



NEW HAMPSHIRE
CHARITABLE FOUNDATION
UPPER VALLEY REGION

**UPPER VALLEY CLIMATE AND ENERGY:
ASSESSMENT OF REGIONAL ASSETS, NEEDS AND OPPORTUNITIES**

July 26, 2011

OVERVIEW

In 2009-2010, the New Hampshire Charitable Foundation-Upper Valley Region hosted a series of gatherings for private, business, and community foundations who support climate and energy work in the Upper Valley. Out of that work and subsequent conversations with leading climate and energy organizations in Vermont and New Hampshire, this assessment describes the Upper Valley's needs, assets, recent initiatives, and opportunities for advancing climate and energy work.^{1,2} It covers activity in the areas of energy efficiency, weatherization, transportation, sustainable agriculture, renewables and green design.

Climate and energy work involves intricate partnerships among the public, private, non-profit, policy and advocacy sectors, as well as awareness and behavior change at the individual and organizational level. This assessment explores those relationships, and highlights promising areas for further work. It is not intended to be an exhaustive analysis, but rather a starting point for discussion.

STRENGTHS AND ASSETS

- 1. *The Upper Valley is home to many individuals, organizations, and funders with deep commitment to sustainability issues and a willingness to act creatively.*** Funders - ranging from family and business foundations, to community foundations such as the New England Grassroots Environmental Fund, High Meadows Fund, New Hampshire Charitable Foundation and Vermont Community Foundation, to national funders such as the John Merck Fund, Doris Duke Foundation, and several Rockefeller family funds - generously support local climate and energy work,. These funders demonstrate a willingness to get behind leading-edge ideas, and they play critical roles as catalysts and conveners to foster collaboration, networking, and dissemination of best practices and knowledge.
- 2. *A strong local system is doing successful work on a broad spectrum of energy and climate issues.*** These groups are strongly networked and, like funders, play critical convening and partnering roles in the field.

¹ This report was prepared by independent project consultant Lizann Peyton, Norwich VT.

² See Appendices for a map of the Upper Valley region, a list of key informants for this assessment, and a contact list for leading climate and energy organizations in the region.

3. Weatherization and Energy Efficiency:

- SERG (Sustainable Energy Resource Group) is a leading voice and go-to source of knowledge on energy issues, both as a direct service provider and as a bridge and convener across state lines. SERG brokers residential and municipal energy assessments, provides feasibility studies and technical assistance on municipal projects, trains energy auditors and contractors, provides public education through workshops such as “Button Up Vermont,” and facilitates access to rebates and tax incentives. SERG partnered with Clean Air-Cool Planet to successfully replicate the “Button Up” program in New Hampshire and engages in a number of other collaborative efforts described below.
- COVER Home Repair’s volunteer-led weatherization projects reduce energy costs for low-income families, helping them remain in affordable housing and reducing their vulnerability to cutbacks in the federally funded LIHEAP fuel assistance program. COVER plans to double its current capacity to weatherize “100 homes in 100 days” and enlarge the region’s pool of skilled weatherization volunteers. COVER, in partnership with SERG and Vital Communities, launched the Upper Valley HEAT program described below, and is pursuing innovative financing models to address the up-front costs of weatherization.
- Community Action (CAP) programs, such as SEVCA in Vermont and Tri-County CAP in New Hampshire, make free energy audits, weatherization, and fuel assistance available to low-income families as part of their federally-funded anti-poverty mission.
- Efficiency Vermont gives homeowners, businesses, and contractors easily accessible information on reducing energy consumption, and manages the state’s rebate program for home efficiency improvements. Efficiency Vermont is administered through the nonprofit VT Energy Investment Corporation (VEIC), which is well respected for its research, consulting, and policy development on efficiency and renewables.
- Vermont Technical College is professionalizing the workforce with training and certification pathways for energy auditors and weatherization contractors, and participating with SERG in efforts to expand the labor pool for efficiency projects.

Municipal Initiatives

Formalized town energy planning is a growing and encouraging trend. Currently, 24 Upper Valley towns have Energy Committees and 10 more have Energy Coordinators, while about 43 towns lack either. Towns are incorporating energy strategies into their master plans, auditing and retrofitting schools and town buildings, adopting planning and zoning rules to encourage clustered and in-fill development, and installing renewables as time and funding permit. A number of energetic advocacy and provider groups are spurring these efforts:

- The Upper Valley Lake Sunapee Regional Planning Commission and Two Rivers-Ottawaquechee Regional Commission assist municipalities with energy and climate inventories, regulatory and policy audits, master plans, project prioritization and implementation, and access to grants and creative funding. RPCs may also get involved in formal review of proposed alternative energy generation facilities.

- MEAP (Municipal Energy Assistance Program), a RGGI-funded collaboration among Clean Air-Cool Planet, SERG, and Vital Communities, has just wrapped up two years of inventorying municipal buildings in 48 New Hampshire towns, including the Upper Valley towns of Cornish, Danbury, Enfield, Grafton, Lebanon, Lyme and New London. These audits help town energy committees prioritize next steps and present a stronger case for funding. While funding for MEAP has ended, Vital Communities and the Upper Valley Lake Sunapee Regional Planning Commission will continue to work with municipalities.
- The annual Upper Valley Energy Committee Roundtable offers a networking forum for local towns, under the co-sponsorship of SERG, Vital Communities, and the area's two Regional Planning Commissions.
- The Upper Valley's Municipal Network meets quarterly, engaging a broad group of elected and appointed town officials to act on boundary-spanning issues, including transportation, energy, and housing. The Municipal Network is co-sponsored by Vital Communities, the Regional Planning Commissions, and the League of Women Voters.
- In Vermont, town energy committees get support from statewide organizations that include VEIC, the New England Grassroots Environmental Fund (NEGEF), and the Vermont Climate Action Network (VECAN), whose goal is to establish town energy committees or initiatives in every Vermont town by 2012. NEGEF and VECAN also make grants for local energy projects, and VECAN's statewide training conference drew over 250 participants last year.
- Statewide in New Hampshire, Clean Air-Cool Planet (CA-CP) assists local energy committees with convening and technical assistance, and partners with the NH Carbon Coalition to produce an annual Local Energy Solutions Conference, which drew 250 participants last year. The Carbon Coalition's Local Energy Committee Working Group brings local energy committees together with regional planning commissions, state and federal agencies, and multi-state organizations like NEGEF and SERG.
- Handbooks for town planners are available through the NH Carbon Coalition and Vermont Natural Resources Council, with clean energy success stories and concrete guidance on efficiency, renewables, transportation, land use management, waste reduction, and community engagement.
- Citizen action committees such as Sustainable Hanover and Sustainable Woodstock help their towns pursue broad energy agendas. Hanover's goals include eco-friendly lighting in town buildings, idling-control systems on town-owned vehicles, zero-waste recycling, hybrid police vehicles, waste-water sludge composting, weatherization of senior housing, and conversion of mowed lawns to wildflowers. These efforts are expected to save the town 17,400 gallons of fuel and reduce its carbon footprint by nearly one million pounds.
- Municipal streetlight pilot efforts are ramping up, to remove excess streetlights and upgrade others with dimmable LED fixtures. Hartford's initiative, which could save up to \$64,000

per year, evolved through close collaboration among town officials, residents, the utility company, the regional planning commission, and state financing programs.

Transportation

- Advance Transit (AT), the Upper Valley's free public bus system, is the second largest public transportation system in both New Hampshire and Vermont. Funding partnerships with towns, Dartmouth Hitchcock Medical Center, and Dartmouth College enabled AT to eliminate fares, and ridership more than tripled as a result. Advance Transit is also "greening" its own operations, with LEED Silver Certification for its building expansion in Wilder, fuel-efficient buses purchased with 2009 federal stimulus funds, and a large rooftop solar array funded with federal assistance through U.S. Senator Bernie Sanders.
- The Upper Valley Transportation Management Association (TMA), a program of Vital Communities, engages municipalities and local businesses in making transportation investments to reduce fossil fuel consumption. With funding from High Meadows and the U.S. Dept. of Transportation, TMA's "**Smart Commute**" project will engage five Vermont and ten New Hampshire businesses this year to develop sustainable commuting plans for their employees, with incentives and barriers to reduce single-occupancy vehicle trips to work. TMA created an innovative "**Mobility Checklist**" for town planners and developers, and partners with regional leaders to pursue new park-and-ride lots, transit-friendly zoning ordinances, integrated public transit maps, and an inter-modal public transit hub.
- High Meadows Fund's "Smart Commute" convening in March 2011 produced a compelling analysis of employer motivators and barriers, commuting measurements and indicators, and priorities for action. Buy-in from top decision-makers, showcasing success stories and leaders, articulating the case for how businesses gain, analyzing the cost/benefit of personal choices, and problem-solving around personal, cultural, and logistical barriers are among the promising pathways.
- VEIC's Transportation Collaborative develops replicable transportation models, mobility policies, and impact analyses with particular expertise in rural regions.
- The Upper Valley Housing Coalition (UVHC) reduces fossil fuel consumption and vehicle-miles traveled through advocacy for clustered workforce housing and in-fill development.

Renewables and Green Design

Renewable biomass, geothermal, solar, and wind energy projects are gaining momentum as technology advances and as financial incentives improve affordability. Green building design is also gaining traction with homeowners, businesses, nonprofits, and municipalities, fueled by a combination of eco-friendly values, long-term cost savings, and public image.

- Green Home Tourist enables homeowners to give on-line tours of residential renewables and efficiency investments, and compiles a database of best-practice case studies for other homeowners, architects and contractors. GHT is a collaborative effort of the New England

Carbon Challenge, Clean Air-Cool Planet, University of New Hampshire, and New Hampshire Sustainable Energy Association.

- Green building projects at AVA Gallery, Hypertherm, Advance Transit, and elsewhere are advancing public interest and demand for LEED building certification.
 - VPIRG (Vermont Public Interest Resource Group), launched a Solar Communities Program to double the number of solar homes on a town-by-town basis. The program negotiated a 25% discount from solar installers to reduce homeowners' up-front cost, on top of federal and state incentives. VPIRG publishes economic and environmental analyses of Vermont's energy use patterns, and pathways for eliminating fossil fuel dependence.
 - Vermont Technical College is pursuing two multi-partner biomass projects in the Randolph community. One, with U.S. Department of Energy funding obtained through Senator Patrick Leahy, is assessing the feasibility of heating and powering VTC's own campus with a manure and biomass anaerobic digester. The second is evaluating use of local, sustainably harvested wood to heat and power over 400 homes and businesses in Randolph. VTC also offers a Sustainable Design and Technology degree, weatherization and renewables workforce training, and an anemometer (wind measurement) equipment loan program for Vermonters considering small wind systems on their property.
 - The step-by-step Community Roadmap to Renewable Biomass Woody Energy provides towns with concrete decision-making tools. It was developed by the North Country Resource Conservation and Development (RC&D) Area Council and made possible by from New Hampshire's allocation of RGGI funds.
 - Grants from the Vermont Biofuels Initiative (VT Sustainable Jobs Fund) are helping farmers in the Upper Valley and elsewhere evaluate the agricultural and economic feasibility of crop production for alternative fuels.
 - Green Mountain Power's "SolarGMP" provides added incentives for solar customers by paying a six cent premium per kWh, on top of the 12- to 13-cent benefit they already gain from net-metering. New state legislation will further increase those benefits.
4. ***Regional and statewide organizations are driving and supporting change through funding, technical assistance, tax incentives, convening, and advocacy.*** These groups are instrumental in cross-pollinating best practices across state lines and creating data-banks of success stories and replicable projects.
- Vital Communities is stepping up its effort to develop a regional vision for reducing energy use. As new initiatives emerge, Vital Communities can provide an umbrella for incubation of new solutions to sustainability and pressing community needs.
 - High Meadows Fund makes significant grants in the areas of fossil fuel reduction, sustainable agriculture, and Smart Growth settlement. Its website is a portal to dozens of deep learning resources, including state activity, research reports, and promising practices.

HMF also organizes topic-focused learning days for funders, and participates actively in convenings across New England.

- New England Grassroots Environmental Fund (NEGEF) is another significant grant-maker on climate and energy, sustainable agriculture, Smart Growth, sustainable behavior, environmental health and water issues. It focuses on grassroots activities that cumulatively “tip the scale,” often funding ad hoc groups trying to get community initiatives off the ground without paid staff. NEGEF produces skill-building workshops for grassroots leaders and community organizers, and is active in multi-stakeholder groups across New England.
 - Clean Air-Cool Planet does extensive work on global warming, helping organizations understand and reduce their climate footprint and advocating for effective policy solutions at the state, regional and national levels. CA-CP just released in June a comprehensive needs assessment of climate change preparedness in ten Northeast states. The report is the first region-wide snapshot from regional, state and local governments on how communities are preparing for a changing climate, and what resources and assistance they need to address issues such as sea level rise; natural resource management; regional tourism impacts; infrastructure vulnerability; public health systems, public water supplies; and drought and flood responses.
 - The Upper Valley Lake Sunapee Regional Planning Commission is engaging in a culvert inventory and water infrastructure project, funded in part through the National Oceanic and Atmospheric Administration. Its purpose is to prepare towns to handle increased storm runoff and flooding, in part from extreme weather events expected to result from climate change; to protect safe drinking water sources such as Lake Sunapee from these weather events; and limit the future need for water treatment facilities, which are high energy users.
 - Vermont Sustainable Jobs Fund takes a market-based approach to expanding the green economy with tools that include: grant-making, market analysis, marketing development, an innovative working capital pool for growth-oriented green-economy businesses, peer-to-peer mentoring for green-business CEOs, an interactive web atlas of promising locations for renewable energy generation, and the multi-year Vermont Biofuels Initiative.
 - Over the past five years, the Vermont Clean Energy Development Fund (supported by payments from Vermont Yankee) provided nearly \$2.5 million in grants, loans, and tax credits for alternative energy projects in Windsor and Orange Counties, and these monies leverage significant matching investments.
5. ***The Upper Valley has made great strides on sustainable agriculture*** over the past 10 years, reducing fossil fuel use in the production and transport of food and preserving the working landscape. Farmers markets are blossoming, local products are appearing in traditional supermarkets and restaurants, and networks of groups are engaged in high-level convening and collaboration.

- Valley Food and Farm (VFF), a project of Vital Communities, helps build the viability of small- and medium-scale farms and the connectedness among farmers, consumers, food outlets, and institutional buyers. Its Valley Food Council reduce duplication of efforts and increase networking among producers, retailers, town planners, advocates, and farm-to-school groups, and VFF's partnership with HEAL (Health Eating Active Living) seeks to bring farmers markets to the region's poorer communities.
- The Vermont Food Funders Network, convened by the VT Community Foundation, helps foundation and donor-advised funds collaborate on sustainable agriculture issues. It was instrumental in winning legislative approval and funding for the Farm-to-Plate (F2P) 10-year strategic plan (developed by the VT Sustainable Jobs Fund) lays out a roadmap for significant scale-up of sustainable agriculture.
- Upper Valley Farm-to-School Network is a group of farmers, teachers, parents, students and community members working to integrate local farms and food into school cafeterias, classrooms and communities in Vermont and New Hampshire's Connecticut River Upper Valley. UVFTS supports farm to school programs by helping schools to initiate new FTS programs by conducting FTS Assessments; working with schools on particular objectives, including: using local food in the cafeteria, growing school gardens, integrating food and farm themes into the curriculum, organizing and fundraising; hosting forums for FTS leaders on specific topics; and gathering and disseminating successful tactics and stories from and for FTS coordinators in the region

6. *Local business leaders and employers are stepping up to civic engagement and inspiring others to adopt "Green" business practices.*

- Hypertherm builds corporate social responsibility into all facets of the organization with innovative Green business practices: a Green continuous-improvement team; state-of-the-art video-conferencing capabilities to reduce business travel; low-impact supply and distribution chains; in-house energy reduction strategies; a local-foods cafeteria program and on-site farmers market; and alternative transportation incentives. Hypertherm's HOPE Foundation is also introducing Green Grants to help nonprofits themselves "go Green."
- Vital Communities' Corporate Council convenes 20 leading businesses to use a regional mindset in addressing important issues. Its Energy Committee is developing an Energy Charter to engage businesses in analyzing their carbon footprint and take steps to reduce energy use, and a Tuck School study³ profiled best practices in three other U.S. cities. Leadership Upper Valley, also hosted at Vital Communities, teaches emerging community leaders about critical regional issues such as energy and transportation, and helps them move into on-going civic engagement roles.
- Solar arrays installed by high-visibility community organizations help shift community norms and inspire others to follow suit. In just one block along Norwich's Main Street, solar arrays are in place at Dan & Whit's General Store, Marion Cross Elementary School,

³ See www.vitalcommunities.org/cc_energy.htm

and St. Barnabas Episcopal Church. When panels are not easy to see, attractive real-time displays in high-traffic entryways help consumers know about these installations.

7. *Innovation is increasing in the Upper Valley.*

- Advance Transit is pioneering interactive cell phone technology to let riders check bus-stop wait-times and minimize the “convenience gap” between public transit and private cars.
- UV-HEAT (Upper Valley Home Energy Action Team), a partnership among SERG, COVER Home Repair, and the Upper Valley Housing Coalition (UVHC), seeks to reduce energy use and spending by 30% for many Upper Valley homeowners. Its multi-pronged approach includes partnering with businesses and contractors to increase the pool of trained and certified weatherization contractors; attracting large numbers of residents into weatherization volunteering; and leveraging the workplace to bring energy-saving opportunities to employees, educate homeowners and connect them to weatherization financing. UV-HEAT created a one-stop weatherization website last year, and is conducting audits to document the energy outcomes of volunteer-assisted projects. Beginning this year, UV-HEAT hopes to grow beyond direct weatherization delivery to the larger issue of building regional capacity, by marketing and coordinating other weatherization programs.
- COVER is exploring several innovative financing mechanisms to support weatherization, with assistance from the Upper Valley Housing Coalition and Dartmouth’s Tuck School of Business. Opportunities under exploration include commercially-viable loan tools and a revolving community loan fund for homeowners who earn too much for CAP agencies’ free weatherization but earn too little to qualify for traditional bank loans. SERG is also increasing contractor knowledge of financing options and urging them to educate customers who face an up-front cost barrier.

8. *Policy initiatives and federal and state tax incentives are making headway.*

- New Hampshire’s state Climate Action Plan, a consensus document developed by a broad group of stakeholders, calls for an 80% reduction of greenhouse gas emissions by the year 2050. It prioritizes investments in building and vehicle efficiency, renewable energy generation, land use and compact development, multi-modal transportation systems, natural resource protection, public education, workforce training, and climate impact preparation.
- The NH Energy and Climate Collaborative is working with the Department of Energy to implement a pilot “Home Energy Score” sticker program—similar to an automobile MPG rating miles-per-gallon or Energy Star appliance label—in several NH communities. The energy-efficiency rating would enable home buyers and renters to compare energy consumption/costs of different housing options, and enable realtors and appraisers to place a higher value on labeled properties.
- The NH “Better Buildings” program is using ARRA funds to explore a variety of ‘deep’

energy-efficiency and sustainable energy projects in Berlin, Plymouth, and Nashua. As these “Beacon Community” programs are tested and piloted, the best examples will be shared more widely as ‘best practices’ for other communities across the state.

- The NH Energy Efficiency and Sustainable Energy Board is soon to receive results of a study of recommended energy policy and program changes that would help the state meet its energy and climate goals. The report is being completed by an independent consultant team lead by the Vermont Energy Investment Corporation.
- Vermont Governor Peter Shumlin recently appointed a Climate Cabinet to coordinate state agency activities. A state climate change plan is due to be released on October 15.
- Federal ARRA stimulus funds brought over \$58 million to New Hampshire and \$22 million to Vermont for efficiency, weatherization, and clean energy projects.
- The PACE program (Property Assessed Clean Energy) enables towns to create a special tax district and issue bonds to fund local home energy improvements. Through community loans, homeowners get help with the up-front costs of renewables and efficiency upgrades. Loans are repaid gradually through a marginal increase in their property tax bills, generally less than their energy cost savings over the same time period. PACE was paralyzed in 2010 after Fannie Mae and Freddie Mac objected to priority for loan repayment. Vermont’s 2011 corrective legislation will help PACE pick up speed again, and the Town of Thetford voted this year to participate in the pilot.
- Using a similar approach, the Upper Valley Lake Sunapee Regional Planning Commission is pursuing a Municipal Energy Financing Project under a grant from the U.S. Dept. of Housing and Urban Development. New “energy financing districts” (special tax or tax assessment districts) would allow towns to issue bonds specifically for clean energy projects, and the Town of Hanover hopes to pilot the financing opportunity.
- The Vermont Energy Act, which cleaned up the PACE program, also streamlines the registration process for solar installation, increases net-metering benefits to customers, and strengthens the Clean Energy Development Fund’s work on renewables. The law was co-authored by Windsor County state representative Margaret Cheney.
- In New Hampshire, the Renewable Energy Property Tax Exemption program permits towns to exempt residential solar, wind, and central wood-fired heating systems from assessed value and removes the financial disincentive for homeowners to make these upgrades. In the Upper Valley, the towns of Canaan, Enfield, Lyme and Plainfield have opted to participate.
- Vermonters can claim up to \$2,500 in rebates for home energy improvements through the VT Energy Investment Corporation. In NH, there are various rebate programs available

through all the state's electric and gas utilities.⁴ Federal tax credits for residential energy improvements provide a highly-motivating, reduction in taxes owed.

- Agricultural producers and small businesses in communities with a population of less than 50,000 (most of New Hampshire and Vermont) can seek grants and federally-guaranteed loans from the U.S. Department of Agriculture's Rural Energy for America program.

9. *Sustainable-behavior projects, though sometimes small in scale, encourage individual action to reduce energy and climate impact.*

- MyEnergyPlan.net (a joint project of UNH, Clean Air-Cool Plane, NH Sustainable Energy Assn, and others) enables families to calculate their carbon footprint and develop a personal energy-reduction plan with specific on-line tools and information.
- Catamount Earth Institute's popular "Menu for the Future" brings local residents together for guided six-week discussion of sustainable food principles and personal behavior change.
- Campus sustainability coordinators at Dartmouth and VT Technical College organize student and institutional initiatives to reduce carbon footprints.
- Local First Alliance, a program of Vital Communities, encourages consumers to keep money in their community and reduce fossil fuel consumption in the production and transport of goods to market.
- Transition Town White River is part of a national grassroots network preparing communities for climate change and fossil fuel depletion. The White River group runs discussion groups and self-sufficiency "re-skilling" workshops, and recently won a grant to coordinate Upper Valley participation in Bill McKibben's *350.org* Climate Action Day. Other towns like Chelsea and Tunbridge are organizing their own solar and carbon challenges.

NEED, GAPS AND CHALLENGES

- 1. *Operating funds are hard to come by.*** New initiatives may get off the ground, but struggle to find on-going funding once the attractive start-up phase is done or public funding dries up. Grassroots projects attract high volunteer energy, but stall when volunteers begin to burn out and no paid coordinator can be supported. Multi-year funding is critical to give pilot programs time to scale up to their full potential, evaluate their outcomes, and fine-tune replicable models.

⁴ For more information on New Hampshire rebates, see the following websites: <http://www.nhsaves.com/residential/retrofit.html>, <http://www.unitil.com/energy-efficiency/energy-efficiency-programs>, and <https://www.powerofaction.com/nhrngasheating/>

2. ***Partnership-building time is hard to fund.*** Paid staff coordination is essential for convening stakeholders and “unusual partners” over the one to three years it takes to develop new ideas and commitment to synergistic use of resources. But this staffing is often invisible to funders until an attractive concrete idea is ready to launch.
3. ***Public financing is insufficient to meet the challenge, and creative financing is desperately needed.*** Federal stimulus funds have expired, taking away a much-needed infusion of money for new project investment. Replacement funds are needed, but without a clear source. Federal and state budget cuts are making it hard to develop and implement comprehensive regional and statewide energy plans, and funding responsibility is being pushed onto local towns already struggling with issues like school funding.
4. ***Federal, state and local politics are confusing decision-makers and making them cautious about new initiatives.*** The RGGI cap-and-trade program is under pressure in New Hampshire, where legislation to repeal the state’s participation after only two years is a hotly contested issue, even within the business community itself. RGGI has been an important funding pool for energy efficiency initiatives in the ten participating Northeast states. Expiration of MEAP funding has been replaced with a confusing web of initiatives with potential overlap and duplication, including New Hampshire’s ETAP (Energy Technical Assistance and Planning) for local communities, which itself is a two-year ARRA-funded effort that will run out of cash. More than 50 organizations are involved in implementation of New Hampshire’s Climate and Energy Action Plan, and measurement strategies are hard to pin down.
5. ***The public is beginning to experience “climate fatigue,”*** and education and outreach are a continual challenge. The volume of resources and information can feel overwhelming, and community members often feel powerless to affect such a global problem. Surmounting this “overwhelm” and spurring individual action will increase the demand for products, services, and climate-friendly policies. The University of New Hampshire is moving toward a lead role in education initiatives under the state’s Climate Action Plan, and will need local support.
6. ***Public and alternative transportation are challenged by rural geography, driving habits, and high up-front cost of new infrastructure.*** Advance Transit has difficulty extending routes to night and weekend hours, and capital requirements for fleet replacement are a major hurdle. In many remote communities, families have no alternative to private transportation and those with modest incomes are more likely to be driving older, less fuel-efficient cars. Transportation and land use initiatives are a high priority in state climate action plans but the long lead time and high expense to develop them is daunting.
7. ***Weatherization, efficiency upgrades, and renewables involve high up-front costs for businesses, homeowners, and taxpayers.*** Many just cannot afford to do the work; others are deterred by the long pay-back period to re-coup their investment. Public awareness of rebates and tax incentives needs to grow, and to be protected as state and federal legislatures face difficult budget decisions.
8. ***Weatherization programs are a high-yield starting point but need help in expanding.*** CAP agencies offer free home audits and retrofits but are backlogged in their capacity to serve. Homeowners need education on why weatherization is important and cost-effective, and

assistance in overcoming financial barriers. There is a shortage of contractors and volunteers trained to provide weatherization services. And expansion requires more coordination time from under-funded nonprofits.

9. ***Sustainable agriculture lacks size and infrastructure to bring products to market at a scale that makes them a viable source for institutional buyers.*** Vermont has a stock of small niche farms and large-scale commercial farms, but few mid-sized operations that can provide the steady quantity that restaurants, colleges, and hospitals depend on. Processing facilities such as slaughterhouses are needed but unpopular in many communities where they might be sited.
10. ***Continuing rise in oil prices for the foreseeable future makes weatherization, energy efficiency, and fuel-efficient transportation more urgent for low-income families,*** who already forego rent, food, and medical spending to heat their homes and get to work.
11. ***Little planning for climate adaptation is occurring.*** Floodplain and agricultural repercussions, increasing costs for storm disaster response and recovery, and state and municipal planning time are not built into already-strained budgets.

OPPORTUNITIES FOR INVESTMENT, LEADERSHIP AND COLLABORATION

1. ***Advocacy at the town, state, regional, and federal level is a valuable way to leverage funding streams and systems change.*** Decisions about policy issues, tax incentives, budget priorities, pilot initiatives, and partnership mechanisms go beyond the realm of pure philanthropy. But philanthropists can support the organizations that do that advocacy, and speak out individually as informed and engaged citizens.
2. ***Investing in basic operating costs and dedicated staff time for convening and coordination will give nonprofits the confidence to continue and expand their work.*** Multi-year funding commitments are an even better way to help them plan intelligently in an uncertain budget climate. Stop-and-start funding kills innovation, so pilot projects need continuation funding once their start-up grants expire. A few of the region's many examples include UV-HEAT as it moves past its start-up year; town desires to take action on their MEAP municipal energy assessments; continuing Advance Transit's capital-intensive transition to fuel-efficient buses; and expansion of the "Smart Commute" and Corporate Council fledgling projects.
3. ***Innovative private and commercial lending can supplement or replace nonprofit philanthropy as a source of weatherization funds.*** As examples: COVER and Tuck are exploring a revolving community loan fund, and the Upper Valley Housing Coalition and COVER plan to work with banks to structure commercially viable loans.
4. ***Business strategies to reduce energy consumption in the workplace and change employee commuting habits are a promising path.*** A Tuck School student project recently completed a business energy inventory and identified high leverage workplace strategies. Corporate leadership, HR departments, and transportation and sustainability coordinators offer leverage points for new business energy challenges and sustainable-behavior employee education.

5. ***Replication of successful community organizing and grassroots projects can be built on an existing body of best practices.*** Clean Air-Cool Planet’s and NEGEF’s years of on-the-ground experience provide an array of models, along with the technical assistance capacity to support replication.
6. ***Civic leadership from major partners with institutional resources, big-picture perspective, and high visibility can make a difference in whether climate and energy initiatives take off, or remain fragmented and piecemeal.*** Stronger campaigns will build constituent and taxpayer support. Institutional players can seed creative financing strategies. Corporate and community leaders can provide credibility for out-of-the-box ideas, embed energy and climate decision-making in ongoing policy work, knit the system together, and build large-scale momentum.
7. ***Innovation, creativity, and entrepreneurship will produce the best solutions.*** Old ideas are insufficient to solve the problem, and we are fortunate that the climate and energy field is full of players capable of – and committed to – new experimentation and paradigm change. Nurturing that climate and supporting the capacity-builders can shift the dialogue from immediate crisis response to embracement of new ideas.

CONCLUSION

The Upper Valley already demonstrates a fertile climate for, and commitment to, multi-stakeholder collaboration on climate and energy issues. The region now has a tremendous opportunity to serve as the hub for new ideas and partnerships, and build on the great respect and credibility that local and statewide organizations have earned in the field.

Funders, nonprofits, businesses, advocacy and capacity-building organizations have shown their willingness to partner across sectors and across state lines, and an unwavering commitment to proactively address critical issues that will affect the resilience of the Upper Valley region in the decades ahead. Continued support for convening, collaboration, regional visioning, and sustainable implementation of new ideas holds great promise.

The New Hampshire Charitable Foundation hopes that this assessment is a starting point for discussion of a strong regional vision for the Upper Valley’s climate and energy activity, and a resource to inform funders, providers, and civic leaders in their work ahead.

Attachments:

- Appendix A: Map of Upper Valley region towns
- Appendix B: List of “key informants” for the Climate and Energy Assessment
- Appendix C: Contact Information for Leading Climate and Energy Organizations

**APPENDIX A:
NEW HAMPSHIRE CHARITABLE FOUNDATION
UPPER VALLEY REGION TOWNS**



**APPENDIX B:
KEY INFORMANTS FOR THE CLIMATE AND ENERGY ASSESSMENT**

We thank the following key informants for their time, information, and insights to guide this assessment:

Lisa Cashdan, Vermont Community Foundation (retired)
Van Chestnut, Advance Transit
Stacey Doll, NH Energy and Climate Collaborative
Julia Dunderf, Clean Air-Cool Planet
Karen Ganey, Transition Town White River
John Hawkins, Surdna Foundation
Deb Jones, Valley Food and Farm
Cheryl King-Fischer, New England Grassroots Environmental Fund
Kevin Peterson, New Hampshire Charitable Foundation
Deborah Schachter, New Hampshire Charitable Foundation
Rob Schultz, COVER Home Repair
Megan Shannon, Vital Communities
Gaye Symington, High Meadows Fund
Bob Walker, Sustainable Energy Resource Group
Christine Walker, Upper Valley Lake Sunapee Regional Planning Commission
Gabe Zoerheide, Upper Valley Transportation Management Association

**APPENDIX C:
CONTACT INFORMATION FOR LEADING CLIMATE AND ENERGY ORGANIZATIONS**

<p>Advance Transit P.O. Box 1027, Wilder, VT 05088 www.advancetransit.com</p>	<p style="text-align: right;">Van Chesnut, Executive Director (802) 295-1824 vchesnut@sover.net</p>
<p>Catamount Earth Institute P.O. Box 470, Hanover, NH 03755 www.catamountearthinstitute.org</p>	<p style="text-align: right;">Barbara Duncan, Executive Director May-Oct: (802) 333-3664 Nov-April: (603) 643-0328 barbara.duncan@valley.net</p>
<p>Clean Air-Cool Planet and the Carbon Coalition 100 Market St., Suite 204, Portsmouth, NH 03801 www.cleanair-coolplanet.org</p>	<p style="text-align: right;">Julia Dundorf, Manager Community Relations/New England Carbon Challenge (603) 422-6464, ext. 114 jdundorf@cleanair-coolplanet.org</p>
<p>COVER Home Repair 158 South Main Street, White River Junction, VT 05001 www.coverhomerepair.org</p>	<p style="text-align: right;">Rob Schultz, Executive Director (802) 296-7241 rob@coverhomerepair.org</p>
<p>Efficiency Vermont 255 S. Champlain Street, Suite 7, Burlington, VT 05401 www.encyvermont.com</p>	<p style="text-align: right;">Call (888) 921-5990 or through VEIC, (802) 658-6060</p>
<p>High Meadows Fund Three Court Street, P.O. Box 30, Middlebury, VT 05753 www.highmeadowsfund.org</p>	<p style="text-align: right;">Gaye Symington, Executive Director (802) 388-3355 x 247 gsymington@vermontcf.org</p>
<p>Hypertherm, Inc. 21 Great Hollow Road, P.O. Box 5010, Hanover, NH 03755 www.hypertherm.com/csr/</p>	<p style="text-align: right;">Barbara Couch, Vice President, Corporate Social Responsibility (603) 643-3441 ext. 1212 barbara.couch@hypertherm.com</p>
<p>MEAP (Municipal Energy Assistance Program)</p>	<p style="text-align: right;">Contact: Bob Walker at SERG, or Gabe Zoerheide at Vital Communities (below)</p>
<p>NEGEF (New England Grassroots Environmental Fund) P.O. Box 1057, Montpelier VT 05601 www.grassrootsfund.org</p>	<p style="text-align: right;">Cheryl King Fischer, Executive Director (802) 223-4622 fischer@grassrootsfund.org</p>
<p>New Hampshire Charitable Foundation 16 Buck Road, Hanover, NH 03755 www.nhcf.org</p>	<p style="text-align: right;">Kevin Peterson, Senior Program Officer (603) 653-0387 kp@nhcf.org</p>
<p>New Hampshire Energy and Climate Collaborative c/o NH Dept. of Environmental Services 29 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095 www.nhcollaborative.org</p>	<p style="text-align: right;">Stacey Doll, Collaborative Coordinator (603) 271-6947 stacey.doll@des.nh.gov</p>
<p>Regional Greenhouse Gas Initiative (RGGI) www.RGGI.org</p>	<p style="text-align: right;">In Vermont: see Efficiency Vermont In NH: Public Utilities Commission Jack Ruderman, (603) 271-2431 jack.ruderman@puc.nh.gov</p>

SERG (Sustainable Energy Resource Group) 432 Ullman Road, Thetford Center, VT 05075 www.SERG-info.org	Bob Walker, Executive Director (802) 785-4126 SERG@valley.net
Transition Town White River www.ttwrj.org	Karen Ganey (802) 299-7555 karen.ganey@gmail.com
Two Rivers-Ottauquechee Regional Commission 3117 Rose Hill, Woodstock, VT 05091 www.trorc.org	Chris Sargent, Senior Planner (802) 457-3188, ext. 12 csargent@trorc.org
Upper Valley Housing Coalition 240 Mechanic Street, P.O. Box 17, Lebanon, NH 03766 www.uvhc.org	Anne Duncan Cooley, Executive Director (603) 448-0272 adc@uvhc.org
Upper Valley Lake Sunapee Planning Commission 10 Water Street, Suite 225, Lebanon, NH 03766 www.uvlsrc.org	Christine Walker, Executive Director (603) 448-1680 cwalker@uvlsrc.org
Upper Valley Transportation Management Association (TMA), at Vital Communities 195 North Main Street, White River Junction, VT 05001 www.vitalcommunities.org	Gabe Zoerheide, UVTMA Coordinator (802) 291-9100, x110 gabe@vitalcommunities.org
UV-HEAT (Upper Valley Home Energy Action Team)	<i>Contact SERG, COVER, or the UV Housing Coalition</i>
Valley Food and Farm (VFF), at Vital Communities 195 North Main Street, White River Junction, VT 05001	Gabe Zoerheide (802) 291-9100, ext. 110 gabe@vitalcommunities.org
Vermont Community Foundation 3 Court Street, P.O. Box 30, Middlebury, VT 05753 www.vermontcf.org	Tom Roberts, Senior Philanthropic Advisor (802) 388-3355, ext. 230 troberts@vermontcf.org
Vermont Energy and Climate Action Network (VECAN) General inquiries: 802-223-2328 or info@vecan.net www.vecan.net	Contact: Bob Walker at SERG (above) or Joey Miller, VT Natural Resources Council (below)
Vermont Energy Investment Corporation (VEIC) 255 S. Champlain Street, Suite 7, Burlington, VT 05401 www.veic.org	Scott Johnstone, Executive Director (802) 658-6060 sjohnstone@veic.org
Vermont Natural Resources Council 9 Bailey Avenue, Montpelier, VT 05602 www.vnrc.org	Johanna “Joey” Miller, Outreach Director (802) 223-2328, ext. 112 jmiller@vnrc.org
Vermont Public Interest Research Group (VPIRG) 141 Main Street, Suite 6 Montpelier, Vermont 05602 www.vpirg.org	James Moore, Clean Energy Program Director (802) 223-5221, ext. 4077, james@vpirg.org Dan Conant, Solar Community Coordinator Phone ext. 8421, dan@vpirg.org

<p>Vermont Sustainable Jobs Fund 3 Pitkin Court, Suite 301E, Montpelier, Vermont 05602 www.vsjf.org</p>	<p>Ellen Kahler, Executive Director (802) 828-5320 ellen@vsjf.org</p>
<p>Vermont Technical College Center for Sustainable Practices PO Box 500, Randolph Center, VT 05061 www.vtc.edu</p>	<p>Donna Barlow Casey, Director (802) 728-1719 dcasey2@vtc.edu</p>
<p>Vital Communities 195 North Main Street, White River Junction, VT 05001 www.vitalcommunities.org</p>	<p>Mary Margaret Sloan, Executive Director (802) 291-9100, ext. 101 marymargaret@vitalcommunities.org or Megan Shannon, Energy Project Coordinator, ext. 109 megan@vialcommunities.org</p>