



## ACHIEVING GREENHOUSE GAS EMISSIONS REDUCTIONS IN THE NORTH COUNTRY PROPOSAL TO THE NEIL AND LOUISE TILLOTSON FUND ~ JULY 2008

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### COMMUNITY NEED

Global climate change is an issue of enormous magnitude. According to the Fourth U.S. Action Climate Report, our country's emission of carbon dioxide, one of the main greenhouse gases, has increased by 20% since 1990. The result is, and will continue to be, altered long-term weather patterns; for example, the National Research Council reports that global mean surface temperature has increased by between 1.0 and 1.7 degrees since 1850, and the northern hemisphere is substantially warmer now than at any other point during the last 1,000 years.

These changing weather patterns will impact us all; storm activity, drought and flooding are likely to increase, and these events, whether they happen in the U.S. or on the other side of the world, will have implications for the global economy and public health. Meanwhile, in the North Country, a changing climate will undercut local industries such as winter tourism, maple sugaring or forestry. According to a 2006 report<sup>1</sup> on climate variability and winter recreation, the economies of the four northern New Hampshire counties stand to lose the most:

- Warm, slushy winters mean 3,000 fewer jobs, a loss of 4% of North Country winter employment.
- Thirty-three percent fewer skiers visit New Hampshire in low versus high snow years. Alpine ski ticket sales are lower by 15%, or almost \$12 million. Nordic ski ticket sales drop by almost 30%, or \$650,000.
- Snowmobile registration license fees alone are lower by almost 30%, a loss of nearly \$1 million.
- Total ski ticket, ice fishing license and snowmobile registration fees decline by 14%, a loss of over \$13 million in warm, slushier winters.

Towns throughout the U.S. can play a major role in reducing greenhouse gas emissions at a municipal level (and save taxpayer energy dollars: Claremont, working with PSNH, changed out 1,016 streetlamps and will save over \$1 million over ten years). Local governments have a wide range of responsibilities that can directly impact climate change, including land-use planning, transportation planning and mass transit, reducing local government energy use, local forestry, power generation, residential energy, and solid waste. What's more, communities working cooperatively on the regional level have the added benefit of being able to implement multi-town efforts to reduce greenhouse gas emissions.

Recently, through the work of the Carbon Coalition, a group founded in 2003 by CA-CP, 165 New Hampshire towns passed resolutions urging their selectmen, as well as the next U.S. president, to take action on reducing greenhouse emissions. Ninety-two of these towns have formed or are planning to

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<sup>1</sup> Cameron Wake, Elizabeth Burakowski and Larry Goss. 2006. "Winter Recreation and Climate Variability in New Hampshire: 1984 – 2006". Commissioned by Clean Air-Cool Planet. The full report can be accessed at [http://www.carboncoalition.org/education/documents/NHWinterTourismandClimateVariability\\_Feb\\_2007.pdf](http://www.carboncoalition.org/education/documents/NHWinterTourismandClimateVariability_Feb_2007.pdf)

form Local Energy Committees (LECs) to spearhead and coordinate reductions projects. In Coos, eleven towns passed the resolution: Colebrook, Columbia, Dalton, Dummer, Gorham, Lancaster, Milan, Randolph, Shelburne, Stratford and Whitefield, for a total population of more than 16,000 people.

In short, we believe that New Hampshire communities are ready to take aggressive action to address energy and climate change, and through a comprehensive approach in the North Country, we can link the two issues. Local involvement, we believe, is necessary to promote civic engagement and, ultimately, sustained support for actions at the national level.

Citizens and local governments in Coos County recognize that supporting newly-forming LECs can confer economic benefits as well as environmental ones; in May, the Coos County Economic Development Working Group released an action plan for the region, which included economic development strategies across several sectors, including energy. The top recommendation of the Energy Technical Review Committee was to support the growth of LECs; committee members posited that creating and increasing LEC capacity would help to catalyze a number of high-priority economic outcomes, including the development of local heat/power supply plans; utilization of existing state enabled legislation for tax incentives for energy efficiency improvements by households and businesses; and education of residents on existing technical and financial assistance programs for improving energy efficiency.

## STRATEGY

Clean Air–Cool Planet (CA-CP) proposes to collaborate with the North Country Council (NCC), the Coos Economic Development Corporation (CEDC), ICLEI-Local Governments for Sustainability and the White Mountains Community College (WMCC) to help the towns in Coos County measure and design plans to reduce greenhouse gas emissions. CA-CP will manage the collaborative project and will act as the fiscal agent.

To help Coos County understand its current carbon footprint, we will work with NCC's Executive Director, and ICLEI staff to identify two representative "model" towns in the region and will help these towns to join ICLEI, an organization that provides its members with greenhouse gas emissions inventory software as well as technical assistance. By becoming ICLEI members, these model towns will be granted access to the ICLEI inventory software and training in how to use it, which they can use to help other Coos County town carry out their own inventories.

In helping Coos County estimate its greenhouse gas emissions and enlisting community members' help in identifying priority energy- and cost-saving measures, we're adapting the Cool Monadnock project that CA-CP is piloting in southwestern New Hampshire in collaboration with the Southwest Regional Planning Commission. You can view the details of the project at [www.coolmonadnock.org](http://www.coolmonadnock.org) In Coos County, support and coordination for this project will be provided mainly by CA-CP and the North Country Council. The project will be overseen by a task force comprising individuals from each town in the region interested in moving forward with a Local Energy Committee.

We will recruit, train and supervise two local student interns through White Mountains Community College in Berlin and its Littleton and Woodsville Academic Centers to undertake the community inventory process in order to evaluate municipal-level greenhouse gas emissions in the region. In the event there is a local desire to do so, one additional scope of work for an intern would be to conduct a

greenhouse gas inventory for the community college using the Campus Carbon Calculator®, a tool developed by CA-CP and now used by over a thousand colleges nationwide.

Members of the task force will work within their own communities – and collaboratively where possible – to identify and implement greenhouse gas emissions reduction projects.

To foster community interest in and involvement with the project, we will coordinate and publicize two workshops, both free of charge and open to the public. One workshop, a survey of the latest climate science and local impacts, will feature a member of the Carbon Coalition Speakers’ Bureau, a service that has made over 200 presentations in New Hampshire since it was formed in 2006. The second workshop will be moderated by CA-CP and NCC staff, and will focus on brainstorming ways that communities can overcome economic, educational and institutional barriers to reducing greenhouse gas emissions and energy dollars. All information and resources resulting from the workshops will be posted on a web site that will be utilized as a local clearinghouse of resources for the participants involved. We will also disseminate inventory results to local government leaders and influential groups, including the Comprehensive Economic Development Strategy (CEDS) team, in an effort to solicit stakeholder recommendations and ultimately to design a highly relevant, place-based energy and climate plan.

This regional strategy has two advantages: First, it allows for the identification and reduction of greenhouse gas emissions from sources, such as transportation, that cannot be addressed by individual towns alone; Second, small, rural, relatively isolated towns like many of those in Coos County can achieve economies of scale by working collaboratively to implement town-level solutions. CA-CP’s regional approach builds upon existing planning processes that local governments have used to address issues such as land-use development and watershed management, but which have not been widely applied to climate action.

Overall goals are for each participating town to (1) form an energy committee; (2) complete an energy/greenhouse gas emissions inventory; and (3) to establish a network of collaboration between the towns in order to work in a regional scale on the issue of climate.

## WORKPLAN

Specific activities in pursuit of the strategy outlined above, as well when they will take place and who will be responsible for carrying them out, are summarized in the table below:

<i>Activity</i>	<i>Timeline</i>	<i>Responsible People</i>
Select two model Coos County towns and enroll them as ICLEI members.	September 2008	Christa Koehler (CA-CP); Jeff Hayes (NCC); ICLEI staff
Establish relationship with EPA Community Challenge Program in order to use EPA Portfolio Manager tool with each municipality in the region.	September 2008	Christa Koehler; EPA staff
Form an advisory committee comprising an LEC member for each town selected.	September 2008	Christa Koehler; Roger Stephenson (CA-CP)
Create initial website linked to NCC	October 2008	Christa Koehler; Kay Harrison (CA-CP); outside consultants if necessary
Create logo/name/slogan for initiative.	October 2008	Christa Koehler; Kay Harrison; Bill Burtis (CA-CP); outside consultants if necessary
Hire two interns for 2008 inventory work.	October 2008	Christa Koehler; Roger Stephenson; John

		Dyer or designee (WMCC)
Host first Advisory Task Force meeting. Bring in speaker to highlight energy and climate change effects on region. Identify barriers to implementation of a sustainable energy plan for the region and for each municipality.	November 2008	Christa Koehler; Roger Stephenson
Begin municipal inventories.	December 2008	Christa Koehler; WMCC intern(s)
Host second Advisory Task Force meeting to unveil inventory results.	March 2009	Christa Koehler; Jeff Hayes; WMCC intern(s)
Begin implementation of a communication plan for the project.	March 2009	CA-CP and NCC
Conduct meet-ups in each town across the region.	March–April 2009	Christa Koehler, Jeff Hayes
Coordinate Earth Day weekend event.	April 2009	Christa Koehler, Jeff Hayes
Begin to work with a pilot town on incorporating municipal recommendations into Master Plan, zoning ordinances and CIP process.	April 2009	NCC
Convene the Advisory Task Force to prioritize recommendations for regional plan.	May 2009	Christa Koehler, Jeff Hayes
Host workshops for Energy Committees throughout the region.	May-July 2009	Roger Stephenson, Jeff Hayes
Identify at least two “pilot” (i.e. straightforward, low-cost, accessible) regional projects.	May 2009	CA-CP, NCC, CEDC
Meet with business leaders in the region to promote climate leadership and determine what actions are already underway.	June 2009	CA-CP with local partners and interns
Host forums for decision-makers in the sectors of business and higher education.	July 2009	CA-CP

### EXPECTED OUTCOMES

As noted previously, we hope that through this project we will help each participating town in Coos County build and maintain a Local Energy Committee; complete a greenhouse gas emissions inventory; and collaborate with neighboring towns to realize major emissions reductions. These three expected outcomes will, in turn, lead to some longer-term gains. Primary among these is an overall reduction in greenhouse gas emissions in Coos County – we expect that, through the infrastructure we will build over the course of one year, Coos County towns will be able to reduce emissions by a minimum of 10% by 2011.

A second potentially significant long-term outcome is the cost savings that Coos County towns will realize by identifying opportunities to increase energy efficiency in their municipal buildings. Maximizing this outcome is particularly important to North Country residents due to the recent economic challenges in the area, including paper mill closings in Berlin and Groveton and an expected decline in tourism dollars as a result of higher gas prices. David Van Houten, the Chair of Bethlehem’s LEC, writes, “These problems can be solved with creativity, vision, and investment ... As we work toward establishing a sustainable North Country economy, it is imperative that we pay sufficient attention to energy concerns.”

In Cheshire County, NH, where we are nearly one year into piloting this regional pilot project, baseline inventories have revealed that annual greenhouse gas emissions total 9 tons of CO<sub>2</sub> per capita and that,

overall, 40% of emissions were related to transportation. Within specific towns, sectors with the highest energy use varied – some towns saw as much as 70% of their energy consumption traced to water and sewage, while in others municipal buildings were the main energy sink. In the next phase of our Cheshire County work, we will help town officials interpret this data in order to **make smart choices when it comes to identifying and prioritizing energy efficiency improvements – choices that will offer the most significant results in terms of both greenhouse gas emissions reductions and cash savings.**<sup>2</sup> In Coos County, we will work in a similar way with municipal governments to save towns (and taxpayers) money. In addition, with the LECs and the Coos Economic Development Corporation, we will introduce residents to ways they can measure and reduce carbon emissions in their homes, translating into even more dollars saved within individual Coos County households.

### EVALUATION PLAN

Evaluation tools will include monitoring indicators related to specific outcomes, as well as collecting information from residents and businesses about their opinions, attitudes, behaviors, and knowledge. CA-CP proposes the following outcomes, indicators, and outputs for evaluating program results:

<i>Outcomes</i>	<i>Indicators</i>	<i>Outputs</i>
Reduction in greenhouse gas emissions	<ul style="list-style-type: none"> <li>• Number of pounds of greenhouse gas emissions</li> <li>• Level of financial commitment and expenditures from local governments, businesses, colleges, and other implementers</li> </ul>	<ul style="list-style-type: none"> <li>• Specific projects implemented at the community and regional levels to reduce greenhouse gas emissions</li> <li>• Local climate action plan completed</li> <li>• Greenhouse gas emissions inventory completed</li> </ul>
Personal commitment and actions from significant number of residents and businesses to reduce greenhouse gas emissions	<ul style="list-style-type: none"> <li>• Increased public awareness and understanding of the public, business, local government and education institutions of where greenhouse gas emissions are generated and how to reduce them</li> </ul>	<ul style="list-style-type: none"> <li>• Training and workshops for Task Force, town climate committees</li> <li>• Toolkits and guidance documents prepared</li> <li>• Public outreach campaign implemented</li> </ul>
New leadership and relationships created among leading area stakeholders resulting in joint projects and ongoing partnerships to implement climate solutions	<ul style="list-style-type: none"> <li>• Number of new partnership and partnership activities generated</li> <li>• Number of leaders active in climate action</li> </ul>	<ul style="list-style-type: none"> <li>• Training for business, municipal, educational, and other community leaders on climate and energy actions</li> </ul>
New communities throughout New Hampshire and New England implementing significant community engagement approaches to reducing greenhouse gas	<ul style="list-style-type: none"> <li>• Number of communities active in reducing greenhouse gas emissions using comparable approaches</li> <li>• Number of participants at regional conferences</li> </ul>	<ul style="list-style-type: none"> <li>• Careful documentation of results in pilot region on how assertive community engagement at the regional level can achieve significant greenhouse gas reductions</li> </ul>

### RESOURCE PLAN

<sup>2</sup> The appended report, prepared for one small rural town in Cheshire County, shows the level of detailed analysis that will be available to Coos County towns.

It is our goal to carry out this activity in as many distinct New Hampshire communities as possible; currently, with funding from the New Hampshire Charitable Foundation, the U.S. E.P.A. and Entergy, we are several months into piloting this regional approach to greenhouse gas emissions reductions in the Southwest Region. We will be able to maximize grant support from the Tillotson Fund to achieve significant results in a limited time frame by using proven methods and tested templates.

We are confident that our major goals of helping each participating town in Coos County form an energy committee, conduct an inventory, and devise collaborative projects are achievable over the course of a one-year grant. In addition, our work will create an infrastructure within the community for emissions-reducing and energy-saving work to continue independently. Although we would be very pleased to have the opportunity to continue to play an active, hands-on role in Coos County in the future, we are treating this work for the time being as a discrete, one-year project.

Although we have not identified any other sources of funding to be devoted solely to the Coos County work, we have a two-year application pending with the Cox Trust, which would provide resources to CA-CP's community partnership program as a whole.

#### COOPERATING/COLLABORATING ORGANIZATIONS

Our main collaborators for this project include the following:

##### Coos Economic Development Corporation

148 Main Street

Lancaster, NH 03584

Contact: Peter Riviere, Executive Director

Tel: 603-788-3900

Em: [cedc@ncia.net](mailto:cedc@ncia.net)

In light of rising fuel costs, we hope to work with Peter Riviere to educate Coos County residents on the environmental implications and financial benefits of various fuel types.

##### The New Hampshire Local Energy Committee Working Group

c/o Clean Air-Cool Planet

100 Market Street, Suite 204

Portsmouth, NH 03801

Contact: Roger Stephenson, Vice President for Programs

Tel: 603-570-7504

Em: [rstephenson@cleanair-coolplanet.org](mailto:rstephenson@cleanair-coolplanet.org)

The LEC Working Group was formed in the spring of 2008 as a project of the Carbon Coalition to support nascent Local Energy Committees throughout the state. The LECWG helped to organize several listening sessions for the Governor's Climate Change Task Force during the month of August, including one in Conway. Through this project, the LECWG could identify and create opportunities for North Country citizens to become more involved in the Governor's Task Force, and could help ensure that Coos County interests are well-represented to Commissioner Burack.

##### The North Country Council

The Cottage at the Rocks

107 Glessner Road

Bethlehem NH 03574

Contact: Jeffrey R. Hayes, Assistant Executive Director

Tel: 603-444-6303 x22

Em: jhayes@ncia.net

Jeff Hayes will collaborate closely with CA-CP staff members to provide day-to-day coordination for this project and join in overseeing the work of the student interns.

U.S. Environmental Protection Agency, Region 1

1 Congress Street

Boston, MA 02114

Contact: Shubhada Kambli, Environmental Scientist

Tel: 617-918-1584

Em: kambli.shubhada@epa.gov

In selected Coos County communities, we will use the EPA Portfolio Manager tool to carry out an emissions inventory of municipal buildings. EPA Region 1 has previously awarded CA-CP a grant to undertake work similar to this in Cheshire County, NH, and Regional Administrator Bob Varney is a major champion of Local Energy Committees.

White Mountains Community College

2020 Riverside Drive

Berlin, NH 03570

Contact: Frank Clulow, Vice President for Academic and Corporate Affairs

Tel: 603-752-1113 x1350

Em: fclulow@ccsnh.edu

WMCC is in the early stages of developing an energy auditing curriculum, and is also considering renewable energy curricula. Frank Clulow has appointed John Dyer, Director of Workforce Development and Community Education Center, to work with CA-CP and NCC. We will depend on John and his designee to identify and recruit students to conduct the energy auditing work for this project.