

WEC CO-OP CURRENTS

'The Answer, My Friend?'

Vermont's Unsteady Progress Toward Wind-Powered Generation

Vermonters today are engaged in an important decision. What role, if any, do they foresee for wind-generated electricity in the state's future energy mix?

It's not a decision they can afford to put off much longer. In 2012 the contract that provides 280 megawatts (MW) of power from the Vermont Yankee nuclear plant, which most of the electric utilities in the state depend on (not, however, Washington Electric Co-op), will expire. Three years later, in 2015, another major contract ends – the provision for 310 MW of power from Hydro Quebec. Together, these contracts supply about 70 percent of Vermont's electricity needs. How will that power be replaced?

Conceivably, it will be by new deals with those same providers – although Vermont Yankee is supposed to be decommissioned, and if its new out-of-state owner, Entergy Corp., succeeds in getting the plant relicensed and

increasing its generation capacity, power costs for consumers would rise. As for Hydro Quebec, the company has indicated it will be less interested in long-term contracts. If that power is available, costs also can be expected to rise.

There are other sources: nuclear and fossil fuel-fired plants elsewhere in New England, a new generation of natural gas plants (clean-burning for a fossil fuel, but plagued by volatile prices).

Increasingly, though, Vermont utilities are looking toward home-grown, green, and renewable power. Sources in use include hydro power and wood chips; WEC is pioneering a methane energy-generation plant at the Casella landfill in Coventry.

And, largely untapped, there is wind.

It's not just WEC that's considering wind. Green Mountain Power Corp., which developed Vermont's first wind

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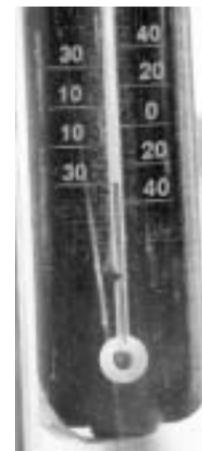
Green Mountain Power Corp.'s wind farm at Searsburg. These towers, which stand 130 feet tall, are much smaller than newer models of utility-scale wind turbines.

No Electricity, And 30 Below! Tune In To The Radio During Power Emergencies

It was a morning of high anxiety for some 3,400 Co-op members on Friday, January 9, when the power went out while temperatures plummeted in some places to a frightening 32 degrees below zero.

The longest of the three outages affecting Co-op members was four-and-a-half hours, which at 30 below can seem like an eternity. A number of people experienced broken water pipes.

The first outage hit WEC's South Walden substation, and the 1,060 members connected to it, at 3:41 a.m.



Power was restored shortly after 8 a.m.

The outages resulted from problems on Green Mountain Power Corp.'s transmission lines, which supply electricity to several of Washington Electric's substations. Every Co-op member dependent on WEC's East Montpelier, Maple Corner and South Walden substations therefore lost electricity. Another 1,100 GMP customers, and customers of the Hardwick and Morrisville municipal utilities

were also affected.

"At temperatures that severely cold,

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The subject was wind:

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Generous members, worthy causes.

Report on the first year of WEC's Community Fund. See page 3.

Candidates needed for WEC's Board of Directors. Two veteran board members have decided not to run again. Page 8.

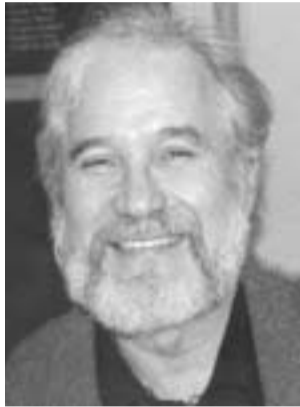
Washington Electric Cooperative
East Montpelier, VT 05651

President's Report

New Look Needed At Proposed VT Energy Plan

By Barry Bernstein

It's cold. As I watch my wood supply shrink, the harsh winter cold continues setting record-breaking temperatures. The extreme cold weather also caused a breakdown on Green Mountain Power's transmission grid, stopping the flow of electricity to WEC's East Montpelier, Maple Corner and South Walden substations, which serve almost 3,400 WEC members. In all, *The Times Argus* reported that about 4,500 consumers' homes and businesses getting power from Morrisville Water & Light, Hardwick Electric Department, Green Mountain Power and WEC were affected on a



Barry Bernstein

morning when temperatures hovered at 20-to-30 degrees below zero. I, like many others, lost my power for several hours, but was fortunate to have wood heat to keep warm.

WEC'S Director of Operations Dan Weston thinks it's a good idea for members to have some type of heat backup in the winter months. A small wood stove, kerosene or propane heater, or small backup generator can be a life and property saver. The

last two winters have been extremely cold. They are reminiscent of the winters of the early to mid '70s, though there seemed to be more snow then to act as an insulator.

As I mentioned in the last issue of

Renewable energy sources and a more aggressive energy-efficiency commitment must be pillars of any state energy plan.

Co-op Currents, I plan to address several of the key energy issues being debated in Montpelier and Washington, the outcomes of which will impact our lives for decades to come.

In this issue I want discuss:

- 1) The 20-Year Comprehensive Energy and Electric Plan. The final draft, released by the Douglas Administration in early December 2003, has come under intense criticism for falling short of the mark on both process and content. The plan is important because it will serve as the template against which all future power projects and energy issues will be decided.
- 2) The state's once-in-a-life time opportunity to purchase the Connecticut and Deerfield River dams from PG & E National Energy Group (in bankruptcy) at a power cost of 4 cents or less per kilowatt. The cost per kilowatt hour (kWh) drops nearly in half as the revenue bonds used to purchase the dams are paid off.

THE 20-YEAR ENERGY PLAN

The Vermont Department of Public Service (DPS) missed an opportunity, as well as its statutory obligation, to involve stakeholder groups – which include cooperative and municipal utilities – as well as consumer groups, in writing the 20-year plan.

It is important that the Douglas Administration get all the key players on board. This is especially critical given the fact that the contracts, which represent 70 percent of the state's power portfolio, will expire between 2012 and 2015. The choices made in the next few years will have an enormous impact on Vermont and Vermonters for decades to come.

Diverse energy supply

While the plan calls for more diversity in the state's power supply, which I applaud, it does little to lay out strategy options to get there. A comprehensive plan needs to be a tool on which to build consensus among the various

stakeholders that must eventually help ensure its success.

Our energy-supply choices and the ensuing debate around them will not be easy. The high volatility in both oil and natural gas prices, coupled with New England's over-dependency on them and the high cost of future new infrastructure to deliver natural gas, increase the complexity of our decision.

The debate on the siting and building of the projected 200 megawatts (MW) of wind power, as discussed in this issue, must be addressed and resolved if wind is to play an important part in that diversity. The Connecticut and Deerfield River Dams, which I will discuss below, received just five sentences in an 80-page document, even though those facilities can provide 23 percent of the state's power demand at low, predictable, stable rates for as long as the water flows. Water, like wind, it is renewable. The use of wood and other biomass, abundant in the Green Mountains, also is given little attention.

If we want diversity in our energy supply, we can't afford not to develop all the resources within Vermont. Renewable energy sources and a more aggressive energy-efficiency commitment must be pillars of any state energy plan.

Risks and unknowns

Are Vermonters willing to accept the potential risks of extending the license of Vermont Yankee? Will Hydro Quebec consider extending its contract for power in 2016, when it already has stated its intention to sell power into the spot market where greater profits can be made? Given those statements, is it realistic to expect to receive wind-generated power from HQ's contemplated projects in the Gaspé area?

The draft energy plan fails to adequately address and develop these issues. It is neither realistic nor fair to Vermonters to promise lower electric prices based on the outdated premise, in the plan, of selling more electricity. Gov. Douglas has been asking us to conserve in the cold of winter to avoid rolling blackouts, while the DPS is suggesting we use more power to lower the cost per kilowatt. It does not add up.

The governor needs to pull this plan and direct the DPS to draft a plan that will serve us well through 2023.

CONNECTICUT AND DEERFIELD RIVER DAMS

These 11 hydroelectric dams represent an opportunity to secure low-cost, stable and renewable power for the next 50-100 years. Publicly owned hydroelectric power is what Republican Gov. Franklin Billings recommended for these dams in 1912. It's what Democratic

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Co-op Currents

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The Board of Directors' regularly scheduled meetings are on the last Wednesday of each month, in the evening. Members are welcome to attend. Members who wish to discuss a matter with the Board should contact the president through WEC's office. Meeting dates and times are subject to change. For information about times and/or agenda, or to receive a copy of the minutes of past meetings, contact Administrative Assistant Deborah Brown, 802-223-5245.

A Successful First Year For WEC's Community Fund

Cabot Commons, a senior assisted-living facility in Cabot. . . Central Vermont Adult Basic Education in Barre. . . Our House of Central Vermont, a resource center fighting child abuse. . . the People's Health and Wellness Clinic, which provides affordable medical care on a sliding scale for people in need.

These were among more than two dozen local non-profit organizations and programs that received financial support last year from Washington Electric Cooperative.

2003 was the first year of operation for WEC's Community Fund. The Fund was created to enable the Co-op to be more engaged in the good works that citizens and organizations are performing for others within our scattered rural neighborhoods.

At the close of 2003, General Manager Avram Patt reported on its first-year activities to the Board of Directors. The news was good, for two reasons.

First, the Community Fund had made donations, in modest amounts, totaling \$6,929 to local causes. Second, the response of Co-op members who were invited to contribute their 2003 capital credit benefits to the Fund exceeded some people's expectations.

Certainly that was true for Patt.

"We sent out a letter last summer before capital credit refunds were issued, explaining the new Fund to our members and providing them an opportunity to contribute to the Fund instead of claiming their 2003 distributions," said the manager. "We didn't know what we would get, but I thought anything above \$10,000 would be a good result. As it happened, we got donations totaling more than \$14,000."

It was important that contributions to the Community Fund be voluntary. The Board seeded the Fund for the first year with a one-time allocation of \$10,000 from general revenues, knowing that practice could not be continued because

revenues belong to the membership. (The \$10,000 was a small enough sum not to affect operations or rates.) As WEC Director Richard Rubin said at the time, "Members can make their own charitable contributions without our help."

But Rubin was also the driving force for creating a fund for local giving. Part of the co-op philosophy, reflected in the principles adopted in 1995 by the International Cooperative Alliance, is for cooperatives of all kinds to support organizations and charities that improve community life. The initial \$10,000 got the ball rolling; the voluntary contributions of \$14,000 assure that the program will continue. The Board intends to invite members once again to contribute their capital credit distributions (which mostly range from \$10 to \$40, and would otherwise be credited to members' November electric bills) if the annual capital credit refund program is repeated, as expected, next fall.

To provide guidelines for Community

Fund grants, the Board of Directors adopted a policy in 2002. It favors organizations that are either extremely local (to particular towns and villages) or which, like the People's Health and Wellness Clinic, are widely available to people in central Vermont, including the Co-op's service territory. The policy calls for donations to organizations that are "financially viable" and "broadly supported in the communities they serve." The Fund does not give to religious or political organizations.

Those criteria generally explain why applications from some worthy causes – such as large national charities, or organizations that operate near but not in WEC's service territory – were not approved.

"The Fund had a good first year," said Director Rubin. "We were pleased with the number of contributions we got, and we're hopeful that after people see how the donations were distributed – what kinds of organizations we gave to and their

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Wec 2003 Contribution Summary, Community Fund

CONTRIBUTION RECIPIENT	LOCATION SERVED	NOTES
Cabot Commons, Inc. Central Vt Adult Basic Education Barre Town Emt Explorers	Cabot most of WEC service area Barre Town & several others	<i>(donated senior assisted living products for auction)</i> <i>youth EMT training</i>
Project Graduations Twinfield U-32 Harwood Spaulding	Plainfield/Marshfield 5 WEC towns 4 WEC towns Barre Town	<i>substance free celebrations</i>
Orange Center Community Assoc. Vermont Historical Society Vermont Grange First Night Montpelier Tunbridge Public Library	Orange statewide (Tunbridge) statewide/national Washington Cty Tunbridge	<i>local civic, cultural, heritage org.</i> <i>co-sponsor VT History Expo,</i> <i>support of national conf/Burlington</i>
Moretown Recreation Committee Our House Of Central Vermont Peoples Health & Wellness Clinic Vermont Ctr For Independent Living The Restore	Moretown much of WEC area Barre & much of WEC area statewide Montpelier & beyond	<i>capital campaign for new rec. facilities</i> <i>educational materials re: child abuse</i> <i>support of youth leadership program</i> <i>recycling non-profit</i>
Roxbury Community Hall/Senior Ctr Good Beginnings Of Central Vermont Sugar Maple Nursury School Woodbury/Calais Foodshelf Chelsea Playschool	Roxbury Northfield & beyond W. Topsham & vicinity 4 WEC towns Chelsea	<i>historic building restoration effort</i> <i>assistance to new parents</i> <i>cooperative pre-school</i> <i>capital campaign- new location</i>
Valley Health Center Vermont Granite Museum Central Vt Community Action Vt Statewide Environmental Education Programs (Sweep)	E. Corinth & vicinity Barre most of WEC area statewide	<i>(plus our old copier if wanted)</i> <i>emergency services to low income</i> <i>envir. educators conference</i>
Total		\$6,929

Prepared by Avram Patt, December 29, 2003



Now, Call WEC for Mad River Glen Tickets

The geese have flown south, the temperatures are lower, and the prospect of snow has forced recognition that ski season is coming. And the Co-op has a member ski deal unlike what we have been able to offer before.

WEC members who ski at Mad River Glen—which is also a co-op—now are able to purchase day passes at the WEC office. The ticket price varies depending on the day, but weekday adult passes are one third off compared to tickets purchased at the Basebox.

WEC is now a ticket retailer, and members are eligible for special prices (see Co-op Store, page 7). You can call and order tickets by phone and pay with a credit card, and either pick up or we will mail tickets to members.

Get the boards tuned, pray for snow, and we'll see you on the mountain!

Wind Power

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farm downstate in Searsburg in 1996, is interested in expanding that facility. Central Vermont Public Service Corp. is involved through a subsidiary in a wind-power proposal in Londonderry. The Burlington Electric Department is working with another company to site wind turbines on Little Mount Equinox in

Manchester. And the Vermont Public Power Supply Authority (VPPSA), which provides power to the state's many municipally owned utilities, is developing a test location for wind energy in Lowell in concert with a company called enXco. In one way or another, practically the whole utility industry in Vermont is getting in on the wind-power act.

Or would like to. But other Vermonters are getting in on the act, too: opponents

of wind power, who believe the tall turbines would ruin Vermont's scenic ridgelines, drive away tourists, endanger wildlife and avian habitat, and bring down property values. The most common complaint is that these purported aesthetic and economic sacrifices would be in the service of a technology with little to offer, because, they believe, wind resources are inadequate in Vermont and electric generation from wind turbines

would be unreliable.

Wind power already exists in the Green Mountains, at GMP's wind farm in Searsburg. Other proposals are into or nearing the state permitting process. Wind power is not going to go away. The question is how much generation capacity will Vermont develop, and what kind of process will eventually take shape to make the development and licensing of wind farms an inclusive process that will

WEC Member Takes Issue With Wind

Not all Co-op members share the opinion of the Board of Directors concerning the desirability of wind energy for Vermont. Catherine (Katie) Anderson and her husband Don actually sold the land in Kirby on which they had begun to build their "dream house" because there was talk of wind turbines being constructed on state land within their view. They recently purchased a home in Peacham, and while renovations to that property are underway the Andersons are living – off the electric grid – by Long Pond in Westmore.

The Peacham property is in WEC's service territory. Yet General Manager Avram Patt was reassuring that there were no potential wind farm sites in that area that he was aware of.

The Andersons' involvement with wind-energy issues began in December 2002, when they and others opposed a proposed amendment to the state's land-use plan for Victory State Forest which would have allowed the installation of two wind-measurement devices on Kirby Ridge. The opponents considered it a precursor to a future development proposal. Katie Anderson considered the Kirby intercession a victory, because the Agency of Natural Resources eventually tabled action on the amendment, pending development of a statewide policy regarding wind installations on state-owned land. State Lands Director Mike Fraysier anticipates holding public meetings in March to gather citizen input on such a policy.

"It started out as a fight (to protect) my dream home," Anderson said, "but for me now this is a state issue that needs to be publicly debated. The biggest thing the government does is protect its citizens, and they haven't addressed that for this issue. There are several things the state needs to look at concerning wind towers in performing its due diligence."

One thing she mentioned was mandatory setbacks to isolate the towers in case the blades of the wind turbines threw ice. Other concerns were how wind farms would affect neighboring property values and tourism. Unencumbered views, she said, "is what Vermont is known for. Anything you buy with the Vermont name has a ridge on the label."

What's more, she found it ironic there could be talk of wind farms on visible mountain ridges "in a state where you can't put up a billboard."

Even while she advocates a stronger public-policy role for government, Anderson is skeptical about regulators. The four-turbine, 6-MW East Haven Demonstration Project that has applied for a Certificate of Public Good from the Vermont Public Service Board will be evaluated under the criteria of Act 248 (similar to Act 250), but Anderson doesn't trust the process.

"The Public Service Board has the power to make whatever decision they want," she worried. "Their 'public good' consideration could trump Act 248."

If power supply is the issue, Anderson said, the first thing Vermont should do is increase conservation efforts. Living off the grid has impressed upon her how precious a kilowatt-hour of electricity is, and how important it is to turn off lights and appliances when they're not needed.

"Number two," she says, "is for Vermont to pursue (purchasing) the dams on the Connecticut River. That's infrastructure that's already there."

For the past year Anderson has faithfully attended public meetings anywhere wind installations in Vermont are discussed, in solidarity with a community of opponents that has developed around the issue. She has traveled to Searsburg and New York State to see first-hand what wind farms look like, and concluded they do not match her vision of Vermont.

"This is not about my little backyard anymore," she said, since her property in Kirby has been sold. "It's the bigger picture, of this incredibly special place – Vermont – that concerns me."



Author Warns: Time Is Running Out

Professor Bill McKibben, Environmental Studies scholar in residence at Middlebury College, is not moved by aesthetic complaints about wind towers. He contends that we no longer have the luxury of debating whether wind facilities for generating electricity are pleasing to the eye.

"In an ideal world we wouldn't have them," says the author of *The End of Nature* (1989), an internationally acclaimed book on climate change. "But we don't live in an ideal world. The price of not switching to alternative energy means *real* ugliness – the removal of mountaintops across Appalachia (for strip mining), sea levels rising across the tropics (inundating) human habitat, the eventual end of winter, foliage season and sugaring season. Computer models indicate we'll see the most dramatic change in the landscape since the last ice age."

McKibben, a former staff writer for *The New Yorker*, was the keynote speaker at October's Renewable Energy Conference presented by REV (Renewable Energy Vermont). He says the only way for the human race to dodge the bullet of climate change is to curtail the emission of greenhouse gases and undertake a transition from fossil fuels to renewables – sooner rather than later.

To those who call him an alarmist, McKibben replies: "By now the scientific understanding of climate change is far advanced. Essentially, there is no peer-reviewed scientist in the world anymore who doesn't think we're in for a spell of dramatic climate change. The best guess from the Intergovernmental Panel of Climate Change is that this century we'll see average temperature increases on the order of five degrees, from a worldwide average of 60 degrees to 65 degrees. That's warmer than it has been for tens of thousands of years."

If it's possible to avoid that scenario, it can be done only through conservation, new technologies, and changes in habits in high-consumption countries like the U.S. Among the most promising technologies, he says, are wind and solar power. "Wind, around the world, is the fastest-growing source of new electrical generation."

Several European nations are heavily invested in wind, but while the U.S. had a jump on wind technology some 25 years ago when California established early wind farms under the leadership of Gov. Jerry Brown, this nation has been eclipsed by countries that take the threat of climate change more seriously. Domestic production is now increasing as U.S. developers take advantage of wind resources in plains states. In Nantucket Sound, the controversial Cape Wind proposal would erect 130 wind turbines offshore, and by one estimate could produce more than 1 billion kWh of electricity.

In the Green Mountains, our ridge lines will have to do.

"It's important to develop these resources in such a way that they cause as little damage as possible," says McKibben, suggesting the state take advantage of sites with pre-existing access roads and other human incursions. "I don't think we should have a line of windmills on every ridgeline in Vermont. But we need to substitute as much renewable energy as humanly possible for fossil fuel. We're not going to get off this addiction overnight, but we have to get off it quickly."

Starting in his own backyard, McKibben, who lives in Ripton, encouraged Middlebury College to erect a data-gathering windmill at the Snow Bowl, and hopes eventually to see turbines installed there. His keen interest in wilderness does not lessen, but rather increases, his passion for green energy development.

"It behooves us to find places where this technology can flourish, rather than engaging in rejection of it because we have an aesthetic problem. Also, I have to say, there's something quite beautiful about a windmill."

Especially compared to the alternative.



enable Vermonters to reach some kind of consensus on the issue?

Co-op searching for a fit

The Board of Directors and management of Washington Electric Cooperative are not torn about wind energy. Wind is in WEC's future. In 2001 the Co-op received a \$1 million federal grant to put toward the development of a Vermont-based wind generation facility. So far there has been little activity.

"The small amount of energy we're looking to get out of wind doesn't justify a project of our own," said WEC General Manager Avram Patt. "We want to use our grant and other resources to buy into a larger project as a part-owner. To date there is nothing far enough along or appropriate for our purposes."

The Co-op is looking for no more than 1 MW of "delivered power." With any kind of electric generation there is a difference between "capacity" and delivered power. If you expect to get 1 MW of delivered — that is, available — power, you must develop a wind farm capable of generating 3 MW. That's because there isn't always enough wind to produce at capacity. The 1 MW of electricity WEC would be looking for would be an average it could expect from the site.

"That's the argument opponents of wind power make, that it's weather dependent," said Patt. "But hydro power is similar. Our Wrightsville turbines can't generate 100 percent of the time because river flow fluctuates. The Connecticut River dams have high and low periods. Even Hydro Quebec and Ontario Hydro are affected by draught conditions; at times they've had to purchase power from other sources in order to meet their load."

Reliability questions about wind energy are not as important as many people assume because ISO New England, which operates the regional electric grid, is constantly bringing power sources on-line or taking them off as demand changes. Adding wind sites to the mix would provide another alternative. When those sites were generating, other facilities more harmful to the environment could be stilled.

WEC Board President Barry Bernstein explained that the Co-op's interest in wind energy was driven by a practical philosophy about providing power to WEC's membership.

"As much as possible, we want to get our power close to home, at stable prices, from renewable sources," he said. "When I look at the future energy needs of Vermont, I don't think it's fair to the public for policy makers to say we're going to be able to lower electricity rates. I think rate stability needs to be the goal."

Stable, predictable prices that are also competitive, and renewable resources in or near Vermont, are behind the Co-op's emerging power mix, with its already high percentage of green power. As for wind,

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First In Line: East Mountain

The next wind-energy installation in Vermont will probably be the four-turbine East Mountain Demonstration Project, proposed by Matthew Rubin of Montpelier, president of a company known as East Haven Windfarm. Rubin is a renewable-energy veteran, having previously developed in-state hydroelectric facilities. (A former Co-op member, Rubin chaired Washington Electric's 1978 Alternative Energy Committee; his brother Richard currently serves on WEC's Board of Directors.)

The East Mountain Demonstration Project (EMDP) is the first of the new wind-to-energy proposals to apply for a Certificate of Public Good from the Vermont Public Service Board. With only four turbines, it is the smallest of the projects. Rubin hopes for Board approval by spring.

The turbines would be erected at 3,400 feet elevation on East Mountain in Essex County. The 220-foot towers (their 115-foot blades would extend the vertical reach to 329 feet) would be spaced approximately 850 feet apart on the ridgeline, and would produce six megawatts (MW) of electricity. Projections of the site's output were derived from wind measurements taken at nearby Burke Mountain over a five-year period.

EMDP's website (www.easthaven-windfarm.com) features a photographic simulation of the ridgeline with the proposed turbines, from a vantage point seven miles away. The electricity generated by these four turbines — purportedly equivalent to the needs of 3,000 average Vermont homes — would be sold to the Lyndonville Electric Department at approximately 10 percent below market rates, and cover 30 percent of the utility's power needs.

East Haven Windfarm has also discussed a future proposal to add 46 more wind turbines on additional adjacent ridges. That 50-turbine project would be the largest in the East, and produce some 75 MW of electricity, equaling 50 percent of the Northeast Kingdom's electric demand. But it has met with substantial opposition, which has raised the profile of the immediate, four-turbine project. Opponents of wind power have called the modest, locally produced demonstration project "four lurid monuments to myopia," and an example of "the arrogance of big money."

Starting someplace...

The EMDP site originally was developed by the U.S. Air Force as a radar installation during the Cold War.

Several empty, rusted metal buildings remain. An existing road to the abandoned installation would provide access to the wind farm. The company plans to preserve one of the radar buildings as an historical site and viewing station, suggesting that the project might attract, rather than discourage, tourism.

"Everything the Public Service Board has said it wants to see in a site is satisfied at East Mountain," said Andrew Perchlik, director of Renewable Energy Vermont (REV). "It's already cleared at the top, there's a road to the site, and there's a local customer for the power."

The developers foresee at least a 20-year lifespan for the project. Critics therefore charge that the term "demonstration project" is misleading. Others say it's exactly what's needed to provide Vermont with real data and experience concerning the visual appearance of multiple, utility-scale wind turbines on a mountain ridgeline, their impact on tourism and local property values, their effect on habitat, and the potential for wind-energy production in Vermont.

"What these turbines will demonstrate, most importantly, we believe, is that wind turbines work and they produce electricity economically," said Rubin. "This is now a mature technology, but there have not been any modern wind turbines installed anywhere in New England. After the demonstration project is up and people have experienced it, they will have a different view of wind projects."

He added that Vermonters need not


be concerned about rampant wind farm development.

"There are going to be very few in Vermont," he predicted. "First, you need ridgelines at more than 2,500 feet elevation to produce electricity, and in Vermont half of the land above 2,500 feet is owned by the federal government and another 25 percent is owned by the state. Of the remaining land, half is under protective easements. Then, you need to be close to power lines, you need a willing property owner, you need (a road) to be able to get there, and you need a ridge at least a mile long."

"People have been looking around," he said. "Only half a dozen sites have been identified."

"There are issues about wind power," Perchlik, of REV, acknowledged, "but we can't solve them without testing. We have to move forward, rather than being frozen like a deer in the headlights."

WEC President Barry Bernstein agreed.

"I think we need wind in our future power mix, and I think a project of four windmills will give us a chance to see whether our fears or expectations are justified," he said. "The fact that this project will supply a local municipal utility with 30 percent of its customers' electric power needs at below-market prices seems to make this a good test case for wind energy in Vermont." 



The East Mountain Demonstration site, as it looked in its radar-station heyday.

Bernstein is not swayed by the aesthetics argument.

"Personally, I don't like seeing multi-million-dollar homes on the best ridgelines of the state," he said. "I think it's an eyesore. Some people think the condos around ski areas are great because it's economic development, while others think it wrecks the environment. People have different opinions."

Co-op Director Wendell Cilley noted another plus for wind: the apparatus (towers and turbines) can be removed without leaving their mark on the mountaintop.

"The presence, use and departure of wind facilities will leave a very light footprint on the mountains and ridgelines," he said. "They'll lack the contaminated soils, spent fuel rods and resource depletion associated with nearly every other generation source."

Roundup of projects

Presently there are five active wind-farm proposals in Vermont (a sixth, located in Sheffield, is in very preliminary stages). In **East Haven**, northeast of St. Johnsbury, developer Matthew Rubin proposes to erect four turbines on East Mountain, the site of an abandoned Air Force radar base. Rubin owns the property. (See "First In Line: East Mountain," p.5). Rubin is also behind a much larger, 46-turbine concept that would spread across three Northeast Kingdom mountain ranges, but which has generated significant controversy. It would require easements the developers have not yet been able to obtain. The idea appears to be dormant, if not dead.

Farther to the west, in **Lowell, Eden and Irasburg**, a multinational company called enXco has erected two wind-measurement towers on property owned by private landowners. The company and its consultants are also examining lighting, avian and engineering issues. The idea is to construct a dozen or more wind turbines.

This is where VPPSA – which provides power to small municipal electric utilities throughout Vermont – comes in.

"Starting nearly three years ago, the municipal utilities, through VPPSA, have been taking an exhaustive look at wind generation," said Director Brian Evans-Mongeon. "The crux of our investigation is whether this technology is economically viable and a suitable component for our energy portfolio. If we can derive electricity from turning blades, like we do with water and rivers, why not take advantage of it? But if the cost far outweighs the benefits, are we really helping our members? That's what we're trying to find out."

The environmental advantages of non-polluting wind power are real, but secondary, to VPPSA.

"Municipals have an obligation to provide power at the lowest possible cost of service," the director said. "If we can do that in conjunction with environmental benefits, fine, but not if all we're doing is

adding cost to the consumer's bill."

In **Searsburg**, where GMP already generates power from 11 wind turbines, a proposal exists to construct 22 more. This project would be sited on federal land, and subject to federal review. In

Londonderry, Catamount Energy Corp., a wholly owned subsidiary of CVPS, wants to build some two dozen wind turbines adjacent to the Magic Mountain ski area. Here, as in East Haven, access already exists to the development site – an important consideration under the state's review process.

Access exists also at Little Mt. Equinox in **Manchester**, thanks to a road that leads to a monastery near where Catamount hopes to erect five wind turbines.

These scattered locations disprove a charge that is put forth by wind tower opponents, according to Andrew Perchlik, director of Renewable Energy Vermont (REV), a non-profit that acts as a clearinghouse and advocacy organization for its members.

"There is a lot of misinformation around, including that the Kingdom is being unfairly targeted by developers who want to take advantage of poor, rural people up there," said Perchlik. "The projects in Manchester and Londonderry are in gold towns in southern Vermont."

Perchlik contends that a lot of the opposition to wind farm proposals in Vermont is based on misinformation and unwarranted assumptions.

"People hear that wind energy gets subsidies," he said, "but there are no state subsidies for wind energy. The projects will pay local property taxes, but people are saying there's a secret move afoot to abolish property taxes (for wind farms). There will be safety lights on the towers, which some people are comparing to airport beacons. They're just blinking red lights. People are projecting their fears, not their hopes."

Contrary to rumor, he added, wind holds its own with other generation sources.

"At 2,400 feet the wind blows quite a bit," he said. "Like, 80 percent of the time there's enough wind to generate some electricity. The capacity factor is around 30 percent, but that applies to the time (turbines are operating) at full output. People are confusing reliability with intermittency."

Objections to wind power

There is a windmill of some nature in Norwich, Vermont. John McClaughry of Kirby, president of the Ethan Allen Institute, doesn't know exactly what it's for, but he's been driving past it for more than 10 years.

"Every time I go down there I look at that thing, and I've never once seen it move," said McClaughry. He doesn't believe wind-generated electricity can replace any considerable portion of the power the state now gets from Vermont Yankee and Hydro Quebec.

"In terms of baseload power, forget it," he said. "You'd have to have a complete forest of these things that run 35 percent of the time."

For future global energy needs McClaughry favors new technology in nuclear reactors, which he said are smaller and more efficient than structures like Vermont Yankee. Nor is he persuaded by concerns about global warming caused by human activity. He contends that water vapor produced by the sun's

effect on the oceans produces 95 percent of the greenhouse gases, and that projections of climate change are based on worst-case scenarios from computer modeling.

"If humans are producing global warming it's a good thing," he added. "Vermonters would save millions (of dollars) in oil they didn't burn for electricity they didn't use."

But McClaughry's primary gripe against wind energy is economic.

"The industry," he said, "is tax-subsidy driven."

As evidence, he pointed to a (currently lapsed) federal credit for produced power at wind installations. McClaughry had no objection to reasonable depreciation credits for equipment, but production credits were a different story.

"That subsidy expired in 2003," he said, "but would continue in the federal energy bill – which (recently) didn't get passed, mercifully, because it's a subsidy carnival for a lot of people. We ought to abolish every tax subsidy for energy production. I'm convinced that the commercial (potential) for wind is overwhelmingly tax-driven for generation, in which case we shouldn't do it."

Among the general public, response seems to be mixed on the prospect of wind farms. On January 20, voters in Burke passed a two-year ban on



'The presence, use and departure of wind facilities will leave a very light footprint, lacking the contaminated soils, spent fuel rods and resource depletion associated with nearly every other generation source.'

Wendell Cilley

structures more than 100 feet tall at elevations higher than 1,000 feet. The ordinance was aimed at wind towers. A week earlier, according to the *Barton Chronicle*, about 100 people attended a public hearing in East Haven on the East Mountain Demonstration Project, and the sentiment in the room was overwhelmingly hostile to the project. People expressed that they were "willing to fight for (their) homes" and said the project "would manifestly harm the northeastern highlands."

Yet a survey of town residents taken in October by the East Haven Board of Selectmen indicated public support for that same project, and the \$70,000 tax revenues it would bring. Asked whether residents favored the project, 89 said yes and 15 said no.

A week later the Selectboard formally endorsed the project. In a letter to Gov. James Douglas, the Board cited its survey and wrote, "The news media (have) carried the vocal opinions of people who do not live in East Haven, do not own property in East Haven, or even pay taxes in East Haven."

News reports (the St. Johnsbury *Caledonian-Record*) from a September meeting on the East Mountain proposal made a similar point. Of 50 people at the public meeting, 28 were local residents.

Andy Perchlik, of REV, has attended meetings on wind power in Lowell, Kirby, Londonderry and elsewhere. "A big chunk of the people (who come to express opposition) are the same people, and they are angry and intimidating," he said. "At Kirby, nobody spoke in favor, but afterward I got emails from people saying 'I support it but I wasn't going to get up and say anything.'"

Co-op on course

Washington Electric Co-op, in its own way, has tried to gauge public sentiment about wind power. At community meetings for Co-op members in Corinth and Moretown last fall, WEC directors asked people their opinions on the subject.

"As an electric utility responsible for providing power to our members, we have a significant interest in defining our alternatives," explained Director Roger Fox. "To the extent that people had opinions about wind power, they seemed generally supportive."

Unfortunately, wind power may fall victim to the polarization that characterizes so many issues these days. Meanwhile, the Co-op's job is to secure electricity – preferably close to home, at stable prices, from renewable sources – for its members.

"We think eventually we'll be able to match up with an appropriate-sized project that meets our needs," said General Manager Patt. "It will be important to respect the wishes of the neighbors and be sensitive to environmental impacts. But we think there's a future for wind in Vermont and for the Co-op."



WEC's Community Fund

continued from page 3

geographical representation around the Co-op's service territory – the percentage of contributions will increase next time.”

Operationally, certain adjustments need to be made, but a year's experience has provided a sense of how many requests the Co-op can expect from hopeful applicants and how far the money might stretch.

“This was a good model for model for future years,” said Rubin. “Organizationally we're in a strong position for 2004.”

A list of the organizations receiving donations from WEC's Community Fund appears on page 3. Co-op members who wish to see Patt's report to the Board of Directors – which includes the amounts given and details of requests not funded – are invited to call Washington Electric Cooperative in East Montpelier.



WARMTH Contributions Increase In 2003

Despite – or maybe because of – a difficult state and national economy, Washington Electric Cooperative members have shown themselves willing to sacrifice for the benefit of their neighbors.

Last fall, 1,523 members passed up their capital credit refunds and instead donated the money to WEC's Community Fund. It netted the new program for local charitable giving more than \$14,000.

Co-op members still had room in their hearts for another cause. WARMTH, which provides heating assistance to people in need, received \$11,801.20 in contributions from WEC members in 2003. This was an increase of \$157 over the donations of 2002 – which continued the unbroken pattern of Co-op members giving more each year.

WEC provides two ways for members to donate to WARMTH. They can make direct contributions in response to a once-a-year solicitation that comes in the form of a brochure enclosed in members' October electric bills (responses to that brochure can be made at any time.) Direct contributions in 2003 amounted to \$3,426.31.

The other way for WEC members to give to WARMTH is through Operation Round-Up. When you sign up for Operation Round-Up you authorize the Co-op to round your electric bill up to the next-highest dollar amount, and the change – anywhere from a penny to 99 cents – goes into a fund that the Co-op forwards to WARMTH each month. Round-Up is a small, virtually unnoticeable way to make steady contributions to a program that protects people from losing their heat, and in certain cases their electricity.

In 2003, WEC members' contributions through Operation Round-Up came to \$8,374.89.

There are 1,408 Co-op members signed up for Operation Round-Up, out of WEC's total membership of about 9,400. In other words, there's room for growth. By initialing the marked area on your bill stub and mailing it to Washington Electric you can add your name to those who let WEC round off their monthly electric bills to help someone less fortunate make it through the winter. Those who prefer to make a specific contribution, or whose electric bills are paid by automatic debit, can call the Co-op to arrange for a donation to WARMTH.



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(If ordered before March 2004, no charge shipping included!)

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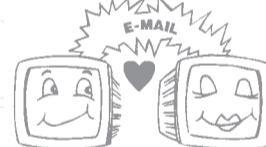
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WEC member prices .	adult	jr/sr
Midweek	\$30	\$20
Weekend	\$40	\$28
Holiday	\$45	\$33

MRG regular prices . .	adult	jr/sr
Midweek	\$45	\$33
Weekend	\$45	\$33
Holiday	\$45	\$33



Think Now About Running For WEC's Board of Directors

Deadlines Approaching For Candidates, Bylaw Changes

Often at this time of year it feels too early to remind Washington Electric Cooperative members about the Co-op's annual election of Directors to serve on the WEC Board. After all, the Annual Meeting doesn't roll around until May.

But considering the frigid temperatures our region has experienced lately, we thought people might enjoy a reminder that spring is coming. WEC's 65th Annual Membership Meeting will be held at the Montpelier Elks Club on Tuesday, May 25, 2004.

Like many annual spring rituals, it's best to prepare ahead of time. Therefore, we now urge Co-op members to think about running for a position on the Board of Directors. If you wish to have an influence over the policies and decisions made on behalf of some 9,400 Co-op families, farms and businesses in 41 towns in central Vermont, WEC's member-elected Board provides a unique chance to contribute. U.S. Rep Bernard



Directors Carla Payne, left, and Monique Hayden will not run for re-election to the Board.



Sanders, guest speaker at the 60th Annual Meeting in 1999, called the member-owned electric utility one of the remaining bastions of democracy in a country where local control – of anything! – is becoming rare.

True. But like all community organizations, Washington Electric functions best when members vote and participate. Candidates for the Board of Directors

must submit petitions at WEC headquarters, signed by 25 Co-op members, no later than Friday, March 26, 2004. People interested in running should call the Co-op for further information on presenting successful petitions.

More than in many years, the Cooperative needs civic-minded members to step forward. That's because two incumbent directors whose Board seats will terminate in May have decided not to run again. Carla Payne of West Danville has served WEC members since December 1996, when she was appointed to fill a vacancy. Carla was later re-elected twice. Monique Hayden of Williamstown ran successfully for the Board in 1998, and was re-elected in 2001. Both these directors have contributed their fair share, and are stepping down to make room for others to serve their cooperatively owned electric utility.

Each year three Board seats expire (directors are elected to three-year terms), which gives the membership an opportunity to replace fully a third of the nine-member Board at every annual

election. Board President Barry Bernstein of Calais, whose term also expires in 2004, plans to run again this year.

WEC Board members serve at-large, rather than representing districts. When there are more candidates than open Board seats, the three candidates with the most votes win.


Bylaws

Washington Electric Cooperative is governed by a set of bylaws — the legally binding rules the Co-op lives by. The annual election process provides members an opportunity to amend those bylaws.

The deadline for proposing bylaw amendments is Tuesday, February 10, 2004. For this purpose, the signatures of at least 50 members are required.

You don't need to be a lawyer to draft an amendment proposal. You do, however, need to know whether the subject that interests you is addressed in the current bylaws, and what those provisions are. You can obtain a copy of WEC's bylaws by contacting Deborah Brown, executive assistant, at the Co-op's office in East Montpelier.

Co-op Currents will explain your amendment proposal to the readers, just as it does when amendments are proposed by the Board of Directors. Approval or rejection of bylaw amendments is decided by a simple majority of votes. Ballots are cast by mail during a period in May, or in person at the Annual Meeting.

WEC encourages all its members to become involved in Co-op policy and operations, making use of an opportunity not available to the customers of investor-owned utilities. 

30 Below!

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aluminum splices on the wires can contract, which adds tension to the lines," explained WEC General Manager Avram Patt. "If there's not enough slack it can cause a break somewhere. That's what happened to the GMP transmission lines feeding our South Walden substation."


Power to the East Montpelier and Maple Corner substations was cut off after a tree fell across a different GMP transmission line that feeds both.

"We had a huge number of people calling to report their outages, and understandably many people were pretty panicky," said Patt. "So many members were trying to reach us that it tied up our phone lines and people couldn't get through."

This drove home an important point: In cases of widespread outages affecting a lot of people, Co-op members can get information on the radio (though they'll

need to use a battery radio or car radio if they don't have back-up power).

WEC sends bulletins to local stations WDEV, WSNO/WORK, WSKI, and WNCS (*The Point*). In this case, the bulletins assured listeners that Washington Electric was aware of the outages, explained what the causes were, and reported that Green Mountain Power and WEC were working to repair the damages and re-energize the transmission lines. The reports were updated until power was restored.

"When we lose power to a substation, thousands of people can be affected," said Patt. "We're not equipped to handle such a staggering number of calls. But in a situation like this, or in a big snowstorm or any other kind of disturbance that causes major damage and power outages, people can get a lot of what they need to know from these radio stations. It's a way we can communicate with hundreds or thousands of our members at once." 

President's Report

continued from page 2

Gov. Phillip Hoff tried to bring to Vermont in 1966. It's what has helped ensure lower-cost power in other parts of the country for decades.

The dams have a combined capacity of 570 MW and an average annual production of 133 MW of electricity. While they are not baseload power (that is, power from a generating source in constant operation), they can help provide that sought-after diverse power supply at the lowest possible price in today's marketplace.

The fight – and it's just that – for the purchase of the dams has been led by State Sen. Vince Illuzzi, R- Essex/ Orleans, and Senate Finance Committee Chair Sen. Ann Cummings, D-Washington, with guidance from Senate President Pro Tem Peter Welch, D-Windsor. Illuzzi, Cummings and Welch wrote the legislation that created the

Vermont Renewable Power Supply Authority to study the purchase of the dams.

Many others, including Washington Electric Cooperative's Board of Directors, have urged the governor and his administration to provide strong and aggressive leadership to purchase the Connecticut and Deerfield River dams. Unfortunately, as of this writing, the governor has not come forward with the leadership necessary to ensure the success of this project. Time is running out and Vermont will not succeed in this effort without Gov. Douglas becoming personally and positively involved.

Our power-supply choices for the future will not be easy. A realistic 20-year comprehensive energy and electric plan that involves, and then enjoys the support of, Vermonters will ensure our state is a better place in which to live and work. 