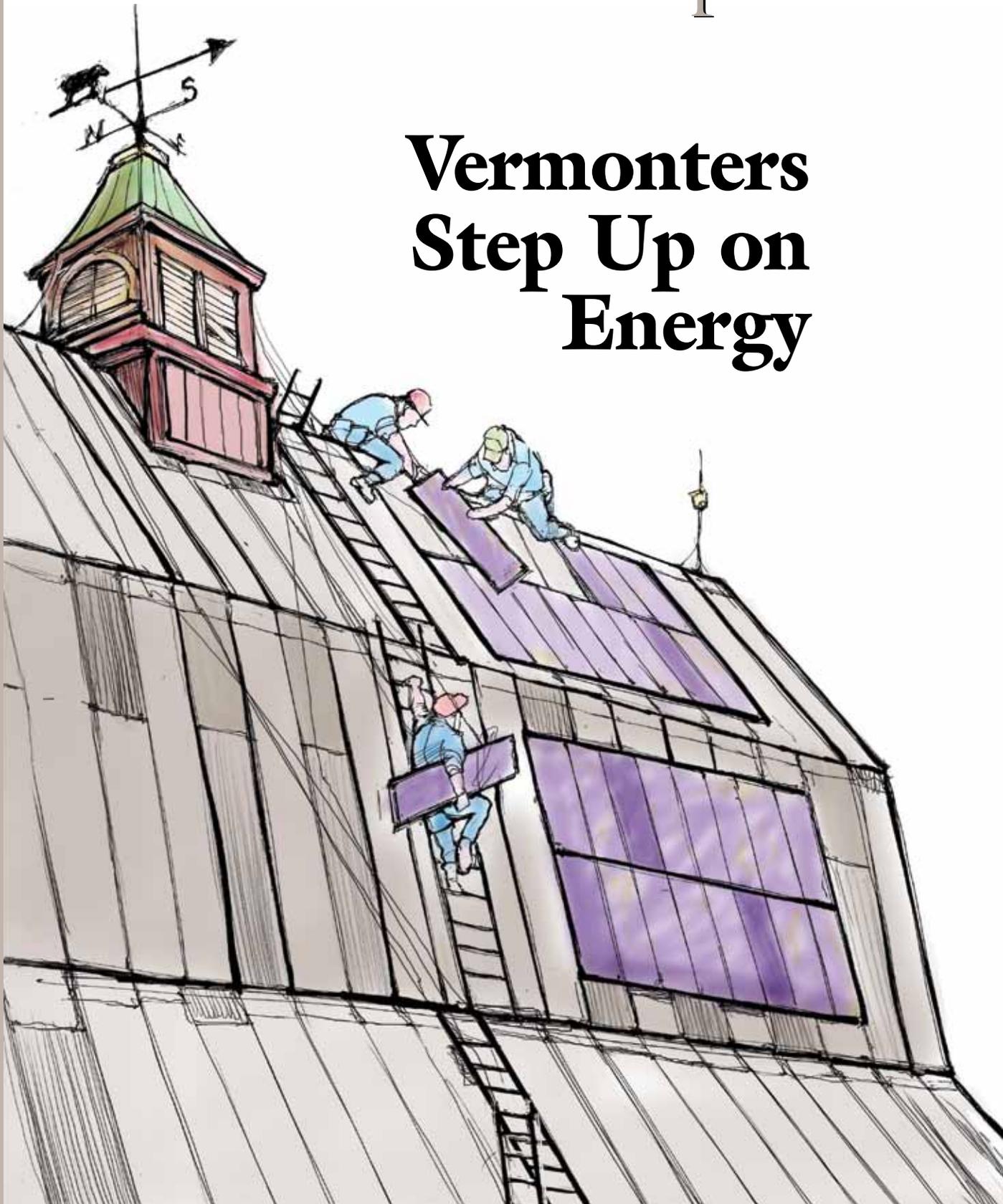


Vermont

Environmental Report

Vermonters Step Up on Energy



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The Vermont Natural Resources Council, Inc., is a nonprofit environmental organization founded in 1963 to protect and restore Vermont's natural resources and environment for present and future generations through research, education, collaboration and advocacy.

VNRC is the Vermont affiliate of the National Wildlife Federation.

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TOWARD RESILIENCE, ONE COMMUNITY AT A TIME

BY ELIZABETH COURTNEY, EXECUTIVE DIRECTOR



A compact development pattern teamed up with a working landscape . . . can go a long way to help communities develop more resilience to the abuses of climate change.

See an additional message from Executive Director Elizabeth Courtney on page 23.

In just the past few months, Americans across the country have felt the repeated lash of extreme weather, in many forms: droughts in the Midwest, dangerous forest fires in Arizona, brutal tornados in Joplin, Missouri, and violent storms in Tennessee. Here at home, we have had massive floods this spring and summer, causing still yet-to-be calculated levels of damage.

Nature, it seems, is on something like a carbon high. It's becoming unpredictable and many of us, I think, are worrying about our collective ability to continue to bounce back from the climate's increasingly unpredictable abuses.

Climate scientists have been saying for some time now that we will be facing more extreme weather. And now we are. We need to move swiftly to rethink and rebuild our infrastructure — from resizing culverts to redesigning our sewage treatment plants to reducing the amount of flood-provoking pavement we lay down. We need more transportation options for all Vermonters, options that will be used — because only through their use will they become cost-effective and a seamless part of our daily lives.

Likewise we need to build and retrofit more energy-efficient, affordable homes for those who need them. With worsening storms, we'll also need to protect and restore the ecological functions of natural systems, such as wetlands and stream banks and floodplains so we can ensure clean water supplies, prevent the loss of topsoil necessary for growing our food, and protect our infrastructure.

And many of us are concerned about other challenges in our future. Food, energy and job security are all on our minds. As the weather ramps up, the economy shrinks down and the price of gas goes through the roof, we need one thing for sure: resilience.

The good news is that Vermont communities — with help from VNRC and our partners — are taking matters into their own hands and are planning and implementing exciting initiatives to increase their resilience to things like high energy costs and extreme weather and at the same time reduce their dependence on greenhouse gas producing fossil fuels.

We are highlighting some of the terrific work of town energy committees in this issue of the VER.

We also offer interviews with key state officials, including Department of Public Service Commissioner Elizabeth Miller because, later this fall, she and her team will roll out a draft Comprehensive Energy Plan for public comment. The administration is taking an integrated approach for this plan, one that recognizes the complex network of interactions accounting for our energy usage. As Vermonters go about our daily lives, surfing the Internet, driving to school or work, doing our laundry, heating our homes, reading in bed at night, we consume energy in a myriad of ways, sometimes efficiently, sometimes not. Vermonters are driving this energy demand, so clearly, citizen understanding of the complex web of energy use is critical to the success of the implementation of the plan. That's why the public's level of interest and understanding is so important.

Many of the communities highlighted in this issue are grappling with broad planning concepts that can help in developing compact, transit-oriented, walkable, bikeable, full service communities, communities that work. A compact development pattern teamed up with a working landscape that provides for a variety of ecological and economic functions, such as clean water, local food supplies, flood mitigation, renewable energy sources and waste recycling, can go a long way to help communities develop more resilience to the abuses of climate change.

With this good work, we believe that Vermont communities might just have the resources to achieve a high level of sustainability. The Comprehensive Energy Plan can help to put us all on the same page in understanding the problems we face, develop a vision for an innovative, secure and sustainable future and craft a strategy for success.

It's been a long time since we've worked on a common, statewide community-building effort. At VNRC, we believe that the movement taking shape in Vermont right now is one that can bring us to a more resilient and vibrant Vermont.

We hope that you will be inspired by this issue of the VER. 



THE “NEW ECONOMY” CAN STRENGTHEN VERMONT’S WORKING LANDSCAPE

By WILL RAAP



*It’s my view that in the coming years of slower, “peak petroleum” economic growth, Vermont’s farms and forests can play a key role in enhancing economic prosperity and resilience and generating a higher return on investment, both financial and in terms of a return to nature’s capital**

The July 10, 2011 issue of *Time* magazine ran an article titled “Want to Make More than a Banker? Become a Farmer!” It is about the resurgence in the value of Midwest grain farms as food and energy (with the impact of ethanol) prices rise globally.

Vermont farmers and forestland owners must find new sources of income if our celebrated working landscape is to survive and thrive. While Vermont farmland, with our dominant dairy industry and fast-growing diversified vegetable and value-added farms, is not seeing a doubling in value in the past six years like the Midwest, our farmers and foresters are likely to see better income opportunities in coming decades.

It’s my view that in the coming years of slower, “peak oil” and debt-laden economic growth, Vermont’s farms and forests can play a key role in enhancing economic prosperity and resilience and generating a higher return on investment, both financial and in terms of a return to nature’s capital.*

I have focused on the food side of this equation for almost 30 years though Gardener’s Supply and the Intervale Center plus through board membership with VNRC, the Vermont Land Trust, the Vermont Sustainable Ag Council, and helping Vermont Businesses for Social Responsibility to launch Farm to Plate. The Vermont Sustainable Jobs Fund just completed the Farm to Plate statewide plan for our food system. It concluded that the direct economic impact of increasing farming and food production in Vermont by just five percent (by Vermonters buying more local food and/or selling more to New England) would generate \$135 million in annual output for the Vermont economy.

As the *Time* magazine article notes, in addition to food, the renaissance in farm value and employment is being triggered by another major force in today’s economy that can help Vermont landowners increase their financial return beyond food: Clean energy.

“Peak oil” has arrived and other fossil fuels are quickly dwindling, or are exceedingly costly in terms of dollars and the environment, to extract. Energy costs will increase and with the Vermont Yankee nuclear plant closing in 2012, we will experience new energy supply and cost challenges. But Vermont has been innovating in the area of land-based renewable energy for decades, and the Biomass Energy Resource Center in Montpelier is showing the way to optimize our biomass resources for heating. Dairy farmers are generating electricity from manure bio-digesters, and biodiesel is replacing on-farm fossil fuel use.

This transition to a locally owned, more resilient and more affordable (as fossil fuel costs rise) energy system can accelerate with the right policies and incentives. Our working landscape can play a central role and benefit from this shift. Innovative group net metering programs, state tax credits and financing support for clean energy projects, and Vermont’s standard offer (the nation’s first statewide price for renewable energy projects) are birthing hundreds of new clean energy projects – owned by Vermonters – all across the state.

Vermont energy experts suggest that the state’s working landscapes offer the potential for wind, solar, biomass and methane projects to generate over 50 percent of our electrical energy by 2030 (they generate five percent now). This clean, safe, local energy would more than replace the electricity we currently get from Vermont Yankee. Solar and wind projects will be the key to this happening.

To learn more about this “new economy” opportunity I developed a 150 thousand kWh solar array last year to provide all electrical power for Farm at South Village, a community supported agriculture, or CSA farm I started in 2009. Excess power from this array is provided through Green Mountain Power and their group net metering program to the City of South

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SUSTAINABLE COMMUNITIES UPDATE

It's been a busy year for VNRC's Sustainable Communities Program.

In June, VNRC and Smart Growth Vermont announced a merger of the two organizations. The result? VNRC's Sustainable Communities Program will take on much of the planning and community development work that Smart Growth Vermont has been doing successfully in Vermont communities since it was founded as the Vermont Forum on Sprawl in 1997.

On other fronts, VNRC and the state Department of Housing, Economic

Development and Community Affairs will be taking a comprehensive look over the next several months at ways to improve the implementation of the state's growth center program. That program aims to promote development in compact centers in order to keep poorly-planned development from chipping away at Vermont's working landscape.

The Sustainable Communities Program is also closely following a broad review of Vermont's environmental permitting structure that the Natural Resources Board has been undertaking this summer and fall. Over the

past couple of years, VNRC has offered some detailed proposals for changes to Vermont's environmental permitting system to make it fairer, more transparent, and citizen-friendly. We will be urging state policy makers to take a similar approach to any changes they contemplate. Public hearings on this effort are expected this fall.

Finally, VNRC and its partners in the Smart Growth Collaborative, hailed Gov. Shumlin's announcement this spring that the full build-out of the Chittenden County Circumferential Highway, better known as the "Circ" would likely not move forward as originally envisioned. The Collaborative (which has included VNRC, Smart Growth Vermont, and the Conservation Law Foundation) has for years argued that the broad, limited-access highway proposed around Burlington was wasteful of public dollars, would not solve traffic



Blake Gardner

congestion, and had a heavy impact on the environment. CLF led a successful battle in the courts on the "Circ" and the result will likely be a scaled-back, more cost-effective project.

The Sustainable Communities Program will continue to work closely with VNRC's other programs to bring community planning assistance to municipalities around the state.

WATER UPDATE

The VNRC water program has been deep in the policy trenches this summer and fall, working to assure a strong foundation of protections for both surface and groundwater.

On various fronts, VNRC continues to push for strong implementation of Vermont's landmark groundwater protection law of 2008. For example, VNRC worked closely with the Agency

of Natural Resources as the agency developed permitting requirements for any proposed large groundwater withdrawal. In a related effort, VNRC is

bird-dogging ANR to assure the agency properly puts into practice, in all its groundwater permitting programs, the "public trust" component of the 2008 law.

"The groundwater protection act of 2008 was significant, but VNRC's continued follow-through is necessary to assure the law is more than just words on paper – that it means something on the ground for our natural resources," said VNRC's Water Program Director Kim Greenwood.

VNRC is also working to protect surface water such as lakes and streams. VNRC has been pushing the Agency of Natural Resources to develop a

protective water quality "anti-degradation" implementation rule. This rule, in essence, codifies a simple notion: that healthy waters – whether they are polluted a lot, a little, or not at all – should not be further degraded. In short, there should be no backsliding in the level of water quality in Vermont's lakes and streams. While it sounds simple in theory, its application to Vermont waters is extremely complex. Over the next few months, ANR will be developing this rule, which is required under the federal Clean Water Act.

For more information about VNRC's water work, contact Kim Greenwood at kgreenwood@vnrc.org and stay tuned for details on how you can get involved.



Dave Hajdasz

ENERGY UPDATE

Since the close of the legislative session, which ushered in a bill that significantly expands opportunities for small-scale decentralized solar power in Vermont and made much needed changes to the new clean energy financing tool known as PACE, VNRC has been focused largely on the update to the state's Comprehensive Energy Plan.

The state is required to craft and adopt an energy plan that looks forward 20 years and update it every five. The last year Vermont officially adopted a CEP, however, was 1998. When the Shumlin administration took office this past January, the Department of Public Service immediately moved to begin updating this important guidance document. Since then, VNRC has been working closely with administration officials, other stakeholder groups, town energy committee leaders and our members to help shape the development of this plan.

To help engage the active network of 100 town energy committees, VNRC, in our role as the coordinator of the Vermont Energy and Climate Action Network, worked with the Department of Public Service and regional planning commissions to convene a successful series of public forums around the state to get feedback from Vermonters on their hopes, interests and concerns for an energy plan. Hundreds of Vermonters turned out to make their voices heard in Montpelier, Springfield, Rutland and Colchester this past June.

It's abundantly clear from

these forums, as well as from many smaller stakeholder conversations VNRC has been participating in related to the energy plan, that Vermonters are optimistic that a well-vetted, strategic plan could help guide the state on these challenging issues. VNRC will continue to help coordinate public engagement as the plan is developed and will put forward our own ideas for energy solutions that will meet our energy needs, grow a clean energy economy and balance other important Vermont values.

Beyond the energy plan, VNRC also recently helped organize a series of regional energy network gatherings in Montpelier, the Upper Valley and Windham, Addison and Bennington counties. The forums, focused primarily on helping communities harness their municipal plans to save energy and move toward cleaner energy sources, were designed to introduce Vermonters to a set of powerful tools VNRC and the Vermont League of Cities

and Towns published in April. The first, *The Energy Planning and Implementation Guide for Vermont Municipalities*, is a how-to tool for Vermonters who want to work with local officials and community leaders to use the energy element of their town plan to comprehensively address energy issues. The other publication, *Communities Tackling Vermont's Energy Challenges*, offers a snapshot of the innovative, entrepreneurial and proactive approaches being taken by over three dozen Vermont communities to save money, reduce energy consumption, transition to renewables and combat climate change. One other important element of the forums was to outline how communities can pair planning with a potentially powerful inventory tool — the Vermont Sustainable Jobs Fund's GIS-based "Renewable Energy Atlas of Vermont." Be sure to check out this innovative web-based program at www.vtenergyatlas.com.

VNRC has also been helping communities understand and take advantage of the clean energy financing option known as Property Assessed Clean Energy districts or PACE. PACE allows property owners to get financing through their city or

Mark Your Calendars!

- **September 24** — Moving Planet: A 350.org-inspired rally to move beyond fossil fuels at the State House in Montpelier.
- **October 11-12** — Renewable Energy Vermont's Annual Conference at the Sheraton in Burlington.
- **December 3** — VECAN's Annual "Community Energy and Climate Action Conference" at Lake Morey Inn in Fairlee.

Check out our Calendar of Events at www.vnrc.org for all the details.

town (if the municipality has approved a PACE district) for approved energy efficiency or renewable energy upgrades to their properties. The Legislature this past year made some positive, strategic changes to the underlying PACE law, and now, VNRC and other organizations are working to help communities form and implement successful programs at the local level.

For more information about any of these initiatives and all of the energy and climate action work underway at VNRC, please contact Energy Program Director Johanna Miller at jmiller@vnrc.org or 802-223-2328, x112.

East Montpelier residents Dave Grundy and Rob Chickering with energy efficient lightbulbs and a programmable thermostat.



Jake Brown

FOREST AND WILDLIFE UPDATE



VNRC's Forest and Wildlife Program has been busy on multiple fronts over the last several months, issuing two detailed reports (see box below) as well as working directly with

communities and at the statewide level advocating for forestland and wildlife conservation policies.

VNRC recently received funding to continue our in-depth research on how

local zoning is influencing the subdivision of forestland in Vermont. In addition, in coordination with the Vermont Association of Planning and Development Agencies, we will be holding meetings with regional planning commissions to develop a statewide action plan for regional and local land use planning to promote forestland conservation.

This work will follow up on research conducted as part of one of the recent reports

issued by VNRC.

Through our partnership with the Critical Paths and Staying Connected Projects in Vermont, VNRC continues to provide technical assistance to towns across Vermont to maintain habitat connectivity in priority wildlife linkage areas. In addition, as part of the Forests, Wildlife, Communities Project, we have been working in the Mad River Valley to develop build-out models and conservation area maps

Land Use Reports Shed Light on Subdivision Trends, Wildlife Planning

This past year, VNRC researched and published two detailed forest and wildlife related reports. One focuses on land subdivision and the other on protecting wildlife habitat.

The first report, *Informing Land Use Planning and Forestland Conservation Through Subdivision and Parcelization Trend Information*, quantifies the extent of subdivision over the past decade and the degree to which subdivision is affecting the viability of undeveloped land for resource management and conservation purposes. The report also documents in a number of case study towns how zoning can influence subdivision rates.

Subdivision and the conversion of land from forest use to a developed use can harm plant and animal species, degrade wildlife habitat, water quality and recreational access, curtail the ability of forests to sequester and store carbon, and make forest tracts less viable for timber or energy resources that contribute to the region's rural economy. While subdivision and conversion pressures have been identified as problems for decades, until now there has been no systematic tracking of trends to inform planning or resource management.

"With this report, and through a companion webpage at VNRC, it is now possible to look at subdivision trend information for every town and municipality in Vermont and compare it with statewide information," according to Jamey Fidel, VNRC Forest and Wildlife Program Director.

The report, conducted by VNRC and Vermont Family Forests, was funded in part with help from the Northeastern States Research Cooperative (NSRC), a partnership of Northern

Forest states (New Hampshire, Vermont, Maine, and New York), in coordination with the USDA Forest Service.

The second report, *Wildlife Considerations in Local Planning – An Evaluation of a Decade of Progress in Vermont*, was based on a detailed assessment of all municipal plans and related zoning bylaws and subdivision regulations adopted by Vermont communities.

The report reflects, not surprisingly, that Vermonters overwhelmingly want to conserve wildlife habitat such as deeryards, trout streams, and bear habitat. Cities and towns have made noticeable strides in improving attention to wildlife habitat and natural resource conservation, and nearly every municipality recognizes wildlife habitat as an important local resource, according to the report.

But while most towns recommend the conservation of wildlife habitat in their municipal plans, this report documents a significant lag between plan recommendations and actual implementation of binding standards in local bylaws.

"Over the past several years, more and more Vermonters, through their town plans, have clearly and repeatedly said, 'our wildlife heritage is important' – now there is a need for on-the-ground work to assure those values are reflected in specific municipal policies," said Jamey Fidel, VNRC Forest and Wildlife Program Director.

The report, which includes recommendations for improving habitat conservation at the municipal level, was done in partnership with the Vermont Fish and Wildlife Department through a State Wildlife Grant. Both reports are available on the VNRC website. Visit VNRC.org and on the upper left of the page, see links to both reports.



Blake Gardner

to assist planning efforts for forestland and wildlife resources.

On the energy planning front, VNRC continues to serve on the Bio-E Group, which was created by the Legislature nearly three years ago to explore ways to promote the efficient development of biomass energy in Vermont while at the same time safeguarding forest health. On the Bio-E Group, VNRC has been advocating for harvesting guidelines and procurement standards to ensure that forest health is maintained while promoting incentives for the development of efficient biomass projects. The final report from the group is expected at the end of this year or beginning of next year.

Also, this summer and fall, the Current Use Tax Coalition – a diverse group of organizations that support



Wayne Laroche/Vermont Fish & Wildlife Department

the Current Use Program – has been researching a host of issues including how to make the program sustainable over the long-term. In

particular, VNRC is interested in documenting the degree to which conserved lands are over assessed at the local level and feasibility of building

incentives for landowners to maintain public access or permanently conserve their land. 

The “New Economy” Can Strengthen Vermont’s Working Landscape

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Burlington (for traffic and street lights) and the South Village Community. Plus, the CSA has locked in energy prices for the next 25-30 years.

Now, I’m working with Encore Redevelopment, a leading clean energy project developer, to develop an exciting wind project in Derby Line under the Vermont standard offer SPEED program. This project is comprised of two 2.2 MW turbines located on adjacent farms, the Chase Farm and the Grandview Farm, in the Northern Plateau among the corn rows. It is projected to generate eight million kWh of carbon-free electricity each year. Besides helping the two dairies control their energy costs and generate \$800,000 of extra income over 20 years, these wind turbines would generate approximately eight million kWh of carbon-free electricity each year. That’s enough to supply the electricity needs for up to 2,000 average Vermont homes and would keep 4,000 metric tons of CO₂ out of the atmosphere . . . comparable to keeping 700 cars off Vermont roads each year.

Vermonters send a lot of money out of state to get energy. But we don’t have to.

The nearly \$100 million we currently pay to get almost one third of our electricity from a risky and aging nuclear power plant also sends a substantial flow of profits to corporate owners outside

Vermont while we bear the risk. To heat our homes, we buy heating oil that comes from out of state, while we could support farms to produce more renewable biomass as an alternative heating fuel.

Today, we can start using money that leaks out of the Vermont economy to fund Vermont’s transition to local, clean energy. Let’s keep our dollars circulating here in Vermont. That will help build a more resilient economy, as well as a bright energy future. 

- * Partnering with Vermont’s farmland and forests to produce more needed products sustainably will generate financial return on investment, or R.O.I. as well as the value that comes from healthy forests converting CO₂ to oxygen, restored soils sequestering atmospheric carbon and protected wetlands purifying water. We are some years away from a new economic analysis framework that has the R.O.I. on nature’s capital on the same ledger as the R.O.I. on our financial capital, but we will get there. The Gund Institute for Ecological Economics at UVM is a national leader in developing new economic analyses that value nature’s services.

Will Raap is the founder and chairman of Gardener’s Supply in Burlington. He also founded the Intervale Center and he is on the Board of Directors of the New Economics Institute, among many others. He works to create and nurture local food, energy, waste recycling, and land restoration enterprises that support a more sustainable economy and future.



FROM THE GROUND UP:

Vermont's Local Energy Committees Offer Hope for a Brighter Energy Future

BY JOHANNA MILLER AND JAKE BROWN

Over the last few years, Vermont's local energy committees have been, in some respects, like snowballs rolling down a long steep incline: they've been getting bigger and bigger and they've started rolling faster and faster. Today, they have serious momentum.

It all started very locally. Over the past decade or so, Vermonters have been sitting down with their neighbors at kitchen tables, in living rooms and in town halls, deeply motivated to do something – whatever they can – to confront what are believed to be the two most critical global threats of our time: climate change and energy scarcity.

These Vermonters moved from talk to action, forming local energy committees and then getting down to the nitty-gritty. They have jammed themselves into crawlspaces to insulate school attics, climbed high up on ladders to install solar panels on town hall roofs, and hiked door-to-door in their towns, handing their neighbors efficient light bulbs and answering questions about energy conservation.

These motivated, mostly volunteer groups have been, bit-by-bit, grabbing ahold of, and beginning to influence, the state's energy future.

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From the Ground Up *continued from page 9*

Now, the results of their on-the-ground efforts have attracted widespread attention from both the Legislature and the administration of Gov. Peter Shumlin. Today, town energy committees have proven to be a collective force in Vermont, and not only at the community level. They have been “essential partners” as the Legislature wrestles with energy policy, according to Rep. Margaret Cheney (D-Norwich), vice chair of the House Natural Resources and Energy Committee. She says they have brought expertise and real world experience to committee rooms at the State House.

“They are often experts in the field and can testify on bills and improve them and give us reaction and input,” explained Cheney. She says that people who have, through their local energy committee work, become educated about energy, have helped the Vermont Legislature cut new ground – indeed lead the nation in many ways – on energy policy.

Input from town energy committees, for instance, has helped shape the Property Assessed Clean Energy program, a state initiative designed

to make it more affordable for residential property owners to install energy efficiency and renewable energy measures.

These committees have also brought their sheer mass, from all corners of the state, to bear on the critical, fresh energy planning being undertaken by the Shumlin administration. Bodies like the Department of Public Service and the Agency of Natural Resources as well as other arms of state government, are leaning strongly on these groups for their on-the-ground experience, as state officials embark on a long-overdue update to Vermont’s Comprehensive Energy Plan.

The Climate and Energy Umbrella Called VECAN

Much of this homegrown local energy work hangs together, intensifying the power and reach of local energy committee efforts, with the support of the Vermont Energy and Climate Action Network, or VECAN.

In 2005, VNRC joined forces with the Alliance for Climate Action, New England Grassroots Environment Fund, Sustainable Energy Resource Group and the Vermont Energy Investment Corporation to form VECAN. The primary goal

of this partnership has been to support the formation of local energy and climate action committees to foster clean energy solutions. At the time VECAN was founded, there were about a dozen of these primarily volunteer community-based groups. Now there are over 100.

VECAN essentially serves as a “hub” connecting the spokes of Vermont’s energy wheels. As coordinator of VECAN, VNRC is, in a sense, the hub of the hub, helping to ensure that support organizations and community energy committees are collaborating, communicating and connecting efficiently. To that end, VNRC and VECAN support the hard work of local energy and climate action committees primarily in four ways:

Chalking up the Savings at the Local Level

The efforts of Vermont’s community energy committees are paying off. Here is just a snapshot of some inspiring energy committee success stories to date:

- The Middlesex Energy Committee’s “21st Century Barn Raising,” where the committee worked with the local school and professional energy consultants to undertake an ambitious, two-day volunteer-driven effort to weatherize seven attics in the elementary school. The result? A savings of about 2,000 to 2,500 gallons of fuel oil a year, reducing taxpayers’ costs by thousands of dollars each year.
- The Ripton Energy Committee’s successful “community energy mobilization” initiative, where trained volunteers made targeted energy-saving changes — installing low-flow showerheads, programmable thermostats and more — in over 50 percent of the community’s households. The result? The project helped Ripton residents save about 39,000 kilowatt hours in one year for a combined annual savings of over \$5,700.
- The Waterbury effort to get solar PV panels installed on the roofs of both the elementary and middle school. The local committee that took on this challenge – called Local Energy Action Partnership (LEAP) – is now working to make solar energy generation a reality for interested homeowners by partnering with the Vermont Public Interest Research Group on their “Solar Communities” initiative.
- After removing a quarter of the town’s streetlights about five years ago, the Thetford Energy Committee got an EECBG grant to replace its remaining streetlights with more efficient LED lights. Once the LEDs are in place, Thetford’s streetlighting energy use will be cut by about three quarters.
- The Norwich Energy Committee’s work with the town to install a 75-100kw solar array on town land, with significant funding from the Clean Energy Development Fund. The goal? Produce enough electricity to support a substantial portion of municipal electricity use.
- Among many projects, the Colchester Energy Task Force helped develop an “eco-driving” curriculum and facilitated the purchase of a 2010 Prius for the High School Driver Education Program.

- **Organizing the annual “Community Energy and Climate Action Conference.”** This annual event, held in partnership with UVM Extension, is a daylong forum aimed at town energy committee leaders and other energy-interested Vermonters. The conference offers over a dozen workshops on timely, turnkey energy and climate change programs and related topics; compelling keynote speakers; regional or topic based roundtable discussions; information tables; and networking opportunities. This year’s event will take place on December 3 at the Lake Morey Inn in Fairlee and will include an overview of the new state Comprehensive Energy Plan by Department of Public Service Commissioner Elizabeth Miller.

- **Hosting regional energy network gatherings.** Often held in partnership with regional planning commissions, these quarterly-to semi-annual, regional forums are convened around timely topics of interest to community energy groups. Some of the topics VECAN and partners have covered have included: how to harness the municipal energy plan (and pair it with the Vermont Sustainable Jobs’ Funds innovative, web-based Renewable Energy Atlas of Vermont); an overview of the Property Assessed Clean Energy financing program; transportation solutions and strategies communities can advance; energy efficiency opportunities presented by federal ARRA funding available to community groups for starting, strengthening, sustaining and funding a town energy committee; and many more. Updates on recent state-level policy changes or activities have also been a key part of many of these forums. For example, in June, in our role as VECAN coordinator, VNRC worked closely with the Department of Public Service and regional planning commissions to host four forums in communities across Vermont on the process underway to update the state’s Comprehensive Energy Plan.

- **Providing direct technical assistance.** VECAN partners also work directly with individual committees on particular projects including helping to host forums that connect grassroots energy leaders to programs like the energy-efficiency “Button Up” workshops or the Way to Go! Commuter challenge. VECAN also provides the committees with support and expertise on energy issues, such as reviewing and helping them to shape the energy element of their municipal plans. VNRC

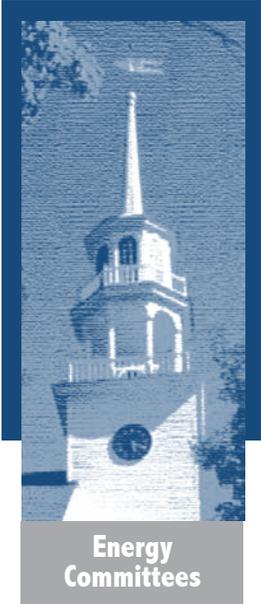
in particular has taken a lead role in working with communities on energy planning. Most recently, in partnership with the Vermont League of Cities and Towns, VNRC wrote and published a set of publications outlining how communities can comprehensively, systematically and aggressively plan for a clean energy future. *The Energy Planning and Implementation Guide for Vermont Municipalities* is a how-to tool for Vermonters who want to work with local officials and community leaders to use the energy element of their town plan. *Communities Tackling Vermont’s Energy Challenges* — in over three dozen case studies — offers a snapshot of the innovative strategies that Vermont communities are using to help save money, reduce energy consumption, transition to renewables and combat climate change.

- **Hosting the VECAN web site.** The VECAN web site – www.vecan.net – serves as a clearinghouse of information for town energy committees, connecting community groups to each other and to the information they need to undertake programs and projects. Committee contact information is on the site, and each group has the ability to ‘host’ their own page, sharing information and updates on the projects they are undertaking in their communities.

While VECAN helps to support these dedicated groups, it’s the passion, drive and expertise of Vermonters at the very local level that is reaping money-saving, clean-energy results. In the pages that follow we highlight the work of just a few of Vermont’s community energy committees. These short overviews are meant to inform and inspire others to join or start an energy committee. We also offer interviews with state leaders on the broader policy questions that lie at the heart of the critical discussion on energy policy currently underway in Vermont.

The reality is that the threats of climate change and energy scarcity are indeed critical. But, here in Vermont, with a deep commitment to local action, Vermonters are rising to the challenge and helping to shape solutions for a new energy future: one based on efficiency, conservation and renewable energy. It’s a positive, hopeful future that is growing straight out of Vermont’s local communities. It’s our privilege to work with so many of these motivated local leaders. Because of them, it’s a more hopeful story to tell. And, through the pages of this VER, it’s our hope that you enjoy reading their inspiring stories. 

Interested in starting a town energy and climate action committee in your town?
Contact:
 Johanna Miller,
 VNRC Energy
 Program Director
 802-223-2328,
 ext. 112
 Email:
jmiller@vnrc.org.



Thetford Hopes to Sweeten the Pot and Get People Talking

In Thetford, the energy committee hopes to lend property owners a little extra help to improve the energy efficiency of their homes under a possible new, local energy incentive program.

The idea is this: the state-wide Efficiency Vermont already offers people financial incentives to do energy efficiency work on their homes. Under the Thetford plan, the town would be able to sweeten the deal, with the hopes of prompting even more people to take the leap and retrofit their houses to cut their energy use, and by extension their heating and utility bills. The town hopes that the Clean Energy Development Fund will approve repurposing a \$24,000 grant it received for setting up a Thetford Property Assessed Clean Energy (PACE) district to provide town-level incentives.

The plan would also include an effort to develop case studies of some of the completed projects, and then have some of those property owners become “spokespeople” in town who could encourage their friends to consider the same work. Bob Walker, the chair of the Thetford Energy Committee, envisions trusted friends talking to each other to spread the word about the process of getting an energy audit done and their decision to insulate their attic, seal windows, or even install solar panels.

“We believe there are a couple of barriers holding some people back from making building improvements,”

Thetford Town Energy Committee

- Appointed by the Select Board in 2002
- Seven members
- Meetings: Monthly, an hour and a half, sometimes two hours
- Average length of service: Approximately five years.
- Advice: people will want to serve if you are doing interesting work and are getting projects actually implemented; keep length of meetings contained; a supportive select board is very helpful; helpful to assign an energetic and organized central person, perhaps the chair, to keep things coordinated and projects moving forward.

Contact: Bob Walker, chair, 802-785-4126 or serg@valley.net

Walker said. “There are financial roadblocks and there are information roadblocks, so to speak. We are trying to address both: getting people incentives that allow them to move forward making their homes more efficient, and being sure people who have the work done have an opportunity to tell their friends and neighbors.”

The Thetford committee this fall also plans to take to the streets, going door-to-door to every home in town letting people know of the incentives, “hoping to spark their interest in participating,” said Walker. The door-knocking, which will include the offer of a \$150 coupon toward Home Performance with ENERGY STAR efficiency services, a free compact fluorescent lightbulb (to be installed at the time of the visit) and a chance to win a free energy

audit, will be followed by a town energy expo slated for November 5. At that expo, residents will have a chance to talk with lenders, contractors, and homeowners who have had the work done.

As part of that expo, the Central Vermont Community Action Council will bring a new “house” on a trailer. The CVCAC “house” allows people to see up-close demonstrations of the types of home energy-saving steps they can take.



Bob Walker

In Strafford: A Powerful Domino Effect Catalyzed by a Committed Community

In the small, picturesque town of Strafford in Vermont's Upper Valley a small, committed cohort of energy-conscious leaders has been elevating the energy awareness of friends and neighbors for over a decade. In more recent years, the work of that group — the Strafford Energy Committee — has accelerated and is much more directly moving the town toward a future based less on energy-intensive fossil fuels and more on energy efficiency and renewables.

While the group first focused on energy education primarily — showing films, delivering surveys, advertising carpooling opportunities — it wasn't long until they moved on to other initiatives. They distributed efficient compact fluorescent light bulbs and undertook a “Button Up” home weatherization workshop.

According to Dori Wolfe, an active energy committee member, the group's ability to secure outside funding has enabled it to undertake more ambitious projects. For example, a \$12,000 grant the committee received in 2009 from the Agency of Natural Resources Climate Change grant program proved pivotal because it allowed the group to undertake their first, more sizeable project: installing a small (2kw) solar array and more efficient lighting at the Newton School.

Building off the enthusiastic support from the community, the school project included a local energy services business — Renew Energy Systems — donating the installation of the photovoltaic array and an employee of groSolar arranging for a discount on the equipment. The energy committee helped develop an energy curriculum for the school, and one community member in particular, John Freitag, helped take the school to the next level after he successfully secured a Clean Energy Development Fund EECBG grant to upgrade the school's refrigeration systems and install a more efficient furnace and lights in the gym.

The work of the energy committee has created a domino effect in the 1,000-person community. Buoyed by the success of the school solar project, for example, the local church undertook a fairly aggressive energy efficiency upgrade to its parish hall making some simple retrofits — including new insulation, air sealing and efficient lighting — that

Strafford Energy Committee

- Ad-hoc, independent committee that works closely with local officials and community leaders.
- Membership shifts, but the core is about three very active members.
- Meetings: Usually once a month, but more or less intensive depending on projects and the time of year.
- Average length of service: On and off for 15 years but very active the last several.

Contact: Dori Wolfe, 802-765-4632, dori.wolfe@gmail.com

have cut the costs of energy for the building by about 20 percent.

Now, the committee is exploring a particularly big, promising, innovative project seeded by Select Board member Steve Wilbanks: Turning an old, abandoned mine — the Elizabeth Mine Superfund site — into a solar farm of up to five MW. If fully realized, the power generated from this site would provide electricity for approximately 850 homes.

According to energy committee leader Wolfe, the goal would be to turn the toxic site into a useful community asset: a solar array with direct benefits to local residents. Though completion of the project may take time, the pieces are coming together

and the energy committee is focusing primarily on helping make this project happen.

They see their local efforts as a piece of a bigger whole: Vermont's energy future.

“It's going to take an across-the-board effort to meet the energy challenges before us,” noted Wolfe. “Knowing that our efforts at the community level are helping to fulfill state goals and vision gives us incentive to keep on keeping on,” she says.

For a committed corps of volunteers, that kind of shared purpose is no doubt essential to continue to harness the passion and potential at the local level. And, clearly, as Strafford community members can no doubt attest, harnessing that passion pays off.



Photo courtesy Dori Wolfe

Dori Wolfe, an active energy committee member of the Strafford Energy Committee, at the Elizabeth Mine.



Solar Panels, Energy Audits, and Tight Windows in Marlboro



People join energy committees in Vermont for lots of reasons. Old fashioned Yankee thrift is sometimes one of them.

"I'm a miser," says Gussie Bartlett, of Marlboro. "I have an old house and for many years I did the usual basic stuff – seal leaks around doors, put plastic over the windows." That saved some energy, but now, says Bartlett, she is going to get more serious. She had an energy audit done of her home and plans to invest in some more elaborate energy efficiency measures. Her interest in saving money, and helping others do the same, was part of the reason she found her way to the Marlboro Energy Committee.

Kip Tewksbury, another energy committee member in Marlboro, is a solar veteran. He's had PV panels on his house for many years, with 12 of those years off the grid. "It made sense to take my interest and get involved in the committee," he said. "I was interested in spreading awareness."

Another member has background as an oceanographer, so understands water flow, and the dynamics of hydro-power.

Tom Simon, the Marlboro Energy Committee coordinator, sees big, broad costs – both financial costs and environmental costs – looming in the future. "Regarding energy, we've really had it pretty easy, at the expense of the environment and of our kids and grandkids," he says. "If we are going to make changes in how we generate and use energy, it is better to do it before we have to, because that time will come," he said. "I got involved because I wanted to help people understand sustainable energy."

This energy committee, active in the tiny (pop. 900) high-elevation town of Marlboro, like many energy committees

around the state, is advancing on many fronts at the same time.

Their projects have included procuring a grant for \$50,000 to replace the heating and ventilating systems in five of the classrooms in the Marlboro Elementary School that will keep the rooms warm and the air quality high. "This was a huge step for us, and will save a lot of energy down the road," said Simon.

Several years ago, a teacher at the Marlboro Elementary School began incorporating energy efficiency and renewable

energy concepts into his curriculum. After a while, students came to the conclusion that they wanted to see solar panels on the school. What did they do? They applied for a grant – co-written with the Marlboro Energy Committee – and saw the whole process through to installation and electricity generation. Today, the 2.5 kilowatt net metered system supplies enough electricity to supply some of the school's needs.

The committee also:

- Has developed maps showing acceptable solar sites in town.
- Has developed an inventory and database of installed renewable energy projects in town and is in the process of putting pictures of those sites on the town website.
- Offers basic energy audits to homeowners for free. Several members have been trained by Efficiency Vermont to conduct these basic energy audits.

What makes the Marlboro committee work?

A larger group with a range of skills and interests allows people to plug in when they can, spreading the workload and reducing burnout.

The committee has representatives from the select board, the school board, the planning commission, as well as Marlboro College. This helps keep information about the energy committee flowing well around town.

"Overall, we have had tremendous community support," said Simon. "People are very interested in the subject but people have busy lives and not everyone has the time to really understand what is possible. Among other things, we try to show them what's possible."

Marlboro Energy Committee

Fifteen to 20 members
(roughly six attend each meeting)

Meetings are monthly, one and a half to two hours.

Contact: Tom Simon
802-380-5958 or email
tomrsimon@yahoo.com

Members of the Marlboro Energy Committee install an interior energy panel on one of the windows in the Marlboro Elementary School Library. Left to right: Marlboro Energy Committee member Tom Toleno, Marlboro Energy Committee coordinator Tom Simon, and committee members Gussie Bartlett and Kip Tewksbury.



Theo Anagnostaras, Marlboro Energy Committee member

Waterbury Committee Helps Achieve Ambitious Energy Goals

The town energy committee in Waterbury, known as Local Energy Action Partnership or LEAP, offers one of the most powerful examples of how effective community energy groups can be.

Since 2007, the primarily volunteer group has helped to execute dozens of projects. From its annual “Energy Fair,” which recently drew over 500 people, to organizing several residential energy efficiency initiatives, from helping update the town plan to arranging for free energy audits for local businesses; from municipal lighting retrofit projects at the school and the community Ice Center to helping get solar arrays installed on both the elementary and middle schools in town, LEAP has had a profound impact on community awareness and dedication to a clean energy future.

The mission of the group is to help Waterbury become the “greenest community in Vermont by 2020.”

“To make that claim, if we are to be successful, we need to know where we started,” said LEAP Board member Jamie Ervin. “How many houses have renewable energy systems, how efficient are we as a community?”

That’s why LEAP also recently launched a community energy inventory. They have begun to gather data to create a comprehensive snapshot of the community’s cumulative energy use. An accurate and complete summary of this information is difficult to develop, as there are no easy and consistent mechanisms to measure unregulated fuels, like heating oil and motor fuels. But LEAP is developing a list of verifiable measures that will allow them to track their progress across a number of criteria.

Ervin noted that tackling transportation-related energy use is a challenge in Waterbury, as it is across the rural state of Vermont. To meet that challenge, the committee has turned their attention to transportation in a focused manner.

In 2010, LEAP initiated a town-wide effort to develop a safe and accessible bike and pedestrian

Waterbury Local Energy Action Partnership

- Ad-hoc, independent committee formed in 2007 and formally incorporated in 2009 as a 501(c)3 that works closely with local officials and community leaders.
- The LEAP board currently has five members and wants to add three to four more. They have an at-the-ready network of about 100 volunteers who help them with events and other opportunities.
- LEAP members meet regularly every six to eight weeks. Each meeting is advertised and open to the public.

system in Waterbury that also connects the community to neighboring towns. Working with stakeholders from over a dozen local organizations and buoyed by the support of resident Sue Minter, a long-time transportation advocate and current deputy secretary of the Agency of Transportation, LEAP recently helped form a new group called Waterbury In Motion, or WIM. WIM is focused solely on developing this multi-modal transportation solution and is creating a master plan for this multi-year effort now.

LEAP’s commitment to a clean energy future and climate action is clear and the group pushes themselves and the community hard.

“We’ve reached a critical threshold,” said Ervin. “I’d like to see us go beyond boutique solar panels on a few homes to seeing solar hot water heaters and panels on two-thirds of the houses in town.”

Ervin believes being part of LEAP is one great avenue for her, and others, to help foster change.

“Serving on the LEAP board is one of most hopeful things that I do,” Ervin noted. “There’s excitement, there’s hope and we’re working together to solve these problems. We’re helping to change the culture in a way; getting people to start thinking about energy differently,” she said.



LEAP Board and other volunteers



Photo courtesy Waterbury LEAP

How We Roll

Sue Minter, deputy secretary, Agency of Transportation

As we look at Vermont's energy picture it's often overlooked that transportation accounts for a very large proportion of both our energy use and our greenhouse gas emissions. Can you explain that in more detail?

In Vermont, transportation accounts for a relatively high proportion of our energy use and greenhouse gas emissions. This is partly because, compared to other states, Vermont has a relatively "clean" (low carbon) electric energy portfolio. Consequently, the transportation sector is the largest single contributor to greenhouse gases due to the carbon-intensive petroleum use from cars and trucks in Vermont. This reality challenges us to look carefully at energy consumption (and emissions) from the transportation sector.

Changing our transportation patterns is, in many respects, a long-term effort. What broad strategies do you see Vermont using in the short term, and then over the long term, to address transportation related energy use and greenhouse gas pollution?

In the long run, Vermont needs to pursue land use and public investment strategies that help us reduce our current reliance on (petroleum based) vehicles. We can do this by enhancing our downtowns, villages and growth centers as vibrant places to live and work; increasing opportunities for Vermonters to live close to their jobs; improving access to public transportation; supporting a fleet and network for alternatively-fueled vehicles (electric & natural gas).

In the short term, Vermonters can help by reducing their reliance on single occupant vehicle (SOV) travel by trying to carpool, ride share, van pool and use public transportation. For short trips, try biking and walking. There is little environmental impact, the exercise is good for your health, and it's a great way to enjoy our beautiful state.

What can Vermonters do to help encourage a more efficient transportation system?

There are so many ways Vermonters can be a part of the solution, including working within their communities to promote a different future. You can join a town conservation commission, a local or regional planning commission, a select board or a town energy committee. Town energy committees around the state are promoting ridesharing, planning park-and-ride facilities and assisting with the preparation of the energy section of town plans.

You can also help your school be a part of the VTrans' Safe Routes to School program. This program assists schools in



planning and building sidewalks and other investments and programs to help kids safely walk and ride to and from school.

We all know old habits die hard. How can we as Vermonters change our habits, on a personal level, to reduce our transportation energy use?

VTrans' GoVermont program makes it easy to learn how to change your habits. This is a web-based clearinghouse for alternatives to SOV travel. The Go-Vermont website, www.connectingcommuters.org, has lots of information to help Vermonters get started. The site will help you find a carpool mate and calculate the costs savings

and carbon-reduction benefits of sharing a ride. Handy links to the state's rail and bus services are also included.

As you think about the trips you take regularly such as commuting to work or going to school you may find alternatives such as carpooling or biking / walking can work. Start with one or two days a week. If you carpool, you will quickly learn that there are not only real dollar savings but also the camaraderie benefits that you just don't get driving alone.

When it's time for a new car, investigate energy efficiency as part of the purchasing process. If you must drive alone, make the trip in a vehicle that is as energy efficient as possible.

What policies or programs do you envision VTrans undertaking in the next year or two to address Vermont's energy challenges as they relate to transportation?

The Shumlin administration is committed to re-thinking our energy future. VTrans is a partner within the Department of Public Service's comprehensive energy planning process that is currently underway. We are working with the department to better understand transportation energy needs in the future and are exploring ways to use less energy and also replace existing carbon-intensive fuel sources with renewables.

VTrans will also be enhancing the GoVermont program by linking to the work of local energy committees. In conjunction with regional planning commissions, we are offering mini-grants to local energy committees to increase participation in Go Vermont at the grassroots level. VTrans will also be expanding the bicycle and pedestrian program and park-and-rides. We are building upon our local transit services and improving inter-city rail so that Vermonters can easily connect to Montreal, New York City and beyond. And we will be partnering with other agencies and states throughout the northeast as well as the private sector to pursue alternative fleet and fuel strategies such as supporting a charging network for electric vehicles and fleets powered by natural gas.

How We Run

Elizabeth Miller, commissioner, Department of Public Service

What are some of the challenges for Vermont as it moves toward a more efficient, cleaner energy future?

One of the challenges as we move forward is working out the right balance between costs, land use and economic growth, in all of our energy sectors. For example, in electricity, as the ratepayer advocate we want costs to be as low as possible given the backdrop of our other state interests that need to be considered such as the desire to have a low carbon footprint. There are tradeoffs in any energy choice – taking a bus, for example, limits a person’s flexibility even though it is often a better choice from an environmental and total cost point of view. Building renewable energy alters our landscape and creates cost impact, even though emissions are low; conversely, in another energy area, continuing to heat our homes mainly with fossil fuels leaves us subject to price volatility and does not help our emissions profile. The point is that there are always positives and negatives, and finding the balance is a difficult thing to do. But we do have some very good things on the horizon – for example, smart grid presents an opportunity for ratepayers, the utilities and the state in general with the ability to promote distributed generation and conservation measures.

What will be the benefits of this transition?

Three of the primary benefits of the transition would be greater energy independence from resources outside of Vermont, the potential economic growth from green jobs, and improvement in our already favorable carbon footprint. Ultimately, the goal is to position Vermont for long-term stable and sustainable energy choices, even if there are upfront tradeoffs that must be made to do it.

What role do you see Vermont’s local energy committees playing — or hope they will play — as Vermont plans for its energy future?



Local energy committees can be the leaders in bringing innovations and education to the communities. We’ve already seen some great examples of leadership – town energy challenges, municipal building audits, and consumer education outreach, to name just a few. Once again, the new smart grid technology may play a role. I could see the local energy committees being key in assisting people in using the technology to greatest advantage. Right now, local energy committees can assist the Department

in the development of our energy future by commenting on or contributing to the Comprehensive Energy Plan that will be released later this year.

You’ve been doing a lot of public meetings and outreach on the plan. What are you hearing or learning regarding what Vermonters want for their energy future?

The depth and breadth of comments are fascinating. There does seem to be a trend toward wanting increased renewable energy, but people are divided on what types of renewable energy and on what scale are acceptable. Reliability and affordability are also themes that reverberate across many sectors of Vermont. I believe we have to recalibrate how we think of energy usage – right now, we often think in terms of our gas purchases, our home heating purchases, and our electric purchases, all in separate buckets. As fuel choices and platforms increase both in the transportation and heating sectors, we should start to concentrate on our total energy expenditures. For example, if we purchase an electric vehicle, our electric bill will go up, but our gas spending would disappear. If we make our homes more thermally efficient, we’ll spend money on those improvements but lower our home heating bills for the long term. I believe Vermonters understand the need for this holistic thinking and would like the state’s energy plan to reflect it.

How We Grow

Noelle MacKay, commissioner; Economic, Housing and Community Affairs

People talk about “smart growth.” What is it exactly, and what role does it have in helping Vermont save energy?

Some folks think it is a new fangled planning policy. Instead, I think of smart growth as a part of Vermont’s past, present and future. It is the landscape that Vermonters and visitors alike are drawn to – villages surrounded by working landscape. Vermont has compact, mixed-use centers that have homes, jobs, services and schools in close proximity. Outside these centers are working farms, forests and recreation lands.

Smart growth means building urban, suburban and rural communities with housing and transportation choices near jobs, shops and schools. This approach supports local economies and protects the environment.

Transportation accounts for about 46 percent of Vermonters’ energy use. If we continue to plan and develop our communities around the automobile, we will not be able to reduce our energy use in this sector. Creating communities that have options – walking, biking, car pooling, transit – can not only reduce our energy use, but also creates choice for those that cannot rely on the car for getting to work, meeting friends or volunteering in their community.

In many ways, we Americans have built ourselves into a quandary, promoting development that uses land and energy resources inefficiently. Vermont is lucky, in some respects, to have a historic settlement pattern that could lend itself to the development of a new, more efficient development pattern for the 21st Century. How do we assure that we continue to pursue this sort of land use pattern and not end up squandering opportunities to use our resources as thoughtfully as possible?

One of the hopeful trends in the past several years is the acknowledgement that how we develop, steward and conserve our



landscape has an impact on transportation choice, energy use, climate change, community cohesion and financial consequences. So often we, as individuals, town or state agencies, talk about inefficiencies in programs, projects and policies. We also need to probe the inefficiencies and financial impacts that our decisions on where and how we develop have on our communities.

In this time of constrained budgets, some of the implications of these decisions are becoming more apparent. Spreading development means more roads to maintain, more sewer and water lines to keep up and larger distances for our service providers to travel to meet their customers’ needs. As gas prices rise and budgets are strained, difficult choices need to be made and how we develop our communities need to be part of the discussion. What can we do?

- We must consider the economic, social and environmental costs and benefits of our land use policies. Only then can we understand the future implications of the choices we are making in the present.
- We also need to align state goals, policies and investments across agencies and departments. The Shumlin Administration is making progress in this area as various agencies are integrating land use patterns in their work – for example in discussion of the Comprehensive Energy Plan lead by the Department of Public Service and the Climate Cabinet led by Agency of Natural Resources and Agency of Transportation.
- We also need to support local communities as they plan the future of their towns. It is a very difficult job – making decisions that have short and long-term implications for a community – made by volunteers late into the evening. Often they have little or no professional training or support and our department is working to determine how best to help municipalities.

Some say that development patterns across the landscape are largely a function of what people want. Is this really true? Does inefficient, sprawl type development accurately reflect what people really want and what they will want in the future?

This is a complex issue. Market forces are at play – we live in a rural state and many people live or move here for space and independence. And we need to have options for folks that want a more rural lifestyle.

Historically, we have also designed our communities around single occupancy vehicles, and not the needs of people. It has also been easier to develop outside of our centers. The result is a lack of housing options for young professionals and “empty nesters” and business sites in our centers. All of these factors have resulted in our more scattered development pattern.

However, changing demographics, in Vermont and in the nation, should also be considered as we plan for the future. Vermont has an aging population that may want to downsize and live in a place where they can walk, or take a bus to activities instead of driving a long distance. We also want to attract and keep young people and studies indicate that they want to be in our centers – able to walk or bike and be near restaurants, entertainment and cultural events.

What policies or programs do you envision your agency undertaking in the next year or two to address Vermont's energy challenges as they relate to land use and community development?

I think the greatest asset we have is the broad spectrum of state agencies, non-profit organizations and businesses that are working together to chart a course for our energy future. It is a collaborative effort with the Administration, our talented and committed staff and public and private partners.

We are working on leading and supporting several initiatives, including the following:

- Working on a state-wide economic development plan that identifies current clusters of economic activity and develops strategies to maintain current employers and attract new employers. Many of these play a role in our energy future.
 - Supporting the Department of Public Service's development of the Comprehensive Energy Plan that includes goals in the areas of renewable energy, efficiency, transportation and land use.
 - Participating in the newly created Climate Cabinet led by Vermont's agencies of natural resources and transportation.
 - Ensuring a high level of energy efficiency and the incorporation of smart growth principles in affordable housing and community development projects funded by the Agency.
- Leading a review of the state's designation programs – downtowns, village centers, growth centers, etc. – to determine how to streamline and provide consistency in the programs, increase incentives and attract redevelopment and new development in these areas.



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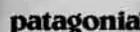
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Recent Floods Underscore Wisdom of ANR's New Focus

By KIM GREENWOOD

Several weeks ago, on the heels of this spring's widespread flooding, Gov. Shumlin announced that the Agency of Natural Resources would renew its focus on long-term policies to reduce the effects of massive and destructive flooding. Then, days after the governor's announcement, tropical storm Irene swept through Vermont as if to further underscore the point.

The Shumlin administration deserves credit for taking seriously – both before and even more so after Irene – the long-term threat that flooding poses to our communities.

The vast costs associated with flooding are, unfortunately, fresh in our minds. The devastation of peoples' lives that we have all seen in recent days is, in almost every way, beyond description.

Today it's painfully obvious to Vermonters that floods destroy homes and businesses, ruin roads, overload sewage treatment plants, and render places like the state office complex in Waterbury (ironically the home of ANR's central office) unusable for weeks and months, and possibly forever. Floods attack the



economic viability of our downtowns, and they have deep impacts on our natural resources. Floods, occasionally and tragically, take lives, as Irene has. And unfortunately, Vermont is likely to see more precipitation in the future.

The good news is that we know at least some things we can do to assure flood impacts are minimized over the long haul. How Vermont manages its landscape – in other words, how Vermont grows and develops in the coming years – will in part dictate whether we effectively adapt to this increase in precipitation, or not.

Here are some things VNRC has advocated for in recent years, and that ANR might consider (and perhaps is already) as part of its renewed and timely focus on flooding:

Encourage towns to plan for "smart growth." Among other things, smart growth (compact rather than spread

out development) minimizes the need for runoff-inducing parking lots and roads. Fewer acres of parking lots and roads means less runoff and also less potential flood-caused infrastructure damage.

Reduce the rate of "conversion." The state should invigorate policies to keep forestland intact and undeveloped through incentives like the Current Use program and conservation funding. This will, over the long term, help keep flooding down. Land with trees – not pavement – is more stable, filters water and discharges far less runoff.

Protect riverbanks. The state should consider both regulations and incentives to encourage waterfront property owners to leave vegetated buffer strips along shorelines to help protect shorelines from eroding, and runoff from finding its way into rivers. River corridor management, the science that seeks to minimize conflicts between people and rivers, protects homeowners as well as rivers.

Stand strong on gravel extraction. Well-intentioned but scientifically short-sighted gravel extraction from riverbeds will only exacerbate future flooding. ANR should continue to educate Vermonters on the damage this practice can cause.

Vigorously enforce stormwater pollution laws. The state should consistently and fairly enforce these laws that are designed to keep water from going into our rivers in the first place. Good infrastructure and preparedness help prevent catastrophic discharges of polluted water.

Promote "L.I.D." The state should set up both incentives and regulations to encourage "low impact development." That's development that puts a premium on letting water soak into the ground where it lands, rather than letting it run off into watercourses.

Vermont was hit hard by tropical storm Irene, and no amount of planning can completely prepare us for a storm of the magnitude of Irene. But through thoughtful,

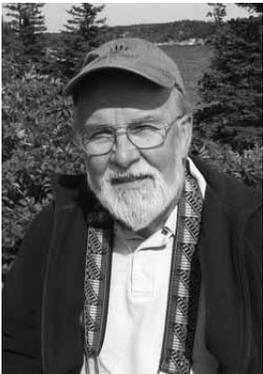
long-term planning by the Agency of Natural Resources and with the help of willing landowners, we can reduce the impact from the inevitable storms of the future. 

Kim Greenwood is the Vermont Natural Resources Council's water program director and staff scientist. She lives in Duxbury on a road that was heavily damaged by Irene.



Wayne Fawbush

Ron McGarvey: Saving Energy One Vermont Faith Community at a Time



Ron McGarvey

BY JAKE BROWN

Think “Vermont church” and what comes to mind? History? White? Charm? Certainly. How about drafty? How about hefty fuel oil bills?

For Burlingtonian Ron McGarvey, a member of Vermont Natural Resources Council and board member of Vermont Interfaith Power and Light, buildings associated with faith communities, be they churches, synagogues, mosques, parish halls or meeting houses, represent an opportunity for energy savings. And for him personally, helping these congregations to save money by saving energy is a good way to chip away at the environmental challenges facing the world.

McGarvey has for years been concerned about the degradation of our environment. But he found it hard, with the almost overwhelming breadth of different environmental challenges, to know which problem, or problems, to focus on. Eventually, he settled on energy and energy efficiency because, as he sees it, excessive and inefficient use of energy is the root cause of a lot of environmental damage.

“Reducing our energy use through efficiency improvements and moving to renewable energy, I hope, can slow the degradation of the planet,” he says.

While he may think globally, McGarvey is also the kind of guy who likes to get things done, locally. He worked for almost 30 years with energy efficiency programs, most recently as Director of Residential Energy Services for Efficiency Vermont. After his retirement in 2005, he became connected with Vermont Interfaith Power and Light, VT IPL, (www.vtipl.org), a non-profit organization that – based on the belief that people of faith are called to be stewards of the earth – is working with Vermont faith communities to reduce the impacts of climate change through promotion of energy efficiency and renewable energy. He sees opportunities for energy savings in Vermont’s faith community buildings and the homes of their members. So far, he’s done about 170 assessments of buildings in

Vermont owned by local congregations of various denominations.

“I do a walk-through energy assessment with people from the congregation, whomever is interested, and then I send them a report with a series of recommendations – a list of things they can do to use less energy. I also try to direct them to resources for additional technical and financial assistance,” McGarvey says.

He often suggests things like reducing air leaks, installing energy efficient lighting, and adding thermostat controls. He says that churches and other faith-based buildings often have old, and donated, energy inefficient refrigerators, for example.

Says McGarvey: “Half the churches I go into, these fridges are not full – they may have a half-gallon of milk in them, so I ask folks, ‘do you really need to keep food cold all week?’”

Sometimes the solution is to empty the refrigerator and turn it off until it’s needed; other times it’s to upgrade to a more efficient model. “I also like to encourage ride sharing among members since driving generates the most greenhouse gases in Vermont,” he says.

McGarvey, who himself is a member of Christ Church, Presbyterian, in Burlington, also tries to connect the congregations with Efficiency Vermont, which offers technical help, financial incentives and rebates for certain energy efficiency improvements. He also makes congregations aware that VT IPL can work with them to help members work through David Gershon’s “Low Carbon Diet Workbook” which outlines ways people can reduce their energy use and carbon footprint in at home.

“Hopefully, those things that people do in the churches and other buildings, they will do in their own homes,” says McGarvey.

That way, the word spreads. And with an estimated 600 to 700 faith communities in Vermont, it would seem, as long as people like Ron McGarvey keep at it, there is plenty of energy still to be saved. 



A Time of Transition at VNRC

BY ELIZABETH COURTNEY

This September marks my 14th year as the Executive Director of VNRC. It has been an honor to serve this organization's mission and a pleasure to get to know so many of the dedicated members of VNRC.

Over a year ago, I let the VNRC Board of Directors know that I wanted to change my role within the organization.

The Board and I soon started a strategic planning process to choose my successor. After a year of thoughtful discussion, with a thorough process behind us, the VNRC Board has chosen its next Executive Director.

We are very pleased to announce that Brian Shupe, our Deputy Director, will become VNRC's next Executive Director. You may already know Brian and his excellent work in the Sustainable Communities Program. It has been my great pleasure to work closely with Brian over the past few months to facilitate a smooth executive succession transition. Brian is a widely respected, capable and inspiring asset to the organization already. I believe, as the VNRC Board does, that Brian will lead VNRC with vision and stature as we move into our second half-century.

While I am stepping down as VNRC's Executive Director, I am happily staying on – for a limited time – in a different capacity. I am privileged to head up the VNRC Legacy Project, which has been germinating for well over a year and now requires a focused effort.

The Legacy Project has several components, including a Fund for the Future Campaign and a history of – and future vision for – the environmental movement in Vermont in which VNRC plays a central role. I will want to touch base with many of you as these challenging pursuits take shape.

The Legacy Project will have its grand finale on June 22, 2012 at Shelburne Farms' spectacular Breeding Barn. We will gather in celebration of 50 years of VNRC's environmental and community leadership in the Green Mountain State.

For me, this year ahead is a gift and a truly gratifying endeavor – to help bring lasting security and a place in history – for this great organization and for the state of Vermont.



BY BRIAN SHUPE

As VNRC prepares to celebrate its 50th year as an essential voice for Vermont's environment, I am humbled and honored to take over as the new Executive Director. My heartfelt thanks go out to VNRC's members, board, staff and – most importantly – Elizabeth Courtney, for making this possible.

Elizabeth is, and has been for many years, Vermont's environmental conscience. She has played that role with grace, civility, and deep determination for over two decades. She has been steadfast in her commitment to the health of Vermont's natural resources and the well being of the state's communities.

Elizabeth's decision to focus on the Legacy Project is a generous one. The VNRC of tomorrow already owes its gratitude to Elizabeth.

One of the reasons that I am excited to take the helm at VNRC is the present strength of the organization. The great recession has not only been hard on businesses and families, but on non-profit organizations and VNRC is no exception. However, our members have remained loyal in their generosity and – with Elizabeth's leadership and the Board's support – VNRC has remained financially sound without any reduction in core programs. This unwavering support gives me great optimism and has affirmed for me, more than ever, the critical nature of the VNRC mission.

In recent years, VNRC has taken important steps to respond to the economic challenges we have all faced by building greater organizational resilience. For instance, this past July we completed a successful merger with Smart Growth Vermont, bringing new tools and resources to the organization. We have brought a state-of-the-art membership database on-line and overhauled several of our management systems. We are also in the process of updating and expanding our electronic communications. All of this progress is possible because of VNRC's most valuable asset: its talented and committed staff.

I look forward to working with Elizabeth, and the rest of the VNRC staff, and our members, activists and partners, to assure a strong and vibrant future for Vermont's natural resources and communities.



VNRC RECEIVES GENEROUS BEQUEST

VNRC is deeply appreciative of a generous and unexpected bequest we received this summer. VNRC plans to allocate the majority of the \$97,971 gift to our Fund for the Future.

VNRC's Fund for the Future has been set up to help VNRC weather unforeseen circumstances, such as costly but important legal action on conservation matters, or another serious downturn in the economy.

We would like to thank the family of the donors, who wish to remain anonymous, for making this gift possible.

Please contact Stephanie Mueller at VNRC, 802-223-2328 x 113, if you would like information about planned giving, or are interested in learning more about VNRC's Fund for the Future.





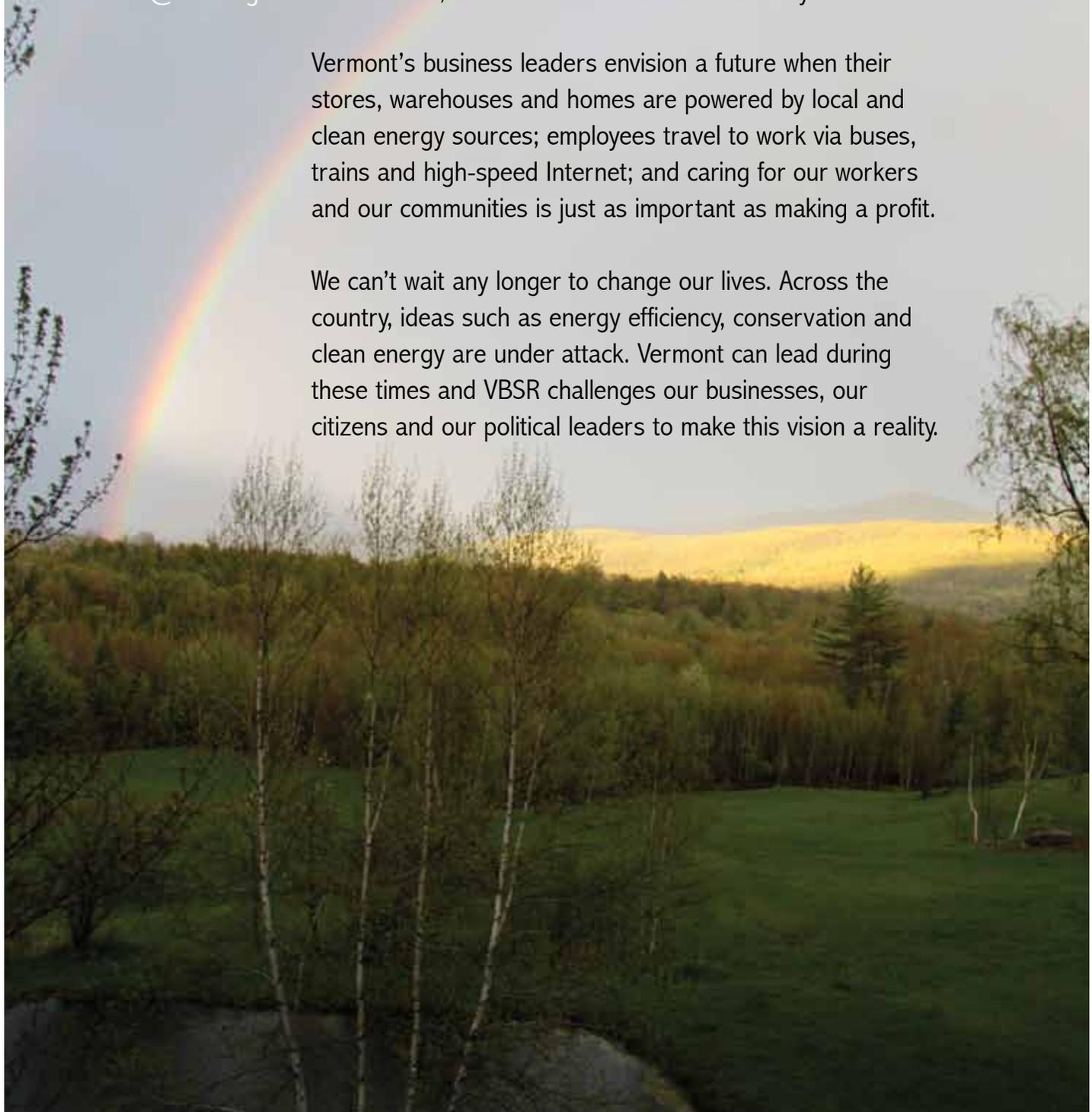
info@vbsr.org

VBSR believes that climate change is real and threatens all aspects of our lives, including the way we do business.

As a group of Vermont businesses dedicated to social responsibility, we know bold and decisive action is needed to address this crisis. All of the energy and environmental problems we face can be addressed in ways that benefit our communities, our environment and our economy.

Vermont's business leaders envision a future when their stores, warehouses and homes are powered by local and clean energy sources; employees travel to work via buses, trains and high-speed Internet; and caring for our workers and our communities is just as important as making a profit.

We can't wait any longer to change our lives. Across the country, ideas such as energy efficiency, conservation and clean energy are under attack. Vermont can lead during these times and VBSR challenges our businesses, our citizens and our political leaders to make this vision a reality.





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Save the Dates!

October 20 **Wild & Scenic** **Environmental Film Festival**

Main Street Landing, Burlington
5:30 – 9:30 p.m.

Wild & Scenic is VNRC's favorite benefit and membership event of the year! This year the event is sponsored by Patagonia Burlington to benefit VNRC. Come see award-winning adventure and environmentally-based films, enjoy Skinny Pancake munchies and Vermont beer, a silent auction and raffle. Bring your friends and neighbors for an inspirational evening. \$12 per ticket; \$20 gets you a VNRC membership too!

October 29 **Annual Environmental** **Action Conference**

Vermont Technical College, Randolph

Join hundreds of fellow activists, experts, and policy-makers for a day chock-full of workshops covering Vermont's hottest environmental issues and skill-building opportunities.

Network with your colleagues from across the state. Hosted by New England Grassroots Environment Fund, Toxics Action Center, the Vermont League of Conservation Voters, Vermont Natural Resources Council, and VPIRG. Contact Dan Frosh at dan@toxicsaction.org or visit www.vtenvironmentalaction.org.

November 6 **Vermont Interfaith Power** **and Light Conference**

Vermont Law School, South Royalton
12:30 – 5:45 p.m.

This year's VIPL conference is entitled "Justice and Climate Change – Faithful Action." Join with members of faith communities and others from across the state to address impacts of global climate change. Learn what can be done individually and as congregations to adopt and help the most vulnerable. Exhibits, resources, book table, music, refreshments and more. Keynote speaker is James Gustave Speth. www.vtipl.org

December 3 **Community Energy and** **Climate Action Conference**

Lake Morey Inn, Fairlee
8 a.m. – 4 p.m.

This conference brings community energy committee leaders, municipal officials and Vermonters simply interested in energy together to network, share strategies and learn about some of the most pressing and promising energy issues and programs. Department of Public Service Commissioner Liz Miller will lay out the elements of the state's new Comprehensive Energy Plan; Agency of Natural Resources Secretary Deb Markowitz will describe the important work of Vermont's Climate Cabinet; and actor, activist and visionary Kathryn Blume will inspire attendees with humor and a serious call to action. Cost is \$25 lunch included. Hosted by the Vermont Energy and Climate Action Network and UVM Extension. Visit www.vecan.net to learn more and to register.

For more information about these events, contact Nina Otter at 802-223-2328 x121 or email notter@vnrc.org.

JOIN VNRC!