
Federal Climate Change Legislation as If the States Matter

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States are at the forefront of climate change efforts in the United States. These efforts involve more and more states and are becoming increasingly ambitious and regional in scope. Most observers, even at the state level, see state and regional efforts as a next-best strategy in the absence of serious national leadership. The growing prospect of comprehensive national climate change legislation, however, raises many important questions about the role of state efforts in a national climate change program.

This article identifies the key state/federal issues that should be addressed in any comprehensive national climate change legislation and provides recommendations for resolving these issues. We cannot hope to successfully address climate change without fully engaging states and their local governments as partners in the national effort. In the early 1970s, Congress passed national air-quality, water-quality, surface mining, solid and hazardous waste, and other legislation based on models created by prior state action. This federal legislation created floors and requirements for states that had failed to do the job but left a significant role for states both in implementing the federal model and continuing to act. As a result, state environmental protection and natural resource agencies have become larger, better funded, more professionally staffed, and more effective than they were in 1970. For climate change, by contrast, the federal government has delayed taking action far beyond the time in which it acted previously. State and regional actions greatly exceed in both scope and number those seen on other environmental issues prior to major federal legislation.

The federal government's failure to take significant action has not been due to any desire to allow states to pursue independent action without federal interference. But the states have responded to climate change because they believe their shorelines, water resources, key industries, and people are at risk. Much of what the states have done, moreover, falls squarely within their traditional police power roles, including public health and safety protection and regulation of land use. Massachusetts and other states challenged the U.S.

Environmental Protection Agency's (EPA's) refusal to exercise jurisdiction over greenhouse gas (GHG) emissions under the Clean Air Act (CAA), 42 U.S.C. §§ 7401-7671q, precisely because they saw themselves and their citizens as threatened by rising sea levels from global warming.

In *Massachusetts v. EPA*, 127 S. Ct. 1438 (2007), the U.S. Supreme Court decided that EPA's decision not to regulate GHGs from motor vehicles under the CAA was arbitrary and capricious. The Court also held that GHGs are pollutants that can be regulated under the CAA. As a consequence, the CAA, which provides a significant role for states, is now a likely vehicle (in its current or in amended form) for GHG regulation. The CAA provides federal floors in the form of national, technology-based standards under Sections 202 and 111, 42 U.S.C. §§ 7411, 7521, and national ambient air-quality standards (NAAQS) under Section 109, 42 U.S.C. § 7409. But it preserves a significant role for state involvement by requiring states to develop state implementation plans that provide "for implementation, maintenance, and enforcement" of the NAAQS under Section 110, 42 U.S.C. § 7410. Although these plans have traditionally focused on local concentrations of pollutants, the statutory language allows this planning mechanism to be used to assign states declining emissions allowances that could be achieved through the plan. 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 (2007); Thomas D. Peterson, Robert B. McKinstry, Jr., & John C. Dernbach, *Developing a Comprehensive Approach to Climate Change Policy in the United States: Integrating Levels of Government and Economic Sectors*, 26 VA. ENVTL. L. J. (forthcoming 2008).

Based on these practical and legal considerations, one would think that the climate change bills introduced in Congress in 2007 would assign an important role to the states. One would be wrong. Six comprehensive climate change bills are now pending in Congress, and all are focused predominantly on the role of the federal government. Two proposals, companion bills in many respects, are S. 280, the Climate Stewardship and Innovation Act of 2007 (Sen. Joseph Lieberman (Independent-CT) and six cosponsors, including Sen. John McCain (R-AZ)) and H. R. 620, the Climate Stewardship Act of 2007 (Rep. John Olver (D-MA) and 17 cosponsors). The other four are S. 1766, the Low Carbon Economy Act of 2007 (Sen. Jeff Bingaman (D-NM) and six cosponsors); S. 309, the Global Warming Pollution Reduction Act (Sen. Bernie Sanders (D-VT) and ten cosponsors); S.

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485, the Global Warming Reduction Act of 2007 (Sen. John Kerry (D-MA) and one cosponsor); and H.R. 1590, the Safe Climate Act of 2007 (Rep. Henry Waxman (D-CA) and 131 cosponsors). A seventh bill, S. 2191, America's Climate Security Act of 2007, is sponsored by Sen. Lieberman and nine others, including Sen. John Warner (R-VA).

These bills are comprehensive because they address all six GHGs that are subject to reduction under the Kyoto Protocol, not just carbon dioxide. They also apply to all sectors of the economy, not just, for example, electrical generation or transportation. The bills tend to cover the largest emitters of GHG emissions and those entities indirectly responsible for the largest share of emissions. The bills establish short- and long-term emission reduction goals, cap the overall emissions and emissions from covered entities at increasingly lower levels in accordance with those goals, and authorize regulated entities to purchase and use allowances (equal to one ton of carbon dioxide equivalent) to meet required reductions. Design issues for the cap and trade program, including allocation of allowances and the expenditure of funds received from auctioning of allowances, dominate in many of these bills. (Two major energy bills, H.R. 6 (passed by the Senate June 27, 2007) and H.R. 3221 (passed by the House August 3, 2007), contain renewable energy and energy-efficiency provisions that would indirectly address climate change but do not attempt to comprehensively reduce GHG emissions.)

What the comprehensive climate change bills do not do, and what amended or future bills need to do, is enable and encourage states to play a substantial and constructive role in the newly developed federal regime. To be sure, the bills do envision a state role, but it is a limited one. Many explicitly or implicitly allow more stringent programs. The Waxman bill and S. 309 expressly authorize more stringent state actions to address climate change, enhance renewable energy, or foster energy efficiency. Other bills (e.g., H.R. 620, S. 280) anticipate that states may have more stringent programs and authorize EPA to consider that in allocating allowances to covered entities. State programs are also recognized in the allocation of allowances. Some bills (e.g., S. 1766, Lieberman-Warner) would allocate a fraction of each year's allowances to states, half based on state population and half based on historical emissions. States would be required to distribute or sell these allowances for specified purposes, including cost reduction for low-income energy consumers and energy efficiency.

Federalism and the Role of the States

State experience has produced significant data and experience that can inform development of a more effective federal program. The majority of states have now implemented comprehensive planning processes involving stakeholders from all sectors of the economy to identify a portfolio of measures and policies for achieving significant emissions reductions.

These processes have been initiated by both executive order and legislation, and they frequently establish reduction goals. The planning processes begin with a GHG emissions

inventory that calculates current GHG emissions, projects future emissions under a business-as-usual (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. *New-Old Federalism*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. at 76–84. These measures cover a wide range, including (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 forty 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, markets mechanisms, such as taxes and cap and trade, monitoring, education and technical assistance, voluntary agreements, and demonstration projects. For an overview of state activities as well as maps depicting state use of specific legal and policy tools, see Pew Center on Global Climate Change, What's Being Done . . . in the States, www.pewclimate.org/what_s_being_done/in_the_states/.

A growing number of states are doing this on a regional basis. Seven northeastern states (Connecticut, Delaware, Maine, New Hampshire, New Jersey, New York, and Vermont) formed the Regional Greenhouse Gas Initiative (RGGI) to develop a regional emissions cap and trade program and an eighth—Maryland—has decided to join RGGI. RGGI has developed a model rule to establish a cap and trade program for electric utilities. RGGI, Model Rule and Amended Memorandum of Understanding, www.rggi.org/modelrule.htm. Most of the RGGI states have already proposed individual state rules to implement the model rule. Six western states (Arizona, California, New Mexico, Oregon, Utah, and Washington) and two Canadian provinces (British Columbia and Manitoba) participate in the Western Climate Initiative to adopt a regional emissions cap for multiple economic sectors and a cap and trade system. Western Climate Initiative, www.westernclimateinitiative.org/Index.cfm. Finally, thirty-nine states, two Canadian provinces, and three American Indian tribes are members of The Climate Registry, which is developing a common set of criteria for registering measures to reduce emissions and a cap and trade program. www.theclimateregistry.org/index.html.

Most major federal environmental laws preserve a significant role for state and sometimes local government. They create overarching federal goals and minimum standards and provide for state implementation, often leaving the design of implementation mechanisms to the states. Preservation of a significant state role in federal programs reflects political reality in the United States. Constitutional limitations on federal power have been reinforced by a long political tradition of local decision making epitomized by the New England town meeting and concern that centralizing power would undermine political freedoms.

There are also concrete advantages to giving state and

local government a significant role in implementing environmental policies as evident in the progress of climate change initiatives in the United States to date. As noted by Justice Brandeis in *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting), states have greater flexibility that allows them to innovate with less severe consequences and provide models for future federal legislation. State and local government programs can allow bottom-up decision making with greater stakeholder involvement. This allows the development of more precisely focused targets and strategies that are tailored to local conditions and are more likely to succeed.

While there are significant advantages to preserving a significant state role in crafting legislation for the reduction of GHG emissions, some federal role is necessary. Lack of consistency among state programs can present significant difficulties for the regulated community. Similarly, uneven performance among states requires the establishment of federal floors and uniform goals with federal oversight and enforcement. There are also jurisdictional and Constitutional limitations on state authority that militate towards a federal response to clarify state authority.

Current Federal Climate Change Bills

The current federal bills provide some useful and important points of departure. The bills all require steep cuts in emissions over a series of steps ending in 2050 with GHG emissions about 20 to 35 percent below current levels. These goals are consistent with the science indicating emission reductions are needed to avoid serious damage to the climate system; they also provide a sound basis for short- and long-term public and private sector planning. The bills amend the existing CAA, a statute with which we have considerable experience, and will enable sources to integrate their reductions of GHGs with their control of other regulated pollutants such as sulfur dioxide. The CAA also establishes NAAQS at a level sufficient to prevent “dangerous anthropogenic climate change,” the goal of the United Nations Framework Convention on Climate Change, to which the United States is a party. In addition, CAA cap and trade programs for other pollutants could, if also applied to GHGs, reduce costs and encourage private sector innovation.

These bills do not, however, address all of the areas where reductions will be required, and states could achieve significant reductions in these missing areas. Reductions will be required through the following five areas: (1) regulated emitters (e.g., power plants) through sector-specific cap and trade programs (CT); (2) uniform federal standards for achieving emissions reductions (e.g., renewable electricity portfolio standards, more stringent corporate average fuel-efficiency standards for motor vehicles, more stringent and comprehensive efficiency standards for appliances, and GHG emission standards for new and modified stationary sources under Section 111 of the CAA, 42 U.S.C. § 7411) (F); (3) energy-efficiency and conservation measures beyond the minimum federal standards, based on state experience (SE); (4) other measures used in state plans (e.g., forestry and land use

practices, transportation measures, taxes, and more stringent state standards) (S); and (5) individuals through changes that state and local governments can encourage in their behavior, purchasing decisions, and other means, including tax incentives for efficiency and conservation; programs to more easily finance the replacement of older and less efficient furnaces, air conditioning systems, and other equipment with newer and more efficient equipment; and recycling laws. (While we discuss measures to engage individuals separately, as a practical matter these measures will likely be incorporated as measures specified in state plans or nationally applicable programs and are therefore included in F, SE, and S.)

Thus, if R = the total reductions needed by a certain date, then $R = CT + F + SE + S$.

The various federal climate change bills focus on the first and second categories but not the last three. Virtually all of them would establish a cap and trade program for large emitting entities. Most of them also contain some uniform federal standards, including more stringent fuel-efficiency standards for motor vehicles and renewable electricity portfolio standards. But they do not expressly encourage or require the states to seek additional reductions. Consequently, the bills are less likely to achieve significant reductions, and they fail to take advantage of state knowledge and experience and to address how the five types of mechanisms should be integrated.

Elements Needed to Fully Involve the States

1. *Modifying the cap and trade program for some sectors.* The cap and trade program proposed by these bills would need to be modified to take into account overlaps among the various categories of emissions reductions. The reductions to be achieved by uniform standards, energy efficiency measures, and other planning measures will have a cumulative effect in reducing any given sector’s overall emissions. These reductions need to be calculated first for any given sector and then subtracted from that sector’s baseline emissions, thus yielding the initial cap for that sector. Thus, if the emission level for that industry sector is E today, the cap would be $E - (F + SE + S)$. This approach ensures that the emission level established for the cap and trade program takes into account reductions that can come from other programs, particularly state programs.

2. *Uniform national standards.* For some issues, national standards will have to be designed around existing state standards and laws. These standards, moreover, will need to navigate between two difficult positions. On one hand, the national standard should not weaken or undermine existing state laws by causing confusion among regulated entities and the public and interrupting the momentum toward renewable energy and energy conservation that is gaining strength by the year. Renewable electricity portfolio standards are an example. For example, twenty-two states and the District of Columbia have laws in place that require electricity providers to increase over time the percentage of their delivered elec-

tricity that comes from renewable energy. These laws differ in their definition of renewable energy, their ambitiousness, and a variety of other issues. Several of the bills now before Congress would establish a national renewable electricity standard, but they do not address the question of what to do with these twenty-three existing laws. On the other hand, differences among state renewable portfolio standards can weaken the potential for a more robust national market for renewable energy and thus greater use of renewable energy. Benjamin K. Sovacool and Jack N. Barkenbus, *Necessary but Insufficient: State Renewable Portfolio Standards and Climate Change Policies*, ENVIRONMENT, July/Aug. 2007, at 20, 24–25. Important differences include what counts as renewable energy and the extent to which renewable energy credits from other states can be used to satisfy a particular state's requirements.

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The most basic thing Congress can do before adopting any legislation is to learn what works and what does not in these state laws. State officials are an obvious source of information on this issue, as are many nongovernmental organizations. The Union of Concerned Scientists, for instance, has created a Web-based toolkit intended to help citizens and policy makers understand design and implementation issues. Union of Concerned Scientists, Renewable Electricity Standards Toolkit, http://go.ucsusa.org/cgi-bin/RES/state_standards_search.pl?template=main. Beyond that, it makes sense for Congress to build on, rather than replace, existing state efforts. Congress should, for example, write a definition of renewable energy that substantially tracks the definitions used in existing state laws and establish national rules where conflicting or inconsistent state requirements would interfere with the full development of a national renewable energy market. At the same time, states should be explicitly authorized to continue features of their existing laws or to adopt new laws that go beyond the minimum federal requirements.

3. *State Implementation Plans designating additional measures necessary to achieve the emissions reduction goals.* State Implementation Plans (SIPs) under the CAA provide states

with considerable autonomy in determining how to meet NAAQS for criteria air pollutants such as carbon monoxide and nitrogen dioxide and in achieving the needed reductions. SIPs are of particular importance when, as is often the case, uniform national standards are not sufficient to achieve the needed reductions and additional reduction measures need to be undertaken. SIPs also let states take into account their own unique emissions profiles and use their political judgment to determine how to achieve needed reductions. For GHG emissions, something very much like SIPs would be especially useful. Congress should require SIPs that would include state energy-efficiency and other planning measures (SE + S). Essentially, Congress should require states to consider a list of such measures and to implement those measures or others like them.

Unlike SIPs for criteria air pollutants, which are intended to meet standards for the maximum permissible concentration of those pollutants in the atmosphere, these SIPs should be based on tons of GHGs emitted. Congress would need to amend the CAA to achieve that result. Criteria air pollutants tend to be concentrated in those areas where they are emitted, particularly metropolitan areas. GHGs, by contrast, tend to be fairly uniform in concentration throughout the atmosphere; their effects are also felt throughout the world, principally in the form of greater warming and higher sea levels. It is thus more important to reduce the tons of these pollutants that are emitted than it is to achieve a particular ambient standard for those pollutants in a particular area.

4. *Allocation among sectors and measures.* The bills that have been introduced to date do not address how these various measures will be integrated. As is evident from state experience, the reductions needed to prevent “dangerous anthropogenic interference with the climate system” cannot be achieved with just one or several measures but will require a portfolio of approaches—a silver buckshot rather than a silver bullet. Reductions will need to be achieved across many sectors and by using many methods. In many cases, one method of reduction will overlap with another. Although some measures in some sectors can be readily achieved using market mechanisms, such as cap and trade, in other situations market imperfections will require other regulatory approaches or modification of existing laws. Careful consideration must be given to the questions of what measures are appropriate for what circumstances and how the measures will be integrated.

These particular difficulties are most obvious for the electric utility sector, where energy-efficiency and conservation measures can reduce the demand for electricity generation that causes GHG emissions. A cap and trade program should achieve reductions beyond those achieved through demand reduction measures, which will require the cap to be set at a level below that from demand reduction alone. For this reason, the RGGI states, in establishing their cap for the utility sector, assumed that they would all be employing a set of demand reduction measures and established the cap below the level that those measures would achieve. However, while uniformity in establishing demand reduction measures can be readily achieved in a program that motivates states to join

voluntarily, uniformity will not automatically occur in a larger federal system. Not all states have established programs for reduction of demand, and additional action to reduce demand will be required in many states if utilities are to achieve the necessary reductions to meet a uniform cap.

This type of program integration would not be an issue in a cap and trade system or with a GHG emissions tax operated under conditions of perfect competition because the price of allowances would create sufficient incentives for customers to reduce demand and for utilities to take actions that would result in demand reduction. (A cap and trade system where all allowances are auctioned and a tax where credits can be created and traded would have very similar economic consequences.) However, markets with perfect competition never exist. In the case of GHG emissions, for example, the utility industry is still regulated in many states, and there are barriers to its ability to pass through costs. Moreover, individual consumers may lack the knowledge or the financial wherewithal to implement many demand reduction and energy-efficiency measures. The combination of these and other market imperfections means that some alternative nonmarket mechanism will be required to coordinate reductions.

Coordination of reductions will require some sort of allocation of the reduction among sectors, measures, and states. With a properly structured GHG tax, the invisible hand of the market would arguably effect such an allocation. This might equally occur with a universal cap and trade program coupled with an allocation mechanism that auctioned all allowances. However, the market imperfections discussed above and political resistance to a tax mechanism make such an allocation mechanism problematic and suggest that some nonmarket-based allocation mechanism will be required.

Achieving such an allocation is easier said than done. Although the allocation likely will be determined by the political process, the experience of the states suggests a possible allocation mechanism for reductions other than those to be achieved by the cap and trade/market-based system. Because the cap will define what reductions will be achieved after consideration of nonmarket-based reductions, it should be calculated *after* the cumulative reductions to be achieved by all other measures are subtracted from the current total aggregate emissions. One could make that determination with an iterative process.

Federal legislation will contain some uniform federal standards, such as automobile emissions standards or motor vehicle fuel-efficiency standards, which will achieve some emissions reductions from a BAU scenario. To calculate the reductions that need to be achieved through other mechanisms, one can calculate the reductions that can be achieved through the national standards (F) and subtract that number from the total reductions required nationally (R), so that the reductions required by the other three sectors would equal $R - F$.

Next, one will need to determine the reductions to be achieved by energy-efficiency measures (SE). A number for the reductions that can be achieved nationally through energy efficiency can be determined by looking at what state climate planning processes have achieved through energy-efficiency

measures, scaling those reductions up to a national scale, and subtracting those reductions that will be federally mandated. The remaining energy-efficiency reductions should then be allocated among the states. Each state would be required to establish a plan to achieve these reductions. The reductions to be achieved through the other two sectors would then equal $R - (F + SE)$.

There are also a number of measures that are best achieved by state policies and are not readily amenable to national standards or a market-based approach. Most notably, many reductions will need to be achieved through mechanisms that the courts and Congress have long recognized as lying within the primary jurisdiction of the states, including land use, building codes, local transportation, and utility regulation. Others will be achieved by states adopting more stringent standards than nationally applicable ones, as California and eleven other states have already done in the case of mobile source emissions standards, see *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, 508 F. Supp. 2d 295 (D. Vt. 2007), and as many states are likely to do if a national renewable portfolio standard should be adopted. As noted above, state climate plans have relied on a wide variety of these types of mechanisms, including smart growth policies, open space and forest conservation programs, agricultural incentives, renewable portfolio standards, and a variety of incentives and fees, to achieve significant GHG reductions. These state experiences can also be scaled up (i.e., applied to more states and applied more intensively) to determine what states might achieve nationally (S).

The remaining reductions to be achieved through a cap can then be calculated by subtracting all of the other reductions from the cap, $CT = R - (F + SE + S)$. The actual cap would be calculated by subtracting the sum of the reductions to be achieved through the cap and the energy-efficiency measures ($CT + SE$) from the emissions of the sectors covered by the cap, which would operate nationally. Because the cap will rely upon demand reductions to be achieved through state energy-efficiency measures, the cap must assume that state energy-efficiency planning efforts will achieve the desired goals. Accordingly, some measures will need to be included in legislation to address situations where state energy-efficiency measures do not achieve the necessary reductions.

5. *Allocation among states.* Two sets of emissions reductions are best managed at the state level through SIPs—those to be achieved through demand reduction (SE) and remaining state measures (S). If these mechanisms are achieved through state plans, there must be some mechanism for allocating the required national reductions among the states. Here, again, there is sufficient diversity in the state experience to inform Congress, or even EPA, how to design an allocation mechanism.

Emissions reductions among states could be allocated most easily by scaling up what has been achieved through existing planning measures, determining per capita emissions or emissions reductions in each source category, and allocating those among the states. However, there are two problems with this approach: First, population growth is uneven across the states.

As a result, rapidly growing states such as Arizona are planning to achieve absolute emissions reductions from a year 2000 baseline more slowly than slower-growing states. Therefore, an allocation of reductions among states would need to be adjusted to account for this factor. Secondly, some states have already acted, and the early actors will need credit for their reduced baselines.

The first problem might be dealt with through census projections that are trued up after each census. One would first determine the reduction in emissions required on a per capita basis across the nation. The baseline from which reductions would be required would be calculated for each state based on projected population growth. Required reductions would be calculated by multiplying the average per capita reduction by the census projected population. States have differences other than rates of population growth that may be relevant to emissions reductions. For example, people in states with large rural areas, such as Wyoming or Texas, need to drive longer distances than those in more urbanized states, such as New York and California. However, experience comparing rural versus urban states, or rapidly developing versus stagnant states, suggests that these other differences are less significant than might be believed.

However, there are real differences among states due to the fact that many have already acted. Thus, for states as well as companies that have acted early, credit will need to be awarded for early action. Although this issue is being addressed in the development of regional GHG programs, such as the Western Climate Initiative, no resolution has yet been negotiated. One approach to calculating credits for early action would be to treat the early actions as though their emissions reductions had been banked. "Banked reductions" could be calculated by first determining the baseline from which reductions will be required on a BAU basis, assuming each state had not taken early action. BAU projections are an element of every climate change plan and could be readily calculated for the states that have already taken action. Reductions resulting from these measures from the business-as-usual projection can then be calculated and treated as though they had been banked. Providing this type of credit will require commensurately lower reduction goals to achieve the same overall reductions.

6. *Provisions to effectively engage individuals in its implementation.* The CAA already contains significant public participation provisions but tends to treat emitting entities and individuals separately. By contrast, activities that are under the "direct, substantial control of the individual and that are not undertaken in the scope of the individual's employment," are responsible for about one-third of U.S. GHG emissions and eight percent of global GHG emissions. Michael P. Vandenberg and Ann C. Steinemann, *The Carbon-Neutral Individual*, 82 N.Y.U. LAW REV. (2007). It thus makes good sense for Congress, as well as the states, to fully engage individuals in the national effort to reduce GHG emissions. John C. Dernbach, *Harnessing Individual Behavior to Address Climate Change: Options for Congress*, 26 VA. ENVTL. L. J. (forthcoming 2008). While the federal government would need to have an

active role in this effort, many activities involving individual actions are already subject to considerable state and local government involvement. These include state recycling laws, which produce significant GHG reductions because reusing material uses less energy than producing new products, and net-metering laws, which encourage individuals to produce renewable electricity for their own use because they allow them to sell excess electricity to the grid.

Of course, any major effort to encourage and enlist individuals in a national climate change mitigation program can be criticized as politically inappropriate because many individuals simply will refuse to participate. Perhaps more significantly, such an effort would directly challenge environmental law's traditional divide between individuals and polluters. The CAA has never succeeded, for instance, in changing individual driving habits. The shortest answer to this objection is that *some* significant fraction of the American public likely would respond positively to appropriately crafted efforts to engage them in reducing GHG emissions as exemplified by the significant impact of state recycling and net-metering laws. States could likely generate significant economic development and cost-saving opportunities, moreover, with aggressive programs to encourage individuals to upgrade or renovate existing residential and commercial buildings (e.g., through low-interest loans whose monthly payments are less than or equal to the cost savings)—an area where significant GHG reductions could be achieved.

The Supreme Court's decision in *Massachusetts v. EPA*, makes a comprehensive federal approach to reduce GHG emissions under the CAA appear inevitable. That decision has also provided support for aggressive state programs now being implemented or developed by the majority of states. The Supreme Court's decision weighed heavily in the first judicial decision addressing a challenge to a state climate change program, where Judge William Sessions rejected all challenges to Vermont's adoption of the California GHG emissions standards. *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*. It was also central to Judge Ishii's decision in *Central Valley Chrysler-Jeep, Inc. vs. Goldstone*, slip op. Case CV F 04-6663 (E.D. Ca. Dec. 11, 2007), that California's standards are not preempted by the other federal laws, and that California is entitled to a waiver of preemption by EPA under CAA Section 209.

States have already developed a sophisticated matrix of activities to reduce GHG emissions, and these should provide a model for federal action. It is likely that state actions will have advanced even further by the time the design for a federal program is decided. Moreover, achieving the challenge of preventing "dangerous anthropogenic interference" with the climate system will require implementation of measures in areas traditionally exclusively reserved for the states. Given these considerations, the federal system will fail in achieving this objective if it does not fully engage state and local governments in the effort and fully incorporate state and local measures. The SIP mechanism contained in the CAA, if adapted to the problem of climate change, can provide a mechanism for doing so. 🌳