# Climate Leadership in Northeast North America*
## *Draft*

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## Introduction

Most innovative and ambitious policy making efforts in the United States on climate change and greenhouse gas (GHG) mitigation are developing apace at regional, state and local levels. A steadily growing number of states across the country are initiating climate change action beyond requirements mandated by the federal government (Rabe, 2004; Rabe 2006; PEW, 2006). As of May 2006, the Pew Center of Climate Change lists 48 case studies in 31 states of relevance to climate change. Combined, these efforts have measurable effects on GHG emissions reductions.

States officials and policy makers can address GHG emissions directly through the many key policy areas where they hold policy making competence (rather than the federal government), including the generation and distribution of electricity, transportation infrastructure, land use and planning, agriculture and forestry, and waste management. In this respect, states can act as "policy laboratories" on climate change mitigation and adaptation and exercise political pressure on federal climate policy from below. In addition, states implement many federal environmental laws, they issue more than 90% of all environmental permits, and they conduct more than 75% of all environmental enforcement actions (Rabe, 2004).

Although individual states have adopted climate change relevant policy since the late 1980s, there has been a noticeable expansion of policy since 2000 (Rabe, 2004; Selin and VanDeveer 2005). In addition, there has been an important expansion of regional collaborative state action in recent years (sometimes also including Canadian provinces). Examples of multi-state cooperation include the West Coast Initiative (CA, OR and WA), the Southwest Climate Change Initiative (AZ and NM), and the Powering the Plains Initiative (ND, SD, Minnesota, Iowa, Wisconsin and Manitoba) (see PEW, 2006). Some of the most ambitious of these regional collaborative efforts, however, are developing in the Northeast.

This paper briefly reviews two regional climate change mitigation initiatives in the Northeast: the 2001 Climate Change Action Plan of the New England Governors Conference and the Easter Canadian Premiers and its implementation, and the ongoing efforts to establish a regional "cap and trade" scheme for CO2 emissions from power plants, the Regional Greenhouse Gas Initiative. The region also includes extensive municipal and university level climate change policy, and particularly active civil society actors around such issues. The paper concludes with a brief discussion of the possible ramifications and the limitations of climate change policymaking in the region.

## Climate Change Action in the Northeast

State level collaboration in the Northeast includes two separate, but related and geographically overlapping initiatives. First, a regional Climate Change Action Plan was signed by the Governors of six New England states and the Premiers of five Eastern Canadian provinces in 2001. The Regional Greenhouse Gas Initiative (RGGI), initiated in 2003, seeks to establish GHG emissions permit trading from Maryland to Maine. It is to these two initiatives we now turn.

NEG-ECP

The collaborative effort by the New England Governors (NEG) and the Eastern Canadian Premiers (ECP) includes the six New England states (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut) and five Eastern Canadian provinces (Nova Scotia, Newfoundland and Labrador, Prince Edward Island, New Brunswick and Quebec). Under the joint 2001 Climate Change Action Plan, participating states and provinces commit to reduce GHG emissions to 1990 levels by 2010 and to achieve 10% reductions below 1990 levels by 2020. The plan calls for ultimate emissions reduction to levels that do not pose a threat to the climate system. An official estimate stipulates that achieving this goal would require a 75-85% reduction from 2001 emissions levels .[1]

The NEG-ECP plan outlines nine general actions and goals pursuant to the regional emissions reduction targets:

1. Establish a regional standardized GHG emissions inventory
2. Establish a plan for reducing GHG emissions and conserving energy
3. Promote public awareness
4. State and provincial governments to lead by example
5. Reduce greenhouse gases from the electricity sector
6. Reduce total energy demand through conservation
7. Reduce and/or adapt to negative social, economic, and environmental impacts
8. Decrease the transportation sector's growth in GHG emissions
9. Creation of a regional emissions registry and explore a trading mechanism.

To further specify policy options for the implementation of these nine action steps, the plan contains thirty-four recommendations for policy action for the participating states and provinces. Some of these recommendations involve building regional institutions for continued policy making and implementation review. Others call for policy making by states in support of the regional policy goals and emissions reduction targets. In addition, the plan's recommendations also contain provisions for outreach efforts to private and public sector groups and public awareness rising. Since 2001, New England state officials and NGOs have worked to develop and implement state level policies and programs in support of the regional plan (Selin and VanDeveer, 2005). Figure 1 shows GHG reduction goals of the Northeast states, including the NEG-ECP goals of the New England states.

To date, state and provincial officials have focused their attention on the launching of relatively small-scale abatement programs. Efforts have focused on "smart growth" and "no-regrets" measures seeking to reduce both financial costs and GHG emissions. Examples include the use of more efficient light emitting diodes in traffic lights, promoting the purchase of Energy Star products in state governments, and switching to more energy efficient vehicles in state vehicle fleets. Though small in size and ambition, such programs nevertheless can save state and local budgets millions of dollars in public expenditures annually and contribute to reductions in GHG emissions (Hamel, 2003).

[1] For more on the NEG-ECP climate change program, see http://www.neg-ecp-environment.org.

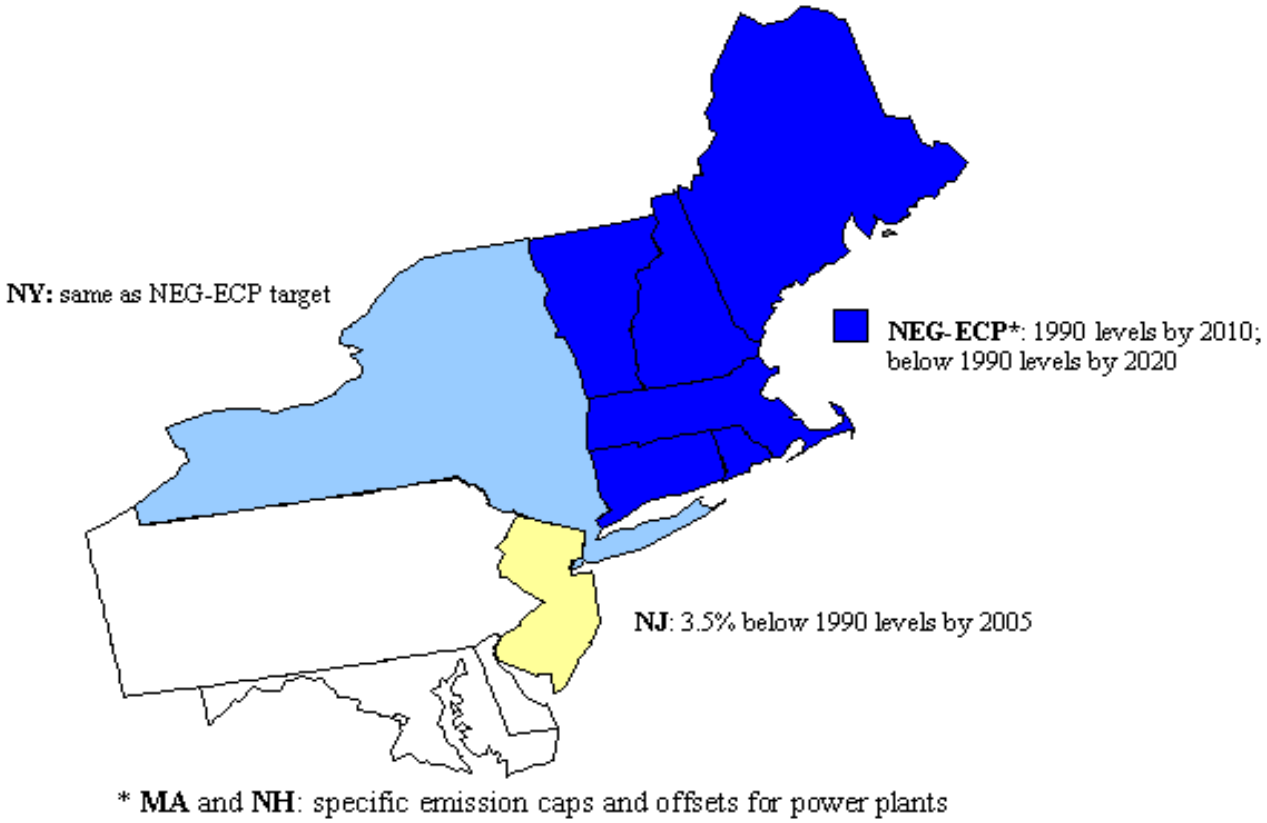
State efforts and accomplishments vary substantially, however (NECC, 2003; 2004; 2005). In 2003, Maine was first to write the regional goals into state law. In 2004, Connecticut passed similar legislation. Bills addressing $CO_2$ emissions reductions have been debated in a number of the region's legislatures, including Connecticut, Rhode Island and Massachusetts. Four states have issued state-level climate change action plans designed to achieve NEG-ECP goals (Connecticut, Rhode Island, Maine and Massachusetts). Some regulatory progress can be noted, for example, in efforts to cap and reduce $CO_2$ emissions from power plants in Connecticut, New Hampshire and Massachusetts. Yet, emissions reduction schedules are not yet set in these states.

Of the eleven US states in the Northeast from Maryland to Maine, ten have instituted renewable portfolio standards (PEW, 2006), though it must be said that most such RPS goals are rather modest. All eleven have some sort of public benefits funds, designed to support energy efficiency and/or renewable energy development, and nine of eleven offer state-wide net metering (thus allowing customers to sell some power back to the grid). Though, here again, the outcomes of state-wide net metering are likely constrained by the rather cumbersome, inflexible and often expensive realities of actually selling power to the grid. Of the ten total US states that have announced their intention to adopt California's new vehicle standards for CO2 if these survive court challenge, eight are in the Northeast (PEW, 2006). Such a development would greatly expand the impact of California's standards for automobile manufactures and consumers. Lastly, the Attorney's General of several states in the Northeast are cooperating in efforts to sue the US federal government of its lack of action vis-à-vis climate change emissions.

Yet, several older oil and coal powered facilities remain in use across New England and renewable energy sources still supply only a small fraction of total energy production. Emissions from coal-fired facilities and from the transport sector will need to be addressed more aggressively if stated regional goals are to be achieved. For example, reports by the NGO Environment Northeast (2003: 12) argue that emissions from oil and coal-fired power plants in Connecticut could be reduced by 60% if replaced by new, more efficient natural gas plants. Even more dramatic cuts would of course be possible by increased use of hydro, wind and solar generated power. Yet, local and political opposition to Cape Wind (a proposed wind farm in Nantucket Sound, Massachusetts) and many smaller wind power proposals demonstrates that expansion of renewable energy capacity remains highly contentious.[2]

**Figure 1: State GHG Reduction targets in the Northeast**

[2] For more on Cape Wind, see http://www.capewind.org.




RGGI

The RGGI initiative covers a larger group of US states than does the NEG-ECP program. RGGI participants aim to create a CO2 emissions inventory, registry and trading mechanism in the US Northeast. RGGI was proposed by Governor Pataki (NY) in April of 2003, when he invited officials from states from Maryland to Maine to participate in discussions about a regional cap and trade system. After over two years of negotiation among state officials and extensive debate, data gathering and analytical modeling, a joint Memorandum of Understanding (MoU) was signed by the Governors of seven participating states in December 2005. This MoU identifies basic principles of the proposed cap-and-trade scheme. The fundamental rules of the cap-and-trade scheme are outlined in the "Model Rule," a draft of which was issued in March 2006. It is current subject to stakeholder discussion before final adoption in 2006.[3] If adopted, each state would then need to implement the rules within its borders pursuant to its state laws and regulatory processes.

The current RGGI members include Maine, Vermont, New Hampshire, Connecticut, New York, New Jersey, and Delaware (see Figure 2). In April of 2006, Maryland officials announced their intention to join. Massachusetts and Rhode Island officials actively participated in the design of RGGI, however their governors decided not to sign

[3] For extensive documentation on the RGGI process and the content of various modeling and stakeholder involvement exercises, see the RGGI website <www.rggi.org>.

the December 2005 MoU. Many RGGI participants and observers expect officials in these two states to reconsider joining RGGI after the fall 2006 elections, if the initiative continues to progress toward enactment. However, unlike NEG-ECP work, RGGI does not include Canadian provinces. Some Canadian provincial officials have observed the RGGI process, however. In addition, there is nothing in the formal structure of RGGI, or in the operation of a cap & trade system, that prevents other states from joining the trading scheme at a later date if they negotiate their conditions of entry with RGGI states and fulfill the incumbent obligations of participating states. In fact, additional participants need not be geographically contiguous with current RGGI states, since the market for emissions permits could include participants from anywhere. In theory, RGGI may also be extended to include GHG emissions sources besides power generating facilities.

RGGI would create a regional cap-and-trade program for utilities for CO2 emissions. RGGI enactment would require participating states to jointly determine which emissions sources should be regulated under the program and to set aggregate CO2 emissions allowed from the regulated sources -- the so-called emissions cap – and to apportion these emissions among the participating states. States will issue one allowance for each ton of emissions, up to the amount of the total cap, distributing most allowances to generators and their permit market. Each source is required to have enough allowances to cover its emissions during each compliance period, if necessary by entering the market to purchase additional allowances. RGGI is scheduled to operate on three-year compliance periods, beginning in 2009. Three year allowance periods allow for greater flexibility to adjust for shorter term market, technical and meteorological conditions.

The RGGI MoU and model rule are designed to stabilize emissions from the power sector from the start of the program in 2009 through 2015. From 2015 through 2018, each state's annual CO2 emissions budget will decline by 2.5% per year, achieving a 10% reduction by 2019. In addition, some of the program reductions will be achieved outside the electricity sector through emissions offset projects. As RGGI has developed, much attention has been paid to the costs of the program to the region's private sector and households through increased prices for electricity. The effect on residential rates is projected to be less than 1.5% through 2021. However, energy efficiency components could result in a small overall positive economic effect (Brome, 2006).

The econometric models on which the RGGI estimates are based are, if anything, quite conservative regarding the potentially beneficial factors included and excluded. Brome (2006) also highlights two critical omissions in many of the economic models predicting a negative economic impact of a regional cap-and-trade CO2 trading scheme. First, technological innovation over the coming decade may absorb some of the costs of reducing emissions. For example, many economic models predicted costly effects to industry for SO2 reductions mandated in the federal Clean Air Act of 1990, which established a trading scheme for SO2 emissions. Yet, when the program was implemented businesses faced an incentive to develop new technologies, which reduced their compliance costs. These and other factors resulted in much lower implementation costs than predicted for the region's NOx contols, which were also implemented via cap and trade systems (Aulisi, Farrell, Pershing and VanDeveer, 2005). Second, intensified

technological innovation may mean that companies in the region benefit from these product developments as national and international markets for such technology grow.

In addition, a key component of RGGI is the inclusion of a price safety valve, which would expand the compliance period if the allowance price equals or exceeds $10/ton (2005$) for twelve months (following an initial 14-month "market settling" period at the beginning of each compliance period). Breslow and Goodstein (2005) show that of the 25 largest industries in Massachusetts (accounting for 81% of total output in the state), only eight have electricity costs over 1% of their total operating costs. As projected rate increases resulting from RGGI if Massachusetts were to join amount to less than 0.1%, Breslow and Goodstein conclude that the economic impact of higher rates to these companies would be modest even in the absence of technological development. Nevertheless, companies such as Raytheon lobby aggressively against Massachusetts' RGGI participation.

**Figure 2: RGGI Participating States**

Municipal Policy Developments

Legendary Massachusetts native and former Speaker of the US House of Representatives, Tip O'Neill, liked to say that "all politics is local." Evidence that many citizens and public officials in the region want more stringent climate change goals and policies can be found in the 60-plus cities and towns eight Northeastern states that have joined the International Council for Local Environmental Initiatives (ICLEI) and its Cities for Climate Protection (CCP) campaign. ICLEI began in 1993, seeking to aid the development of local climate policy through information sharing and other collaborative efforts (Betsill, 2001; Kousky and Schneider, 2003; Betsill and Bulkeley, 2004). Pursuant to the CCP goals, many municipalities in the Northeast are developing climate change action plans. Local governments like Cambridge, MA cite multiple reasons for taking on the climate issue, including the responsibility to "contribute to the cumulative solution to climate change" (City of Cambridge, 2002).

Many Northeastern CCP members initiated climate change action before, or around the same time as, state level climate policies were developing. While municipal supplements state action, the two governance levels have not been linked through formal agreements. Yet, municipal climate change action plans often note cities' intentions to lobby for state and federal climate policy through their local actions (City of Cambridge, 2002). Municipal leaders also use local newspapers to call on state and regional leaders to take supportive actions on a larger geographical scale (Cohen and Murray, 2003).

Like states, municipalities tend to focus on 'no-regrets' measures to reduce GHG emission through energy saving measures. For example, municipalities and firms in the Northeast can engage green building and the registration of greener buildings under the U.S. Green Building Council.[4] This status is based on the LEED (Leadership in Energy and Environmental Design) Green Building Rating System, a voluntary national standard. Practical actions involve installing solar photovoltaic systems, constructing with recycled materials, maximizing daylight, minimizing heat/cool air loss through improved insulation, and sensor lighting, to name a few. Boston, for example, has included in its zoning code that that all large projects built in the city should be LEED certifiable.

However, municipalities also have discovered that reducing GHG emissions can be challenging. For example, Cambridge, MA aimed to reduce its emissions to 20% below 1990 levels by 2010, which would represent an annual reduction of 494,400 tons of CO2 across residential, commercial and transportation sectors (City of Cambridge, 2002). Nevertheless, data released in 2004 showed that Cambridge's GHG emissions are up 27.2% from 1990 levels (Cambridge Climate Action Protection Committee, 2004). While emissions from the residential sector were down, commercial and industrial emissions grew by 70% from 1990 levels, with the largest increase taking place between 1998 and 2003. Transportation emissions also increased by 22% between 1990 and 2003.

[4] For more on the U.S. Green Building Council, see http://www.usgbc.org.

Civil Society

An expanding regional network of environmental NGOs, the New England Climate Coalition, has coalesced around climate change action.[5] This NGO network includes state Public Interest Research Groups (PIRGs), state chapters of Clean Water Action and Sierra Club, dozens of local environmental groups, and relatively new organizations focused on climate change such as Clean Air - Cool Planet and Environment Northeast. Coalition members prepare well researched assessments and policy reports, which are read by officials and decision makers and covered by the news media, and coordinates NGO lobbying and public awareness campaigns (Selin and VanDeveer, 2005). In addition, coverage of developments in climate change science and politics in the region is extensive in major newspapers such as the *New York Times* and the *Boston Globe*. NGOs in the region are becoming more adept at framing the causes and consequences of climate change in region and local terms. For example, various NGO campaigns now invoke the potential economic and cultural losses associated with changes to New England icons such as fall foliage, maple syrup, and skiing.

Many of the region's universities have also adopted climate change action plans, developed emissions inventories and emissions reduction goals, and a host of other initiatives (see Levine paper). Linking these efforts to the regional NEG-ECP Action Plan and working with the New England Board of Higher Education, NEG-ECP officials sponsor a university outreach program. To date, over 130 universities have joined the program, which seeks to challenge universities to initiate climate action measures and increase climate-related research and education efforts on campus. Universities are encouraged to complete and release GHG emission inventories, to stabilize and reduce their GHG emissions, and share their experiences with each other and with public officials, NGOs and citizens. To these ends, universities are encouraged to use a "toolkit" supplied by Clean Air – Cool Planet.[6]

## So Who Cares? The Potential and Limits of Regional Action

As argued elsewhere, a network of civil servants and their partners in civil society and the private sector have been an important driving force behind climate policy initiatives in the Northeast (Selin and VanDeveer, 2005). These networked "policy entrepreneurs" (see Rabe, 2005) frame climate change issues in regional and localizing terms and exchange scientific, technical and political expertise and experience in ways that help to shape the policy choices of elected officials. The regional, state and local initiatives outlined above, and well-networked climate policy advocates associated with them, are potentially influential well beyond the Northeast region and/or the direct effect on GHG emissions from the rather modest set of policies (Selin and VanDeveer, under review). The initiatives outlined above, if perceived as even moderately successful, will be invoked by climate change policy advocates in the region and across the continent as demonstrations that measured climate change policy is possible. Furthermore, these initiatives may help to expand markets for energy efficient products and renewable energy, as well as engender policy learning and diffusion across actors and borders.

[5] For information and a list of coalition members, see http://www.newenglandclimate.org.
[6] See http://www.cleanair-coolplanet.org/toolkit .

More concretely, policy initiatives in the Northeast have already avoided the release of tons of CO2, and engendered the construction of institutions and human capacities necessary for political and social action to address climate change. For example, many states in the US Northeast have GHG emissions levels similar to several of the European countries currently attempting to implement the Kyoto Protocol. If it 'matters' that such countries act to mitigate climate change, than it should matter that many US states do so. Regarding institutions, the state and regional climate change "policy laboratories" in the Northeast are constructing and refining regional GHG emissions inventories and registration processes. In RGGI, they are attempting to launch a CO2 emissions trading scheme. Many of the region's states have formulated and adopted state climate change action plans. To the extent to which these efforts are covered in popular media and discussed by elected officials, publics may come to expect climate policy action for their political leaders.

Yet, one must not overstate the impacts of climate action in the Northeast. State actions taken to date are not likely to achieve established emissions reduction targets. Announced reduction programs of the New England states remain well short of the agreed emission reduction goals for 2010 under the Regional Action Plan. In other words, the 2010 and 2020 emissions reduction goals cannot be met without further efforts to reduce emissions from the two major sources of GHG emissions, transportation and energy. Similarly, while RGGI may prove to be an important institutional precedent, it will not, in itself, achieve the goals set by the 2001 NEG-ECP plan.

There are, of course, opponents to regional climate change action in the Northeast. Massachusetts and Rhode Island decided to stay out of RGGI, for example. This occurred, at least in part, because of political pressures (from the public and private sectors) on Massachusetts Governor Romney. Some policymakers and analysts also claim to oppose the NEG-ECP climate plan on principle. For example, US Senator John Sununu (New Hampshire) is a consistent skeptic of climate science, while researchers at the Maine Public Policy Institute refute data pointing to an increase in human influence over the climate, declaring that higher energy prices would be "death to New England."[7]

Progress toward addressing transport emissions is, in the Northeast as in most of the rest of the continent, generally non-existent, posing a series of major policy challenges. Though state officials from Maine to Maryland frequently discuss public transportation and the need for 'smarter' growth, little policy change has been achieved that is likely to substantially impact GHG emissions. In part, state officials in the Northeast are awaiting the outcome of California's current efforts to regulate CO2 vehicle emissions (and the subsequent courts battles). Because several states in the Northeast have adopted other aspects of the California emissions standards, states in this region are widely assumed to be among the most likely to adopt California GHG emissions requirements, should these enter into force. In addition, some states such as Massachusetts, are required under state law to adopt any new California standards on vehicle emissions.

[7] Jon Reisman, *Governors and Greens Au Groton*, Tech Central Station, 5 September, 2003. The text is available at http://www.techcentralstation.com. See also http://www.maineinstitute.com.

NEG and RGGI efforts also may be important beyond the region through emulation by other states and regions and/or by 'uptake' into future federal climate change policy action. Many climate change policy advocates and opponents – in the public, private and civil society sectors – have engaged the NEG-ECP and RGGI efforts precisely because they hope to participate in setting precedents for later federal action (author interviews, 2003-2005). So, regional groups of states such as those on the West Coast or around the Great Lakes may take up similar climate change policy planning and goal setting efforts. Furthermore, as noted above, additional states may seek to join – or harmonize their efforts with – those of RGGI. RGGI participants report extensive contact with interested public and civil society actors in other US states, Canadian provinces, European countries and Australian provinces regarding the procedures and substantive elements of RGGI. Federal SOx and NOx trading programs were substantially shaped by regional Northeast action. Lastly, the myriad climate policy initiatives may, eventually, encourage US federal officials to return to serious international climate change discussions.

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