

# WEC CO-OP CURRENTS

## AMI (“Smart Meters”) Coming To Your Co-op

### WEC to Launch Automated System over the Next 18 Months

Sometimes it pays to be a leader. Washington Electric Cooperative has been a trail blazer in many ways – from breaking the economic grip of Seabrook (with its cost overruns) on New England utilities in the 1990s, to promoting energy efficiency and conservation when other utilities were still trying to get their customers to buy more power, to terminating its Vermont Yankee contract in 2004, to constructing its own methane-fueled generating station in 2005.

But sometimes it pays to be a follower. In the matter of “smart metering,” WEC’s Board of Directors chose to let other utilities go first. Washington Electric’s sister co-op, Vermont Electric Cooperative, has been Vermont’s leader in creating a system-wide “smart grid”; begun in 1990, VEC’s conversion is now about 90 percent complete.

“We have admired VEC’s trailblazing work on this issue,” says WEC Manager Avram Patt. “For ourselves, though, we chose to watch the development of smart metering and wait for the technology to prove itself, while putting our

energies elsewhere. That’s what we have done for the past 10 years.”

However, it’s now time to take the leap. “Smart grid” technology is the wave of the future, a future so immediate that it’s already here. It’s a system of two-way digital communication between electric utilities and the meters installed at the homes and businesses of their members/customers.

*Vermont’s co-ops are using a “wired” technology called Power Line Carrier; the power lines themselves will carry meter information back to the central computer, so homes will not be equipped with transmitters.*

Rather than sending electric power out to those members and then having people drive out to read their meters once a month, members’ usage information will be sent electronically back to the Co-op, and recorded, several

times a day. The advantages of this steady two-way communication are compelling for any company that wants to reduce the time involved in locating outages so that members’ power can be restored more quickly and cost-effectively, to help its members conserve their electricity, and to provide the most modern electric service available.

And it’s time for WEC to take the leap because the federal government

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Gov. Peter Shumlin participated in the ribbon-cutting and formal opening of the 40-MW Sheffield Wind project on Wednesday, October 26. In his remarks, Shumlin (above) noted that he had been in office only since January, “But in that time I’ve seen three major flooding events in Vermont – in April, May, and August. We’ve seen homes, businesses, and people’s dreams and aspirations washed away. That’s got everything to do with why we’re here,” he said. “We need to build renewable energy projects as fast and as well as we can, to get off our addiction to oil. And that means harvesting the wind, the water, the sun, and the fields.” At top, Shumlin greets WEC Director Roy Folsom (left) and WEC President Barry Bernstein.

### Manager’s Report

## Stop, Look, And Listen

### Why Gaz Metro’s Proposed CVPS Purchase Merits Your Attention

As most Vermonters know, the Vermont Public Service Board has opened a proceeding to consider the proposed acquisition of the state’s largest utility, Central Vermont Public Service, by Gaz Metro, the Montreal-based company that already owns Green Mountain Power and Vermont Gas Systems. As a result of this acquisition, GMP and CVPS would be merged into



one company serving more than 70 percent of the state’s electricity consumers. Their proposal also includes changes in how Vermont’s statewide transmission provider, VELCO, would be governed.

Every so often in the history of the utility industry in Vermont, a major event happens that shapes Vermont’s energy future for generations to come, often in

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### Washington Electric Cooperative

East Montpelier, VT 05651

### Inside

**With its 2011 rate case resolved,** the Co-op plans a more gradual approach for future increases. See President’s Message, page 2.

**Moretown and Williamstown were the scenes** for this year’s community dinner meetings. Electric rates and “smart meters” were on the menu. Page 5.

**More co-ops than you can shake a stick at.** October was National Co-op Month, and Vermonters walk the walk. Page 6.

**Among the leviathans.** Sheffield residents tour their local wind farm. Page 8.



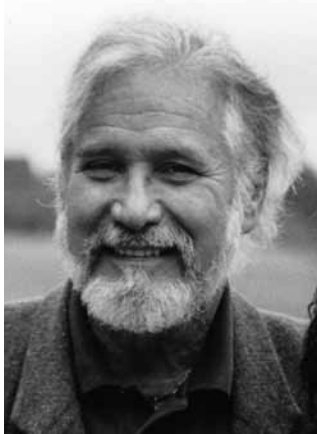
*Time to get your wood in!*

## President's Message

# Coming To Terms With Cost Demands: An Issue For WEC, And For the State

By Barry Bernstein

As Indian summer moves on most Vermonters busy themselves with the chores of preparing our gardens and homes for the coming winter. I have, with the help of a dozen friends, just moved and stacked five cord of wood, from my field across the road into my base-



ment. Unfortunately for too many of our friends and neighbors who experienced significant damage caused by Tropical Storm Irene, their focus and energy is on clearing out the muck and debris from their homes and businesses.

It's been a longstanding Vermont tradition to call on friends and neighbors to help when in need, whether it be to raise a barn roof, bring in the hay from the fields, or support neighbors who are sick or in need after being hit by some tragedy. In that spirit, Governor Shumlin called on Vermonters to come together again on October 22, to offer their support in assisting fellow Vermonters around the state who have been so

hard-hit by Tropical Storm Irene. The task facing those whose lives have been so devastated is monumental and will take much longer-term support from all from us who were spared this time.

I therefore would like to offer a personal suggestion, knowing that others also may have thoughts about

ways we can address the very extraordinary and difficult recovery challenges that our state is facing. It's a dialogue that needn't be confined to public officials, because we're all in it together. I suggest we consider issuing Vermont Irene Recovery Revenue Bonds, at a nominal interest rate of say, 2 percent to 3 percent interest, in low-enough denominations so that many Vermonters, as well as others in the country, can invest in our state's recovery. At a time when our savings are sitting in bank accounts earning almost no interest, such bonds would allow people to earn a bit more, while at the same time knowing that their

money was really going to help others. I know most Vermonters want to help out in some way – and have done so with labor or contributions. Perhaps this would be another way of sharing the burden, so it's not just falling upon those towns and citizens who have suffered the worst losses.

Okay. Now back to WEC-specific business. As usual, the Co-op has a lot on its plate.

### Rebuilding our office

Five months after our offices were inundated with flood runoff and sewage backup, the restoration process is now underway. The building interior has been gutted and a certified abatement team has removed all the asbestos from the premises. Site work is in progress behind the building on storm-prevention trenching, and we expect to receive bids in early November so we can finally get to work rebuilding both the interior and exterior of WEC's home. Special thanks go to staff members Dan Weston, Cheryl Willette, and Debbie Brown, and to WEC Board Members Dave Magida, Richard Rubin, and Annie Reed for their extra work on this project. I also want to thank the Black River Design team and our construction management company, PC Inc.

### Gaz Metro takeover of CVPS

Our general manager, Avram Patt, has addressed this subject incisively in his Manager's Report on page 3, but it bears emphasis here. Most of our members are aware of the merger proposal of our two largest electric utilities into one, to be owned by Green Mountain Power, which is owned in turn by Canadian company Gaz Metro. The new GMP would then own an electric-distribution system serving 72 percent of Vermont ratepayers, and have an even greater political influence on VELCO – Vermont's high-voltage transmission company – and state energy policy.

It's the biggest game changer in Vermont's electric-utility history.

Over the next seven months the Vermont Public Service Board will be charged with determining whether this merger is in the public's interest, and if it is, under what terms and conditions. Your WEC Board has asked for intervention status in the case, as have the other publicly owned electric utilities. We will monitor and respond to this significant change as more specific details unfold.

### WEC community meetings

In October we held our annual community dinner meetings, in Moretown and Williamstown. I sincerely thank the Moretown Fire Auxiliary and the Williamstown High School Class of 2013 for preparing the dinners.

In Moretown we were witness to the resilience of a town that was closed off by the flood damage caused by Irene, which knocked out the bridges on Rt. 100B at the north and south ends of the village. At Williamstown we were served by some of our future community and state leaders, who were raising funds for their class prom and senior trip. Thanks to our members who were able to attend the meetings, our staff for their excellent presentations on smart meters, and everyone for the good exchange that took place at the meetings.

### 2011 rate case resolved; forecast for 2012

The Public Service Board has just approved the DPS/WEC agreement to a 19.44-percent rate increase – a reduction of 4.37 percent from the original 23.81-percent increase we filed for a year ago. WEC members will receive a one-time refund on their November or December electric bills for the difference in what was collected and the lesser amount that was approved, retroactive to January 2010.

As I mentioned at the community dinners, WEC will need to file for another rate increase to take effect on our January bill in 2012. We expect the new request to be between 3 percent and 4 percent, but are still working on the filing. Your Co-op Board is committed to trying to keep increases at or below the annual cost of inflation. It does appear that we will need to be prepared for small but annual increases based on the rising costs of normal operating expenses and regional electric transmission, as well as the volatile market for sales of our Renewable Energy Certificates (RECs). A number of our members have urged the Co-op to consider this approach rather than deferring rate increases for longer periods and then needing to institute a sharper increase all at once, as we have just experienced.

### East Montpelier substation

WEC has just energized our newly rebuilt and upgraded substation. This will greatly improve our reliability for members supplied by the Jackson Corners and East Montpelier substations, by enabling us to back-feed to people served by either of these substations when we experience problems at one of them. Much thanks to our WEC crew, who provided the expertise to enable us to do this project in-house.

Finally, I share these thoughts at the end of October, which is National Co-op Month. The cooperative way allows us to work together to utilize and share each other's skills and energy, helping to provide a better future for our communities.



## Co-op Currents

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WEC is part of the alliance working to advance and support the principles of cooperatives in Vermont.

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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.*

# Manager's Report

## Stop, Look, and Listen

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ways that cannot be predicted at the time. Approval of the proposed merger of CVPS and GMP into a single, foreign-owned company would certainly be such an event. This is a big deal, and we should all pay attention and care about the outcome.

### WEC's interests

Washington Electric Co-op has asked to intervene in the PSB docket, as have other utilities and a number of other parties who feel they have a stake in the outcome. While WEC's Board of Directors has not fully developed a position on this matter, we do have a number of interests in this case. GMP subtransmission lines serve a number of our substations. We are involved in several significant joint long-term contractual arrangements with CVPS, GMP, and other utilities for power supply and other matters. We have an interest in how those relationships (and the costs associated with them) will be affected by the merger.

### What happens to VELCO?

The issue that may be the hardest for most Vermonters to grasp, but which may be among the most significant ones, is what happens to VELCO, the statewide company that is owned by all of Vermont's electric utilities including Washington Electric Co-op. VELCO manages Vermont's high-voltage transmission system. The ownership structure of VELCO and its affiliate, Vermont Transco (which actually owns the system), is unique in the country. It has given local utilities and state regulators a greater degree of control over the high-voltage transmission grid within our borders than is found elsewhere. It has also given our small state a stronger voice in regional and national transmission issues than we might have had were the transmission system owned by a conventional for-profit company, as is usually the case.

CVPS and GMP together own more than 70 percent of the shares in this system. What would happen to VELCO if it were to be controlled by a private Canadian energy company and its investors? How would this affect decisions about where transmission infrastructure is built, who pays for it, and who benefits from it?

GMP has acknowledged concerns about this in its proposal, and has suggested a mechanism so that the new merged company does not have a controlling share of votes in VELCO. Whether this proposal provides sufficient long-term assurance that Vermont will retain control of this critical energy resource will likely be investigated and

debated in the PSB proceeding. In addition to WEC's own direct operational and contractual interests, we are concerned, as a small, local, consumer-owned utility, about control of Vermont's transmission grid, and about Vermont's voice in larger regional and national transmission grid development.

### "We can't foresee the future. Why care about this now?"

That's exactly why we should care. Most Co-op members, like most Vermonters, usually don't get immersed in the nitty-gritty of the energy industry. But this is an issue that Vermonters should pay attention to. The present

customers of CVPS and GMP will, of course, want to know how this might affect the quality of their service and their rates. But let's assume for now that the Public Service Board determines that

those customers will either benefit, or not be harmed by the merger. Utility mergers are not that uncommon, after all. What makes this merger different?

The history and development of Vermont's electric utility industry stretches back to the late 1800s. Over the course of those many years there have been a few major turning point moments that, for better or worse, set the course of Vermont's energy future for generations after. Those decisions determined not only what Vermont's major power supply sources would be, but also who would own and control them, and for whose benefit. This is one of those moments.

Vermont has not always made the right decisions at those moments, although we've made some good ones too. Sometimes decisions were far too influenced by those who stood to gain financially from them. Sometimes Vermont leaders passed on opportunities, perhaps not even realizing that a turning-point moment was upon them, to be regretted many years later with the wisdom of hindsight.

The global energy industry is changing dramatically. In Vermont, we have a strong desire for a cleaner energy future. Who will decide what to invest in? How much local renewables can we develop? Can we build a grid that will move massive amounts of renewable energy over great distances? How can we be sure that energy efficiency and conservation always comes first?

Transmission-infrastructure decisions, at VELCO and beyond Vermont's borders, will affect anyone making energy choices down the road. How can we assure that little Vermont does what's best at home, and speaks up for what's right as even bigger decisions get made at the regional, national, and continental level?

Well, we can't assure that, because we don't know exactly what major

energy choices will actually be before Vermont, its utility managers, regulators, and elected leaders, whether that future is five years or generations from now.

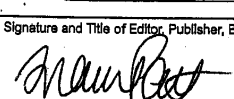
### Who will be calling the shots, and on whose behalf?

What we can have some say about, today, is how a vital organization like VELCO is governed. VELCO manages Vermont's transmission grid and its relationship to the regional grid system and beyond. Some will argue that in the big energy industry picture, tiny Vermont has little clout. Maybe that's true, maybe not. But the real question is: Who looks out for Vermont's energy interests with whatever clout we do have? Who will be calling the shots when those decisions get made in the future?

Depending how far into the future we're looking, we can't even say which people will call those shots. What we can influence, today, is how those people will be chosen, and whether they will be looking out for our interests and for those that come after us.

The proposed merger of CVPS and GMP into a single utility owned by a Canadian company that also owns Vermont's natural gas utility is a big deal. There's more at stake than simply who will be selling electricity to most of Vermont's ratepayers or restoring their power during storms. That's a major reason why WEC has asked to participate in the Public Service Board proceeding, and we will take more specific positions as the case develops. It's why all Vermonters should pay attention to this proposed change in ownership in Vermont's energy industry.

*What would happen if VELCO were to be controlled by a private Canadian energy company? How would this affect decisions about where transmission infrastructure is built, who pays for it, and who benefits from it?*

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## Smart Meters

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will pay 50 percent of the \$2 million cost of WEC's upgrade, through the 2009 American Recovery and Reinvestment Act (known as the "stimulus bill"). WEC will cover the balance of approximately \$1 million through its 2012-2015 Four-Year Construction Work Plan, the standard loan program for the nation's electric co-ops. The construction-and-maintenance loans are financed by the U.S. Department of Agriculture's Rural Development Electric Program.

The ARRA's contribution – which is not a loan, but a federal grant provided to a consortium of Vermont utilities – is an opportunity that won't last forever. WEC Operations Director Dan Weston explained the schedule to Co-op members who attended Washington Electric's community meetings in Moretown and Williamstown in October.

"Through the ARRA we have until April 2013 to get the job done," said Weston. "Being frugal Co-op people, we're going to have it on line, on time."

### Primer on smart metering

"Smart metering" – or AMI (Automated Metering Infrastructure) – was Topic Number One at the Co-op's Moretown and Williamstown meetings. The annual October meetings give WEC's members and leadership an opportunity to socialize and to trade information and opinions on WEC's practices and policies. At this year's meetings the discussion ranged from rate increases to sources of power to the flooding last May of Washington Electric's office building, and more (see story, page 5). But the message the Board and staff carried to the meetings was that the changeover to smart metering is set to begin.

General Manager Patt began with an explanation. There can be many aspects to a fully developed smart grid, Patt said, "But for everyone in this room the change will come in the form of a computer chip inside the electric meter at your home or business. If you have a digital meter, in most cases we'll just be able to install the new chip. If you have one of the older, analogue meters, it will be replaced.

"The primary benefit we will all receive will be a quicker restoration of power after outages, because it will take the Co-op less time to locate the cause. We're a rural Co-op," he reminded people, "so we're not going to put an end to outages because they happen on a rural system. But we'll get our crews to them more quickly and have the power on faster. And that means it will cost us less."

Weston explained how that will work. The distribution system has hundreds of fuses upon its lines, and like fuses and breaker switches

in people's homes they are designed to be weak points on the system, to disconnect when there's a power surge or interruption caused, for example, by a tree falling on the lines.

"When you lose power, nine times out of ten it's a fuse," Weston said. By disconnecting, the fuse protects members who live closer to the substation from losing their power, too.

WEC needs members to call and report their outages, which won't change under AMI. But by testing (Weston said "pinging") people's meters from the substation, linemen will be able to identify more quickly which meters aren't pinging back – the two-way communication enabled by smart metering. Comparing that information to WEC's computerized mapping system will then enable them to detect the disconnected fuse. That narrows the search for what caused the fuse to break in the first place.

Actually, WEC has some of these capabilities now, through similar but less-advanced technology. But with AMI's two-way communications Co-op technicians will be able to locate problems without gathering as much information as the present system, so it will provide results far more quickly.

Weston added that members whose lights flicker at certain times of the day will also benefit from AMI. Once they report the condition, WEC's technicians can study the information sent back from the meter and analyze whether there's a loose connection somewhere, or the voltage is inconsistent, or another "load" is impacting power quality.

"Otherwise what we need to do is send out a crew to monitor your home for an hour sometime while you're there, and perform an outage or two for diagnostic purposes. It's much less

convenient," said Weston.

Patt addressed an issue that's important to some electric customers – how the electronic data get communicated. He displayed a state map with green and blue areas, the green representing the service territories of WEC and VEC – Vermont's electric co-ops – the blue where investor-owned utilities Green Mountain Power and Central Vermont Public Service operate. The latter (the IOUs) are implementing "wireless" radio-frequency (RF) systems for electronic communication, so there will be transmitters at people's homes and businesses. The co-ops are using a "wired" technology called Power Line Carrier (PLC). That means the power lines themselves will carry meter information back to WEC's central computer, so homes will not be equipped with transmitters.

"We've been watching AMI deployment, here and around the country, for ten years," Patt said, "not wanting to jump into this until we knew what we wanted to do. We think that Power Line Carrier is a better technology for our system, and that's what we'll be using."

The manager also spoke to another issue that has arisen for some people – basically, a concern over how much other people, including their power companies, know about their electricity consumption. Patt said that Washington Electric will offer a "functional opt-out" of the AMI system. The Co-op will put smart meters in all members' homes and businesses to compile a record of their usage, which is necessary for billing purposes; but if they choose the "opt out" WEC will electronically read their meters just once a month

so they can be charged for their power. (There will be no more manual meter reading on the Co-op's system.)

Besides the Co-op, the people who stand to gain the most from the data accumulated by the utility are the members themselves. Member Services Director Bill Powell explained that people will be able to see the same usage records the Co-op uses, by going to a password-protected web site and logging onto their individual accounts. (He emphasized that no one else will have access.) Powell also pointed out the limits of the system: The records will show, with an hourly bar graph, how much power the member's home is using, but it will have no way of showing what "loads" in the home were in use when the consumption increased or decreased. For that, further analysis is needed (and you can call Powell at the WEC office for assistance). But tracking the hourly usage provides a great starting point for members to begin to reduce their power consumption and lower their electric bills.

Deployment of AMI will also pave the way for further innovations, should WEC and its members choose to pursue them. One possibility is to expand the Time of Use Rates, a system for charging different electric rates at different times of the day, which would enable members to operate high-usage appliances like clothes dryers during hours when the power would be less expensive. Expanded Time of Use rates are not in WEC's immediate plans, but they could become an option for WEC members after the AMI system is in place and operational.

"There are future capabilities we aren't even looking at yet," said Patt. "They could be significant advances for us and our members somewhere down the road."

### FAQ (Frequently Asked Questions)

WEC members at both community meetings had questions about AMI. Here is a sampling.

#### How are you going to get started with this?

Weston said the Co-op will begin at the substations, which must be equipped to transmit the information between members' meters and Co-op headquarters. Meters will then be installed at homes connected to those substations. The process will begin this winter in East Montpelier, the closest substation to WEC's headquarters and workforce, which is favorable for launching a new technology.

#### Will AMI be able to provide internet service to the house?

Powell answered that it would not. "It will be providing only quick blips of digital information back to the Co-op – not enough bandwidth for downloads to your computer."

#### How often will data be collected?

Powell said that the system will collect the data hourly, but probably transmit that collected information back to the Co-op only about three times a day. It will not be a constant back-and-forth.

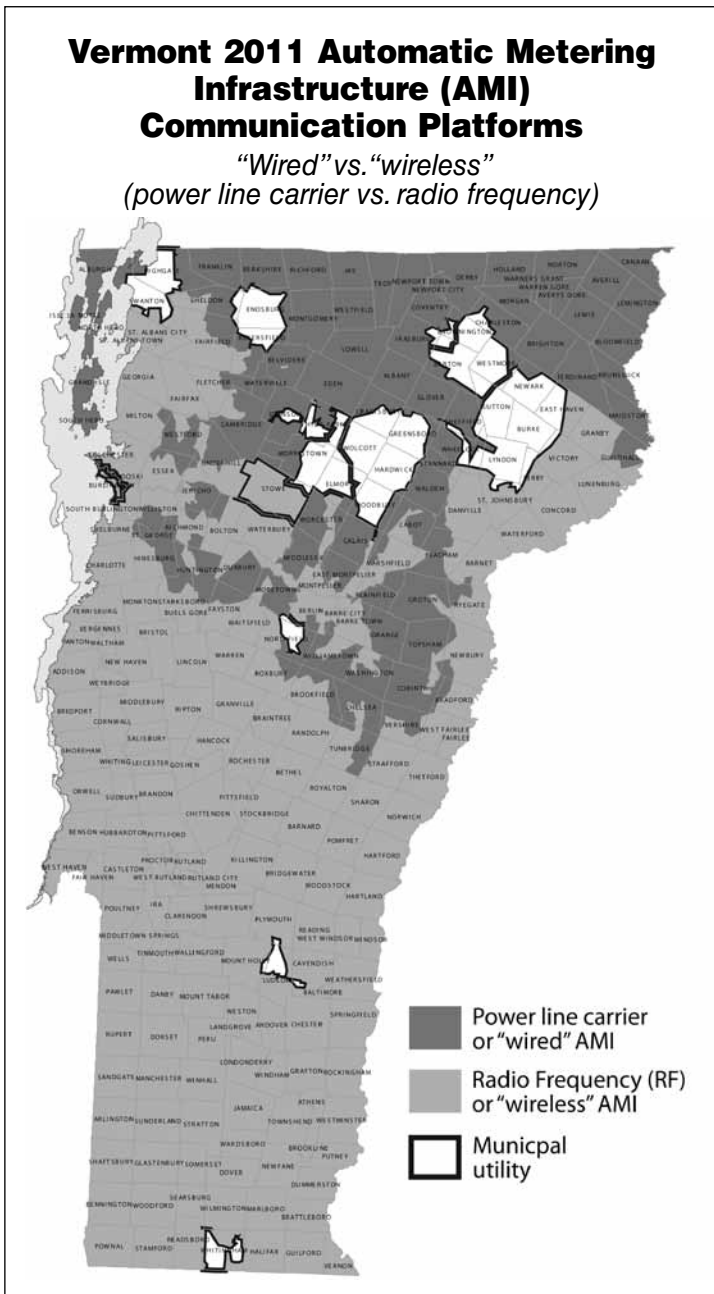
#### Will the Co-op be adding IT staff (and therefore, payroll)?

Patt said WEC's workforce would remain about the same size as now, though with turnover people with more IT-related skills might be brought on, reflecting the change in the industry.

WEC member and State Representative Sue Davis, of Washington, pointed out at the Williamstown meeting that the statewide adoption of AMI will mean that meter readers will lose their jobs. (WEC does not directly employ meter readers; the Co-op contracts with a company for those services.)

WEC President Barry Bernstein acknowledged Rep. Davis' concern.

"We are sensitive to the point you're raising," he said. "There will be a loss of these part-time jobs for some Vermonters. It's a trade-off for the benefit of providing better services for our Co-op members."



# Attendance Is Mixed, But Discussions Are Vital, At WEC Community Meetings

Washington Electric Co-op held its annual community meetings in Moretown and Williamstown this October, meeting with local members at Moretown's Town Hall on Thursday, October 13, and at Williamstown's Middle/High School on Tuesday, October 18. Hosting the Moretown Meeting was the Fire Department Auxiliary, local folks who served up a tasty dinner and perhaps earned some profits to put toward the auxiliary's community projects. The Williamstown dinner was a benefit for the school's Class of 2013. The high school juniors helped prepare a sumptuous meal, and served and cleared for the roughly 50 Co-op members, Board members, and staff who attended.

Turnout in Moretown was considerably smaller – in the neighborhood of 20, plus WEC directors and staff. (Typically, community meetings draw about 30 to 35 members.) Moretown Village took a major hit from Tropical Storm Irene, and the Town Hall is not yet fully restored – which may have contributed to the low attendance. Those who came, however, were well informed and participated in the evening's discussion about WEC's rate increases, power sources, and other issues. For the Co-op's Board and management the 2011 community meetings served a particular purpose: they provided an opportunity to debut WEC's plans to institute AMI – automated metering infrastructure (known as "smart metering") – between now and April 2013. (See "AMI Coming To Your Co-op," page 1.)

These were Washington Electric's first community meetings since it introduced a 23.81-percent rate increase on January 1, 2011. (In 2010, preparing members for the coming rate increase was the major topic at the October community meetings.) It was WEC's first rate hike in 11 years, and even at nearly 24 percent it was less than the average increase in other utilities' rates over that 11-year period. But that didn't diminish the blow for some WEC members.

The January rate hike was made provisionally – put in place, as state law allows for electric cooperatives, while the Vermont Public Service Board (PSB) collected information to decide whether to grant the precise increase the Co-op asked for. Typically, a part of that deliberative process is an investigation conducted by the Department of Public Service, which then delivers its recommendations for the Board to consider. In this case, the process was further in flux because Washington Electric's management team uncovered an error in the calculations that all the parties had been using; the Co-op immediately notified the DPS of the error, leading to a slight reduction of the requested rate increase.



*It all starts with a good meal. WEC Manager Avram Patt (left, above) breaks bread with Co-op members in Moretown prior to a discussion on AMI (automated metering infrastructure) and other matters at the first of two community meetings in October. The Moretown event was held on October 13 at the Town Hall (left) in a village still recovering from Tropical Storm Irene. Below, three students from Williamstown's Class of 2013, which hosted the WEC community meeting at their school on October 20.*

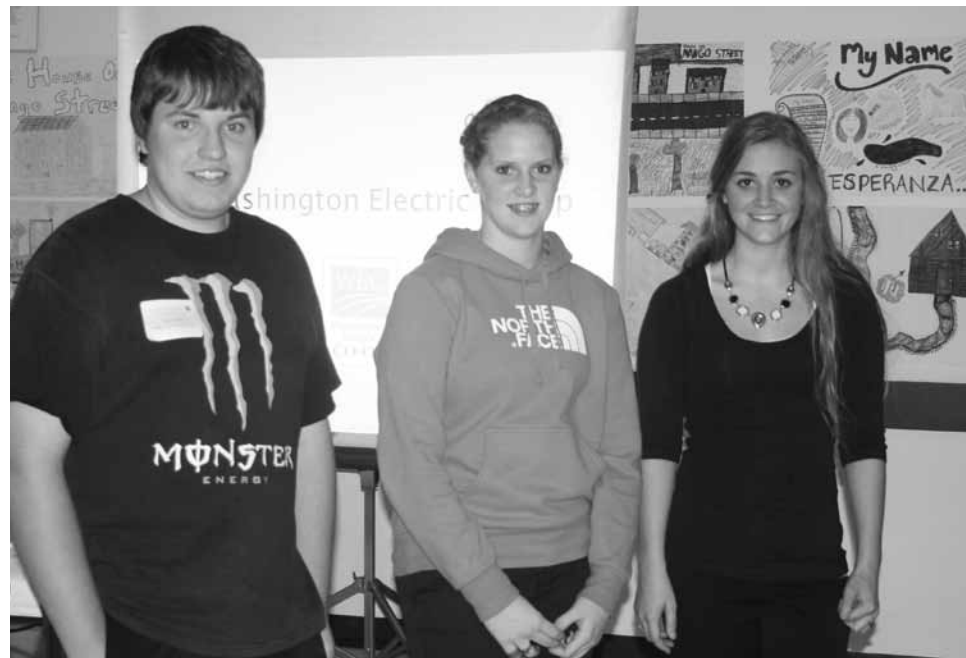
At the community meetings, WEC President, Barry Bernstein explained the most recent development in the rate case, which was that the Department (DPS) and Washington Electric have reached agreement on a mutually acceptable rate increase.

"It looks like the increase will be just above 19 percent," he told his listeners in Moretown and Williamstown. "When it's finalized we'll all see a credit on our bills to make that [smaller] increase retroactive to last January."

Still, it was a mixed message. WEC's leadership believes a 19-percent increase won't provide enough revenue to meet operating expenses and loan requirements from WEC's creditors on an ongoing basis; therefore, the Co-op expects to apply for another rate increase before the year is out.

"We'll try to keep it to three or four percent," said Bernstein, who predicted, "We're now going to be in a period, like other Vermont utilities, of seeing small annual rate increases."

It's the product of increased operating expenses, flat revenue growth (members are conserving electricity), and a sharp drop in the value of renewable energy credits (RECs) that the Co-op earns from its Coventry and Wrightsville generating plants and sells to Massachusetts customers who need the credits to comply with state laws. Once a major source of revenue for the Co-op, the RECs market changed suddenly and severely – a combination of less demand and more competition



– altering the Co-op's finances dramatically.

## Other business

There was more to talk about at the meetings than the Co-op's electric rates. General Manager Avram Patt updated members on the condition of WEC's office building in East Montpelier, which was damaged by flooding on May 26 to the point that it's not usable and much of the workforce has been displaced to a pair of construction trailers in the parking lot.

The news was that renovations have recently begun, and the scope of the work has come into focus. "This provides an opportunity to make our old building a better building than it was," said Patt, "more energy efficient,

a better workplace for our employees, and a more welcoming facility for our members."

WEC's members own and pay for that building and all WEC's facilities, so even though East Montpelier is some distance from Moretown and Williamstown the renovations are everyone's business.

Patt also touched on the redesign of Washington Electric's web site. For many members the web site is their point of contact with the Co-op; it is informative (with news updates, history, and other features) and useful, providing information on bill-paying options including paying electronically. Web sites should be easy to navigate and provide clear information. The

*continued on page 6*

# Vermont Cooperatives: The Facts

(October is National Cooperative Month)

- More than 300,000 Vermonters are member-owners of co-ops.
- Almost 50 percent of Vermonters belong to at least one co-op.

Vermont is home to an array of cooperatives of varying sizes and types, including:

**Agriculture:** 6,000-plus farmers. The trend is to more value-added products and savvy marketing, while retaining the “local” connection.

**Consumer Food:** More than 25,000 member-owners. Food co-ops have changed the American diet and have led the way in organic and natural food and health products. They are now becoming “Main Street” grocery stores.

**Credit Unions:** More than 260,000 Vermonters are members of 35 Vermont credit unions. With a commitment to local development dating to their origins, Vermont credit unions continue to expand their financial services and are viewed with trust and high regard by their members.

**Education:** For more than 25 years Vermont has led the way in setting standards of child care for cooperative education, impacting more than 900 Vermont students.

**Energy/Electric/Water:** More than 50,000 members. Electric cooperatives wired rural Vermont when no one else would. Today, Vermont’s electric and fuel cooperatives offer dependable services with an increasing emphasis on renewable and clean energy. There are also cooperatively owned water utilities in at least 12 Vermont communities.

**Farm Credit:** Impacts more than 1,600 Vermonters. For 65 years, farm credit has provided financial services in addition to loans in support of equipment, operating costs, and home mortgages to farmers and rural residents.

**Housing:** At least 200 units of housing. From urban renovations to mobile home parks to time shares, Vermonters have put their faith in cooperative housing.

**Insurance:** Three small rural insurance cooperatives, organized in 1915, 1924, and 1933, combined forces in 1951. Today this cooperative ranks as Vermont’s largest farm insurer. It is also the second-largest homes and ninth-largest auto insurer. With more than 55,000 policies in force, this cooperative is growing rapidly, and recently expanded into New Hampshire.

**Employee-Owned:** Vermont has a growing number of worker cooperatives that create jobs anchored in community. Furniture makers, farmers, software developers, carpenters, and others who want to jointly own and govern their businesses and workplaces have formed such cooperatives. The Vermont Employee Ownership Center promotes this business structure.

**Recreation:** Mad River Glen is one of a kind – the nation’s only cooperatively owned ski area.

## Co-op Principles



### 1. Voluntary and Open Membership —

Cooperatives are voluntary organizations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.

**2. Democratic Member Control** — Cooperatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership. In primary cooperatives, members have equal voting rights (one member, one vote) and cooperatives at other levels are organized in a democratic manner.

**3. Member Economic Participation** — Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. They usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing the cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

**4. Autonomy and Independence** — Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

**5. Education, Training and Information** — Cooperatives provide education and training for their members, elected representatives, managers and employees so they can contribute effectively to the development of their cooperatives. They inform the general public — particularly young people and opinion leaders — about the nature and benefits of cooperation.

**6. Cooperation among Cooperatives** — Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.

**7. Concern for Community** — While focusing on member needs, cooperatives work for the sustainable development of their communities through policies accepted by their members.

## Community Meetings

*continued from page 5*

redesign, now nearing completion, will accomplish those goals.


### Silver linings

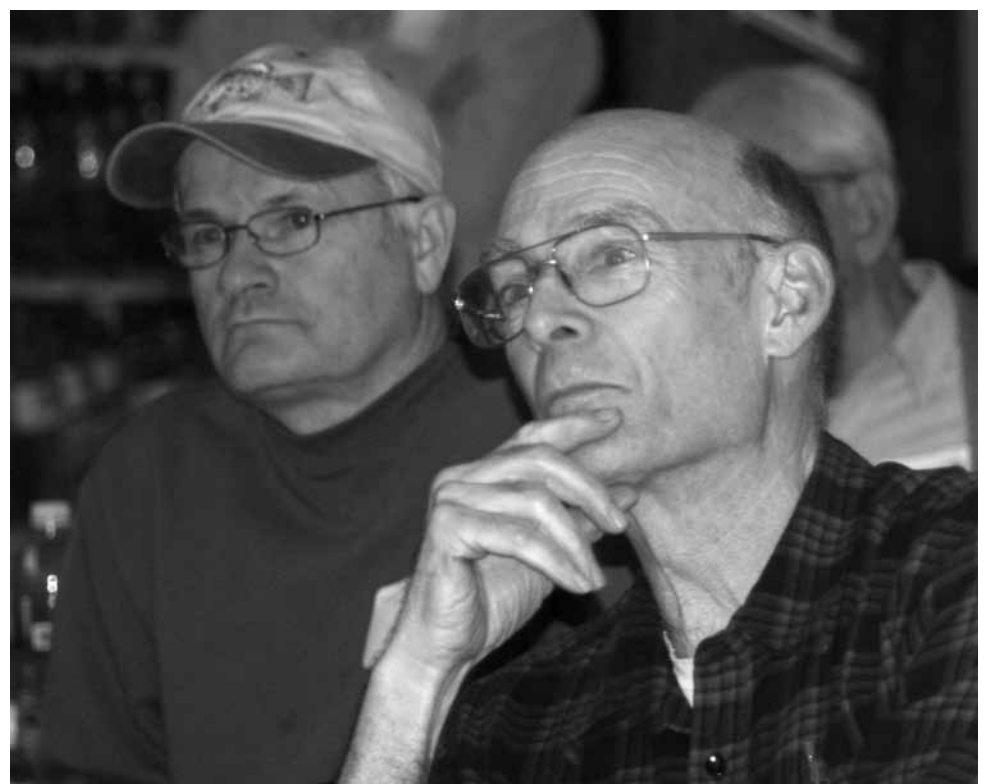
Buoyed by a good meal at both locations, the members, staff, and directors then settled in for a long talk about smart metering. But before the night was over, President Bernstein made sure to impart an important message.

“Despite hard times, we all have reason to be proud of our Co-op,” he said. “Almost all of the power that each of us, as members, uses in our daily lives, comes from renewable resources — the Coventry landfill-gas station, our hydro plant in Wrightsville, woodchip and small hydro stations, and other in-state renewable facilities. We’re now going to be adding wind power from Sheffield to the mix. Basically all of it is non-fossil-fuel power.

“We can also be proud of our employees,” he added, “who have really come through for us. They’ve worked under difficult circumstances since the May flood, even during Tropical Storm Irene, and have risen to meet every challenge they’ve been given.

“And another thing that’s great about our Co-op is that the average electricity usage by our members is lower than anyone else’s in the state. That’s not just by chance; it reflects an effort among all of us to achieve that goal. It’s good for our members because it saves them money on their bills, it’s good for the environment, and it’s good for the Co-op because it reduces the amount of power we have to purchase and provide.”

Those are trends that will only be enhanced as WEC evolves to the next phase — automated metering, and an infrastructure that can help the Co-op and its members conserve energy and use it more efficiently everywhere in Co-op country. 



*Listening and learning at the Williamstown community meeting. (WEC’s Bill Powell likes to say it’s more about people learning to be “smart members” than about “smart meters.”)*

## Sheffield Wind

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wetlands and other important natural resources, and used the existing logging roads as much as possible and built smaller turbine pads. We have a commitment to reduce bat fatalities through voluntary curtailment of turbines during bat migration. The project was built to reduce environmental impacts to the greatest extent possible.”

A point of contention, as always for commercial wind-energy projects, was the “noise” the wind farm would make. On the day of the October visit the wind was strong and the blades were turning vigorously – although the term is relative; the longer a windmill’s blades the more slowly they spin (for contrast, picture a child’s pinwheel). At the Sheffield site even a vigorous rotation seems languorous. The “noise” that a well-calibrated (and probably well-lubricated) turbine makes in such a wind isn’t a “noise” as people might fairly describe it, but more of a “sound” – low, natural (as opposed to mechanical), posing no problem for



First Wind’s Josh Bagnato, hosting the tour of Sheffield residents at the company’s new wind farm.

conversation. Pleasant, quite frankly. And unheard at even a short distance away.

The turbines themselves are majestic, graceful and elegant (rare enough for man-made objects), and somehow swan-like. Others surely would see it differently, influenced by

their opinions about wind power and its role on select ridgelines in Vermont. Yet here, in any case, are machines that reach into the sky to harvest electric energy for our towns and homes, and inject no toxins into that sky. (Says First Wind: “A traditional fossil-fueled generation facility in New England

producing an equivalent amount of electric energy would consume over 226,000 barrels of oil or over 61,000 tons of coal per year.”)

Yes, from certain vantage points – such as a few spots on I-91, and Crystal Lake in Barton – we can see them, just as, elsewhere, residents can see coal-, oil- and gas-fired power plants (and their stacks) that are near to them, and sprawling nuclear energy stations.

As the bus descended, back past the substation and the maintenance building, through the huge circular culverts, and returned to the parking lot, the riders kept up their chatter and jokes. They had now seen the wind farm that, a few years ago, they agreed to host in their town. No one voiced regrets, though a few alluded to the rift that the proposal had caused, and their hopes that wounded feelings would heal.

But for these Vermonters, Sheffield Wind, as the project is called, was clearly something they felt they could live with – and not just that, but could support and be proud of.



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# 'Sheffield Wind' Welcomes Town Visitors

## Local Residents Take a Ride to the Top

**O**n a clear, windy afternoon in October, First Wind hosted a tour for local residents of its new wind farm in the Caledonia County town of Sheffield. People drove to the wide dirt parking lot at the top of Duck Pond Road, where they left their cars and pickups. Then the group of some 40 adults crowded into a school bus for the climb up the narrow dirt road to where the turbines were spread across the ridgeline, many of them in small clusters although from afar they appear to be evenly spaced.

It was a jovial group. These were, after all, friends and neighbors, and most were getting their first look at the project that had resulted from a fairly contentious public debate in their town, which eventually ended in a vote of approval for the wind farm and the economic and environmental benefits it offered – such as 100 percent of its power production going to Vermont utilities, including WEC. The tour was hosted by First Wind's Josh Bagnato, a Charlotte resident and Vermont native who works on-site.

As the bus passed through a pair of giant culverts forming tunnels under I-91, then labored slowly uphill, Bagnato, standing next to the driver, greeted everyone and provided information about the project. Construction had commenced in September 2010, he said (shortly after a final favorable ruling by the Vermont Supreme Court), and finished on September 29, 2011. "We took four months off during the winter," he admitted. "You remember what kind of a winter you had here. We had to take a break."

Sixteen turbines had been erected, he said, each with a production capacity of 2.5 megawatts (MW). On this day, some two weeks after



Local visitors to the Sheffield wind farm eyeing the turbines on the next hilltop, and the one beyond that. There are 16 2.5-MW turbines generating renewable electricity at the installation, which began production in October.

completion, 12 were in operation and selling electricity into the grid; the remaining four were in final stages of testing. The turbines were manufactured in Iowa by Clipper Windpower. The towers are 275 feet tall, but Bagnato said that when the blades were at their highest they reached a peak of 420 feet from the ground.

As the road curved and climbed, the first construction that the bus encountered was a large, spanking-new substation on the left. One section of the substation is owned by First Wind and the rest by VELCO, which owns and operates the state's transmission infrastructure. "The VELCO lines were already here," Bagnato explained, "which is what made this project possible." The conductors from the turbines to the substation are underground, so there is no clutter of overhead lines nor tree

trimming to make clearance for them.

Across from the substation was the operations and maintenance building. "This is where our office will be, if you need to see somebody," said Bagnato.

Then came the serious climbing. The road is basically wide enough for only one vehicle, which Bagnato said was part of the state's requirement. "If we were in Maine it would be wider," he said. (First Wind has projects in Maine.) As the school bus lumbered up the road, at a speed of around 10 miles an hour, one gentleman said to his seat companion, "Quite a road, isn't it?" The elderly gentleman beside him, his hands resting atop his cane, quipped, "Is there a road here? I hadn't noticed."

Then the first of the turbines came into view. There is a way that wind turbines are like a full moon early in the night: At one moment they can

appear enormous, dominating the sky, and just moments later, from a slightly different perspective, they can appear startlingly small and modest, no larger than a Dutch windmill. They are much larger, of course; standing at the base of a turbine – which the visitors had an opportunity to do when the bus reached a summit and people got out to walk among a group of the machines – the tower dwarfs everything around it; but the next tower over, separated perhaps by a cluster of trees or a turn in the road, can look very humble, indeed. There is a point on I-91 South headed toward the Sheffield/Burke exit, where a large group of turbines – a dozen or so – suddenly looms, large and in charge, before you, a startling yet fascinating phenomenon that is, surprisingly, more dramatic than the experience of being among them in the wilderness.

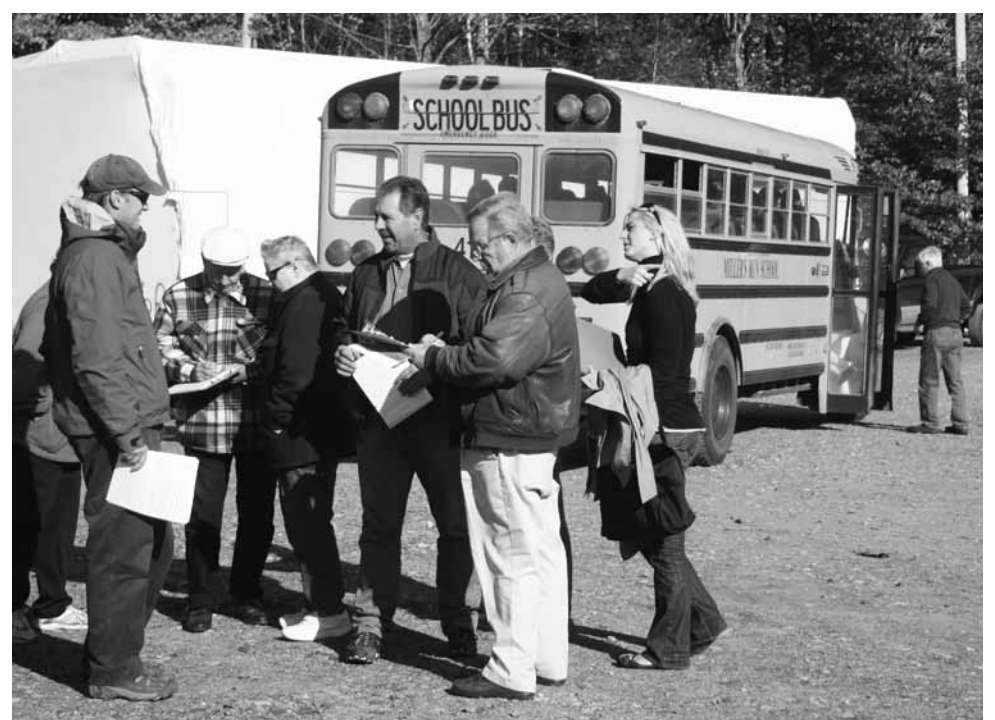
Wilderness still exists on the Sheffield ridgeline; in fact, there's more wilderness than development, with sweeping views that take in Burke Mountain and Mt. Washington in New Hampshire. There is the narrow dirt road, some six miles long, ambling, climbing, and descending through the 20 acres devoted to the construction (out of a total of 2,700 acres at the site; First Wind's lease stipulates that there can be no additional development). And there are some 27 "wet basins," as they are called – basically, holding ponds for runoff control required by the state permit. There are the 16 turbines and pads, and the substation and maintenance building. Otherwise, there is forest, quiet on an October day but for the persistent sound of wind across the mountain.

"We designed around bear habitats," Bagnato explained. "We avoided

*continued on page 11*



The towers are 275 feet tall, but the blades, at full extension, reach 420 feet into the air. Yet the turbines can look deceptively small from some angles.



Sheffield residents, with a few additional visitors, prepare to board a school bus on a slow drive up to the new wind farm.