

# **New Hampshire Climate Action Plan Annual Progress Review 2010**

## **Executive Summary**



**Prepared By the NH Energy & Climate Collaborative  
JUNE 2010  
[www.nhcollaborative.org](http://www.nhcollaborative.org)**

## **NH ENERGY & CLIMATE COLLABORATIVE MEMBERSHIP**

### Business and Industry Representatives

Kendall Buck, Exec. Vice President, Home Builders and Remodelers Association of NH  
Sandi Hennequin, Vice President, New England Power Generators Assn., Inc.  
Gary Hirshberg, President and CE-Yo, Stonyfield Farm  
Gary Long, President, Public Service of New Hampshire  
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Steve Walker, President, New England Wood Pellet

### Non-Profit Sector Representatives

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### Public Sector Representatives

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George Campbell, Commissioner, NH Department of Transportation  
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# Introduction

Governor John Lynch created the Climate Change Policy Task Force for the State of New Hampshire in 2007 and charged the group to develop a plan for achieving the greatest feasible reductions in greenhouse gas emissions while also providing the greatest possible long-term economic benefit to the citizens of New Hampshire. Following 18 months of intensive efforts, the 29-member Climate Change Policy Task Force, with the help and participation of over 125 stakeholders and input from over 200 citizens, released the New Hampshire Climate Action Plan <sup>1</sup>in March 2009.

The causes and impacts of climate change are inextricably linked to the sources of energy that drive our economy, the quantity of each energy source used and the manner in which our communities grow. As a result, the response to climate change, as laid out in the New Hampshire's Climate Action Plan, presents an opportunity to:

- Spur economic growth through investment in our state's economy of monies currently spent on energy imports;
- Create jobs and economic growth through development of in-state sources of energy from renewable and low-emitting resources, and green technology development and deployment by New Hampshire businesses;
- Avoid the significant costs of responding to a changing climate to the state's infrastructure, economy, and the health of our citizens; and
- Preserve the unique and high quality of life that makes New Hampshire an outstanding place to live, work, and raise a family.

As a result of these opportunities, New Hampshire's future economic development and quality of life will rely on how quickly we can transition to a lifestyle that's based on a far more diversified energy mix, more efficient use of energy and development of our communities in ways that strengthen neighborhoods and urban centers, preserve rural areas, and retain New Hampshire's quality of life. The sooner action is taken, the greater the economic benefit. Delays in achieving reductions would result in increased implementation costs, thus reducing the economic benefits and making it more difficult to reach the long-term goal.

This Annual Progress Review is an update on progress that has been made over the past year on implementation of the Recommended Actions in the Climate Action Plan that support the Plan's goal of reducing greenhouse gas emissions by 80 percent below 1990 levels by 2050. The Review is an effort undertaken by the Collaborative to track the efforts underway related to the Climate Action Plan across the state in order to ensure that early action is taken so that maximum benefits can be achieved.

## The Collaborative

In May 2009, a group of leaders from the business, non-profit, and public sectors, some of whom served on the Climate Change Policy Task Force, came together to discuss the importance of ensuring that the NH Climate Action Plan is implemented. The group recognized that implementation of the

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<sup>1</sup> [http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action\\_plan/nh\\_climate\\_action\\_plan.htm](http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/nh_climate_action_plan.htm)

Recommended Actions in the Plan required a broad, diverse effort across the state and across all sectors. The group also recognized the importance of tracking, communicating, and reporting on progress toward implementation of the Plan, as well as the importance of providing a forum (with oversight from the leaders of all sectors) to discuss opportunities, challenges and gaps in implementation efforts. And so the NH Energy and Climate Collaborative was formed

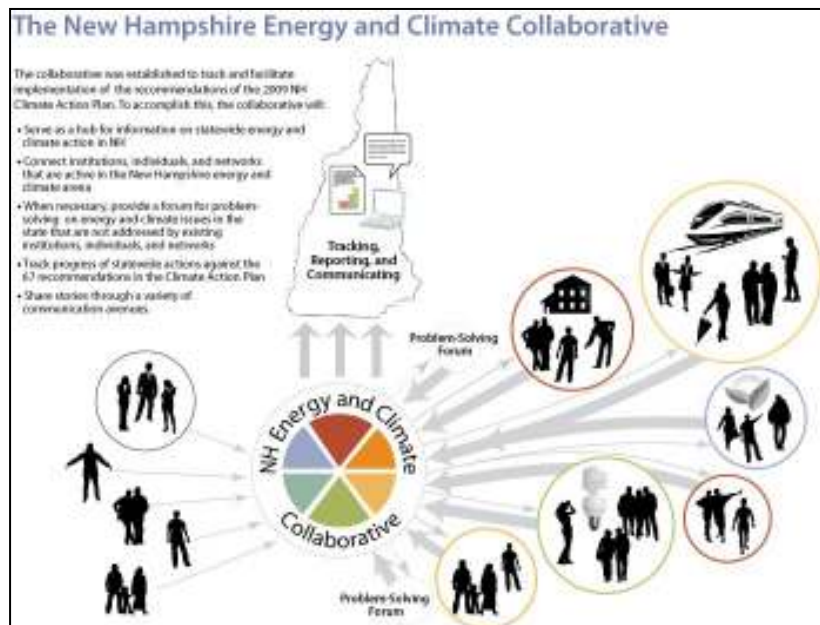
## Goals

The Collaborative has established the following goals in an effort to ensure progress is made toward implementation of the NH Climate Action Plan:

- Serve as a hub for information on statewide energy and climate action in NH
- Connect institutions, individuals, and networks that are active in the New Hampshire energy and climate arena
- When necessary, provide a forum for problem solving on energy and climate issues in the state that are not addressed by existing institutions, individuals, and networks
- Track progress of statewide actions against the 67 recommendations in the Climate Action Plan
- Share stories through a variety of communication avenues.

## Role

The Role of the Collaborative is depicted in this diagram. The diagram illustrates the Collaborative's role in connecting individuals and organizations to Networks, groups of individuals and institutions that are working collectively on implementing Recommended Actions from the Plan for their given sector. In sectors where Networks have not yet formed, the Collaborative members act as a catalyst for action and Network development. The Networks report their efforts to the Collaborative through the Social Process Tracking Database and shared Success Stories, described further on page 12 and 13, respectively. Collaborative meetings are used as a problem solving forum to discuss the challenges and gaps in implementation efforts by Networks, Collaborative members, and other implementing partners. As the Networks and individual implementing partners continue their work, the Collaborative shares their progress and stories through a variety of communication channels, including the website, Speakers' Bureau engagements, conferences, and social media.



## Membership

The 18 member Collaborative consists of leaders from the Business, Non-Profit and Public Sectors, including:

- Four state agency Commissioners
- Presidents and vice presidents of energy generation and homebuilding businesses and organizations
- University leadership
- CEOs and entrepreneurs of leading businesses influencing climate and energy action
- Leaders in environmental and social justice
- Regional and state leaders in planning, civic leadership and land protection

The full Collaborative membership is listed inside the front cover of this Annual Progress Review Executive Summary

## Meetings 2009/2010

The Collaborative meetings were originally scheduled as quarterly meetings, but as progress on implementation increased along with the need to have meaningful discussions around the challenges and gaps to implementation, the Collaborative amended its meeting schedule to bi-monthly meetings. The Collaborative meetings are an opportunity for:

- Staff to provide progress reports through the Social Process Tracking Database
- Discussion of communication and outreach opportunities for sharing progress
- Collaborative member reports on sector progress and challenges
- Implementing Partner presentations and discussions around progress and challenges

The use of the Collaborative meetings as a venue for implementing partners to discuss progress and the implementation challenges they face has catalyzed efforts around the state. As implementing partners work on programs and projects that support the Recommended Actions in the Climate Action Plan, they see the value in discussing their work with the diverse leadership and guidance the Collaborative offers. Recent experience has shown that in preparing presentations for a Collaborative meeting, the implementing partner Networks will meet more often, evaluate their progress, set priorities and begin to develop strategic plans on implementation so that they are better prepared to discuss next steps with the Collaborative. To date the following implementing partners have presented and discussed their progress with the Collaborative at the Collaborative meetings:

- Cool Monadnock
- Clean Air – Cool Planet for Speakers' Bureau Collaboration
- Homebuilders and Remodelers Association of NH
- NH Department of Transportation
- NH State Legislators
- Interagency Energy Efficiency Committee (state government)

Collaborative meeting agendas, presentations, and reports can viewed at the Collaborative's website at: [www.nhcollaborative.org/calendar](http://www.nhcollaborative.org/calendar).

# The Overview

This section of the Review provides a summary of the State Programs, Economic Opportunities, a tool for visualizing the Climate Action Plan, and an analysis of NH's recent energy costs and consumption, and climate.

## State Programs & Economic Development Opportunities

During 2009, New Hampshire and the rest of the country experienced the continued fall out from what has been called the most severe recession since World War II. While the recession officially began at the end of 2007, the impact on employment was especially significant in 2009. The unemployment rate in NH rose from 5.2% (38,500 NH workers unemployed) in January 2009 to 6.9% (51,000 NH workers unemployed) in December 2009. In this economic environment, it is important to identify opportunities for job growth, and the green economy is one sector that offers strong employment potential.

While recession increased in severity in 2009, it was also watershed year for New Hampshire in terms of funding for energy projects as significant new opportunities became available through a variety of federal grants related to American Recovery and Reinvestment Act of 2009 (ARRA) and the implementation of two new State policies.

### American Recovery and Reinvestment Act of 2009 (ARRA)

The American Recovery and Reinvestment Act of 2009 (ARRA) was intended to stimulate the economy and these grants will inject a total of more than \$70 million dollars into New Hampshire economy's for energy related projects including:

- \$23.2 million for the *Low-Income Weatherization Program*, which is designed to reduce household energy use and costs in the homes of low-income persons throughout the state by installing energy efficiency improvements;
- \$12.5 million for the *Energy Efficiency Conservation Block Grant (EECBG) Program*, which seeks to reduce total energy use and fossil fuel emissions in municipalities through improved energy efficiency in buildings, transportation, and other areas;
- \$10 million for the *Beacon Communities Project*, which will allow the state and the communities of Nashua, Berlin and Plymouth to embark on large-scale energy efficiency projects to make homes, businesses and local public buildings more energy efficient, which will save homeowners, businesses and taxpayers on energy costs;
- \$25.8 million for the *State Energy Program (SEP)*, which targets increased energy efficiency to reduce energy costs to all consumers; reduced reliance on imported energy; improved reliability of electricity and fuel supply and the delivery of energy services; and reduced impacts of energy production and use on the environment;
- \$1.2 million for the *State Energy Efficient Appliance Rebate Program (SEEARP)*, which is devoted to residential replacement of existing hot water heaters, boilers and furnaces to more energy efficient models or solar thermal units; and
- \$450,000 for the *Residential Bulk-Fuel Fed Wood-Pellet Central Boilers and Furnaces Rebate*.

## Greenhouse Gas Emission Reduction Fund (GHGERF)<sup>2</sup>

In 2008, NH enacted legislation to participate in the Regional Greenhouse Gas Initiative (RGGI) which is a cooperative effort by ten Northeast and Mid-Atlantic States to limit greenhouse gas emission. This is the only mandatory carbon dioxide cap-and-trade program in the country and through an allowance system that power plants need to buy, it provides an additional source of funds that New Hampshire can use to reduce greenhouse gas emissions through investments in energy efficiency. Between September 2008 and June 2010, RGGI auctions raised \$24 million for the State of New Hampshire<sup>3</sup>. These funds were used to establish the Greenhouse Gas Emission Reduction Fund (GHGERF), which is administered by the Sustainable Energy Division of the NHPUC.

In the first round, New Hampshire has allocated \$17.6 million to 30 programs that affect non-profits, utilities, businesses, residents, municipalities, universities, and K-8 schools to reduce emissions through increased energy efficiency; energy education and outreach; benchmarking; and green workforce development through RGGI, which led to<sup>4</sup>:

- More than 30 energy efficiency training opportunities;
- More than 709 people trained in energy efficiency;
- 500 efficiency projects complete or underway; and
- More than 185 buildings received energy audits or benchmarking information.

## The Renewable Energy Fund (REF)

The Renewable Energy Fund was established through the creation of NH's *Renewable Portfolio Standard (RPS)*. The fund is capitalized by payments made by NH utilities that are unable to meet their annual renewable energy obligations under the RPS. This fund, which is also administered by the Sustainable Energy Division of the NHPUC, is intended to support electrical and thermal renewable energy initiatives around NH. This includes the NH Residential Solar Rebate Program that provides up to \$3 per watt (\$6,000 maximum per project) for solar electric systems. In fiscal year 2010, the program led to:

- \$1.34 million disbursed to 237 homeowners;
- 63 additional applications requesting \$372,000 in process;
- 0.872 MW of combined capacity of all installations;
- Average installed cost of \$1.96/W;
- Total cost of all installations requesting funds: \$6.5 million
- \$4.8 million in leveraged funds; and
- 129 participating electricians and alternative energy businesses.

This rebate approach, combined with a 30% federal tax credit, has been benefiting the solar electric installation industry in NH. A residential solar hot water incentive program has recently been launched using both REF and ARRA funding and a commercial renewable energy incentive program is in the works.

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<sup>2</sup> <http://www.rggi.org/about>

<sup>3</sup> <http://www.rggi.org/co2-auctions/results>

<sup>4</sup>

<http://www.puc.nh.gov/EESE%20Board/20100409Mtg/Jack%20Ruderman%20Update%20%20Greenhouse%20Gas%20Emissions%20Reduction%20Fund.pdf>

## Electric and Gas Energy Efficiency Programs

As part of the Restructuring Act, RSA 374-F:3 X, the electric utilities in the State of New Hampshire have established a set of energy efficiency programs designed for statewide implementation in the service territories of the utilities regulated by the Public Utilities Commission (PUC). A variety of programs exist, serving both residential and commercial and industrial customers. They include programs for new construction, retrofitting existing structures, and rebate programs for selected lighting and appliances. In addition to the statewide programs, individual utilities run specific programs. Additional details on the core energy efficiency programs may be found by visiting [www.NHSaves.com](http://www.NHSaves.com).

On January 1, 2003, the natural gas utilities again began offering energy efficiency programs for New Hampshire customers. The programs are designed to increase customer awareness of the benefits of energy efficiency products, services and practices, induce lasting market changes and realize energy efficiency savings that might not occur without the programs. Programs common to both Unitil/Northern and National Grid NH include audit and weatherization services, high efficiency heating and water heating equipment, Energy Star Homes, and a residential Conservation Services Program. For specific program offerings and requirements, please contact your utility or visit their website.

- Unitil/Northern Utilities: [www.northernutilities.com/forhome/eneraudit.htm](http://www.northernutilities.com/forhome/eneraudit.htm)
- National Grid NH: <http://thinksmarthinkgreen.com/service/nhgas.html>

## Additional Opportunities

The Green Launching Pad administered through the University of New Hampshire is providing a mechanism for start-up green companies to obtain some funding through a competitive technology program, which is accessible to NH entrepreneurs, businesses, and innovators. Projects funded under this program will specifically address commercialization of energy efficiency, energy conservation, renewable energy, and/or sustainable energy projects, programs, services, or techniques that will quickly lead to energy savings and emissions reductions and business and employment growth.

The next wave of federal funding supporting energy efficiency may be the \$5.7 billion Home Star program. This legislation passed the U.S. House of Representatives on May 7, 2010. If enacted into law, a portion of the \$5.7 billion would be provided to NH to further support the development of green industries and jobs in the Granite State.

## A Tool to Visualize the Plan – The Decarbonizer

Created by Carbon Solutions New England, the Decarbonizer is an online modeling tool that you can use to calculate reductions in greenhouse gas emissions resulting from different greenhouse gas reduction strategies. The Decarbonizer modeling tool complements the New Hampshire Climate Action Plan and can be used to visualize the impacts of different action items considered in the Plan. To learn more, visit <http://carbonsolutionsne.org/projects/decarbonizer/>.

## New Hampshire Analysis

### CO2 Emissions

Analyses conducted for the NH Climate Action Plan included state carbon dioxide emissions from 1990 up through 2005. As of May 2010, the Energy Information Administration has published state emissions data through 2007 (Figure 1). Overall, emissions of carbon dioxide peaked in 2004 and have since been on the decline. In 2006 and 2007, emissions have been below the estimated “business as usual” projections developed for the New Hampshire Climate Action Plan. There was a significant decline in state emissions in 2006, which followed a slight decline in 2005. Emissions in 2007 were slightly lower than emissions in 2006.

What accounts for the declining trend in greenhouse gas emissions in NH since 2004? First, it should be noted that this decrease occurred well before the global economic downturn in the fall of 2008. A breakdown of emissions by source (Figure 2) shows that there was a significant decrease in emissions from 2005 to 2006 in the electric generation (a drop of 1 million metric tons of CO<sub>2</sub> [MMTCO<sub>2</sub>]) and commercial sectors (a drop of 0.7 MMTCO<sub>2</sub>). This was accompanied by decreasing trends in emissions that began in 2004 from the transportation and residential sectors.

The amount of electricity generated in New Hampshire fell considerably in 2006 (by 2.4 MW) (Figure 3), which accounts in part for the decrease in emissions. In addition, emissions from the burning of petroleum dropped considerably over the period from 2004 to 2006, while emissions from the burning of natural gas rose (Figure 4) as two new natural gas generating stations were brought online in 2003. These natural gas-fired plants are used primarily as marginal producers (as opposed to baseload) and, therefore, electricity generated at these

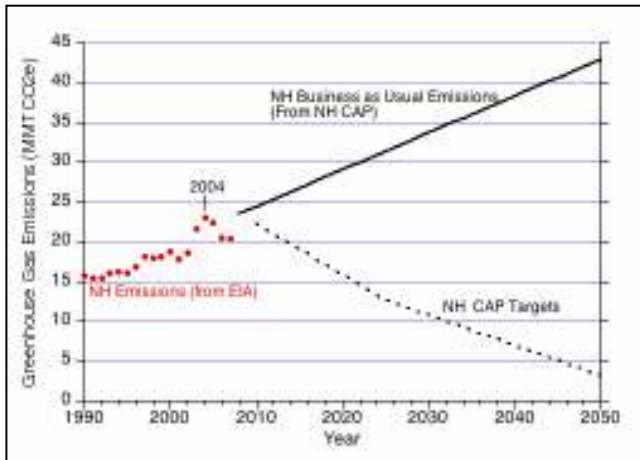


Figure 1. New Hampshire Greenhouse Gas Emissions: Historical & Projected

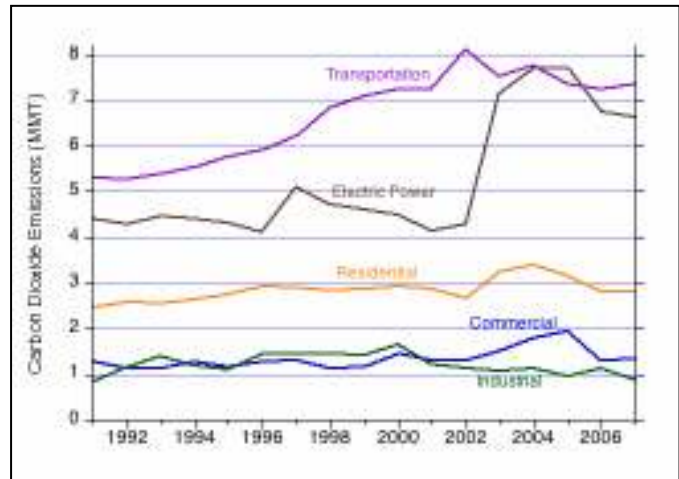


Figure 2. New Hampshire Greenhouse Gas Emissions by Sector



Figure 3. Electricity Generation in New Hampshire from all Sources

stations is more closely correlated with warm summer temperatures (when NH experiences peak demand for electricity for air conditioning). Summer temperatures were cooler on average in 2006 and 2007, especially when compared to 2005, which was very hot.

### Energy Costs

The decrease in emissions from petroleum after 2004 may also be due in part to the rising price of petroleum over that time period (Figure 5). It should be recognized that carbon dioxide emissions per BTU of energy produced from natural gas are 33 percent lower compared to residual fuel oil (the main petroleum product used in NH to generate electricity).

One of the drivers of the decrease in emissions of carbon dioxide from the electricity generation, transportation, residential, and commercial sectors since 2004 is likely related to the cost of petroleum products (heating oil and gasoline) (Figure 5).

In 2005, the price of heating oil and gasoline rose above \$2 (in 2009 dollars) and then continued to increase in price through 2006 (for heating oil) and 2007 (for gasoline).

Carbon dioxide emissions resulting from the generation of electricity have dropped 17% across all ten RGGI states since 2005 (from 167.7 to 139.5 MMTCD), similar to the 19% decline in NH over the same time period (8.2 to 6.5 MMTCD)(Figure 6). The NH trends therefore reflect a region wide decrease in carbon dioxide emissions from electricity generation.

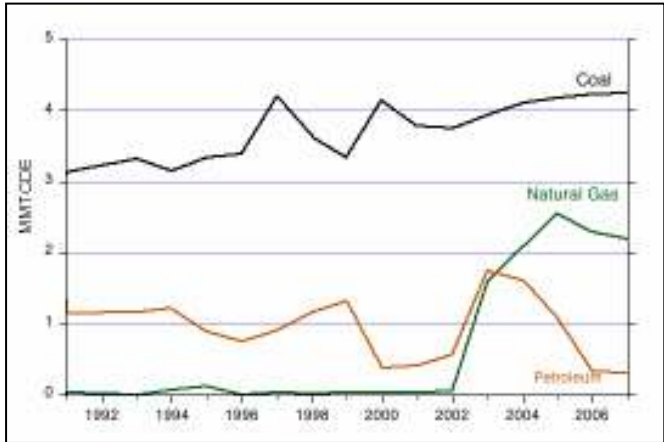


Figure 4. New Hampshire – Greenhouse Gas Emissions from Electricity Generation

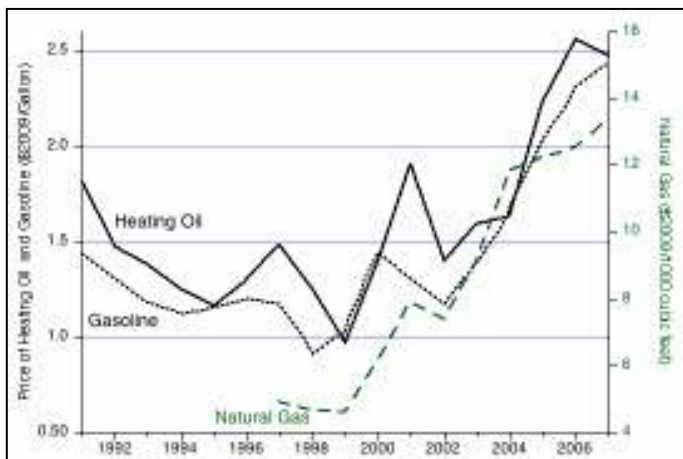


Figure 5. Price of Heating Oil & Gasoline, & NH Gross State Product

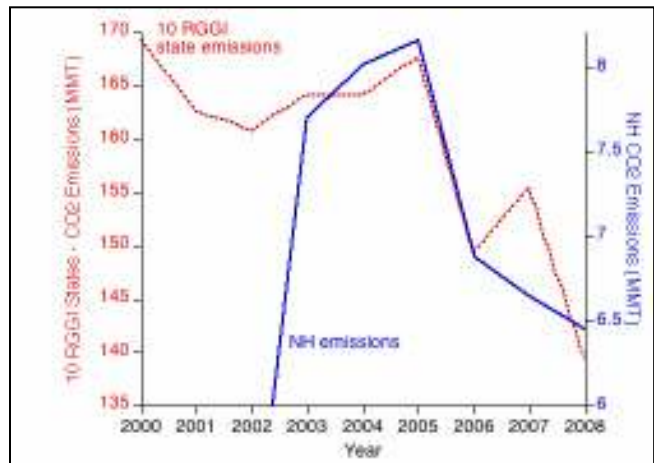


Figure 6. Carbon Dioxide emissions from 10 RGGI states and NH from Electricity Generation

## National & Regional Climate Science

On the national front, a report published by the US Global Change Research Program in 2009 summarized the science of climate change and the impacts of climate change on the United States, now and in the future. The report concludes:

*“Observations show that warming of the climate is unequivocal. The global warming observed over the past 50 years is due primarily to human-induced emissions of heat-trapping gases. . . . Warming over this century is projected to be considerably greater than over the last century. The global average temperature since 1900 has risen by about 1.5°F. By 2100, it is projected to rise another 2 to 11.5°F.”*

The report provides a synthesis of information from a wide variety of scientific assessments and published research to summarize what is known about the observed and projected consequences of climate change on various sectors such as energy, water, and transportation.

The impacts of a changing climate in the Northeast US were detailed in the Northeast Climate Change Impacts report and set of papers released in 2007 and 2008. More recent research has demonstrated that our winters across the Northeast US are getting warmer at a rate of 0.8°F per decade (over the past four decades), with most of the warming occurring during the coldest months of winter (January and February). This has been accompanied by an average decrease in the number of days with snow on the ground of almost 9 days per decade. Another study examined changes in extreme precipitation events defined in several different ways over the time period 1948 – 2007. It is likely not surprising to anybody living in New Hampshire that the results indicate that the occurrences of extreme precipitation events, and the intensity of rainfall, are increasing (Table 1).

<b>Extreme Precipitation Event Definition</b>	<b>1900-2007</b>	<b>1948-2007</b>
1-inch event (events/decade)	+ 0.16 ± 0.20	+ 0.26 ± 0.07
2-inch event (events/decade)	+ 0.11 ± 0.09	+ 0.17 ± 0.06
4-inch event (events/decade)	0.13	0.16
1-yr return interval (events/decade)	0.38	0.82
5-yr return interval (events/decade)	0.12	0.27
10-yr return interval (events/decade)	0.05	0.18
99 <sup>th</sup> Percentile (inches/decade)	+ 0.01 ± 0.03	+ 0.06 ± 0.03

Table 1: The regional average trends for each definition of extreme precipitation at eleven stations across the region for the 1900–2007 and 1948–2007 time periods. Note the significant increase in events over the last 60 years

The increase in extreme precipitation events is occurring primarily during the spring and fall. Correlation between seasonal northern hemisphere temperature anomalies and the occurrence of seasonal one-inch events is also strongest during the spring and fall, suggesting that increasing temperatures play an important role in the increasing frequency of extreme precipitation.

Note that this analysis does not include the record breaking extreme precipitation and flooding events that occurred in March 2010. The March 13-15, 2010 storm dropped up to nine inches of rain

from New Jersey to southern Maine. The next storm on the 22nd and 23rd dropped two to five inches of rain over a large portion of the Northeast. The third rain event of the month soaked eastern portions of the region once again, with the highest totals in eastern Connecticut, southern Rhode Island and southern Massachusetts. Totals of five to nine inches caused unprecedented flooding in this area. Overall, much of coastal New England experienced rainfall totals 3 times above normal levels. The total cost of the damaging floods created by these extreme precipitation events is yet to be determined, but will certainly be high.

It is also important to note that the two largest impacts to New Hampshire's electric utility systems occurred within the past 18 months due to severe weather, both causing power outages to over half of the state's electric customers at the peak, with up to 2 weeks restoration time. The December 2008 ice storm was unprecedented in geographic extent and severity<sup>5</sup>. The February 2010 wind storm was also exceptional in severity and extent, causing the 2nd greatest extent of power outages in New Hampshire's history.

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<sup>5</sup> <http://www.puc.nh.gov/2008IceStorm/December2008IceStorm.htm>

## Tracking NH Action

One of the primary roles of the Collaborative is to track, report, and communicate on progress toward implementation of the Climate Action Plan. The Collaborative has developed tools for tracking progress and has been able to identify implementing partners at the individual and local level, the institutional level, and partners working within Networks.

### Social Process Tracking Database

The Collaborative has developed a Social Process Tracking Database in an effort to capture what progress is being made on implementation of the Climate Action Plan goals. The Database identifies the progress that is and is not being made for each Recommended Action. The Process of completing the database, in and of itself, raises awareness of and familiarity with the Plan and its Recommendations by generating discussion and dialogue among existing and potential Implementing Partners. The findings of the Database are easily communicated to the public and Implementing Partners, and are used to promote coordination in action areas.

The Database collects information to respond to the following questions:

- Who are the implementing partners (current and potential) for each of the 67 CAP recommendations?
- What is currently being done to implement the 67 CAP recommendations?
- What new opportunities have been presented through the implementation process?
- What barriers exist that are preventing more comprehensive implementation of the 67 CAP recommendations?
- When will the effort be completed?
- What remaining gaps exist?

The complete Social Process Tracking Database can be found on the Collaborative's website at: [www.nhcollaborative.org/actions](http://www.nhcollaborative.org/actions).

### Partners & Networks

Through the Collaborative's Social Process Tracking Database and Success Stories that have been shared with the Collaborative, more than fifty implementing partners and six Networks have been identified over the past year. There are many other implementing partners around the state, however, and their efforts and progress have yet to be reported to the Collaborative. One of the challenges the Collaborative faces is not only identifying the implementing partners but also encouraging the implementing partners to submit their progress information for tracking and reporting purposes.

The Collaborative has identified six strong Implementing Partner Networks that consist of individuals and institutions that are working independently or collectively on implementing specific Recommended Actions from the Climate Action Plan for their sector. Those Networks include:

- Energy Efficiency and Sustainable Energy (ESEE) Board (<http://www.puc.nh.gov/eese.htm>)
- Interagency Energy Efficiency Committee
- NH Transportation Demand Management Committee

While there is a need to form a Statewide Adaptation Network to help coordinate Adaptation efforts across all sectors, three working groups have already developed within specific sectors, including the following:

- Public Health Adaptation Working Group
- Coastal Adaptation Workgroup
- Ecosystem and Wildlife Climate Change Workgroup

## Gaps & Obstacles to Implementation

As the NH Energy and Climate Collaborative tracks progress towards the Recommended Actions in the Climate Action Plan, the Collaborative has asked implementing partners to identify primary, secondary and tertiary challenges to implementation. Additionally, the Collaborative has identified gaps in progress where specific actions are not currently being addressed by many, if any, implementing partners.

Obstacles and gaps to progress are expected, especially in the early years of implementation. The Collaborative exists to discuss these obstacles and gaps and provide guidance on overcoming them. It is also important to share information about obstacles that have been addressed by one implementing partner so that another may learn from their experience. Gaps and Obstacles identified to date by implementing partners that are common to multiple sectors include:

- Sustainable Funding & Resources
- Training & Education: “The Supply”
- Outreach & Awareness: “The Demand”
- Partnership & Network Formation

## NH Success Stories

The Collaborative also collects and shares success stories from implementing partners around the state. It is important for us to not only track progress but also to celebrate progress and let implementing partners become storytellers. Success breeds success, and businesses, homeowners, municipalities and organizations are more likely to act if they learn how other competitors, neighbors, and constituents embraced the goals in the Climate Action Plan and were successful in implementing measures that help to achieve those goals.

NH Success Stories are posted through our communication tools and are also online as part of the Annual Progress Review. They include stories about businesses transforming the way they do business, energy efficient and sustainable development, new energy generation, and educational institutions integrating sustainability into their environment. The following page contains two sample Success Stories.

### **NH Community Action Agencies (CAAs) Expand Weatherization Programs**

Through support from ARRA, the CORE Utilities Program, natural gas utility energy efficiency funding and leveraging additional funding sources through other programs such as the Single Family Rehab Program (housing rehab) and Lead Abatement Program, the CAAs were able to expand their Weatherization Programs.

These Programs directly relate to Climate Action Plan Recommended Action RCI 1.2 which is the recommended action of maximizing energy efficiency in existing residential buildings especially those occupied by low income clients (200% federal poverty guideline (fpg), or less)

On April 1, 2009 U.S. Department of Energy increased the income guidelines from 185% fpg to 200% fpg and the average investment per household was raised from \$2800 to \$6500. The increased funding and higher average allowable cost per household allowed the CAAs to accomplish better household energy savings. Savings are now approaching an average of 25% to 30% of energy usage reduction per household, where they were in the 10% to 15% range prior to the ARRA funding. With the ARRA funding the CAAs were able to increase production by doubling the number of state certified auditors, training of new contractors, purchasing of vehicles and equipment for crew-based CAAs, and improving technology and weatherization methods for increased savings. To date, the CAAs have created 72 new full-time positions within the Agencies and retained or added a total of approximately 220 contractors (individual workers). The current goal of the CAAs as filed with the DOE is 1600 households per year but is expected to surpass 2000 per year.

### **First LEED-Certified School in NH Achieves Platinum Ranking**

The 2nd Nature Academy, a Nashua, NH based private elementary school, has just become the first school in New Hampshire to become LEED-Certified, and the first non-residential building to receive Platinum certification, the highest ranking possible. 2nd Nature Academy is an independent, healthy high-performance, green school with an environmental science pedagogy and integrated curriculum. Located on a sustainable working farm, the 2nd Nature Academy campus boasts fields, forests, hiking trails, barns, ponds, and gardens and hosts an American Camp Association outdoor adventure camp program each summer.

Denis and Debbie Gleeson, together with the Jordan Institute, Green Building Construction Group, KW Management, New Energy Works Timberframers, and Virstar Geothermal Energy, planned, coordinated, and documented the green construction process. The Jordan Institute has verified the actual performance of the building. "Second Nature Academy's new school building is the most efficient building we have analyzed to date," said Paul Leveille, the Institute's High-Performance Buildings Program Manager. "Utility costs for the first year of operation were \$0.45 per square foot, about a quarter of what other schools use. Its exemplary energy performance is thanks to a superbly insulated and very air-tight shell coupled with high-efficiency geothermal heating and cooling equipment.

# Get Involved

“Here in New Hampshire, we recognize that climate change poses serious risks to the health of our citizens, to our quality of life and to our economic future,” stated Governor John Lynch. “Working together, we have made great progress on implementing the recommended actions in the New Hampshire Climate Action Plan, however more work needs to be done. We must continue to work together because it is the right thing to do for our environment, and it is the smart thing to do for our future.”

## Residents

- Use My Energy Plan Tools  
<http://myenergyplan.net/>
- Take the NH Carbon Challenge  
<http://necarbonchallenge.org/>
- Find Homeowner Incentives through NH Saves and DSIRE  
<http://www.nhsaves.com/> and <http://www.dsireusa.org>
- Weatherize your Home  
<http://www.nh.gov/oep/programs/weatherization/index.htm>
- Carpool through the NH Rideshare Program  
<http://www.nh.gov/dot/nhrideshare/>

## Businesses

- Find Incentives through NH Saves and DSIRE  
<http://www.nhsaves.com/> and <http://www.dsireusa.org>
- Join NH Businesses for Social Responsibility  
<http://www.nhbsr.org/>
- Tips for Greening your Organization through Clean Air – Cool Planet  
<http://www.cleanair-coolplanet.org/OfficeFootprint.php>
- Participate in the Retail Merchants' Association Energy Program  
<http://www.rmanh.org/energy.html>
- Consider the Community Loan Fund and CDFA Energy Enterprise Fund  
<http://www.theloanfund.org/news/EEF.html>

## Municipalities

- Participate in the NH Community Energy Project  
[http://www.nhenergy.org/index.php?title=Main\\_Page](http://www.nhenergy.org/index.php?title=Main_Page)
- Consider the CDFA Municipal Energy Reduction Fund  
[http://www.nhcdfa.org/web/erp/merf/merf\\_overview.html](http://www.nhcdfa.org/web/erp/merf/merf_overview.html)

## Regional Assistance

- Contact your Regional Planning Commission  
<http://www.nharpc.org/>
- Contact the Northern Forest Center  
<http://www.northernforest.org/>

# Conclusion

To view the entire Annual Progress Review and its supporting documents, please visit the Annual Progress Review Progress Map at [www.nhcollaborative.org/APR.shtml](http://www.nhcollaborative.org/APR.shtml).