0-news.bna.com.libcat.widener.edu/deln/DELNWB/split_display.adp?fedfid=16337280&vname=dennotalissues&fn=16337280&jd=a0c2d2x5n2&split=0). In response, Sen. Lisa Murkowski (R-Alaska) has introduced a "resolution of disapproval" to vacate the endangerment finding by EPA, and Sen. Jay Rockefeller (D-W. Va.) introduced a bill placing a two-year moratorium on EPA authority to regulate GHGs. While these resolutions and bills are not likely to be enacted, they appear to be motivated more by concern over the impact of the endangerment finding on stationary sources than its impact on mobile sources. Steven D. Cook, *House Republicans to Introduce Measure to Reverse EPA on GHGs*, DAILY ENV'T REP., Mar. 2, 2010, available at [http://0-news.bna.com.libcat.widener.edu/deln/DELNWB/split\\_display.adp?fedfid=16359563&vname=dennotalissues&fn=16359563&jd=a0c2e4p7t9&split=0](http://0-news.bna.com.libcat.widener.edu/deln/DELNWB/split_display.adp?fedfid=16359563&vname=dennotalissues&fn=16359563&jd=a0c2e4p7t9&split=0).

11. Robert B. McKinstry Jr. et al., *The New Climate World: Achieving Economic Efficiency in a Federal System for GHG Control Through State Planning Combined With Federal Programs*, 34 N.C. J. INT'L L. & COM. REG. 767 (2009); see also CENTER FOR BIOLOGICAL DIVERSITY & 350.ORG, PETITION TO ESTABLISH NATIONAL POLLUTION LIMITS FOR GHGS PURSUANT TO THE CLEAN AIR ACT (2009), available at [http://www.biologicaldiversity.org/programs/climate\\_law\\_institute/global\\_warming\\_litigation/clean\\_air\\_act/pdfs/Petition\\_GHG\\_pollution\\_cap\\_12-2-2009.pdf](http://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/Petition_GHG_pollution_cap_12-2-2009.pdf) (petitioning EPA to establish national ambient air quality standards for GHGs under the CAA).

12. CAL. HEALTH & SAFETY CODE §38,500 (2007) (stating that the task of choosing legal and policy tools to meet that goal generally is assigned to the California Air Resources Board (CARB)). *Id.*

13. CARB, Cap-and-Trade, <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm> (last visited Mar. 31, 2010).

14. Center for Climate Strategies, U.S. Climate Policy Action, <http://www.climatestrategies.us/> (last visited Mar. 31, 2010).

15. John Dernbach and the Widener University Law School Seminar on Energy Efficiency, *Stabilizing and Then Reducing U.S. Energy Consumption: Legal and Policy Tools for Efficiency and Conservation*, 37 ELR 10003 (Jan. 2007) (describing various state programs); see also AMERICAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY, SUCCESS WITH ENERGY EFFICIENCY RESOURCE STANDARDS (2009), available at [http://www.aceee.org/energy/state/EERS\\_statesuccess0109.pdf](http://www.aceee.org/energy/state/EERS_statesuccess0109.pdf) (describing successful energy efficiency and conservation efforts in California, Connecticut, Hawaii, Nevada, Texas, and Vermont).

16. RGGI, Model Rule Documentation, [http://www.rggi.org/model\\_rule\\_key\\_documents\\_link](http://www.rggi.org/model_rule_key_documents_link) (last visited Mar. 30, 2010). The 10 states are: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The overall environmental goal for RGGI is for each state to adopt a CO<sub>2</sub> trading program for emissions from fossil fuel-fired electricity-generating units having a rated capacity equal to or greater than 25 megawatts. These states together have negotiated a model rule that is being used, in each state, as the basis for the program. Power plants are an attractive starting point, because they have already experienced the sulfur dioxide trading program under the CAA. Emissions reductions are to occur from 2015 to 2018, at a rate of 2.5% annually for each of the four years. By 2018, each state's base annual emissions budget is to be 10% below its initial budget.

17. WCI, <http://www.westernclimateinitiative.org> (last visited Mar. 30, 2010). The WCI is comprised of seven western states (Arizona, California, Montana, New Mexico, Oregon, Utah, and Washington) and four Canadian provinces (British Columbia, Manitoba, Ontario, and Quebec). The goal of the WCI is to reduce GHG emissions by 15% from 2005 levels by 2020. The governor

that state's Department of Environmental Protection to develop a cap-and-trade program for carbon dioxide (CO<sub>2</sub>) emissions from power plants,<sup>18</sup> and the State Energy and Climate Change Action Plan has recommended that this policy be implemented by joining either the WCI or the RGGI.<sup>19</sup> The Midwestern Greenhouse Gas Reduction Accord is a 2007 agreement among six midwestern states and one Canadian province to establish a cap-and-trade program to reduce GHG emissions along with a series of other regional policies and measures.<sup>20</sup> Finally, 39 states, the District of Columbia, all 12 Canadian provinces, six Mexican states, and four Indian tribes are members of the Climate Registry, which is developing a common set of criteria for registering measures to reduce emissions in anticipation of a cap-and-trade program.<sup>21</sup>

The scope of state climate change actions is also expanding beyond clean energy and reduction of GHG emissions. States are beginning to create legal structures and programs for long-term carbon storage, including both terrestrial (forestry and agriculture) and geological sequestration.<sup>22</sup> Conscious of the risks they face as the climate changes, many states are engaged in adaptation planning.<sup>23</sup> State insurance regulators are beginning to take climate change risks into consideration.<sup>24</sup> Many ongoing efforts with other primary goals, such as land use and smart growth as well as waste

reduction and recycling, are being reframed to include GHG reductions and adaptation as additional objectives.<sup>25</sup>

These state efforts will almost certainly continue and intensify in the absence of a national climate change program. Yet, for several reasons, a federal program—either through legislation or regulation—is necessary to achieve a full level of national effort that addresses economic and energy needs. First, a serious effort requires *national* goals for GHG emissions reduction to guide that effort. National goals cannot be set by states, whether they act individually or regionally. In addition, a serious effort to address climate change requires an economywide price on carbon through a cap-and-trade program or a national carbon tax that can only be achieved through federal action. A national program also is needed to prevent “leakage”—or negative displacement effects—where reductions in emissions in one state are offset by corresponding increases in a second state with no cap or other regulatory program. Finally, climate change is a global problem: the United States is a party to the UNFCCC, and this country is expected to play an international leadership role in addressing this issue. Accordingly, a national program is needed to give the United States a credible foundation for its negotiating position. While these objectives can be achieved using existing CAA authority, legislative action is preferable, because it will reduce uncertainties, preempt litigation, and provide added legitimacy to the federal action.

Senators Kerry, Lieberman, and Graham, in their work toward a bipartisan legislative approach to climate change, have reached a similar conclusion:

By failing to legislate, Congress is ceding the policy reins to the EPA and ignoring our responsibility to our constituents. . . . *The absence of national GHG emissions standards has invited a patchwork of inconsistent state and regional regulations.* Since it is not reasonable to expect businesses to comply with fifty different standards, it is imperative that a federal pollution control system be meaningful and be set by federally elected officials.<sup>26</sup>

On many issues (such as fuel economy standards for motor vehicles, GHG emission standards for motor vehicles and stationary sources, and energy-efficiency standards for appliances and equipment), federal rules applicable to the entire country will be more effective and efficient than the BAU alternative of climate change rules that can vary from state to state,<sup>27</sup> if rules exist at all. Still, even with a strong

of Arizona recently announced her intention to have Arizona withdraw from the cap-and-trade part of the WCI. Sindya N. Bhanoo, *Arizona Quits Western Cap-and-Trade Program*, N.Y. TIMES, Feb. 11, 2010, at A20, available at <http://www.nytimes.com/2010/02/12/science/earth/12climate.html>. Six other states, two Canadian provinces, and six Mexican states are observers to the WCI. WCI, <http://www.westernclimateinitiative.org/wci-partners-and-observers-map> (last visited Mar. 30, 2010).

18. H.R. 7135, 2008 Leg., Reg. Sess. (Fla. 2008).

19. FLORIDA ENERGY AND CLIMATE CHANGE ACTION PLAN, EXECUTIVE SUMMARY 21 (2007), available at <http://www.flclimatechange.us/documents.cfm> (follow “Executive Summary” hyperlink).

20. MIDWESTERN GOVERNORS ASSOCIATION, MIDWESTERN GHG REDUCTION ACCORD (2007), available at <http://www.midwesternaccord.org/midwestern-greenhousegasreductionaccord.pdf>. Members of the accord are Illinois, Iowa, Kansas, Manitoba, Michigan, Minnesota, and Wisconsin. *Id.*

21. The Climate Registry, <http://www.theclimateregistry.org> (last visited Mar. 30, 2010).

22. Montana is the first state to have adopted carbon sequestration legislation. Ch. 474, 2009 Mont. Laws. Other states are studying options and considering appropriate legal structures and institutions. *See, e.g.*, PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, GEOLOGIC CARBON SEQUESTRATION OPPORTUNITIES IN PENNSYLVANIA (2009), available at <http://www.dcnr.state.pa.us/info/carbon/mastercstareport2.pdf>.

23. *See* PEW CENTER ON GLOBAL CLIMATE CHANGE, ADAPTATION PLANNING—WHAT U.S. STATES AND LOCALITIES ARE DOING (2008), available at [http://www.pewclimate.org/docUploads/State\\_Adapation\\_Planning\\_04\\_23\\_08%20\\_2\\_.pdf](http://www.pewclimate.org/docUploads/State_Adapation_Planning_04_23_08%20_2_.pdf).

24. The National Association of Insurance Commissioners, which represents state insurance regulators, has adopted a requirement that larger insurance companies describe the climate change risks to which they are exposed and how they are addressing those risks. NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS, INSURANCE REGULATORS ADOPTED CLIMATE CHANGE RISK DISCLOSURE, Mar. 17, 2009, [http://www.naic.org/Releases/2009\\_docs/climate\\_change\\_risk\\_disclosure\\_adapt.htm](http://www.naic.org/Releases/2009_docs/climate_change_risk_disclosure_adapt.htm). There is also growing awareness of the potential for considerable litigation over insurance coverage for climate change-related risks. Jeffrey W. Stempel, *Insurance and Climate Change Litigation*, in ADJUDICATING CLIMATE CHANGE: STATE, NATIONAL, AND INTERNATIONAL APPROACHES 230 (William C.G. Burns & Hari M. Osofsky eds., 2009).

25. *See, e.g.*, Patricia Salkin, *Blending Smart Growth With Social Equity and Climate Change Mitigation*, in AGENDA FOR A SUSTAINABLE AMERICA 349, 350 (Envtl. L. Inst. 2009).

26. SENATORS JOHN KERRY, JOSEPH I. LIEBERMAN & LINDSEY O. GRAHAM, FRAMEWORK FOR CLIMATE ACTION AND ENERGY INDEPENDENCE IN THE U.S. SENATE (attachment to Letter from Senators Kerry, Lieberman, and Graham, to President Barack Obama (Dec. 10, 2009)), available at [http://kerry.senate.gov/newsroom/pdf/Climate\\_Framework.pdf](http://kerry.senate.gov/newsroom/pdf/Climate_Framework.pdf) (emphasis added).

27. The senators' fear of businesses being unable to operate under varied state standards is overblown. The states' formation of regional efforts and attempts to coordinate their efforts have resulted in a convergence of state programs. In addition, in virtually every environmental program and in many other realms, such as banking and consumer credit, states are allowed to adopt their own sets of regulations, which can differ from the federal regulations. Nevertheless, without federal oversight, some states will adopt no regulation at all. A fed-

national climate change program, the states need to play a continued and growing role on climate change. This is so for at least seven reasons:

1. *To increase the effectiveness of a federal climate change program, especially in reducing GHG emissions.* A great deal of climate change mitigation will need to occur in areas where the state (and local) governments have historic police power or economic development responsibilities—including “land use regulation; building codes; transportation infrastructure and management; utility regulation; and the regulation of agriculture, forestry, and non-hazardous waste handling and reduction, and other sector based programs.”<sup>28</sup> Federal regulation of stationary sources and motor vehicles, or even a broader price signal for carbon represented by cap-and-trade legislation or a carbon tax, is not likely to address all of these areas, since many of the most cost-effective approaches require non-price mechanisms typically used or formulated through state or local authority.

In addition, a price signal provided by cap and trade, transportation fuel fees, or carbon tax legislation would not address some major sources of GHG emissions. A cap-and-trade or carbon tax system would lead to a price on carbon that would have ripple effects throughout the economy<sup>29</sup> and lead to greater use of energy efficiency, energy conservation, and renewable energy in areas that are price-responsive. Yet, because of market imperfections, “split incentives,” and other structural and behavioral barriers, many mitigation actions are not responsive to price.

For example, consumers often do not purchase more energy-efficient products or invest in energy conservation in their homes because they undervalue the economic savings of those products or lack the capital to purchase these products and improvements.<sup>30</sup> A carbon price, by itself, is not likely to change that. In addition, the person with the ability to achieve greater energy efficiency, e.g., landlord, is frequently not the person who pays the energy bills, e.g., tenant—a split incentive. The carbon price incentive in such cases may not lead to efficient responses.<sup>31</sup> States and localities have considerable experience with, and authority over, many of these issues.

Many states, such as California, have enjoyed considerable success in increasing the efficiency with which electricity is used. Even if cap-and-trade or carbon tax policy is supplemented with federal efficiency standards, e.g., a requirement for more energy-efficient state building codes for new buildings, many state and local governments have considerable experience with renovation and upgrade of *existing* buildings.

States also have the ability to address the landlord-tenant incentives problem by redirecting or modifying the incentives in various ways. Finally, the transition from the status quo to a major federal program needs to be handled so as to prevent a loss of continuity and momentum from existing state programs. The best way to do that is to maintain as much of the existing state law and program infrastructure as possible.

2. *To reduce the cost of the regulatory program for GHG emissions.* State programs can reduce the cost of a cap-and-trade or carbon tax program through the use of non-price policy instruments in all sectors, especially through energy efficiency and conservation in the electricity and transportation sectors. Energy conservation and efficiency, and resolution of the split-incentive issue, do not simply provide greater GHG emission reductions; they also reduce costs. In California, for example, per capita electricity consumption has been nearly flat since the early 1970s, and is now 40% below the national average, due to a range of energy-efficiency measures that saved households \$56 billion between 1972 and 2006.<sup>32</sup> By allowing California households to redirect their expenditures toward other goods and services, the state has also helped create about 1.5 million full-time-equivalent jobs that have a total payroll of \$45 billion.<sup>33</sup>

States can also reduce the cost of a cap-and-trade or carbon tax program because the higher level of detail in policy analysis available at the state level enables them to identify and implement specific policies that would likely be missed by Congress, or difficult to develop at a federal level. Congress, and even EPA, tend to look for the largest sources, while states can address a variety of climate change sources that may each be small but that would be significant cumulatively in reducing GHG emissions and that would have a low or even negative cost (that is, their economic benefits outweigh their costs). State climate change planning processes also have the ability to examine all sectors for a particular state—transportation and land use; agriculture, forestry, and waste; residential, commercial, and industrial; and heat and power<sup>34</sup>—in light of the particular circumstances of that state. This broad scope of review is virtually impossible at the national level. Because of their greater sensitivity to local behavior and customs, moreover, state governments can engage their citizens to reduce their own GHG emissions in ways that would be more difficult for the federal government alone.<sup>35</sup>

In addition, states can reduce costs by modifying laws in ways that will make the price signal from cap and trade or

eral floor is also necessary to prevent the problem of leakage. And it is almost certainly true that a federal program will result in greater national uniformity on matters relevant to interstate business, even with the state planning process proposed in this Article, than the current approach.

28. *New Climate World*, *supra* note 11, at 779.

29. ROBERT N. STAVINS, PROPOSAL FOR A U.S. CAP-AND-TRADE SYSTEM TO ADDRESS GLOBAL CLIMATE CHANGE: A SENSIBLE AND PRACTICAL APPROACH TO REDUCE GHG EMISSIONS (2007), available at [http://ksghome.harvard.edu/~rstavins/Papers/Stavins\\_Hamilton\\_Working\\_Paper\\_on\\_Cap-and-Trade.pdf](http://ksghome.harvard.edu/~rstavins/Papers/Stavins_Hamilton_Working_Paper_on_Cap-and-Trade.pdf). Though less politically likely, a carbon tax would have the same effect.

30. *Id.* at 30.

31. *Id.*

32. DAVID ROLAND-HOLST, CENTER FOR ENERGY, RESOURCES, AND ECONOMIC SUSTAINABILITY, UNIVERSITY OF CALIFORNIA, BERKELEY, ENERGY EFFICIENCY, INNOVATION, AND JOB CREATION IN CALIFORNIA 3-4 (2008), available at [http://are.berkeley.edu/~dwrh/CERES\\_Web/Docs/UCB%20Energy%20Innovation%20and%20Job%20Creation%2010-20-08.pdf](http://are.berkeley.edu/~dwrh/CERES_Web/Docs/UCB%20Energy%20Innovation%20and%20Job%20Creation%2010-20-08.pdf).

33. *Id.* at 4.

34. *New Climate World*, *supra* note 11, at 825. This analysis by the Center for Climate Strategies scaled up the cost-effectiveness analysis conducted in 20 state-climate-planning processes from states representing all regions of the nation.

35. See 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. 797, 823 n.126 (2008).

carbon tax more effective. In many cases, existing state laws make it difficult to use energy more efficiently, discourage energy conservation, impede the development of renewable energy, and in other ways make it harder to reduce GHG emissions. These include, for example, land use laws that foster single-use zoning, tax laws that keep tax revenues (including property tax revenues) within the municipality in which they were generated, and the proliferation of many virtually autonomous local governments in metropolitan areas—all of which contribute to unsustainable land use and transportation patterns and reduce economic opportunities for low-income people.<sup>36</sup> State and local governments can help remedy this by modifying their laws to promote multiple-use zoning, smart growth, and greater regional governance.<sup>37</sup>

Similarly, state public utility laws tend to reward utilities for the amount of electricity that they sell without providing incentives to either the buyer or the utility to implement measures to encourage conservation.<sup>38</sup> Because of such laws, GHG reductions will have a higher cost and will be smaller than they would otherwise be. States can modify these laws in many ways. States can require, for example, that utilities provide more information to the consumer, or states can require utilities to promote energy conservation and efficiency. States can also adopt net-metering laws that would require utilities to compensate providers of additional energy, e.g., the excess electricity generated by a home solar system, at the same price for this energy as they charge utility customers. In addition, states can require billing to be based on time of use coupled with use of smart meters. These modified laws would allow emissions associated with electric generation to be reduced at a very low or zero cost. Without these modifications, much higher allowance prices and correspondingly high electric prices would likely be required to achieve the same level of emissions reduction.

States can also adopt mechanisms to assist in the financing of building energy-efficiency improvements or alternative energy-generation facilities. For example, Vermont<sup>39</sup> and Delaware<sup>40</sup> have each created sustainable energy utilities (SEUs). SEUs provide funding for energy efficiency, conservation, and sustainable energy investments for homes, businesses, nonprofit organizations, and municipalities when the needed capital might not otherwise be obtainable.<sup>41</sup> SEU

loans made on cost-effective investments can be repaid with energy savings, and the debts can be secured by obligations to pay the utility, just as other utility charges are secured. A growing number of municipalities have established property-assessed clean energy (PACE) programs. In a PACE program, a public entity provides the financing for a solar roof or other renewable energy investment. The obligation to repay the investment's costs is secured by a voluntary tax assessment, a utility charge, or other mechanism that establishes a lien that runs with the property.<sup>42</sup> These mechanisms rely upon tax and utility assessments, matters within the traditional purview of local governments. By reducing market barriers, these mechanisms facilitate investments that produce emissions reductions at a negative cost. As with the modification of state laws that support barriers to GHG reductions, the use of these mechanisms would reduce both the cost of GHG emissions reduction and the price of allowances.

3. *To maximize the other benefits of GHG emission reductions.* State actions that address climate change create jobs, protect society from the impact of high and fluctuating energy prices, and improve human health and environmental quality through the reduction of other pollutants (such as sulfur dioxide) commonly emitted with GHGs.<sup>43</sup> State actions may also contribute to economic development, improve the quality of life in communities, and foster local or national energy independence. These co-benefits are experienced at the state or local level. Their creation is of particular interest to state or local officials who may be rewarded politically for their positive effects. The benefits of reducing GHG emissions, by contrast, are diffused throughout the entire planet; state politicians are less likely to be rewarded for such accomplishments. Thus, including the states as strong partners is a powerful way to maximize the co-benefits of a national climate change effort.

In addition, while a cap-and-trade or carbon tax program can reduce the costs of emissions control for price-responsive actions, such a program is less likely to lead to more immediate environmental, social, and economic co-benefits. Experience with the Clean Development Mechanism under the Kyoto Protocol shows that buyers of emissions allowances are primarily interested in reducing their costs, not in fostering or capturing the other benefits that may come from use of a particular policy or measure.<sup>44</sup> Put differently, the price-reduction mechanism in cap and trade does not effectively attain non-price and non-carbon values. These limitations of a stand-alone cap-and-trade program strengthen the case for maintaining and enhancing state authority to adopt policies and measures that would generate substantial co-benefits.

36. Jonathan D. Weiss, *Local Governance*, in *STUMBLING TOWARD SUSTAINABILITY* 683 (Env'tl. L. Inst. 2002).

37. Jonathan D. Weiss, *Local Governance and Sustainability: Major Progress, Significant Challenges*, in *AGENDA FOR A SUSTAINABLE AMERICA*, *supra* note 25, at 43, 52.

38. Hethie Parmesano, *Rate Design Is the No. 1 Energy Efficiency Tool*, 20 *ELECTRICITY* J. 18 (2007).

39. See, e.g., Efficiency Vermont, About Us, <http://www.encyvermont.org/pages/Common/AboutUs/> (last visited Mar. 30, 2010) (explaining that Efficiency Vermont "is the nation's first statewide provider of energy efficiency services," and is funded through a charge in everyone's electricity bill).

40. See 29 DEL. CODE §8059 (creating the Delaware Sustainable Energy Utility); see also Delaware Sustainable Energy Utility, <http://www.energizedelaware.org/about-us> (last visited Feb. 28, 2010).

41. Often, noneconomic issues make conventional financing for these projects unavailable. For example, municipalities might be unable to generate capital because of bond caps. Pooling financing can make investments feasible where financing costs for individual investments might be excessive. Frequently, homeowners sell homes before investments in energy efficiency and alternative

energy can be paid back. Neither real estate markets nor mortgage approval protocols adequately reflect the cost-savings of energy efficiency investments.

42. See, e.g., CAL. HEALTH & SAFETY CODE §38500 (2007) (authorizing PACE program); Boots on the Roof: Training for the Wind and Solar Energy Industry Blog, PACE Program Approved for San Francisco (Feb. 11, 2010), <http://www.boots-ontheroof.com/blog/2010/02/11/pace-program-approved-san-francisco/>.

43. Dernbach, *supra* note 1.

44. David M. Driesen, *Sustainable Development and Market Liberalism's Shotgun Wedding: Emissions Trading Under the Kyoto Protocol*, 83 *IND. L.J.* 21, 52-57 (2008).

4. *To provide a continued source of legal and policy innovations that could be employed at the state, regional, or national level.* Many of the most thoughtful and effective policy innovations in climate change in recent years—including renewable electricity portfolio standards, net metering, SEUs, and PACE programs—have been demonstrated and refined at the state level, and state innovation continues to occur. The complexity, scope, and long duration of the climate change issue make it essential that the efforts of state (and local) governments continue. Prof. William Buzbee has observed that “[r]etaining a diversity of actors and latitude for diverse regulatory arrangements can . . . serve to foster ‘democratic experimentalism’ and ‘learning by monitoring,’ with others able to learn from benchmarked best practices.”<sup>45</sup> As already noted, state regulatory programs have served as models for many of our most far-reaching federal environmental statutes.<sup>46</sup>

The idea that states should serve as laboratories for social and economic policy is often traced back to Justice Louis Brandeis’ famous dissent in the 1932 case of *New State Ice v. Liebmann*.<sup>47</sup> In that case, the court overturned, on substantive due process grounds, an Oklahoma law establishing a licensing system for ice manufacturers and distributors. As Kirsten Engel and Marc Miller have pointed out, Justice Brandeis’ dissent did not argue for state autonomy, but rather reflects a theory on the role of knowledge in solving difficult social problems.<sup>48</sup> The case was decided during the Great Depression, when there was considerable uncertainty about whether more regulation or less of it represented the better approach to economic recovery. Justice Brandeis did not base his dissent on a belief in Oklahoma’s answer on how the ice industry should be regulated, “but rather because he *did not know* the answer, and he was skeptical that others (including those who would limit regulation in the name of substantive due process) had the truth more firmly in their hands.”<sup>49</sup> The observation and operation of state policy experiments such as that in Oklahoma, Justice Brandeis believed, would have shed light on the question.

Climate change is also a problem of enormous complexity, and a wide variety of approaches have been articulated for addressing it. While Congress may decide to adopt a particular approach to GHG regulation, continuing state efforts to address climate change are likely to lead to further innovations. Rather than prevent the states from being laboratories for experimentation, as the Supreme Court did in *Liebmann*, Congress should encourage and support continuing policy innovation.

5. *To prod and encourage continued improvement in the federal program.* There is a well-known tendency on the part of legislatures, particularly for complicated statutes that raise a host of contentious issues, to avoid revisiting statutes in any

substantial way. Yet, it is highly unlikely, given the speed and rapidity of developments in science, technology, economics, and law relevant to climate change, that simply staying on course will be appropriate legislative behavior. Thus, it is essential that the legislation contain “adaptive management” mechanisms that allow or even cause decisionmakers to reflect on experience under climate regulation and to consider ways to make it more effective.<sup>50</sup> Maintaining the full engagement and participation of states in the implementation of this program is one way toward the goal of continued engagement with climate change regulation.

A number of legal mechanisms for achieving this result are already in place. The fundamental mechanism for states to achieve national ambient air quality standards under the CAA is the development of state implementation plans (SIPs), into which states can incorporate a wide variety of mechanisms to control air pollution.<sup>51</sup> In addition, it is generally the rule, rather than the exception, for federal environmental laws to permit states to adopt standards that are more stringent than federal standards, which act as a floor and not a ceiling. Thus, even when the CAA preempts state automobile emissions standards, it provides a mechanism to preserve some state control through the “California waiver.”<sup>52</sup> Under the CAA, all states but California are preempted from adopting more stringent standards, but California’s standards can be adopted by other states.<sup>53</sup> In consequence, about one-third of U.S. cars are California cars. California’s legal authority under the CAA to adopt more stringent motor vehicle emission regulations than EPA has worked as a continual prod to EPA to improve national regulation of motor vehicles.<sup>54</sup> These approaches are not the only approaches available to foster continued improvement, but are illustrative of the ways in which states can use federal law to foster continued improvement in the national program.

6. *To check against possible federal regulatory failure.* The length of the federal effort needed to address climate change is suggested by the bills now before Congress, which require steep emission reductions in the 40-year period between now and 2050. Yet, the effort is likely to last much longer, both because further reductions may be needed and because of the continuing need to adapt to new circumstances (including the effects of changes in the climate). We have little, if any, experience as a nation maintaining progress toward a specific goal over such a period.<sup>55</sup> And we have repeatedly seen Administrations reduce funding and attention for existing programs in order to make room for the new programs they support. We have also seen policies that become fashionable and then fall out of fashion as the public or policymakers lose interest. These tendencies, of course, are not conducive to maintaining the continuity or momentum of a national

45. William W. Buzbee, *State GHG Regulation, Federal Climate Change Legislation, and the Preemption Sword*, 1 SAN DIEGO J. CLIMATE CHANGE & ENERGY L. 23, 55 (2009).

46. See *supra* note 6 and accompanying text.

47. *New State Ice v. Liebmann*, 285 U.S. 262 (1932) (Brandeis, J., dissenting).

48. Kirsten H. Engel & Marc L. Miller, *State Governance: Leadership on Climate Change*, in AGENDA FOR A SUSTAINABLE AMERICA, *supra* note 25, at 442, 452.

49. *Id.*

50. John C. Dernbach, *Navigating the U.S. Transition to Sustainability: Matching National Governance Challenges With Appropriate Legal Tools*, 44 TULSA L. REV. 93, 104 (2008).

51. See CAA §110, 42 U.S.C. §7410 (2006).

52. 42 U.S.C. §7507 (1990).

53. *Id.*

54. See Ann Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097 (2009).

55. Dernbach, *supra* note 50, at 99-100.

climate change effort over two or more generations. There may also be design or implementation failures in national climate change legislation—the cap may prove to be too high, the 40-year effort to reach the cap may prove to be too slow, or there may be delays in implementing the program.<sup>56</sup> If that happens, state (and local) government climate change efforts could reduce GHG emissions beyond the levels required by federal law and could help stimulate support to amend the legislation.<sup>57</sup>

In addition, since federal law could also fail due to a lack of enforcement, “[e]mpowering state and local governments to play their own supplementary role in enforcing the law could be the equivalent of additional cops on the beat.”<sup>58</sup> The U.S. experience during the past decade has shown that states can provide a counterweight in the absence of meaningful federal effort, and such future state climate efforts could help limit the effect of potential federal backsliding. Indeed, that is exactly what has happened with federal implementation of the CAA and other environmental laws during presidential Administrations that have been reluctant to enforce those laws or even hostile to them. Put differently, the employment of both state and federal regulatory authority will make it impossible for those resisting climate change efforts to succeed simply by opposing one or the other.

7. *To foster environmentally sustainable economic development and enhance the likelihood that climate change legislation can be adopted.* Giving the states a full partnership role could also make comprehensive federal climate change legislation more appealing to Congress and the public. First, it would help alleviate concerns that climate change legislation may give too much authority to the federal government. Second, because the states can act with greater precision and specificity within their own borders than Congress or EPA can, state actions offer the prospect of GHG reductions that have a net savings, or at least a lower cost than would be achieved with cap and trade. Finally, for at least a decade, state actions to address climate change have achieved significant co-benefits, including job creation, technology development, and the reduction of other pollutants. Focusing on these benefits, wholly apart from the GHG reductions that are achieved, could help reframe the climate change debate in a more positive way and attract significant support from lawmakers. This is particularly important at a time when the economy and job creation are foremost in the public mind.

## II. Incorporating State Climate Change Action Plans Into a National Program

While there are many ways to engage states as full partners in a national effort to address climate change, a robust state planning process should be the centerpiece of this effort. This process would be similar to those already being employed by a great many states.

56. Buzbee, *supra* note 45, at 26-34.

57. *Id.* at 53.

58. *Id.*

### A. Existing State Planning Processes

State climate change planning processes, initiated by both executive order and legislation, frequently establish GHG emission-reduction goals. The planning processes begin with a GHG emissions inventory that calculates current emissions, projects future emissions under a BAU scenario, and determines the net emissions reductions from BAU that will be required to achieve the necessary reductions. A portfolio of policy actions is then selected from a menu of more than 250 measures.<sup>59</sup> These measures cover a wide range: (1) energy efficiency and conservation; (2) clean and renewable energy; (3) transportation and land use efficiency; (4) agriculture and forestry conservation; (5) waste management and recycling; (6) industrial process improvements; and (7) cross-cutting issues. Each state typically selects a portfolio of 40 or more measures tailored to the needs of the state and calculated to achieve the emissions-reduction goals. These measures are based on an equally wide variety of legal tools, including codes and standards, incentives, market mechanisms (such as taxes and cap and trade), monitoring, education, technical assistance, voluntary agreements, and demonstration projects.

Pennsylvania, for example, recently adopted a climate change action plan that recommends a 30% reduction in GHG emissions below year 2000 levels by 2020. The plan contains 52 specific work plans or recommendations, which are expected to result in the net creation of 65,000 new full-time jobs and add more than \$6 billion to Pennsylvania's gross state product in 2020.<sup>60</sup> The recommendations with the greatest potential for reducing GHG emissions include constructing new high-performance commercial and residential buildings, renovating or upgrading existing buildings, accelerating the replacement of existing and less-efficient indoor and outdoor lighting, increasing the amount of solar energy that is reflected from (rather than absorbed by) roofs, and increasing the recycling rate from 28 to 42% by 2020. All of these measures would result in cost-savings.<sup>61</sup>

Figure 1 shows that 33 state climate action plans are completed or in progress. These plans cover two-thirds of the U.S. economy and population and one-half of U.S. GHG emissions. They also cover the states employing the three regional cap-and-trade initiatives. These plans are not simply sitting on a shelf: many reduction targets, sector-specific programs, and cap-and-trade initiatives are underway.<sup>62</sup>

59. *New “Old” Federalism*, *supra* note 6, at 76-84.

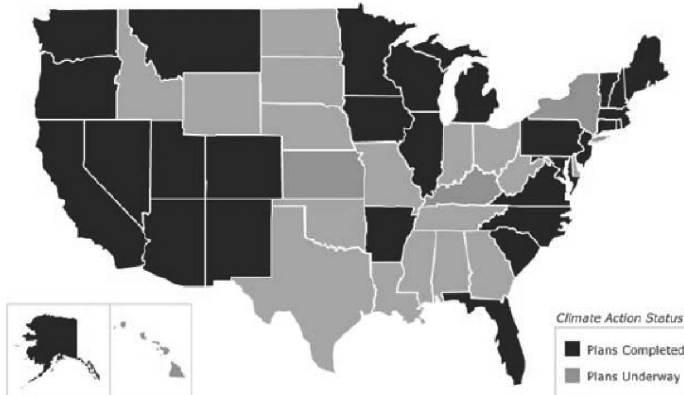
60. PA. DEPT OF ENVTL. PROT., PENNSYLVANIA FINAL CLIMATE CHANGE ACTION PLAN (2009), available at <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-77736/ALL%20OF%20VOLUME%201%20AND%202.pdf>. The plan was adopted pursuant to the Pennsylvania Climate Change Act, 71 PA. STAT. ANN. §§1361.1-1361.8 (2008).

61. *Id.* ex. S-11, F-2 to F-5 (buildings), F-25 (roofs), 4-9 (lighting), 8-5 (recycling).

62. We have described these initiatives at length elsewhere. See *supra* our articles in notes 6, 7, & 11.



**Figure 1.**  
**State Plans Completed or Under Way**



The cumulative emissions reductions that can be achieved at the national level through implementation of these plans are considerable. Figure 2 shows a national scale-up of 16 state plans, and indicates the potential of state plans to reduce national GHG emissions by 27% below 1990 levels by 2020. These plans would achieve emissions reductions in a wide variety of key sectors, including: transportation and land use; vehicle and location efficiency; low-carbon fuels; energy supply; renewable, advanced, and low-emitting generation for heat and power; residential, commercial, and industrial energy use; agriculture, forestry, and waste; and land protection and conservation practices. Significantly, 85% of the climate policies adopted by state plans have moderate to high job-creation potential, while the policies as a whole, if implemented nationwide, would produce 2.8 million net new jobs, a \$148 billion net expansion of gross domestic product (GDP), net economywide cost-savings of \$5 billion by 2020, and modest energy price reductions for households in all categories.<sup>63</sup>

**Figure 2. U.S. 2020 GHG Reduction Potential by Sector, Stakeholder Implementation (Total from Individual Options)**

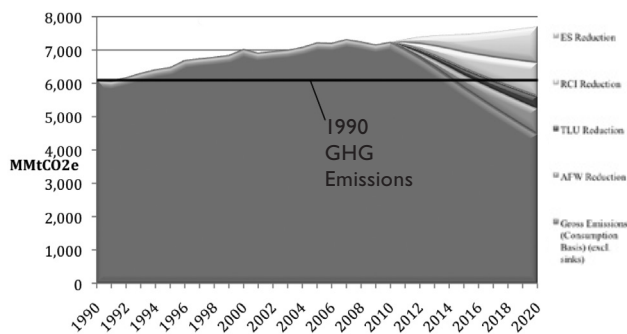
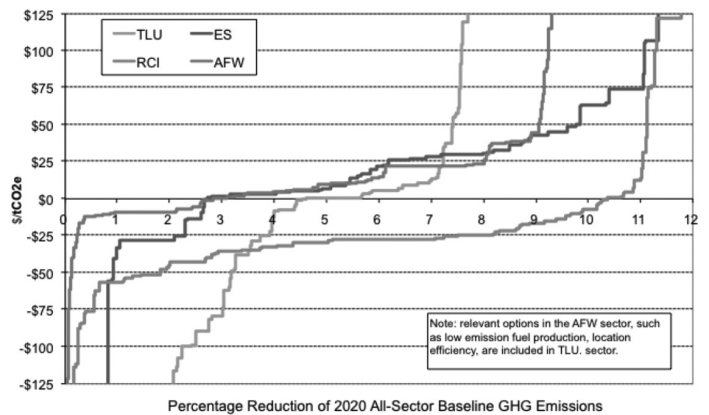


Figure 3 shows a cost curve for 900 climate policies contained in 20 state plans, in which these policies are bundled

into 80 groups or categories.<sup>64</sup> These curves show that, when properly tailored through a state planning process involving stakeholders, significant CO<sub>2</sub> emissions reductions can be achieved with overall cost-savings. For example, measures in the Residential, Commercial, and Industrial (RCI) sector have a negative cost per ton of CO<sub>2</sub> reduction up to a point where these measures can achieve a total reduction of more than 10% of emissions from *all* sectors under a BAU scenario.<sup>65</sup> This is notable because many of the emissions reductions in this sector arise from investments in energy conservation and efficiency in the built-environment, which can most cost effectively be achieved by state and local actions to remove market barriers. The transportation and land use (TLU) sector can achieve reductions of over 5% at zero or lower cost per ton. The agriculture, forestry, and waste (AFW) sector and the energy supply (ES) sector can each achieve a reduction of about 2.5% at a negative or zero cost.

**Figure 3. Stepwise Marginal Cost Curves of US by Sector, 2020**



The co-benefits to be obtained through these plans are also significant. They include job and income creation, energy savings, and investment leveraging, in addition to immediate reductions in GHG emissions. Indeed, many states have focused on the potential of GHG emissions reductions measures to stimulate the economy by generating jobs and building capital infrastructure that will produce a return through cost-savings or energy generation. Many of the jobs required for energy efficiency, energy conservation, and renewable energy generation fall within the construction and manufacturing sectors, which are the sectors that are most likely to stimulate economic growth. At least four states have commissioned studies of the economic impact of their respective climate plans, and all studies have shown a very significant positive effect: producing increases in jobs, state GDP, and income.<sup>66</sup> The results from the most recent

63. Center for Climate Strategies, *Economic Impacts of Comprehensive Climate and Energy Policy: National Climate Change Stakeholder Recommendations and U.S. Senate Proposals Would Advance Economy and Employment: Policy Maker Summary* (Apr. 26, 2010), available at <http://www.climatestrategies.us/template.cfm?FrontID=6032>.

64. Center for Climate Strategies, *Climate Change Policy as Economic Stimulus: Evidence and Opportunities From the States* (2008), available at <http://www.climatestrategies.us/Publications.cfm>.

65. In a BAU scenario, emissions trends (usually characterized by increases) are projected based on policies in place at the time the planning effort begins.

66. These states include Florida, Michigan, North Carolina, and Wisconsin. The economic studies are: STEVEN MILLER ET AL., CENTER FOR CLIMATE STRATEGIES, *THE MACROECONOMIC IMPACT OF THE WISCONSIN CLEAN ENERGY JOBS ACT ON THE STATE'S ECONOMY* (2010) [hereinafter WISCONSIN ECONOMIC

analysis from Wisconsin are consistent with those of the other studies. There, the authors found that the combination of options selected in the Wisconsin climate action plan will result in a net “increase gross state product by a discounted present value of \$4.85 billion and will increase employment by 16,221 full-time equivalent jobs by the Year 2025.”<sup>67</sup> Conservation and energy-efficiency policies, utility supply-side programs, and building code policies—all areas traditionally regulated by the states—have the greatest opportunity for stimulus.<sup>68</sup> Other studies have had consistent results.<sup>69</sup>

## B. Suggested Federal Requirement for State Climate Action Plans

### I. Proposal

To achieve these results nationally will require a comprehensive program that cuts across all sectors of the economy, involves the states, and uses a planning mechanism to integrate measures and address market imperfections. As already explained, this must include a cap-and-trade program for GHGs required by the federal government, whether through legislation or regulation. This should be accompanied by national GHG standards for mobile sources and (at a minimum) large stationary sources. Stronger and more broadly applicable energy-efficiency standards for appliances and equipment are also needed. The federal government, however, should make the states full partners in this effort by requiring that states develop and implement state climate action plans.<sup>70</sup>

Giving state planning a central role in a federal climate change program will increase the effectiveness of the federal program and reduce the cost of the regulatory program for GHG emissions. States are best positioned to identify the programs that can remove disincentives to implement the most cost-effective measures to reduce emissions, and develop the financing and institutional mechanisms that can assist in the development of those programs. States can also address many of the land use, forestry, and agricultural programs that the federal program will not focus on. Continued state involvement assures that states will continue to play their central role in climate change, develop legal and policy innovations, prod and encourage continued improvement in the federal program, and provide a check against future federal regulatory failure. By engaging stakeholders and addressing local conditions, state planning can maximize the mutual benefits of GHG emission reductions. By tailoring their responses to local conditions and needs, states can continue to foster environmentally sustainable economic development. This can also reduce resistance to development of a federal program and enhance the likelihood that climate change legislation or a comprehensive federal regulatory program can be adopted.

These plans can be developed in a manner similar to SIPs required under the authority of §110 of the CAA, but they would be quite different from the SIPs applied to other pollutants. This can be accomplished in two ways—by modifying the SIP requirements for GHGs in comprehensive climate change legislation or by promulgating new rules for state climate change action plans under the existing CAA.<sup>71</sup> Either way, we propose to reinvent the SIP for climate change.

STUDY], available at <http://www.climatestrategies.us/ewebeditpro/items/O25F22680.pdf>; STEVEN MILLER ET AL., CENTER FOR CLIMATE STRATEGIES, THE MACROECONOMIC IMPACT OF THE MICHIGAN CLIMATE ACTION COUNCIL CLIMATE ACTION PLAN ON THE STATE'S ECONOMY (2010) [hereinafter MICHIGAN ECONOMIC STUDY], available at <http://www.climatestrategies.us/ewebeditpro/items/O25F22416.pdf>; ADAM ROSE & DAN WEI, CENTER FOR CLIMATE STRATEGIES, THE ECONOMIC IMPACT OF THE FLORIDA ENERGY AND CLIMATE CHANGE ACTION PLAN ON THE STATE'S ECONOMY (2009) [hereinafter FLORIDA ECONOMIC STUDY], available at [http://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/fl\\_remi\\_report\\_3\\_28\\_09\[1\].pdf](http://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/fl_remi_report_3_28_09[1].pdf); DAVID PONDER ET AL., CENTER FOR CLIMATE STRATEGIES, SECONDARY ECONOMIC IMPACT ANALYSIS OF GHG MITIGATION OPTIONS FOR NORTH CAROLINA (2008) [hereinafter NORTH CAROLINA ECONOMIC STUDY], available at <http://www.nclimatechange.us/ewebeditpro/items/O120F19986.pdf>. See also McKinstry Jr. et al., *supra* note 11, at 818-24.

67. WISCONSIN ECONOMIC STUDY, *supra* note 66, at 21-22.

68. The discussion of energy conservation and efficiency measures is instructive: Conservation and Energy Efficiency Policies . . . tend to generate the greatest impact on GSP. Holding inflation constant, these policies are expected to increase GSP by \$108 million in 2015, \$563 million in 2020 and \$1,224 million by 2025. The final column reports that the net present value (NPV) of projected GSP impacts of conservation and energy efficiency policies is valued at \$3.577 billion, in 2000 dollars and discounted at five percent per year. NPV represents the importance the state places on the future stream of output today. . . .

[Because of the] conservation and energy efficiency policies [in this plan.] in 2015, there will be a cumulative total of 2,501 more jobs than there would be under the baseline case and 14,328 more jobs in 2025 than there would be under the baseline case. [C]onservation and energy efficiency policies tend to generate the largest economic impacts in terms of employment. . . .

[C]onservation and energy efficiency policies outlined in the [proposed Wisconsin Clean Energy Jobs Act] have the greatest potential in terms of positive economic outcomes. Results reflect how reductions in household, commercial and industrial fuel expenditures generate cost savings that are then reallocated to other sectors of the economy. Since Wisconsin is a net importer of conventional fuels, replacing expenditures on fuels with expenditures on other goods may generate relatively more economic activity within the state. To illustrate, expenditures for fossil fuels to generate electricity in Wisconsin go to fossil energy producing states. If, on the other hand, these expenditures stay in the state, they will tend to re-circulate; generating still more multiplier effects.

*Id.* at 20-21.

69. See MICHIGAN ECONOMIC STUDY, *supra* note 66, at 31 (“[T]he combination of options has a Net Present Value of increasing Gross State Product by \$25.3 billion and increasing employment by 129.5 thousand full-time equivalent jobs by the Year 2025.” *Id.*); FLORIDA ECONOMIC STUDY, *supra* note 66, at 2 (“When combined, the Action Plan recommendations would, on a net present value basis, increase Gross State Product by about \$37.9 billion and increase employment by 148 thousand full time equivalent jobs by the Year 2025.” *Id.*); McKinstry Jr. et al., *supra* note 11, at 818-24 (describing North Carolina results).

70. See Robert D. Brenner & Anna Marie Wood, *Comment on Developing a Comprehensive Approach to Climate Change Mitigation Policy in the United States: Integrating Levels of Government and Economic Sectors*, 39 ELR 10723, 10724 (Aug. 2009) (A “planning mechanism similar to the SIP process that facilitates the coordination of GHG mitigation measures and measures progress towards achieving GHG reduction goals is . . . needed.” *Id.*).

71. Sufficient flexibility exists under the CAA to adapt the SIP mechanism to the problems caused by climate change and to allow continued state innovation. See McKinstry Jr. et al., *supra* note 11; Peterson et al., *supra* note 7; Robert B.

To begin with, state climate change action plans should be based on net atmospheric loading of GHGs, expressed in terms of tons of CO<sub>2</sub> equivalent that are emitted within a state. SIPs, by contrast, are based on atmospheric *concentrations* of regulated or criteria air pollutants. Unlike GHG emissions, which are important because of their global effect on climate change and have few if any appreciable local effects, the air pollutants currently regulated under SIPs create public health problems primarily in the area where they are created.

The emissions loadings and reductions required would be based on the U.S. pro rata share of the long-term emissions reductions necessary to prevent “dangerous anthropogenic interference” with the climate system under the UNFCCC.<sup>72</sup> EPA would determine what long-term reductions are required in the United States to achieve these levels<sup>73</sup> and would allocate required reductions to each state based on current emissions, adjusted by population projections. As part of the calculation for the states, EPA would also subtract emissions reductions required by national measures.

Under this planning process, each state would be required to choose from a list a suite of measures to address actions in

each of five separate sectors<sup>74</sup> and meet the state’s quantitative reduction goals. EPA could provide guidance on potential policy measures, but state planning processes also typically use stakeholders to add measures to the list. Using both EPA and stakeholders will assure continued innovation and allow the state planning process to be tailored to individual state needs. Examples of measures that could be selected include: demand reduction for heat, power, and petroleum use; tax incentives, financing, and assistance programs for efficiency and conservation; renewable and clean energy; waste reduction, recovery, and recycling; agriculture and forestry protection and conservation; and programs to effectively engage citizens and consumers.<sup>75</sup> Plans would also identify, and to the extent possible quantify, costs or savings and emissions reductions associated with the measures. States would also need to use these plans to integrate climate change with other state planning, e.g., SIP, transportation, and funding efforts. Plans would include two elements: (1) measures necessary to facilitate the reductions to be achieved through cap and trade; and (2) measures that directly reduce emissions. Measures to encourage end-use energy efficiency will frequently fall within the latter category.

Plans would be developed and submitted for approval to EPA in two phases. The first phase would identify strategies that will be adopted to meet emissions reduction goals. The second phase would identify the actual legislation and rules needed to implement the strategy.<sup>76</sup> Each plan would cover the next five to 10 years and would be revised prior to the end of that period. As is the case with most state planning processes, the states would employ a broad multistakeholder development process with technical working groups. In the first phase, a variety of measures would be designated. In the second phase submission, like a SIP, the plan would need to show that the state had actually enacted any legal measures needed to implement the plan. When revising its plan, a state would be required to consider best-demonstrated practices of other states. For its part, EPA would be required to publish and periodically revise a list of best-demonstrated practices.<sup>77</sup> EPA would be required to approve phase one of a plan if it is demonstrated to be capable of achieving required reductions. EPA would fully approve the plan when appropriate legislation is adopted.

The federal government would be required to play a supporting role in the development and implementation of these plans. EPA and other federal agencies would be required to provide enhanced technical assistance and capacity-building to states to prepare and implement these plans and to guide state and local efforts that address climate change. As noted above, EPA would develop and publish information about

McKinstry et al., *Federal Climate Change Legislation as if the States Matter*, NAT. RESOURCES & ENV'T, Winter 2008, at 3.

Many of the criticisms of this approach focus on the ossified regulatory mechanisms that have been employed in the SIP process applicable to conventional pollutants. As we have argued, the unique characteristics of GHGs, which mix rapidly and globally, require a different approach, which could be implemented by adopting rules under the CAA specific to climate SIPs aimed at reductions of pollutant loadings. *New “Old” Federalism*, *supra* note 6, at 100. Section 110(k)(1)(A) of the CAA authorizes EPA to adopt “minimum criteria” any plan submission must meet in order to obtain EPA approval. 42 U.S.C. §7410(k)(1)(A) (2006). EPA could adopt regulatory criteria specific to GHG provisions of SIPs under this authority. These criteria could include criteria for a cap-and-trade program, as authorized by §110(a)(2)(A) of the CAA. 42 U.S.C. §7410(a)(2)(A) (2006).

There are many requirements applicable to SIPs in EPA’s current regulations. For example, many requirements for permits, enforcement, monitoring, reporting, and measurement will be required under any regulatory program, including market- and tax-based systems. 40 C.F.R. pt. 52 (2010). In other cases, certain requirements can be read and applied differently for GHGs. For example, the CAA frequently requires modeling. The modeling has been used to determine local air concentrations and can be quite complex. Modeling for total statewide emissions loadings would be of a different type. Current state climate plans use modeling to project emissions increases or decreases associated with various policies and sources.

72. UNFCCC, U.N. Doc. A/AC.237/18 (1992), *reprinted in* 31 I.L.M. 849 (1992).

73. These reduction goals could be established through new legislation or be developed under existing authority. Although the GHG concentration and goals and emissions reductions required to achieve these reductions are still unresolved, there appears to be an emerging consensus that an 80% emissions reduction worldwide is needed by 2100, with 80% emissions reductions by the United States from 1990 levels by 2050. *See* James Hansen et al., *Target Atmospheric CO<sub>2</sub>: Where Should Humanity Aim?*, 2 OPEN ATMOSPHERIC SCI. J. 217 (2008), available at [http://www.columbia.edu/~jeh1/2008/TargetCO2\\_20080407.pdf](http://www.columbia.edu/~jeh1/2008/TargetCO2_20080407.pdf). The 2050 goal in the American Clean Energy and Security Act of 2009, HB 2454, which has passed the House, would achieve that 80% reduction from 1990 levels. Where pollution originates outside of the United States, the CAA specifically authorizes the approval of SIPs where the “implementation plan of such State would be adequate to . . . maintain the relevant national ambient air quality standards . . . but for emissions emanating from outside of the United States.” 42 U.S.C. §7509a(a)(2) (2006). This authority could provide a basis for developing an emissions allocation for the United States and emissions allocations for the various states. *See* McKinstry Jr. et al., *supra* note 11, at 804-05.

74. The sectors are: energy supply (ES); residential, commercial, and industrial (RCI); transportation and land use (TLU); agriculture, forestry, and waste (AFW); and cross-cutting measures.

75. *See* Michael B. Gerrard, *Comment on Developing a Comprehensive Approach to Climate Change Mitigation Policy in the United States: Integrating Levels of Government and Economic Sectors*, 39 ELR 10727, 10729 (Aug. 2009).

76. McKinstry Jr. et al., *supra* note 11, at 809.

77. Under §108(b) of the CAA, EPA is required to publish “information on air pollution control techniques,” and §108(c) requires it to update this information periodically. 42 U.S.C. §§7408(b), (c) (2009).

effective state efforts. EPA and other federal agencies would encourage state innovation and experimentation through funding, planning, and regulation. In addition, EPA and other agencies should use federal funding and incentives to reward best efforts by states. Finally, and perhaps of greatest importance, Congress or EPA would provide the parameters for a national climate program, including a national cap-and-trade program.

More broadly, the federal government should fund a systematic review of the most significant state and local (and federal) laws that cause or contribute to increased GHG emissions and/or vulnerability to climate change, and laws that inhibit reductions in GHG emissions. This would enable the federal government to compile and distribute model laws that reduce GHG emissions and reduce vulnerability to climate change. The federal government should also use federal funding to encourage state and local governments to adopt land use, transportation, and other regulations that promote smart and sustainable growth, reduce GHG emissions, and reduce vulnerability to climate change.

This proposal builds on, but differs from, the House-passed climate change legislation. The American Clean Energy and Security Act establishes a cap-and-trade system designed to reduce GHG emissions from covered sources to 17% below 2005 levels by 2020 and to 83% below 2005 levels by 2050. It imposes a climate change planning requirement on states for transportation and land use and requires states and resource agencies to develop adaptation plans. It allows states to allocate significant proceeds from allowances and allows forestry and agriculture to be used to generate offsets.

By contrast, our proposal provides a more comprehensive planning requirement that includes all sectors of a state's economy. It requires states, with federal oversight, to plan for the distribution of allowances and to give particular consideration to reducing GHG emissions. This will be particularly important with respect to the use of allowances provided to electric distribution companies. Our proposal also encourages states to consider creating forestry and agriculture offsets. Finally, our proposal guides states to assure consistency with the overriding national GHG emissions reduction goals. This is not achieved by the American Clean Energy and Security Act because, for example, the bill leaves decisions on use of allowances to state public utility commissions.

Although this is not our preference, our proposal can be implemented without new legislation. Section 110(a)(2)(A) of the CAA requires SIPs to include emissions control measures, which may include market-based systems, such as cap and trade and emissions taxes.<sup>78</sup> EPA can provide the parameters of such a national system and can allow states with approved SIPs that have sufficient reductions to include their cap-and-

trade systems in the national system, which would be similar to the system used by the European Union.<sup>79</sup>

## 2. Objections

Using a state planning process to reduce GHG emissions has been questioned by a number of critics. Here, we answer some of those objections.

Some say that states will resist this proposal.<sup>80</sup> Yet, the majority of states already have climate change action plans, and these plans have demonstrated cost reductions and other co-benefits. If federal legislation is enacted, Congress could allocate proceeds from national allowance sales to states based on adoption of the state's plan and the emissions reductions achieved under it. Absent federal legislation, states that adopt a cap-and-trade program under the existing CAA could allocate allowances by auction. In RGGI states, auction proceeds have been attractive to states and municipalities. These auction proceeds have been used to finance popular programs to provide the capital for revolving loan or PACE programs to implement energy efficiency and alternative energy-production programs and to overcome market barriers to the implementation of cost-effective measures to reduce GHG emissions.<sup>81</sup> Thus, while there may be some state resistance, that resistance should be minimal.

Some say the state planning process is too administratively complex for Congress.<sup>82</sup> Our proposal reduces this complexity through the use of allocation formulas, lists of measures, and standardized means for calculating GHG reductions. Most of the remaining administrative complexity at the federal level would likely fall on EPA, not Congress. Our proposal is not like reinventing fire, because states already have planning requirements, administrative structures, and processes for learning from each other. Our proposal is no more administratively complex than other major environmental programs administered by EPA, and providing states with increased flexibility to implement the program should simplify the process. Indeed, many states have already developed plans that can readily be incorporated into the federal

78. 42 U.S.C. §7410(a)(2)(A) (2009):

Each such plan shall—(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this Act.

79. McKinstry Jr. et al., *supra* note 11, at 813-14. It is also possible that EPA would have the authority to prescribe such a program by rule. It is true that *North Carolina v. Environmental Protection Agency*, 531 F.3d 896, 38 ELR 20172 (D.C. Cir. 2008), partially invalidated EPA's attempt to mandate a cap-and-trade system for certain other air pollutants. Yet, that decision is likely distinguishable from the application of §110 to control GHGs, which have significantly different characteristics from those at issue in *North Carolina*. Nevertheless, an opt-in system similar to that suggested here would avoid any question of validity, given the clear words of the statute.

80. Gerrard, *supra* note 75, at 10728. In fairness, we have modified, clarified, and elaborated on parts of this proposal in response to their criticisms of a similar prior proposal. See Peterson et al., *supra* note 7.

81. For example, the Delaware legislation has directed that funds from its RGGI auction be invested in a Sustainable Energy Utility, where they can be reinvested many times in energy efficiency and alternative energy. DEL. CODE ANN. tit. 7, §§6043-6046 (2008). Vermont established the nation's first sustainable energy utility and has required that its auction revenues be allocated by trustees for the benefit of consumers through "accelerated and sustained investments in energy efficiency and other low-cost, low-carbon power system investments," VT. STAT. ANN. tit. 30, §255(c)(2)(F) (2009).

82. Gary S. Guzy, *Comment on Developing a Comprehensive Approach to Climate Change Mitigation Policy in the United States: Integrating Levels of Government and Economic Sectors*, 39 ELR 10730, 10731 (Aug. 2009).

program and meet the requirements for state planning here. Finally, the opportunities for faster, cheaper, and greater reductions and for co-benefits created by our plan outweigh any additional complexity.

Some say there would be leakage—emissions reductions claimed by one state would be offset by emissions increases in an adjoining or nearby state.<sup>83</sup> EPA oversight and guidance can assure this will not happen. Legislation or regulation could establish procedures for allocating responsibilities and credit. In addition, multistate planning agencies under the CAA already address similar issues, so there is already a basis in knowledge and experience to prevent or minimize this type of problem.<sup>84</sup> In fact, because *all* states will be required to develop EPA-approved plans, EPA can assure that the overall national goal will be achieved, meaning there should be no leakage.

Finally, some say this proposal makes federal legislation harder to achieve.<sup>85</sup> On the contrary, this proposal should make federal legislation easier to achieve, because it will reduce the costs of a stand-alone cap-and-trade program, increase the co-benefits, and provide a more even balance of state and federal roles.<sup>86</sup>

### III. Conclusion

As we move ahead to address climate change, we need to find a way to move from the states as leaders on climate change to the states as partners with the federal government. To be sure, a significant national effort—including cap-and-trade legislation (or regulation) as well as national standards—is needed. Yet, a strong state planning process provides an opportunity to achieve cheaper, faster, and greater emissions reductions, as well as significant co-benefits. The majority of states have already demonstrated that this can be done—through the development of comprehensive state plans and regional cap-and-trade programs that can serve as a foundation for this federal program.

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83. Gerrard, *supra* note 75, at 10728.

84. See Doremus & Hanemann, *supra* note 35, at 818 (describing EPA regulations requiring federally funded or approved highway projects to be consistent with SIPs under the CAA).

85. Guzy, *supra* note 82, at 10731.

86. Alternatively, EPA could use rulemaking for GHGs under the CAA to develop a model for subsequent federal legislation, as it did in the case of the 1977 CAA Amendments and the provisions of the CWA applying national pollutant discharge elimination system permits to stormwater.