Integrating State and Federal Actions in National Climate Policy: A Case for Partnership

Status and Next Steps for U.S. Climate Policy

Federal climate legislation is being developed that could help reestablish the United States' position as a global leader in greenhouse gas (GHG) emissions reductions. As a result of the landmark Supreme Court decision in *Massachusetts v. EPA*, the U.S. Environmental Protection Agency (EPA) must also develop comprehensive climate policy under the Clean Air Act (CAA). Both developments offer a chance for states to provide crucial national leadership on the climate change issue.

As evident from the states' resort to the Courts to challenge federal administrative inaction in *Massachusetts v. EPA*, so far, federal legislative and administrative actions have proceeded with limited input from the states—even though state and local participation in a federal strategy is essential to reduce costs, guarantee attainment of strong national goals, and provide numerous co-benefits. Based on the recent experiences of states and long-standing successes of the Clean Air Act, cost-effective achievement of strong national GHG emissions reduction targets can best be accomplished through a combination of federal cap-and-trade and targeted policies and measures at the national and state levels.

Through recent leadership actions, states have provided a very significant contribution toward solving the climate change problem. As a result of their early action, state leaders possess some of the most advanced knowledge of cost-effective policy solutions for a national commitment to reduce GHG emissions.

Since 2000, 30 states have developed or are developing climate mitigation action plans through open, democratic, and bipartisan consensus-building processes. These plans have resulted in high levels of stakeholder and public support for specific policies and measures that cut emissions, save money and energy, and pave the way for a potent new economy. Involvement of local stakeholders has resulted in a higher level of knowledge regarding economic impacts and cost-effective solutions than can be achieved using national data. The state processes, therefore, provide a clear and cost-effective roadmap to national action.

This wave of state leadership should come as no surprise to students of history. Traditionally, states have given birth to many groundbreaking environmental policies that ultimately evolved into national law through a well-established process[1] that is fundamental to our system of

[1] For example, California state air regulation provided a model for the Clean Air Act. Regulation of water quality by the interstate Delaware River Basin Commission (DRBC) provided the model for the system of federal regulation implemented by the Clean Water Act. Pennsylvania's system of surface mining regulation served as the model for the federal Surface Mining Control and Reclamation Act. The hazardous site remediation program established by New Jersey pursuant to the New Jersey Spill Compensation and Control Act was copied by Congress in enacting the federal Comprehensive Environmental Response Compensation and Liability Act. *See* Robert B. McKinstry, Jr.,

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government. With little action on climate change at the federal level, state governments have once again been the chief locus of policy innovation and consensus building in the United States.

During the summer of 2008, S.2191, America's Climate Security Act (ACSA)—popularly known as the Lieberman-Warner bill—will likely be debated on the Senate floor. This legislation envisions strong national emissions reduction targets that would be achieved by a new federal cap-and-trade program covering all sectors of the U.S. economy through a system of emissions caps and tradable pollution allowances (permits). It is hoped that this new mechanism will be cost-effective by implementing a market-based system for pollution control.

Reportedly, four key issues are under deliberation: (1) how emissions allowances will be allocated to industries under the cap-and-trade scheme, (2) whether the scheme would include a "safety-valve" mechanism for keeping the price of carbon allowances from going too high, (3) whether or not incentives will go to the nuclear power industry, and (4) whether Congress will preempt states from adopting their own GHG regulations that go beyond federal mandates.

The structure of proposed carbon allowances under Lieberman-Warner provides up to 10% of carbon allowances to the states, if certain requirements are met. To industry and power generators—those actually emitting vast amounts of carbon dioxide—the law would give fully 40% of carbon credits for free. Direct allocation by the federal government of emission allowances to sources echoes the approach applied two decades ago in the federal Acid Rain Program.

Given the lessons learned and economic successes of the states in addressing climate change, as well as market imperfections and other barriers that could hamper the effectiveness of a cap-and-trade mechanism, it will be important to couple that mechanism with other policy structures that provide a stronger partnership role for the states and greater inclusion of sector-based policies and measures at both the state and national levels.

This brief paper presents a potential state partnership role in federal climate legislation. It examines what state governments have accomplished and describes a framework for climate policy development that would cover all sectors of the economy and involve all levels of government in implementation, and explains how this could improve proposed legislation or rule making.

Note: This executive overview is intended to serve as a tool for initiating discussion and a first step toward creating a legislative or administrative structure that will take full advantage of state and federal partnerships for solving the problem of climate change.

For further elaboration, questions, or suggestions, please contact The Center for Climate Strategies at (717) 230-8044, or visit our Web site at: www.climatestrategies.us.

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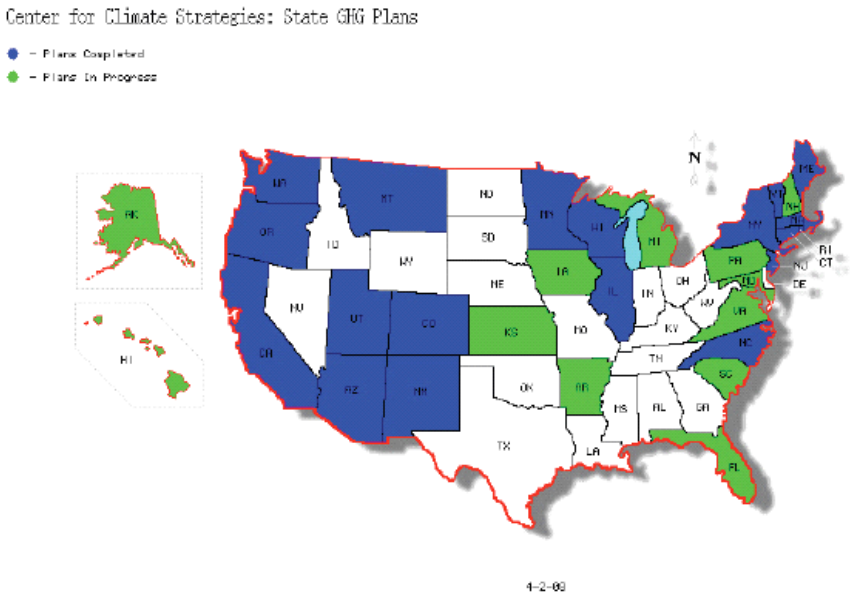
Laboratories for Local Solutions for Global Problems: State, Local and Private Leadership in Developing Strategies to Mitigate the Causes and Effects of Climate Change, 12 Penn St. Envtl. L. Rev. 15, 16 (2004).

I. Summary of State Climate Policy

Thirty states currently have developed or are in the process of developing comprehensive climate action plans. The map in Figure 1 illustrates this national activity.

Figure 1.



These plans include a portfolio of policies and measures that touch all sectors of the economy. Through the "bottom-up" planning process used by these states, each policy in the portfolio is evaluated by a technical work group, expert consulting team, and stakeholder group for its ability to reduce GHG emissions and for its cost-effectiveness, co-benefits, and feasibility. The technical work groups are based on economic sectors—(1) energy production, (2) commercial, residential, and industrial, (3) transportation and land use, (4) agriculture, forestry, and waste management, and (5) cross-cutting issues—and each draws on a cross-section of stakeholders familiar with the conditions and capabilities of the sector in the particular states. If a measure lacks full support, it is sent back to the drawing board for the development of alternatives that better address any concerns raised by the stakeholders and thereby achieve a better fit with the state's economic and policy structure.

Economics of State Action

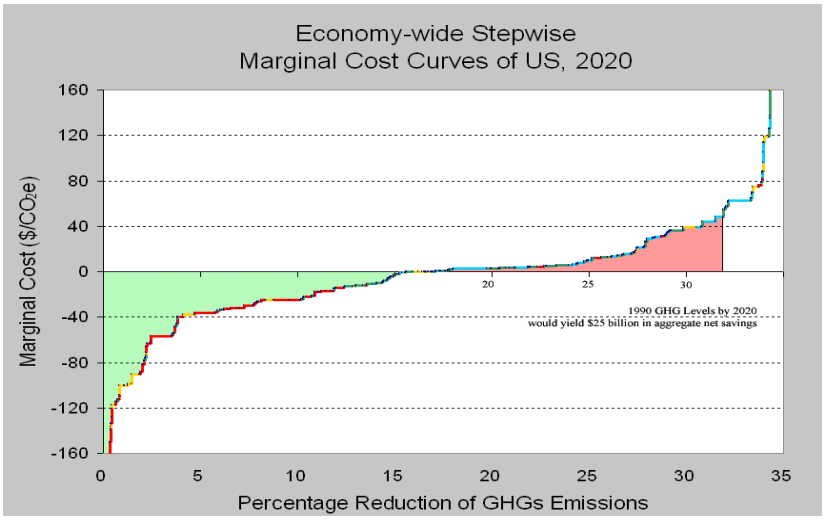
Collectively, state action plans can be aggregated and graphically illustrated on a cost curve that shows the dollar cost or savings per ton of GHG removed for each specific policy measure. The cost curve in Figure 2 was constructed using data from climate action plans in 12 leadership states using more than 500 policy data points.[2] The width of each segment reflects GHG emission reductions as a percentage of national emissions, and its position reflects the associated

[2] The 12 states are AZ, CO, CT, ME, MN, MT, NM, NC, NY, RI, VT, and WA. Data from other states will be added to this analysis as the information becomes available.

cost (above zero) or savings (below zero) per ton reduced for a specific policy option from the full portfolio of solutions.

This cost curve is an aggregate snapshot of state climate actions, illustrating the potential impact of scaling up state climate actions to a national level.

Figure 2.



$/$CO_2$e = dollars per carbon dioxide equivalent; GHGs = greenhouse gases.

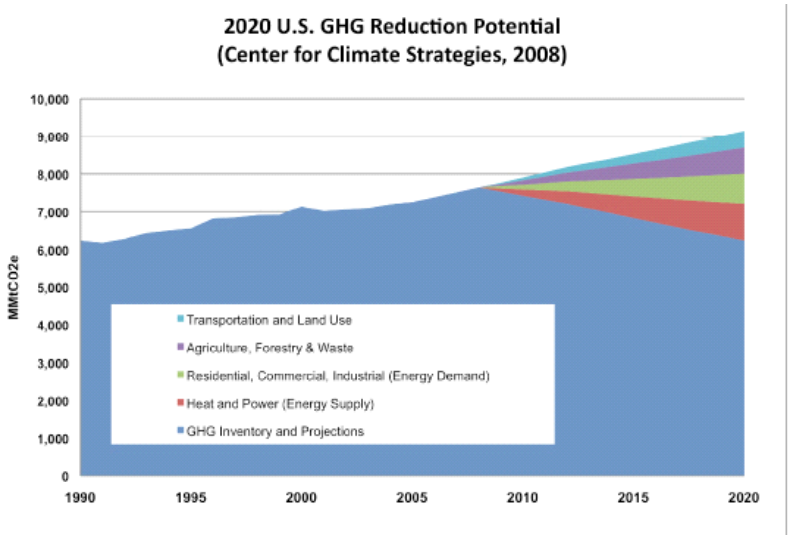
This cost curve shows that a 33% reduction in business-as-usual GHG emissions could be accomplished nationally by 2020 if all 50 states adopted a portfolio of actions similar to the portfolios of the leadership states. The cost curve suggests that a common interim target, which has been recommended by many scientists and policy makers—reduce GHG emissions to 1990 levels by 2020—can be achieved very cost-effectively.

The green area illustrates the *economic savings* and the red area shows the *economic costs* that would accrue from implementing the full range of leadership states' policy measures. Netting the savings and the costs together, these areas reflect an aggregate net economic savings of $25 billion through national adoption of the portfolios of policies developed by the 12 leadership states. The national scale-up results of state actions can be seen in the sector-based wedge graph (Figure 3), which demonstrates specific policy measures that can attain strong national goals.

It must be emphasized that these cost curves are very "conservative" in the sense that they understate substantially the benefits of taking action on climate change and overstate the costs. The curves are conservative both because of the characteristics of the state processes that produced the underlying data and what the cost curves actually represent, as follows:[3]

[3] These curves are cost-effectiveness curves rather than cost-benefit analyses. They focus on costs and cost savings and do not address benefits, such as avoided future damages, health benefits, and job creation.

Figure 3.



GHG = greenhouse gas; $MMtCO_2e$ = million metric tons of carbon dioxide equivalent.

- State climate policy development included consideration of political, social, and economic feasibility issues in the selection, design, and analysis of policy options so that costs and benefits are not "theoretical."
- Through the consensus building process, many actions have been scaled back or redesigned to address potential conflict or feasibility issues.
- The cost curve does not factor in savings from other externalities such as health care savings and avoided military expenditures.
- The curve does not recognize actions implemented prior to the plans, even though costs of such actions have already been incurred.
- The curve does not include reductions, savings, or costs driven by cap-and-trade programs.
- Secondary economic performance (e.g., new jobs, increased income, greater competitiveness, or value-added) is not directly recognized in this curve, even though many actions will encourage the development of new industries and new associated jobs.
- The cost curve does not show the costs of inaction, which are substantial[4] and must be factored into any comprehensive analysis of policy options.

Independent Corroboration of State Planning Economic Analysis

The results of foregoing economic analysis developed by the Center for Climate Strategies (CCS) from the data and analyses generated during state planning processes are consistent with the results of another rigorous analysis by other entities led by McKinsey & Company—using

[4] For example, the Stern Report estimates the cost of inaction to be anywhere between 5% and 20% of global gross domestic product (GDP). To the extent that taking action helps avoid these costs, it represents a benefit that is not counted in this analysis.

different sources and methodologies. Specifically, in collaboration with the Conference Board, McKinsey & Company released a report in December 2007 called *Reducing Greenhouse Gas Emissions: How Much at What Cost?*,[5] produced in association with DTE Energy, Environmental Defense, Honeywell, National Grid, Natural Resources Defense Council (NRDC), Pacific Gas and Electric Corporation (PG&E), and Shell. The report's central conclusion was that

> *The United States could reduce greenhouse gas emissions in 2030 by 3.0 to 4.5 gigatons of CO_2e using tested approaches and high potential emerging technologies. These reductions would involve pursuing a wide array of abatement options available at marginal costs of less than $50 per ton, with the average net cost to the economy being far lower if the nation can capture sizable gains from energy efficiency. Achieving these reductions at the lowest cost to the economy, however, will require strong, coordinated, economy-wide action that begins in the near future.*

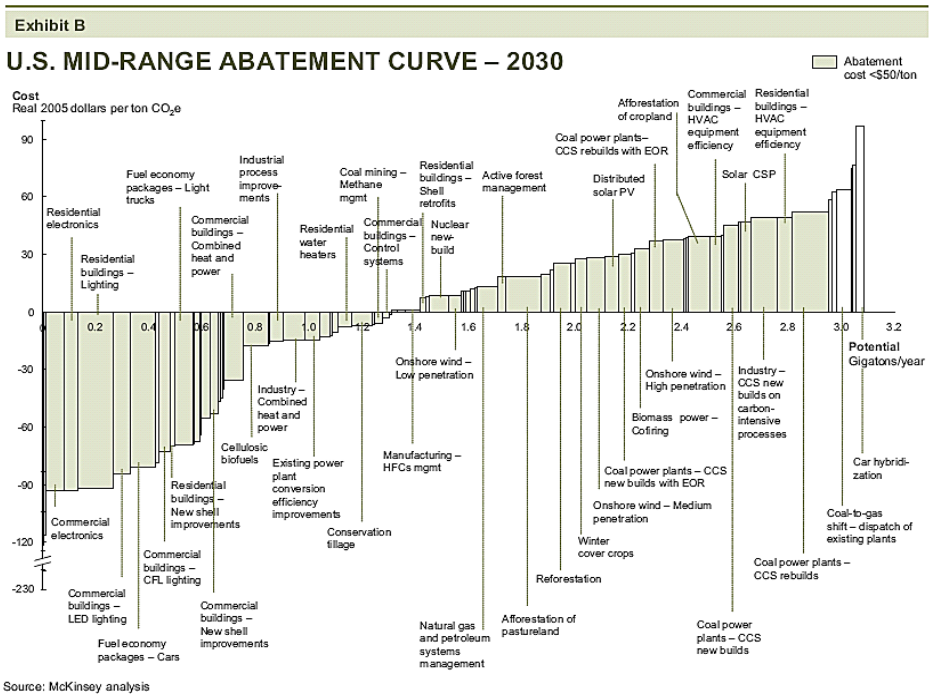
The "five clusters of abatement potential" that McKinsey used closely parallel the economic sectors that the CCS also uses in climate action planning processes. These sectors are

- Agriculture and Forestry
- Energy Supply
- Residential, Commercial, and Industrial
- Transportation and Land Use
- Waste Management

Further, both McKinsey's assessment and the CCS analysis examine options from a bottom-up view. Finally, McKinsey's graphic representation of its results in a cost curve (Figure 4) is remarkably similar to the CCS cost curve in Figure 2:

[5] See http://www.mckinsey.com/clientservice/ccsi/

Figure 4 (from McKinsey).



Lessons from the States' Experience and GHG Cost Curves

A number of important lessons can be learned from both the states' experience in developing and beginning to implement their climate plans and these economic analyses.

- *Economic gains result from a wide variety of specific measures.* Smart policies can create economic savings through expert selection and design. Although job creation is not considered in the economic analyses set forth above, state experience suggests that these policies lead to net job creation, particularly in new industries.
- *Climate action will not dislocate the economy.* Impacts of actions are typically positive and positive overall but, in any case, not large in comparison to the economy.
- *The distribution of costs and savings will be uneven.* There will be winners and losers but, fortunately, a wide range of policy choices can mitigate potential downsides.
- The cost curves generated by both CCS and McKinsey are founded upon actions being implemented *in all sectors of the economy and at all levels of government.* Stabilizing the climate requires a suite of policies that creates the proper incentives to target these disparate sectors and mobilizes all levels of government.
- *A full plan must be implemented.* Partial solutions would not achieve adequate emission reductions and would disrupt important synergies between policies that boost performance in all economic sectors.[6] The need for a plan that addresses all economic sectors is readily

[6] Because all economic sectors must be involved to achieve the necessary reductions, a wide variety of policy instruments is required. The Clean Air Act provides a well-tested model for integrating such a variety of

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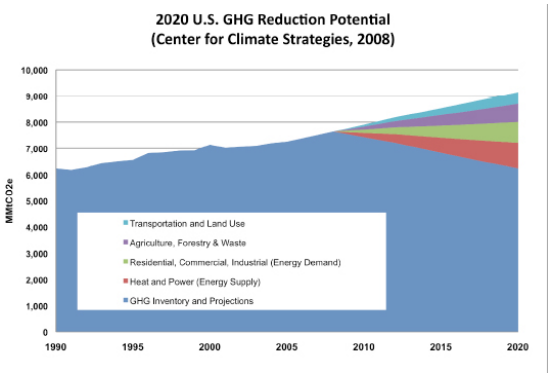
evident from the chart in Figure 5, which shows the reductions by economic sector that could be achieved if state measures were scaled up nationally.

Figure 5.



$MMtCO_2e$ = million metric tons of carbon dioxide equivalent.

As can be seen, elimination of any economic sector would make it impossible to achieve the goal of returning to 1990 GHG emissions levels.

II. Strengthening Law and Policy Through Partnership

Ensuring that all economic sectors are addressed will require a wide array of policy mechanisms and methodologies to coordinate them that must include market mechanisms such as cap-and-trade or taxes, traditional codes and regulations, and a variety of other financing tools and mechanisms.

The cap-and-trade mechanism at the heart of the Lieberman-Warner legislation provides a useful mechanism for reducing emissions, but it cannot create the set of incentives required to reach all of the sectors necessary to achieve GHG emissions reductions cost-effectively. The cap-and-trade mechanism would set an emissions cap for the economic sectors covered by that mechanism and harness the power of markets to send price signals that influence the economy from the top down. However, it cannot work in all cases because of a variety of market imperfections. By incorporating policies and measures developed at the state level into all sectors of the economy and across all levels of government to target other areas, policy makers can strengthen a cap-and-trade approach.

Emissions reduced by policies and measures would ease the demand for carbon allowances, likely lowering the price of carbon credits. Policies and mechanisms also allow policy makers to target action geographically and can provide incentives for reductions beyond cap-and-trade that can significantly contribute to reaching national targets. There is also mounting evidence that

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mechanisms. That law provides a framework that integrates national technology-based standards, sectoral cap-and-trade programs (the Acid Rain Program created by the statute and a variety of other trading mechanisms), and state planning programs that can bring a variety of other policies to bear through the mechanism of State Implementation Plans.

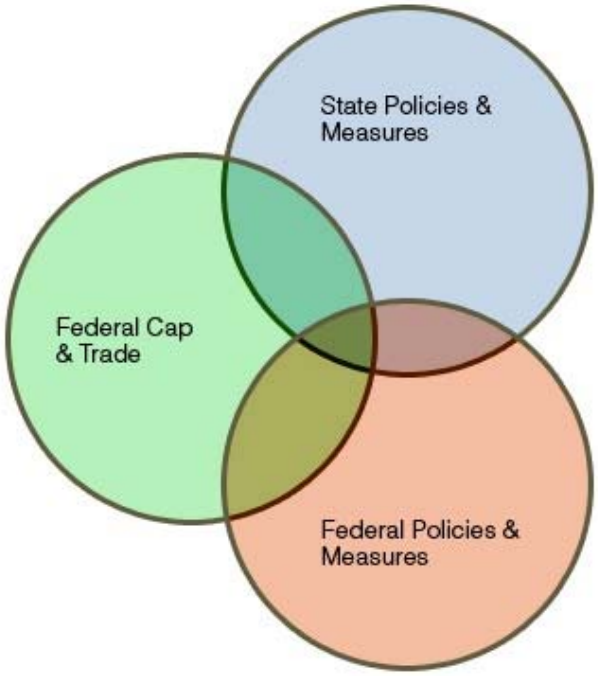
they would create new jobs and promote broad economic development. Most important, policies and measures can be structured to address market imperfections and barriers, and thereby enable a cap-and-trade program to work more effectively, or to encourage or require actions in areas where price mechanisms or market-based caps are not likely to result in implementation of the desired emissions reductions (such as many energy efficiency measures).

For example, the combination of price regulation in many state utility laws and lack of knowledge or capital on the part of individual consumers of electricity means that price-based mechanisms such as cap-and-trade or a tax will not generate the incentives to achieve some of the most cost-effective measures for reducing electricity demand through energy efficiency and conservation. Many states have developed a suite of policies to achieve these results. These complementary state policies to reduce demand are necessary to help the utility sector achieve emissions reductions under a federal cap-and-trade regime.[7]

Sector-specific policies and measures will thus play a crucial role in meeting national GHG commitments by improving overall economic performance and providing incentives not fully provided by a cap-and-trade program. One way of visualizing this kind of symbiotic state–federal approach to climate law is provided by the illustration in Figure 6. Notice that there are three overlapping circles of action, not just two.

[7] Theoretically, the utility that is subject to the cap could create incentives for these measures by paying people to implement energy efficiency measures to create credits. However, in many states, action by the public utility commission would be required before this could occur. Moreover, this approach could present spotty results and may result in higher transaction costs than other simpler measures. For example, changing building codes for new construction will likely produce more uniform, more cost effective and fairer results than requiring a utility to identify those builders and to pay them to install devices where the benefits will accrue to the homeowners who purchase the homes while reducing demand for the utility's product.

Figure 6.



The green circle—federal cap-and-trade—is reinforced and expanded by complementary policies and measures enacted at both state and federal levels. A review of specific policies and measures shows that some are likely to be most effective when implemented through national policy, and others are likely to be most effective when implemented at state and local levels. For example, transportation system improvements benefit strongly from the support and flexibility that comes with federal funding. Conversely, demand-side management programs in the utility sector and waste energy conversion opportunities on farms are both helped most by removal of local regulatory barriers.

One of the more contentious issues in the debate over federal climate change legislation is the extent, if any, that federal regulation should preempt state action. The need for integration of policies across all sectors and levels of government to achieve GHG emissions reductions cost effectively suggests that the proponents of the most radical proposals for blanket preemption may be shooting themselves (or their clients) in the foot, by creating a regime that will foreclose many of the most cost effective solutions. A recognition of this need for integration also has the potential to reframe the issue of preemption by focusing on questions such as the appropriate levels of governance for specific policies and mechanisms for coordination where state or local government must act.

III. Governor's Yale Declaration on Climate Change

One hundred years ago, President Theodore Roosevelt convened a historic Conference of Governors to establish a conservation partnership between the states and the federal government. Always the pragmatist, Roosevelt said, "My concern is not the academic discussion of either the

principles of State rights or the principle of National sovereignty, but it's what will best conserve the needs of the people as a whole."

In commemoration of the example set by President Roosevelt a century ago, the Yale School of Forestry and Environment convened another conference of governors in April 2008, at which the chief executives of the leadership states issued a Declaration on Climate Change (see appendix for full text.)

"Today, we recommit ourselves to the effort to stop global warming, and we call on Congressional leaders and the Presidential candidates to work with us—in partnership—to establish a comprehensive national climate policy," they said, and they called for sound policy based on three principles: (1) a full partnership between state and federal governments, (2) incorporation of policies and measures into national legislation, and (3) funding and incentives for states to provide leadership on climate action. Implied in their Declaration was the preservation of their local authority from unwarranted federal preemption.

IV. Conclusion

Cost impacts will obviously be a key consideration in setting the breadth and depth of federal GHG caps under a cap-and-trade system. If policy makers conclude that economy-wide reductions from cap-and-trade alone are too expensive or risky, they may scale back the level of emissions reduction targets. This could result in the United States' falling short of establishing adequately strong national commitments through a cap-and-trade program alone.

With the experience of a quarter of the states in the United States to draw on and the experience of half of the states expected within a year, the President and Congress can benefit from the lessons learned at the state and local levels and incorporate these lessons into prospective national climate policy. The President and Congress can build a new partnership among local, state, and national interests that will ensure the best outcomes at the least cost.

Full integration of sector-based policies and measures with a cap-and-trade policy will be needed to achieve the best economic and environmental results. This analysis of state climate action actions suggests that integrating a broad climate policy architecture—comprising national cap-and-trade, federal policies and measures, and state-level efforts—is more likely to succeed economically and environmentally than depending on a single national market-based system.

The policy options developed by leadership states reflect broad support by stakeholders across the United States for highly specific policies, the need for broad applicability and involvement across sectors, and the importance of significant public participation in climate policy development. Many proven policy actions can be implemented immediately to reduce GHG emissions and capture economic opportunities, and scientists tell us that time is of the essence.

Appendix

Governors' Yale Declaration on Climate Change

As of April 15, 2008, the governors of the following 17 states have signed on to the policy declaration on climate change: Arizona, California, Colorado, Connecticut, Delaware, Florida, Kansas, Maine, Maryland, Massachusetts, Michigan, New Jersey, New Mexico, New York, Oregon, Virginia, and Washington.

Issued during the 2008 Conference of Governors on Climate Change at Yale University, the Declaration is a call "to embrace the overarching conservation challenge of our time: the threat of climate change," and describes three fundamental principles for constructing a state–federal partnership to guide the formulation of national climate law.

Full text of the Declaration

"Standing in the shadows of President Theodore Roosevelt and Gifford Pinchot, the founder of the Yale School of Forestry and first Chief of the U.S. Forest Service, we—Republican and Democratic Governors alike—are gathered to challenge ourselves, our Congressional leaders, and the 2008 Presidential candidates to learn the lessons these men have taught us and fully embrace the overarching conservation challenge of our time: the threat of climate change.

In 1908 Roosevelt and Pinchot stared down those who looked at the nation's natural resources and saw only the riches they could accumulate from the water, lumber, coal, and gold available to them. They did what had to be done to make the industrial interests see the forests for the trees and, as a result, future generations have been blessed with a National Park System that is second to none and over 100 million acres of nationally protected forest lands. Together, they transformed what was then perceived as an isolated conservation elite into a more lasting and effective national movement—one that connected people and nature, and conservation with economic prosperity. And they did so by calling on states to work together—to unite—to strengthen federal policy.

At that time, 100 years ago, President Roosevelt convened a historic Conference of Governors to establish a conservation partnership between the states and the federal government. Always the pragmatist, Roosevelt said, "My concern is not the academic discussion of either the principles of State rights or the principle of National sovereignty, but it's what will best conserve the needs of the people as a whole." What was true in 1908 remains true in 2008.

We recognize that we are facing a new threat to our natural resources and our way of life, and we are prepared to act with similar courage and determination to meet the needs of the public we serve. We are proud that our state and local governments have been in front—taking action to reduce the emission of greenhouse gases that is contributing to the changing climate—and we will continue these efforts, but we cannot do it alone. All levels of government must work together—in cooperation and without regard for party affiliation—if we are to succeed in meeting the challenge before us. We applaud and encourage the enactment of strong and effective federal climate policy and look forward to the integration of these efforts with those being made at local, state, and regional levels.

Today, we recommit ourselves to the effort to stop global warming, and we call on Congressional leaders and the Presidential candidates to work with us—in partnership—to establish a comprehensive national climate policy. Such a policy must be founded on three principles:

- A federal–state partnership is the only way we can get the job done. Success in tackling climate change in the United States will require the full engagement of leadership states in climate governance processes and organizations as well as support for ongoing state innovation and the development of green technologies.
- State-based climate action plans and programs have paved the way for cost-effective reductions of greenhouse gases, and they deserve continued support. The comprehensive portfolios of measures taken at the state level across all sectors are real and they work. There are a variety of ways these actions can be further strengthened, and more of them developed and implemented, with federal support.
- Rewarding and encouraging meaningful and mandatory federal and state climate action is the key to success. Incentives for states to provide leadership on climate action are critical. Incentives drive change and they can come from existing federal energy, transportation, and agriculture programs as well as from auction revenue derived from a federal cap-and-trade system.

These principles underscore our firm belief in the importance of fashioning a role for both states and the federal government in the design and implementation of a comprehensive national climate policy. This is not a case of advocating local, state, or regional interests versus federal interests, but rather of promoting a partnership that will ultimately strengthen the nation's approach to the climate challenges we face.

To build this partnership, we will coordinate our efforts and actively solicit the support of additional Governors and members of Congress who are also serious about the need to take action now to reduce emissions of greenhouse gases at all levels of government. In addition, we will reach out to the major Presidential candidates as a means of shaping the first 100 days of the next Administration. We have no time to lose.

Together, we are committing to walking in the footsteps of President Roosevelt and Gifford Pinchot by embracing the conservation challenge of our lifetime—the threat of climate change. We hope that many others will join in this journey."

Resources on State Climate Action

The following states have climate action plans either completed or underway. Please follow the links to see the completed action plans or to follow progress of ongoing planning processes. For an interactive map with clickable links embedded, please go to www.climatestrategies.us.

Alaska *	www.climatechange.alaska.gov/
Arizona *	www.azclimatechange.gov/
Arkansas *	www.arclimatechange.us
California *	www.climatechange.ca.gov/
Colorado *	www.coloradoclimate.org/
Connecticut *	www.ctclimatechange.com/StateActionPlan.html
Florida *	www.flclimatechange.us
Illinois	www.epa.state.il.us/air/climatechange/
Iowa *	http://www.iaclimatechange.us/
Kansas *	www.ksclimatechange.us
Maine *	www.maine.gov/dep/air/greenhouse/
Massachusetts	www.mass.gov/dep/air/climate/
Michigan *	www.miclimatechange.us
Minnesota *	www.mnclimatechange.us
Montana *	www.mtclimatechange.us
New Jersey *	www.state.nj.us/dep/dsr/climate/climate.htm
New Mexico *	www.nmclimatechange.us
New York	www.ccap.org/pdf/04-2003_NYGHG_Recommendations.pdf
North Carolina *	http://www.ncclimatechange.us/
Oregon	www.oregon.gov/ENERGY/GBLWRM
Pennsylvania *	www.pecpa.org/Carbonmanagementproject
Rhode Island *	www.dem.ri.gov/programs/bpoladm/stratpp/greenhos.htm
South Carolina *	www.scclimatechange.us
Utah	www.deq.utah.gov/BRAC_Climate/
Vermont *	www.vtclimatechange.us
Washington *	www.ecy.wa.gov/climatechange/cat_overview.htm
Wisconsin	http://dnr.wi.gov/environmentprotect/gtfgw/
Regional Greenhouse Gas Initiative (RGGI) *	http://www.rggi.org/
Western Climate Initiative (WCI) *	http://www.westernclimateinitiative.org/
Midwestern Governors Accord (MGA) *	http://www.midwesterngovernors.org/govenergynov.htm

* Indicates involvement of staff of the Center for Climate Strategies in consultation with the states and/or facilitation of state planning processes.

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