February 2010

A Time for Action:

Regional Efforts to Mitigate Climate Change

With a deep-seated knowledge of economic development and private sector partnerships, regional councils[1] are uniquely positioned to have a significant impact on climate change mitigation. Through innovative business incubation, smarter land use planning and efficient, calculated approaches to energy usage, regional councils can set an example for community stakeholders looking to expand their economic base and breathe cleaner air in the process.

To many, climate change is a theory with little relevance as to how business is conducted or how governments enact policy. To others, it is a looming crisis that deserves much of our world's attention in order to reverse the negative effects of greenhouse gases (GHGs) on our atmosphere. Somewhere in the middle is the belief that a changing environment is an economic opportunity to be seized with progressive dominance and foresight. Beyond all personal views and public debate, the latter is a position that holds great promise with limited risk. It is considered the position of no regret.

"From a practical point of view, you don't have to believe in climate change to reduce energy consumption and greenhouse gas emissions like carbon dioxide (CO_2)," says Roger Stephenson, Executive Vice President of Programs for Clean Air-Cool Planet in New Hampshire. "Let's say in 100 years we've reduced air pollution because of a renewable energy grid that reduces our dependence on fossil fuels; even if climate change turns out to be a non-issue, our children's children will still breathe cleaner air."

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There are also the economic implications at hand. With an auto industry that has taken a severe hit and a manufacturing base that has steadily eroded over recent decades, the United States is ripe for an opportunity to regain its global clout. Meanwhile, a renewable energy economy is taking shape on an international stage, to which the United States has been slow to react. The U.S. market share of production of solar PV cells, devices that convert solar energy to electricity, dropped from 45 percent to less than 10 percent between 1995 and 2005,[2] while Germany, a country roughly the size of Oregon, remains the global frontrunner in total installed wind power capacity.[3] If the United States is to emerge as a global force in the widening renewable energy market, it is first necessary to begin building the industry on American soil.

The Issue

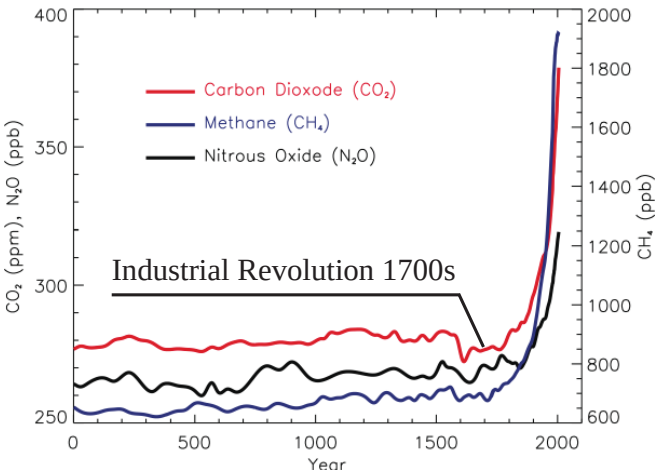
Whether referred to as global warming or climate change, or whether debated as human-caused or a natural phenomenon, it is generally accepted that the earth's climate is going through a transition.

According to a 2007 report by the Intergovernmental Panel on Climate Change (IPCC), "Warming of the [earth's] climate system is unequivocal." A non-partisan, science-based organization established by the United Nations, the IPCC also reported that, "The global atmospheric concentration of carbon dioxide in 2005 (370 parts per million or ppm) far exceeds the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores." [4]

Since the report was published in 2005, the latest data from the National Oceanic and Atmospheric Administration showed that global concentrations of CO_2 have increased to 387 ppm as of December 2009.[5]

To put this in perspective, the lead climate scientist for the NASA Goddard Institute for Space Studies, Dr. James Hansen, considers 350 ppm to be the maximum "safe" level of atmospheric CO_2. Remaining above this level for an extended period of time increases the "possibility of seeding irreversible catastrophic effects," including rising sea level and unstable weather patterns.[6]

Concentration of Atmospheric Greenhouse Gases from 0 to 2005



Source: NASA Goddard Space Flight Center

Although the safe levels of atmospheric carbon continue to be disputed, there remains consensus that global carbon emissions must be reduced, a belief compounded by the fact that the U.S. is responsible for more CO_2 emissions than any other country except China.


Source : Florida Aerial Services, Inc.

Florida Power & Light (FP&L) solar array at Florida Gulf Coast University in Lee County

Chipping Away at the Problem

For regional planners, tackling climate change might sound as tangible as taking on world peace. Most acknowledge that there is a looming problem with the earth's climate trajectory, but because it is a relatively new phenomenon, few regional councils have the expertise and resources to implement solutions.

Some regions, however, have been faced with evidence that is hard to ignore. Coastal areas where climate change is being felt greatest, for example, are bearing witness to accelerated coastal erosion and an increase in weather-related catastrophes.

Having seen this trend first-hand, Ken Heatherington, executive director of the Southwest Florida Regional Planning Commission (SWFRPC), says, "With ice caps melting at an increasing rate, Florida's coastline is deteriorating at an accelerated pace. Being in a region with a growing economy and a growing carbon footprint just exacerbates the problem."

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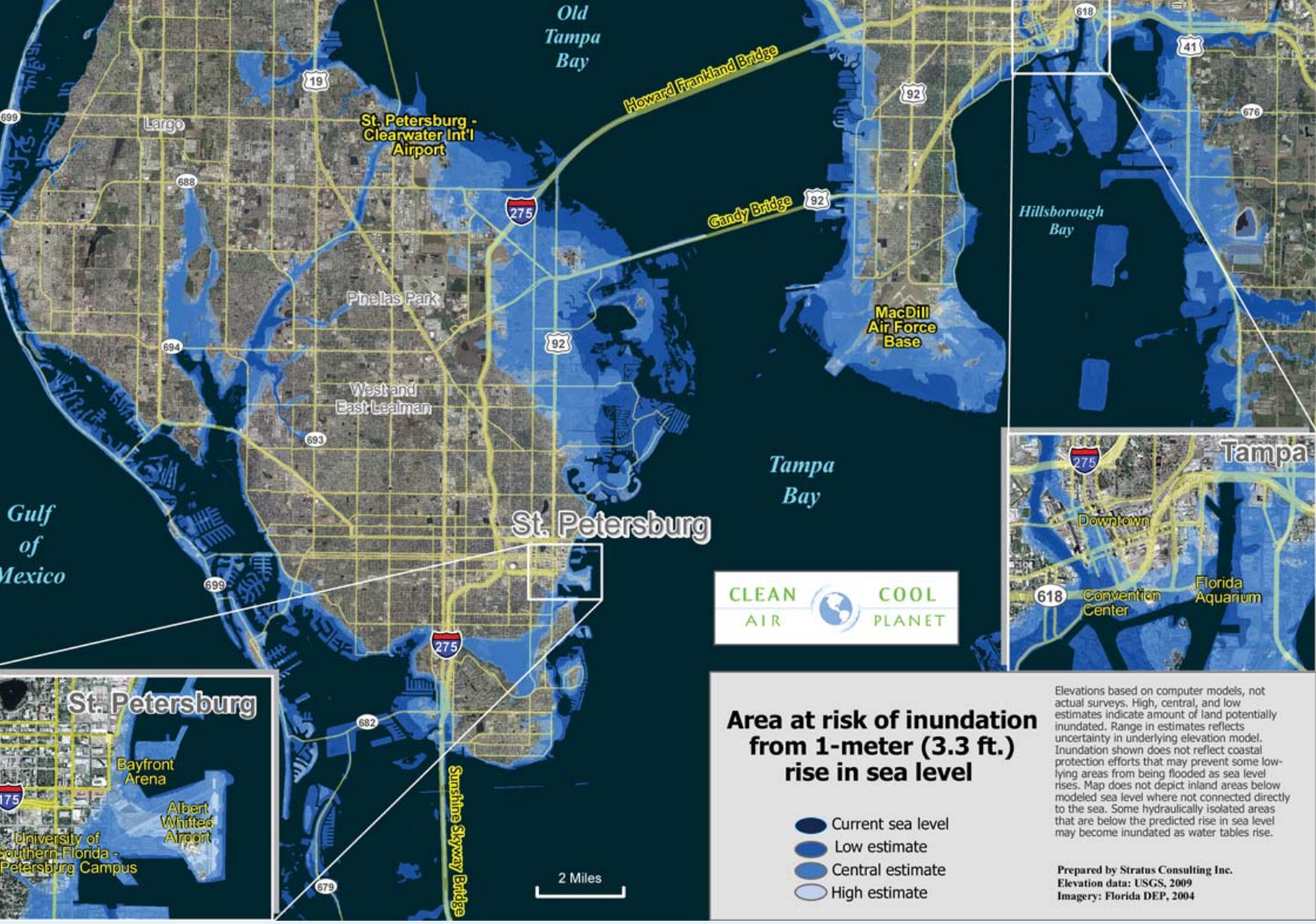
High Tide in Southwest Florida

Ken Heatherington is a busy man. In addition to being in charge of day-to-day operations for SWFRPC, his organization has recently been selected as the lead agency for the Southwest Florida Climate Prosperity Project.

One of eight Climate Prosperity initiatives being piloted nationwide, SWFRPC is tasked with demonstrating that environmentally sustainable business and community development practices can be effective methods for increasing jobs, income productivity and regional competitiveness.[7]

The project is broken down into three components which have been incorporated into SWFRPC's 2008 Comprehensive Economic Development Strategy (CEDS)[8]:

• **Green Opportunities**: A green economy will be based on a new generation of products and services, all of which will create many new businesses and jobs across the entire value chain, including: manufacturing and



Map illustrating potential effect of 1-meter rise in sea level in St. Petersburg, Florida (courtesy of Clean Air -Cool Planet)

production, marketing and distribution, and wholesale and retail trade. Business, government and community actions to reduce greenhouse gas emissions will also greatly expand producer and consumer market demand for green goods and services.

• **Green Savings:** All households, businesses and governments can save money by increasing energy conservation, resource efficiency and innovation, not only by using fewer resources, but by reusing more of what previously have been considered waste products.

• **Green Talent:** Making the transition from resource-inefficient capitalism to resource-efficient capitalism will require green talent—a new generation of green employment and entrepreneurial skills that will help build the essential foundation for a more competitive and productive economy. In addition, improving the quality of life in localities through environmental and cultural sustainability and related amenities will be one of the most effective ways for state and local economies to attract and retain a highly skilled and well motivated workforce of talented people.[9]

Beyond the guidelines of the project, Heatherington is a true believer in capturing all aspects of sustainability through an organization-wide approach. "As planners," he says, "there is an inherent nature to think long term about things like Smart Growth and renewable energy, but in the near term we need to be

Growing Smart

Without proper planning, quaint cities and towns can quickly give birth to regional sprawl that complicates further growth and places an unnecessary burden on a region's natural habitat.

Realizing the inefficient nature of sprawl, planners across the country are adopting a philosophy of long-range development centered on public transit, walkable mixed-use communities, green infrastructure and preservation of open space and agricultural farmland. Often referred to as Smart Growth, these principles of sustainable land use planning are at the heart of a federal inter-agency task force called the Sustainable Communities Initiative.

Spearheaded by the U.S Department of Transportation, U.S. Department of Housing and Urban Development and U.S. Environmental Protection Agency, the partnership is designed to break down policy and planning silos in favor of a coordinated effort that will allow for leveraged funding and capital investment.

"Creating livable communities will result in improved quality of life for all Americans and create a more efficient and more accessible transportation network that serves the needs of individual communities," says Transportation Secretary Ray LaHood. "Fostering the concept of livability in transportation projects and programs will help America's neighborhoods become safer, healthier and more vibrant."

For more information on the Sustainable Communities Initiative visit: www.epa.gov/dced/partnership/index.html

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thinking about how we can get the easy stuff, the fruit on the ground, through conservation and outreach efforts."

Instead of having one group of planners devoted to climate change mitigation, each department within SWFRPC is gradually becoming structured in a way that climate and energy concerns are at heart of all planning decisions.

By focusing on climate change as an issue of public health, economic development and reduction of wasted resources, SWFRPC is able to develop tangible, regional goals that seem less daunting than tackling the earth's warming trend.

Jason Utley (left), LEED Planner of SWFRPC, receiving NADO innovation award with SWFRPC Chair Mick Denham

Transportation planners, for example, strive for "walkable" communities and reduced vehicle miles traveled, while environmental planners discuss matters related to low-impact land use and saltwater penetration into the local water sources. Other planners focus on growth management and making educated decisions on how to adapt to an ever-increasing population of the region. The council also has a planner certified in Leadership in Energy and Environmental Design (LEED) to assist with residential and commercial green building initiatives.

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CLEAN AIR COOL PLANET

With so much of SWFRPC's work focused on environmentally sustainable economic and community development, Heatherington and his organization have their work cut out for them. Surprisingly though, it is not the sound of concern that comes through his voice, but rather a sense of optimism and opportunity. As one of 11 regional planning councils in Florida, all of which are in some form working to reduce their impacts on the environment, Heatherington has come to welcome the challenges that lay ahead.

Clean Air-Cool Planet and the RPC Connection

When it comes to promoting regional solutions to combat climate change, one New Hampshire-based organization recognizes the importance of versatility. Partnering with a diverse mix of local governments, business leaders and educational institutions, Clean Air-Cool Planet (CA-CP) takes an all-inclusive approach to fighting global warming.

Beyond their work in developing a highly lauded tool to inventory carbon emissions called the Campus Carbon Calculator™, CA-CP has partnered with corporations, including L.L. Bean and Poland Spring, to reduce their carbon footprints. CA-CP has also co-authored an Energy Committee Handbook in cooperation with several New Hampshire-based organizations, including the state's regional planning commissions (RPCs).

A collaborative tool designed to provide guidance and technical support to New Hampshire Local Energy Committees, results from the handbook suggest that local governments may have difficulty assessing energy usage across multiple departments, especially smaller towns with fewer staff members.

Executive Vice President of Programs Roger Stephenson comments on the challenges in reducing consumption with limited data and resources. "You can't manage what you don't measure," says Stephenson, "and very few local governments are looking at energy in a comprehensive way right now."

As an organization that has assisted numerous communities with emissions inventories and

energy audits, CA-CP promotes the logic behind Stephenson's reasoning. "Schools, libraries and police departments all get separate energy bills," says Stephenson, "and when it's time to build a budget, the town manager says, 'Well, the police department spent X in 2009, so for 2010 we'll make the budget X plus 10 percent'. If you don't inventory your energy, your transportation fleets, your buildings, your streetlights, it's very difficult to understand how the town's money is being spent."

Combining local government experience and skill sets, CA-CP has partnered with a number of New Hampshire RPCs and professional planners to serve town governments.

Through the support of the New Hampshire Charitable Foundation and the Public Utilities Commission's Regional Greenhouse Gas Emissions Reduction Fund, CA-CP has trained New Hampshire planners and local government officials to measure energy use in buildings, street lighting and vehicle fleets, and use the information to identify high priority and cost-effective solutions. Planners, in turn, help towns draft energy chapters for Master Plans and perform energy-focused land use regulatory audits to help local officials uncover inconsistencies between local ordinances and Master Plan goals.

With sea level expected to rise one meter by the end of the century, CA-CP Communications Manager, Bill Burtis, dons hip waders to illustrate the prospect at Hampton Beach, NH

Understanding how local governments work is an asset that can be used nationally by regional councils to assist these governments in becoming more energy efficient. Through grant writing assistance for state and federal funding (see EECBG on page 8), or through potential fee-for-service programs to offer technical assistance with energy audits, the opportunities abound.

"Local governments and RPCs in New Hampshire have a 40-year working relationship," explains Christine Walker, executive director of the Upper Valley Lake Sunapee Regional Planning Commission, "and we believe that RPCs can be the solution to continuous delivery of energy education and technical assistance."

"With their knowledge of partnerships with state agencies and local governments," Stephenson contends, "regional

EECBG by any other Name

If businesses and communities in the U.S. are to ever embrace energy conservation and efficiency, it will come at the cost of deeply ingrained habits and prodigal norms. A surplus of coal reserves, coupled with low oil prices, have long allowed Americans to power their homes and businesses inexpensively and with little concern for the environment.

In 2009, as a part of the American Recovery and Reinvestment Act (ARRA), Congress sought to challenge state and local governments to "develop and implement projects to improve energy efficiency and reduce energy use and fossil fuel emissions." The vehicle employed to facilitate this challenge is the Energy Efficiency and Conservation Block Grant program (EECBG).

With a total of $3.2 billion in ARRA funding, the majority of resources have been distributed through direct formula grants based on population and energy consumption criteria, with the balance being distributed through a competitive grant process.

To date, NADO members who have applied for EECBG funding have expressed mixed feelings about the program. Some say that the distribution process is skewed unfavorably toward urban markets, while others report that the program fails to consider how these projects outlive the stimulus by remaining sustainable once federal money is exhausted.

From a more positive standpoint, however, EECBG represents the largest single investment to energy efficiency that the country has ever made. Moreover, the program offers an opportunity for regional councils around the country to initiate relationships with state energy offices. As an example, Virginia's regional councils, known as Planning Development Commissions, were contracted and funded to facilitate the grant program release and application submission process for $9.7 million in available EECBG funds for the state.

planning commissions are perfectly positioned to help these communities reduce their carbon footprint."

Getting Businesses and the Public Involved

Reducing the carbon footprint of government buildings and transportation fleets is a small step in what needs to be a colossal leap toward a more evolved approach to climate change.

Brooks Yeager, executive vice president of policy for CA-CP, states, "Changing government fleets over to hybrids or biodiesel is only going to get you 10 percent of the way toward carbon neutrality. That leaves the 90 percent that comprises the private sector untouched."

Yeager, who is currently involved in forging cap-and-trade legislation with members of Congress, attests that "with transportation and electricity generation comprising over 60 percent of greenhouse gas

"With their knowledge of partnerships with state agencies and local governments, regional planning commissions are perfectly positioned to help these communities reduce their carbon footprint."

-Roger Stephenson
EVP of Programs, Clean Air-Cool Planet

emissions in the U.S., improving efficiency and conservation in these two sectors is imperative."

Even some of the most fervent supporters of the environment, however, are slow to embrace measures such as driving less, buying hybrid vehicles or even purchasing recycled goods. Inherent in the American psychology is a sense of entitlement to live as free from constraints as one can afford to live. Until now, this mentality has been nurtured by a lack of accountability on the part of utilities and corporations to factor negative externalities (or costs of harming the environment) into pricing.

With more stringent regulations on carbon emissions set to be implemented by the Environmental Protection Agency, though, producers of goods are beginning to see the economic value of reducing waste streams and building efficiency into their operations.

This shift, coupled with a competition for green market share, has propelled manufacturers to begin offering "eco-friendly" products without compromising quality or price, a compromise that few consumers are willing to make. According to Yeager, "This is not a matter of turning thermostats down, this is a matter of getting the same heat quality in the winter and same cooling quality in the summer, but much more efficiently and at the same price."

Finding the Silver Lining

Similar to a game of chess, effecting change is often best pursued by strategizing a few moves ahead. Although policymakers and citizens may care about a clean environment, tying jobs, entrepreneurship and broad scale economic development to the cause is what gains traction and support.

Matt McCauley, Director of Regional Planning and Community Development of the Northwest Michigan Council of Governments (NWMCOG), is well aware of the science of climate change, but the message he promotes relates more to the economic allure of saving the environment. "The goal through our 3(E) initiative is to create jobs, educate the public and cultivate business," says McCauley. "Most of what we've done so far has been related to energy because that's something we can tie directly to bottom line savings across our region."

3(E), which stands for economy, environment and energy, is a planning initiative spearheaded by NWMCOG in partnership with Northwest Michigan Community College, two local energy utilities—DTE Energy and Consumers Energy—and the region's economic development corporations.

The project blossomed out of the organization's 2007 CEDS process as an investment that would provide a

"The goal through our 3(E) initiative is to create jobs, educate the public and cultivate business"

-Matt McCauley, Director, Regional Planning and Community Development, NWMCOG

platform for planning in the areas of energy efficiency, renewable energy and fresh water resources. "Living in a region with proximity to Lake Michigan and an abundance of natural areas," McCauley says, "there's a good level of consensus that there needs to be a baseline of protection for our natural resources, but there's also a consistent theme of trying to create greater business opportunity and economic diversification."

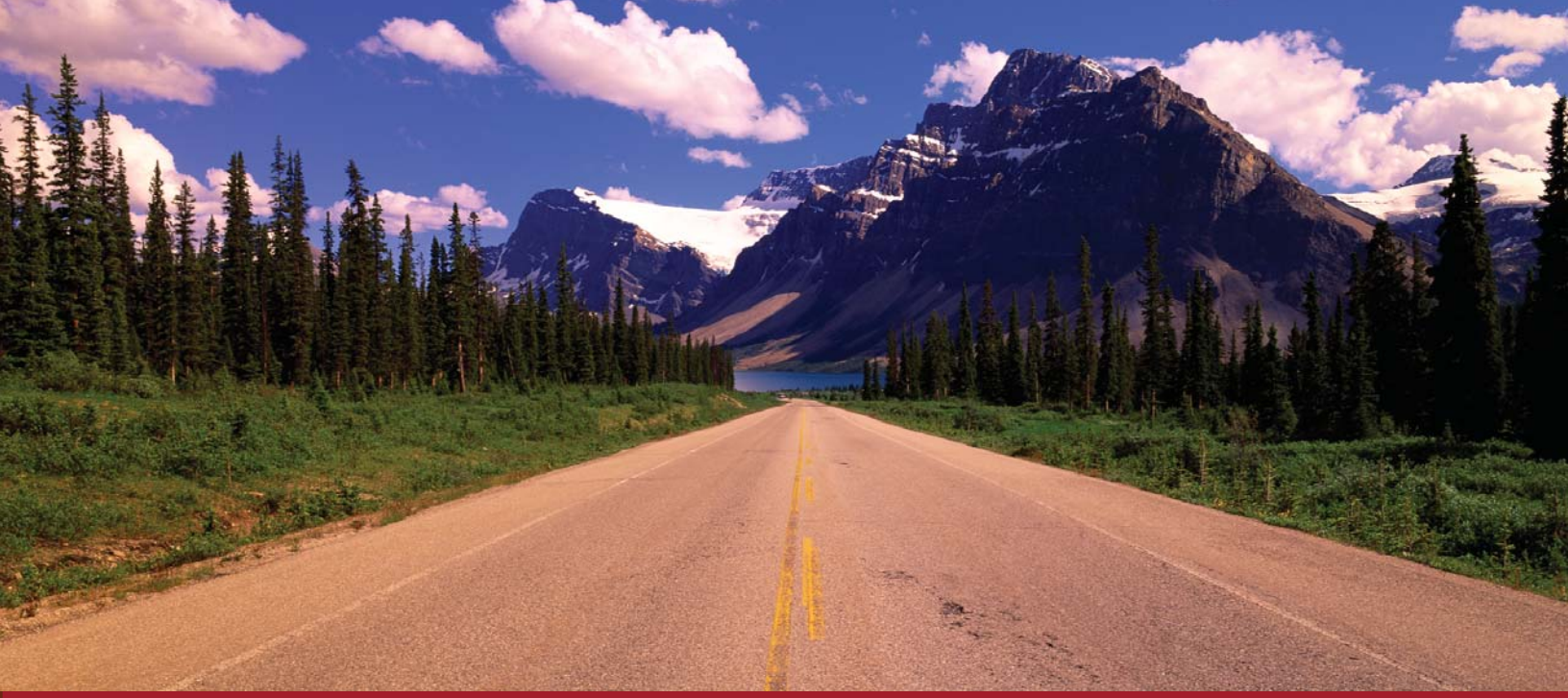
This is not to say that the 3(E) initiative has succeeded in altering mindsets overnight. Perhaps the biggest hurdle, McCauley explains, is "communicating to people that discussions surrounding energy don't have to be in the form of advocacy and carbon emissions. To get the most traction, it's more about discussing capitalizing on the business and cost savings opportunities that can result from energy efficiency and production strategies." A testament exemplified by their partners at Northwestern Michigan College, a national leader in residential renewable energy and home-based wind power education programs.

Wind turbine owned by Traverse City Light and Power produces one million kilowatt/ hours of electricity per year

In addition to funding from the Economic Development Administration (EDA), NWMCOG also received $1.1 million from the Michigan Public Services Commission to assist local governments in performing energy audits and providing funds for the purchase of energy saving equipment. By sub-allocating the funds in $40,000 increments to various local governments (including every county), local officials are able to conduct energy audits on government buildings and municipal departments. Fifty percent of the savings achieved as a result of the audit must be used to open an energy savings account that can be reinvested into future efficiencies.

NWMCOG is also focused on pursuing regional wind projects, biofuels production and recycling programs. In terms of job creation, McCauley touts the recycling centers by explaining that, "10,000 pounds of waste dumped in landfill creates one job, whereas 10,000 pounds of waste at a recycling center creates 10 jobs."

Although jobs and economic development are at the core of NWMCOG's 3(E) mission, the seriousness of the climate change situation is not lost on the people of Northwest Michigan. When asked if there are any signs of climate change affecting the region directly, McCauley ponders the question before answering, "Because tourism and agriculture are such large pieces of our regional economy, no one questions that climate has a profound effect on the region's economic health. People may disagree as to the origins of climate change, but most agree and are willing to create strategies to prepare better for it." §



Resources

Ken Heatherington, Southwest Florida Regional Planning Commission, 239.338.2550, kheatherington@swfrpc.org, www.swfrpc.org

Matt McCauley, Northwest Michigan Council of Governments, 231.929.5000, mccauley@nwm.cog.mi.us, 3(E) web site: www.nwm.org/nwm3e.asp

Roger Stephenson, Clean Air-Cool Planet, 603.422.6464, rstephenson@cleanair-coolplanet.org, www.cleanair-coolplanet.org

Christine Walker, Upper Valley Lake Sunapee Regional Planning Commission, 603.448.1680, cwalker@uvlsrpc.org, www.uvlsrpc.org

Brooks Yeager, Clean Air-Cool Planet, 603.422.6464, byeager@cleanair-coolplanet.org, www.cleanair-coolplanet.org

EECBG program site: www.eecbg.energy.gov

Sustainable Communities Initiative: www.epa.gov/dced/partnership

References

[1] Regional councils (also known as regional development organizations) are multi-jurisdictional planning and development agencies that provide assistance to local governments, businesses and nonprofit organizations. National network of 525 regional councils includes: Economic Development Districts, Area Development Districts, Local Development Districts, Regional Planning Commissions, Councils of Government, Planning and Development Districts.

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[7] Climate Prosperity Alliance Website: www.climateprosperity.com

[8] A Comprehensive Economic Development Strategy (CEDS) is the result of a local planning process designed to guide the economic growth of an area and is required to qualify for assistance from the Economic Development Administration (EDA)

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