

WEC CO-OP CURRENTS



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The newsletter of Washington Electric Cooperative, Inc., East Montpelier, Vermont.

December 2005

5,000 Lose Power

Foliage Left Trees Vulnerable in October Storm

The biggest problem, when the season's first major snowstorm blew into Vermont on Tuesday, October 25, was that the leaves were still on the trees. It was a wet, heavy snow, as fall snowstorms usually are, and the weight of the snow on the leaf canopy snapped branches and split the trunks of maples, oaks, birches, willows and locusts, or brought down entire trees.

The consequences were severe for electric utilities and their customers, including Washington Electric Co-op, which at one point had more than 5,000 members without power. For some, the outages were painfully long – up to four days – partly because WEC linemen spent hours chainsawing their way through trees that had fallen across the roads in rural areas before they could even get to where the power lines were broken and begin their repairs.

"We lost a day and a half clearing trees out of roads," said Dan Weston, WEC Director of Engineering & Operations. After the storm, Weston

was part of a statewide discussion among utility leaders and the Department of Public Service (DPS) contemplating systemic improvements to Vermont's response to weather-related emergencies. One of Weston's recommendations was better coordination among state agencies and town road crews so that line workers from the utilities could "focus fully on line work and restoration."

Co-op personnel swung into action during the day on the 25th, as the storm was gaining momentum.

WEC appeared to be gaining on the problems in the early hours, but overnight the outage numbers increased. The crews and office personnel stayed on the job all that night and the next day before some of the line workers were sent home to rest. (WEC's storm center is staffed 24/7 during extended outages, and one line crew continued to work that night while others slept.) WEC was thus able to begin Thursday morning fully staffed.

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Jeb Wallace-Brodeur/Times Argus

Scenes like this were common in Co-op Country and elsewhere in Vermont after the October 25 storm brought down trees and branches that still had their autumn leaves. Houses and power lines were frequent victims.

ISO Warns: Rolling Blackouts Possible This Winter

Electricity users throughout New England including Washington Electric Co-op members could experience short-term "rolling" blackouts this winter if the electric-generation system is unable to meet regional demands during periods of severely cold weather.

"The odds are that this is not going to happen," said WEC General Manager Avram Patt. "But it is a real-enough possibility under certain circumstances that our members and the customers of other electric utilities throughout Vermont and New England need to be aware of it."

The New England power grid is run

by the Independent System Operator (ISO New England), based in Holyoke, Massachusetts. In November, the ISO issued bulletins warning that some of the major generation stations in the region might have to be shut down for lack of fuel this winter when the demand for electricity is highest – typically during the coldest weather.

In response, Vermont's utilities are working together to prepare a "joint communication campaign," to alert customers beforehand if ISO institutes rolling blackouts.

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Inside

How to survive a prolonged power outage. We've attempted to answer the questions that are most on people's minds when an outage grows longer and longer. Page 8.

Generators or UPS's, that is the question when considering backup power. Learn about the alternatives on page 7.

2005 is nearly behind us, but the energy-related issues that arose during the year loom ahead, and must be dealt with. See the President's Report, page 3.

Sheffield wind-power project gets voters' go-ahead. There are miles still to go, but the WEC-backed development was approved by local folks at a special meeting. Page 8.



After three years' effort by Plainfield and Marshfield citizens, wireless broadband is coming to six WEC towns. Pictured above is project spokesman Michael Birnbaum. Story on page 4.

Washington Electric Cooperative

East Montpelier, VT 05651

Rolling Blackouts

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One reason for this situation is Hurricane Katrina. The August storm devastated much of the Gulf Coast, damaging the infrastructure that provides natural gas by pipeline to other parts of the country. More than a dozen natural gas-fired electric-generating stations were built in New England over the past decade, so that now a third of the region's power is generated from this fuel, leading many to feel that New England is too dependent on this one energy source. Reduced natural gas resources, along with price spikes for natural gas that could result from increased demand during cold weather, could combine to idle some of the plants – just when New Englanders would need them the most.

"If this actually happens," said Patt, "the ISO would set in motion a series of rolling blackouts, which would be something Washington Electric would have no control over but would be required to participate in."

These controlled outages would be brief – probably 20 to 30 minutes. But it's possible that ISO would need to keep them going through a prolonged cold snap, so that areas would experience more than one such outage.

By sharing the burden among all customers, ISO would hope to enable the six-state region to function with no major impact from a power shortage.

However, no home or business would be spared. Some of the steps noted elsewhere in this issue for preparing for major power losses (see page 8) would also be useful for preparing for these shorter, planned outages.

Good time for conservation

The other thing WEC members can do is to reduce their electricity usage – a good idea at any time, but especially during severe weather when electric demand is highest. Turn off lights that aren't needed; avoid running washing machines, dryers and dishwashers, or run them late at night (after 10 p.m.) or early in the morning (before 6 a.m.); if they must be run, do a full load so you won't have to do another load later.

Home electronics – including TVs, VCRs and DVD players – are always "on"; even they're supposed to be off, they're idling on standby power. You can unplug them – or more conveniently, buy a multi-input surge-suppressor strip with an on/off switch that actually cuts off power to them when it's not needed, and allows you to turn the units on easily when you want to use them.

Most likely New England won't run short of power this winter, but the chances of this happening are greater than they should be. Perhaps we can reduce those chances if we all conserve electricity wherever and whenever we can. And in case it does happen, "Be Prepared."



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.

Members Write

Co-op Currents welcomes letters to the editor that address any aspect of the Co-op's policies and operations, or any matters related to electricity. Readers can write to Co-op Currents, P.O. Box 8, East Montpelier, VT 05651. Letters to the editor will not be published in the Annual Meeting (April) issue.

'Little House' in Worcester

Dear Washington Electric Co-op Employees:

I am writing to express my heartfelt thanks for the power outage of October 26-27. My husband and I try to be mindful of the difference between "needs" and "wants," and we work to reduce our "wants" for a joyful life. One item we would classify as a "need" is electricity, and this power outage has given us a new appreciation for this necessary luxury.

Our seven-year-old daughter's hero is Laura Ingalls Wilder. We have had the privilege of living "like Laura," and it has been a true delight, after the shock of no morning wake-up shower for "Ma." ("Pa" washed his hair in the sink at work.) Evening board games and morning breakfast by candlelight have been wonderful memory-making moments.

If it has been a long time since you read the Little House books, I would highly recommend them for winter reading at any age. Prepare yourself for the 19th century attitude toward "Indians" and wild creatures and nature, but then marvel at the pluck and courage of people in search of a good life.

I cannot send a letter to Laura, so I am sending a love letter to my electric cooperative! I have been thinking of the many hours the line crew has been putting in to restore power to all of our homes, and I am grateful for their time, energy and dedication. I am sure being at a desk with a telephone at the WEC office has been no picnic, either, so thanks to the entire staff. This has been a lovely experience for our family, but we are ready to praise our necessary luxury!

Thanks from our entire Ingalls-Conlogue family,
Paige, Michael, Madeline
and Thomas
Worcester

Off Line, And Just Fine

Dear WEC:

In this day of 100 TV stations, computers and other electronic gizmos, losing power can be upsetting.

We lost power for 24 hours and felt lucky that we had not only a wood stove for heat, but also a generator to

keep our food cold.

My husband and I spent our evening by the wood stove chatting about what a job it is to be a lineman for WEC, not something we would take on. We enjoyed our time by candlelight and decided that not having a TV blaring or a computer screen to stare at wasn't a bad thing, not a bad thing at all. We went to bed, both of us, thinking, "If the power isn't back on tomorrow, who cares?"

Thank you, WEC, for all you do, and thanks most of all to the linemen for doing their job in the worst, most dangerous conditions. We're back "on" this morning, and back to work in front of computer screens, remembering our 24-hour loss of power. We'll be ready and waiting for the next time we're knocked off line.

Sue and Rob Bridges
Plainfield

Thanks To Linemen and Their Families

Editor, Co-op Currents:

Our thanks go to the linemen and their support crew for their hard work during the "snow storm."

We were without power for only 45 hours. Some would think that's a long time, but we realize what the guys were going through and know they were giving 150 percent of their efforts. (This also includes thanks to their families, who have concerns for them out in the wet, dark and cold.) We know what a mess they were dealing with because it took us four days to reopen two miles of snowmobile trail the next week.

As far as we're concerned, WEC needs no investigating into their emergency response. Maybe study how well they do and have other companies follow their lead!

Thank you!
Susan Robbins
Brookfield

Editor's Note: We know that not everyone shares the feelings of these letter writers, and that the prolonged October outages caused real hardship for some people. But we thank these writers for their concern for our employees, and their patience during a difficult week.

President's Report

Our October Storm, And World Crises of 2005, Represent Challenges For The New Year

By Barry Bernstein

Come December it is always hard to believe that we are approaching a new year. 2005 has been a very full year, with the Coventry landfill gas-to-electric plant consuming so much of everyone's time at WEC while we're still attending to normal co-op business. I hope things will be easier in the new year.

However, I feel the challenges we are all going to face as we move forward will call on each of us to make changes in how we think, act, and how we live.

The events in the news – the tsunami, Hurricane Katrina, the Iraq war, the sharp rise in oil and gas prices, the constant discussions on global warming, the peaking of oil supply and increased demand for energy by China and India, which represent 1/5 of the world population – are not just a blip on the screen. The long-range impacts of these events are mentioned

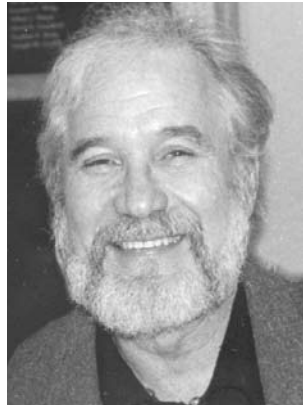
in every regional and national newsletter I get about electricity and in my own business.

Most recently, the awareness that New England may face rolling blackouts this winter is just another indication of the changing environment. Your Co-op Board and staff are continually discussing how we can proactively work with our membership on increasing each household's efficient use of electricity by encouraging replacement of old appliances – refrigerators, freezers, dehumidifiers, air conditioners, etc. – generally tightening up your homes, and making wise choices going forward. We will again be looking at programs such as working with the 20 percent of our members who use electric water heaters to switch to propane or oil, saving them and your Co-op money over the long run.

I do want to specifically address two issues that have taken the time and attention of your Co-op Board and staff during recent months.

October Snowstorm

The unusual October 25 snowstorm resulted in more than 5,000 of our member households – nearly 70 percent of our year-round residential members – being without power for one-to-four



days. The wet snow on trees with full leaves broke lines, brought down trees and made reaching outage locations extremely difficult. It did not help that more than 60,000 households and businesses of other Vermont utilities, including our sister co-op VEC, were in the same boat and unable to give mutual assistance until

late in the week.

I and two other WEC Board members, Don Douglas and Roger Fox, had the privilege and opportunity to help answer phones during the storm, assisting WEC staff. I am really appreciative of our membership and your patience during a difficult situation. I also appreciated our Co-op employees, who worked many overtime hours, maintaining their composure, both in the office and in the field. Watching everyone work and give support to each other and our members was an awesome experience. When a member called

in with a special need staff really tried to accommodate the situation.

What did surprise me, however, was how many of our members do not have any backup heat source, or did not have a backup plan on what to do when Mother Nature overwhelms us. We were fortunate that this storm was in October and not January.

We all really need to have some plan for an event that we have no control over. Preparations could include a backup place to stay, a five-gallon water container, flashlights, a non-electric space heater, a couple of coolers (with ice) for storing perishable food.

We have had many conversations about this situation with Board and staff and hope information we have provided on page eight of this issue will be of some value to you. However, in the end each member household must be prepared when circumstances do not allow us to get everyone's power back on the same day. Our staff has been in discussions with Vermont Emergency Management on how each town can be better prepared to offer help.

Quite a few members have called me asking for information on installation of backup generators, and this issue offers some options for members

to consider (see page seven). Please know that your Co-op staff and Board are always trying to do the best we can to support you, especially when a storm hits.

Wind Power-Sheffield Project

As we have noted previously, the WEC Board voted to use \$850,000 of our federal grant funds to pay for studies and costs associated with determining the feasibility of the wind project proposed for the towns of Sheffield and Sutton.

UPC Vermont Wind is the company developing the project, and if it is successful WEC and possibly our sister co-op VEC and Burlington Electric Dept. will buy most of the power from the project. The town of Sheffield recently held a non-binding referendum where 56 percent of the voters supported the project, following months of rigorous debate.

I am aware, from many conversations with friends and neighbors, that viewpoints are strongly held by folks on both sides of the issue of wind turbines on Vermont's ridges. Your Board of Directors made a policy decision in 2000 to replace expiring power contracts with new renewable and reasonably priced sources. We believe

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that the development of wind power at the six to 10 viable sites that have been identified is an essential part of Vermont's future power portfolio. We also believe that a very aggressive energy-conservation and energy-efficiency effort is crucial to both Vermont and New England.

How we meet our energy needs at WEC

and in Vermont involves critical but less-than-perfect choices. No one solution will work, and our power portfolio will need to include wind, biomass, energy efficiency and conservation, hydro, natural gas, co-generation, geothermal heat pumps, solar, etc. The WEC Board concluded that nuclear power would not be part of our supply mix and are looking to meet your electrical needs through an efficiency/conservation/renewable power portfolio.

As always....

We always look forward to hearing from you, our members. WEC is your Co-op.

I would like to close by wishing all of our members, your families, and our employees and their families, a very healthy and happy holiday season and a great New Year. 



Surrounded by drooping trees and branches, WEC Director Roger Fox shovels snow after the October 25 storm. Members of the Board were not spared; a tree came down on Fox's property, and WEC President Barry Bernstein was without power for two days.

Linda Gathne Fox

Wireless Broadband Comes To The Countryside

Reminiscent of the Early Days of Rural Electricity

It is said that one of the great attractions of rural life is its slower pace. That may be true in most respects, but not when it comes to negotiating the Internet.

Rural people in the 21st century find there's little charm in waiting for their slow dialup connections to complete, and then for pages and websites to labor tediously onto their computer screens.

That's especially the case in central Vermont, where many people work in nearby towns and cities that are "wired" to the Internet, and then return at night to their remote homes, beyond the reach of cable and DSL broadband services.

"It's like returning to the Middle Ages," Washington Electric Co-op Director Richard Rubin said, only half-jokingly.

Rubin, who practices law in downtown Barre where high-speed connectivity is readily available, but lives in rural Plainfield where it is not, has been an advocate on WEC's Board of Directors for the Co-op taking a leadership role in bringing broadband access to the countryside. His efforts were rewarded on November 30, when the board approved a request from the Marshfield-Plainfield Community Internet Project (MPCIP) for WEC to serve as the guarantor of one-half (\$25,000) of a \$50,000 loan from the Community Capital for Central Vermont (CCCV).

The loan represented a third of the \$150,000 financial package that will enable the Cloud Alliance – a partnership of several Vermont-based communications companies (including Power Shift Online Services) that already operates a rural wireless system in the Northeast Kingdom – to launch a new wireless Internet-access system in central Vermont.

With the initial financing package now complete, the Cloud Alliance will begin serving its first customers, in Marshfield and Plainfield, by the end of December. In January and the ensuing months of early 2006 the system will work its way farther out from its new base station on Plainfield's Upper Road, as well as filling in areas closer to the station that are difficult to serve because of the local topography. Eventually it will serve customers in six towns: Calais, East Montpelier, Middlesex and Worcester, in addition to the original two towns that took the lead in bringing wireless access to remote homes and businesses in

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central Vermont.

Following deliberative discussion, Rubin's fellow board members were convinced of the merits of this venture. The parallels to the rural electrification movement that led to the founding of non-profit electric cooperatives like WEC three-score years ago were obvious. They were well-stated in a proposal that Michael Birnbaum, a Co-op member representing the Marshfield-Plainfield Community Internet Project, brought to the board earlier this year.

"This is an analogous situation to this country in the 1930s," Birnbaum said. "Introduction of high-speed Internet is as important to the economic development and survival of rural America as electrification, good roads, and telephony once were. [Without it] we are slipping farther and farther behind urban America and many countries abroad."

The reasons existing cable companies and DSL providers (high-speed connection using phone lines) have not provided their services in

rural areas are the same ones that led investor-owned electric utilities to shun rural America in the first decades of the 20th century: too few customers, not enough profit.

"It's a density issue," said WEC Director of Products & Services Bill Powell, who has worked closely with the community groups as a representative of Washington Electric Co-op. "WEC's density is seven meters [essentially, households] per mile. Maybe half of those would buy cable or DSL service initially. The companies are looking for 15 to 20."

Grassroots

Co-op members have been pressing WEC to look for a way to get broadband service to rural areas. General Manager Avram Patt says he's received more inquiries about broadband than any other subject. On the surface, the most obvious fit for an electric utility is a technology known as BPL – broadband (delivered) over power lines, and WEC is following its development with interest. A very limited number of electric utilities are testing BPL, but there are obstacles that make it prohibitively expensive for Washington Electric, at least for now.

"After hearing from members on a regular basis, but not really wanting to get into the [broadband] business ourselves, this seemed like a good option to help towns and neighborhoods that are not served by DSL and cable," said Patt. "We think that this technology can continue to expand, community by community, but it's very grassroots; it's dependent on citizens and companies participating and marketing the idea to each other."

Backing the loan from CCCV – which is a lending arm of the Central Vermont Community Action Council – appeared to the board to be financially safe for the Co-op, given the structure of the loan agreement. And ultimately the beneficiaries will be WEC members, who live farthest from the main roads and population centers where cable or DSL might someday be available.

Rubin said the Co-op's involvement (WEC will also administer a HUD grant for the project, and will promote it in communications with Co-op members) was consistent with Washington Electric's overall mission.

"We see the Co-op as being not only a vehicle to provide electric energy service, but also other services to our members. And if they are going to survive economically in today's world,



The base station for Cloud Alliance's new wireless broadband system is a meadow on Plainfield's Upper Road. Above, Michael Birnbaum, community spokesman for the project, stands among the markers where the transmitter will be located. Below, a few days later the Co-op was at the site installing utility poles for the project.



Bill Powell/WEC

people in rural areas need to have the latest technology.”

‘Pizza box’ access to the world

Wireless technology can extend broadband access to rural areas cost-effectively because it requires a less-bulky form of infrastructure – basically, broadcast equipment and the air, as opposed to miles and miles of wire strung along utility poles.

Broadband from the Cloud Alliance initially will reach the six-town area via a fiber optic cable from Charter Communications, a spur off of the company’s Barre-to-Danville trunk line. The spur terminates at a meadow on the Upper Road in Plainfield owned by Co-op members Mark Yorra and Kit Gates, which overlooks a broad swath of the Winooski Valley with Marshfield, Plainfield and Calais splayed out scenically below. This will be the location of the system’s base station, consisting of a small building to house the computer system and connections linking the cable to a radio transmitter. These changes have already received local zoning and Act 250 approval.

WEC provided new power poles and electrical connections to the site, and a pole for mounting the transmitter’s antenna. Those were installed in December 15.

From the base station, the transmitter beams low-frequency signals that are

The reasons cable and DSL companies have not provided their services in rural areas are the same ones that led investor-owned electric utilities to shun rural America: too few customers, not enough profit.

received by small antennas – called “pizza boxes” because of their size and shape – that are mounted on or near customers’ homes or businesses. The signal is then passed to a router, which provides it to the customer’s computer.

But of course it’s not quite that simple.

“Customers need line-of-sight access to the transmitter,” Birnbaum explained. “The line-of-sight can pass through trees, but not through hills. To get around hills, access points are established to relay the signal to areas hidden from the transmitter.”

None of this requires apparatus like cellular phone towers; the relays, or repeaters, can be placed unobtrusively on other structures. But there will need to be a number of them to bounce the broadband signal around central Vermont’s rugged landscape. Despite the challenges, Birnbaum – a retired rural mail carrier and a WEC member for 35 years – said, “We’re looking for virtually universal coverage.”

To allay any concerns people might have about radiation, Birnbaum noted that the system will employ low-wave frequencies in the range used

by cordless telephones, garage door openers and baby monitors (900MHz, 2.4 GHz and 5.8 GHz).

‘Pioneers’ and visionaries

Co-op Director Rubin didn’t stop at advocating for WEC’s signing on as guarantor of the CCCV loan; he also put his own money where his mouth was, by becoming a Cloud Alliance “pioneer.”

Community Capital made its \$50,000 loan contingent upon the Marshfield/Plainfield group raising matching funds. The group hit upon the idea of recruiting “pioneers,” who would prepay for a year’s wireless service, and the escrow account formed from these voluntary \$500 contributions would constitute the matching funds CCCV was demanding as proof of community support. Rubin was one of about 50 such pioneers; the balance of the money in the escrow account came from a loan contributed by an unidentified individual.


The third \$50,000 portion for starting the project came from a HUD (U.S. Dept. of Housing and Urban Development) grant, passed through the

Montpelier-based Vermont Broadband Council. WEC serves as the administrator of the grant.

Then there’s the Vermont Council on Rural Development (VCRD), which contributed in significant ways, as well. Two contracted employees with the VCRD, Al and Laura Duey, worked with volunteer committees of citizens in all six towns to help them raise local awareness of the wireless-broadband project, solicit people’s interest and build momentum.

It has been a joint effort of many parties – and the culmination of at least three years’ effort that started with six visionaries from Marshfield and Plainfield – to bring wireless broadband to central Vermont. Hopefully, from WEC’s point of view, the system will continue to grow.

“People have been clamoring for this for a long time, and it’s finally coming,” Birnbaum said enthusiastically. “The politicians have been promising broadband to everybody in America, but it’s not going to happen. We here decided we weren’t willing to wait.

“These towns are going to be lucky, to have rural people with broadband connections way ahead of the curve. It has tremendous potential to improve people’s lives. It’s about development, education, research – companies existing on back roads and competing everywhere in the world.” 

Think Now About Running For The Board

Washington Electric Cooperative will hold its 67th Annual Membership Meeting at the Montpelier Elks Club on Tuesday, May 2, 2006. Members interested in running for a position on WEC’s Board of Directors should begin thinking now about their potential candidacies.

Candidates for the Board of Directors must submit petitions at WEC headquarters, signed by at least 25 Co-op members, by Wednesday, February 22, 2006. Directors are elected to three-year terms, and serve at-large rather than representing districts. Each year three Board seats expire, though incumbent Board members are permitted to run for re-election. When there are more candidates than open Board seats, the three candidates with the most votes win.

Co-op members might also be considering offering amendments to WEC’s bylaws. This is also done by petition, requiring in this case 50 member signatures. Proposed bylaw amendments are due Friday, February 10, 2006. You may wish to contact the Co-op for a copy of the existing bylaws before drafting an amendment.

Statement of Non-discrimination

Washington Electric Cooperative, Inc. is the recipient of Federal financial assistance from the Rural Utilities Service, an agency of the U.S. Department of Agriculture, and is subject to the provisions of Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973, as amended; the Age Discrimination Act of 1975, as amended. In accordance with Federal law and the U.S. Department of Agriculture’s policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, religion, age, or disability (Not all prohibited bases apply to all programs).

The person responsible for coordinating this organization’s nondiscrimination compliance efforts is Avram Patt, the Cooperative’s General Manager. Any individual, or specific class of individuals, who feels that this organization has subjected them to discrimination may obtain further information about the statutes and regulations listed above from, and/or file a written complaint with, this organization; or write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.”

Confidentiality will be maintained to the extent possible.

Notice of Adjustment in the Energy Efficiency Charge to Take Effect in January 2006 for Washington Electric Co-op Members

On 28 October 2005 the Vermont Public Service Board (PSB) issued an Order concerning the amount to be collected in 2006 by the state-wide Energy Efficiency Charge (EEC).

Starting with January 2006 electric usage and bills rendered after 1 February, 2006, the EEC paid by WEC members will be adjusted from the levels most recently set by PSB Order in November 2004.

The Energy Efficiency Charge is paid by all Vermont electric consumers to fund efficiency services that cost-effectively reduce Vermont’s needs for electric power generation. Energy efficiency programs and services are Vermont utility requirements and are part of the cost of your electric service. The Vermont Public Service Board has found that energy efficiency programs benefit Vermonters in two ways: first by lowering the electric bills of individual customers who directly receive the services; and second, and more importantly, to offset more expensive utility power costs thereby lowering electric rates and bills for Vermont consumers over time.

Efficiency Vermont provides these statewide energy efficiency services, including information, technical advice, education, rebates and other financial incentives for homes, farms and businesses. Over one in four Vermont electric consumers have already improved their energy efficiency with Efficiency Vermont’s help. For more information about these efficiency services, contact Efficiency Vermont toll free at 1-888-921-5990 or at www.encyvermont.com.

WEC Members: Effective on February 2006 bills, for January 2006 use, the 2006 EEC charge will be as follows for WEC members:

Residential:	\$.00385 per kWh
Commercial:	
Non demand members:	\$.00367 per kWh
Industrial:	
Demand members:	\$.00179 per kWh, plus .3451 /kW/month
Street and Area Lights	\$.13212, \$.3303, and \$.52848 per month for 100, 250, and 400 watt units, respectively.

Customers with questions about the EEC, or about energy services for WEC members can contact WEC at 1.800.932.5245, or: www.washingtonelectric.coop. Also for more information about the EEC, please contact the Department of Public Service toll free at 1-800-622-4496.

October Storm

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Three members of the board of directors – President Barry Bernstein and Don Douglas and Roger Fox – came in to help the office staff man the telephones.

Eventually the Co-op got much-appreciated help from the Morrisville Electric Dept., the Stowe Electric Dept. and New Hampshire Electric Cooperative, once those utilities had repaired their own systems and could spare some of their personnel.

On Saturday morning, Oct.29, around 50 Co-op homes were still without power. By suppertime those final outages had been fixed. Bad as it was for our members, some folks elsewhere in the state did not regain their power until Sunday, evidence of the uneven destruction wrought by the storm.

Transmission problems, again

As has happened before, WEC's electric system was significantly impacted by outages along Green Mountain Power Corp.'s transmission lines, which carry high-voltage electricity to many of WEC's substations. (The substations reduce the voltage and distribute the power to Co-op members. Power loss to the substations inevitably results in hundreds of Co-op members losing power. In a report shared with the statewide "winter-preparedness committee" Weston wrote: "WEC did lose power to two of our substations for approximately three hours each during the storm, affecting 2,295 members, which added directly to the 3,100 members already out, to place nearly 5,400 members out of power at the height of the storm. The outages to the subs were due to faults occurring on GMP's 34.5-kilovolt sub-transmission lines."

The affected substations were at West Danville and Jackson Corners in Williamstown.

"In 2004," Weston's report continued, "power-supplier issues accounted for 21 percent of the year's total consumer-hours out. In 2005, sub-transmission and transmission issues continue to be a significant concern to WEC. The reliability and integrity of the local transmission systems needs to improve."


Washington Electric owns and maintains 25 miles of high-voltage transmission lines itself. While that's significantly less than GMP owns, WEC is acquainted with the effort to maintain transmission lines; the cleared right-of-way corridors for transmission lines are wider than those for distribution lines (100 feet as opposed to 25 feet) because of the greater need to protect those lines from damage. WEC has experienced only one outage to its transmission lines in the last five years, and that was for a failed insulator, not

from tree damage.

The Co-op has worked closely with GMP to help it improve its transmission-system reliability in places, but the October storm drove home once again how important further efforts by WEC and GMP are for Washington Electric Co-op members.

Surviving Power Outages

Power outages – particularly the most severe ones – provide lessons to utilities about how they can improve their response.

But they can also provide lessons to customers about preparing for and enduring long-running outages, and how best to communicate with their power provider. On page eight ("What WEC Members Most Want to Know"), *Co-op Currents* looks at the most frequently asked questions posed by members during emergencies, and how people can weather the inconvenience of losing electricity. 

Surviving a Power Outage

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should remain at 40 degrees Fahrenheit or lower; freezers between 0 and -10 degrees. Keeping a thermometer in the units will let you know if those temperatures have been maintained.

Generally, food in the refrigerator will remain cold for four-to-six hours if the door isn't opened. Food in a full freezer will stay frozen for two days; a half-full freezer for about one day. You gain a little more time for your frozen food by having it piled up together in your freezer rather than scattered around. Above all, try to avoid eating or drinking these frozen or refrigerated foods – using canned and packaged foods instead – because that will necessitate opening the doors.

When power has been restored you'll need to assess whether your food is safe. The following information was compiled for the Internet by the Baltimore Gas & Electric Company as a guide to food safety. Moldy food, or food with an unusual odor or appearance, should be discarded. If you think meat, poultry, seafood, milk, yogurt, mayonnaise, eggs, lunch meats, or cooked pasta, rice or potatoes (this is not a complete list) have been above 40 degrees for more than two hours, throw them away. Butter, margarine and many other condiments, hard cheeses, whole (unsliced) fruits and vegetables, fruit juices and dried fruits, are generally safer. Frozen foods that still contain ice crystals or are still very cold generally can be cooked or refrozen.

But remember these two rules: keep the doors closed, and **"when in doubt, throw it out."**

What should you do if you see power lines on the ground?

The answer to this one is easy: **Assume they are live and keep your distance.** Call the Co-op and/or your local fire department or emergency services.

Here's the frustrating part: Even if you call, we might not be able to get there immediately; there could be other places where the same thing is happening.

In the October 25 storm WEC received a call from someone in Fayston who was very concerned about a downed power line. He didn't know it, but a Co-op engineer had already been to the site, disconnected the power and moved on (not being a lineman, he was not qualified to make repairs). In the disorder caused by a major storm perfect communication is not always possible. That's why the best course is to play it safe, stay away from the downed line, help others steer clear, and keep in touch with the Co-op.

Reporting your outage; expecting results

WEC has an advanced outage-response system in which information collected from telephone calls is assembled in a computer program that enables our dispatchers to coordinate repairs.

When people call, and get through, they have the options of waiting to speak to a WEC representative or providing their information by automation. The automated system collects the same information as the staffers answering the phones. **By reporting your information through the automated option your call will be shorter, just as effective, and free up the limited phone lines** (the system can accept six calls, maximum, at a time) for other callers.

Often people choose to wait in the phone queue to speak to a member

service representative because they believe the representative will be able to tell them when their power will be restored. In fact, the reps can hardly ever do that; with 1,200 miles of power line spread over 41 towns, and problems during larger storms constantly arising and being resolved, no promises or even estimates can be made. The best course is to leave your information, and certainly call again later if the outage continues.


"How come my neighbors lights are back on and mine are not?"

In any outage situation, the Co-op prioritizes repairs that will serve the most people. In WEC's distribution system, main power lines (or "feeders") lead out from the local substation; all Co-op members depend on these main lines for their power. Other power lines (called "taps") branch off of the feeders and then from each other, serving ever-smaller numbers of people – perhaps, by the end, as few as one or two houses.

The line crews work on the main feeders first, because: 1) repairs on the main lines are most likely to help the largest number of people, and 2) faults on the smaller lines might not even be detected until the larger lines are restored. WEC has eight substations, with multiple feeders leading out from each one.

If you see crews in the area but they leave before your power is back on, or if you know that a neighbor's power has been restored but yours has not, it's because **the configuration of the lines sometimes produces oddities, such as neighbors having different results from a nearby restoration.** It's a system that might benefit you in one storm and put you at a disadvantage in the next one.

When you have power and can go online, you'll find the Co-op's website to be a good resource for information about how to survive a power outage.

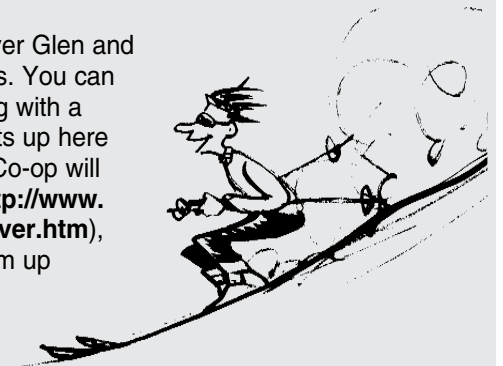
And you'll find that planning ahead of time – for water, food, heat and communication – is the best thing you can do. 

Now, Call WEC for Mad River Glen Tickets

The geese have flown south, the temperatures have plunged, and ski season is coming! This year the Co-op has an improved deal for WEC members who ski at Mad River Glen – which is also a cooperative. You can now purchase day passes at the Co-op 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 a ticket retailer for Mad River Glen and members are eligible for special prices. You can call and order tickets by phone, paying with a credit card, then either pick your tickets up here or have us put them in the mail. The Co-op will fill orders placed from the website (<http://www.washingtonco-op.com/pages/madriver.htm>), but members must still either pick them up or have them mailed to your address. This is not an electronic ticket offer.

See you on the mountain!



Choices For Backup (Emergency) Power

Co-op Currents has published several articles over the years regarding members' options for backup (emergency) electric power. While members typically think of a **GENERATOR** as the primary backup option, there is an alternative way to provide backup service: a **UPS**, or uninterruptible power supply.

Both a generator and a UPS (which is a battery-run system) can be used to provide emergency power, but each has specific advantages. Here are questions to consider if you're thinking of purchasing and installing a backup power supply:

- **What are the critical electrical loads that I need to maintain during an outage: e.g., refrigerator, water pump, heating plant, selected lighting?**

- **What size backup system do I need for those purposes?**
- **Can I manage dealing with a generator? (Generators combust fuel, and therefore must be operated outside the building.)**
- **Do I need the additional advantages (such as convenience and instantaneous response) of UPS?**

Generators have the advantage of being considerably less expensive. The UPS costs more, but has other




advantages: it works automatically, sensing a power outage just as it begins and activating immediately; it makes no noise or pollution; it may be appropriate for households where the occupant(s) cannot physically deal with an engine-driven, outdoor generator.

To illustrate the cost difference between these options, assume that a properly sized generator is 3,600 watts (3.6 kilowatts or kw). This should be sufficient power for the emergency loads noted above.

A new gasoline-powered generator from a national supplier costs \$1,500, plus \$100 approximately for shipping (generators are also available from local dealers). A transfer switch, which allows the outdoor generator to be safely connected to the main electric panel inside the home, and which must be installed by a licensed electrician, costs

around \$300. An estimated cost for a contractor to complete the installation is around \$300. Thus the total estimated installed cost for a generator and switch comes to around \$2,200.

A similar-sized UPS might cost around \$8,000, plus the cost of the contractor's installation.

The Co-op provides members with technical assistance and sizing guidelines for your situation, as well as references to local contractors qualified for such installations. Please contact us for further information. 



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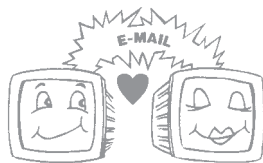
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Sheffield Wind Project Moves Forward With Support of Local Voters

After months of debate about the 26-turbine wind-energy project proposed for their town, the voters of Sheffield this month finally had an opportunity to declare themselves in the one way that matters most: by putting it to a vote.

Gathered at a special, warned town meeting on Thursday evening, December 1, they voted 120-93 to support the project. Although the vote was non-binding, it gives a boost to developer UPC Wind Management as it undertakes its pursuit of regulatory approval, knowing that the majority of local public opinion supports the construction of wind turbines along the ridgeline.

The vote was important for Washington Electric Cooperative, too. Last June, after a long and careful examination of wind-energy proposals in Vermont, the Co-op announced its selection of UPC's Sheffield project for investing most of the \$941,000 that WEC received in 2001 as a federal grant for pursuing wind-generated power for its members. The money will help UPC-Vermont Wind – the local subsidiary of Massachusetts-based UPC Wind Management – to develop its permit application to the state Public Service Board.

If the project is successfully developed, WEC expects to take perhaps 10 percent of the power generated. Two other Vermont utilities – the Burlington Electric Department and Vermont Electric Cooperative – are also in negotiations for UPC wind-generated power.

WEC's endorsement of the Sheffield project (which will also extend to ridgelines in neighboring Sutton) brought the Co-op criticism from project opponents, including some Co-op members, but also expressions of support from other members and from some Sheffield residents. General Manager Avram Patt said that WEC's Board of Directors knew when it invested in the project that some would object vehemently to the decision.

"The board came to the conclusion that a certain amount of wind power would be good for Vermont and good for the Co-op, even before settling on the Sheffield project," said Patt. "Our members and the public know that our policy favors renewable energy when it is competitively priced and, preferably, developed close to home.

"This project is a good fit for us; it will provide a significant portion of our members' energy needs, and after examining UPC's record here and elsewhere the board felt it was a responsible company that would do this project right, which includes respecting local concerns."

Sheffield's voters apparently reached

a similar conclusion. Comments to area newspapers indicated that support came from people who believed the owners of affected parcels on Hardscrabble Mountain and Norris Mountain in Sutton had a right to do as they wished with their property, and from supporters of renewable energy.

The debate, complete with lawn signs and letters-to-the-editor, had gone on for months and people seemed ready to be done with it. At the December 1 meeting residents quickly voted to skip further discussion and get right to the decision

at hand. There were 213 registered voters in the room – more than half of the checklist, and three or four times as many as usually attend Sheffield's annual Town Meeting, a local official told Patt.


Patt admitted he was relieved by the outcome, but said he was not really surprised.

"Surveys consistently show a majority of Vermonters support responsible wind development," the Co-op manager said. "Obviously a significant number of people did oppose the project and were vocal in their opposition. But to me, 56

percent in favor and 44 percent opposed represents a decent margin of public opinion."

Patt also praised the process by which the voters arrived at their decision.

"If every community, our state and the whole country had the kind of debate about energy and where it should come from that Sheffield has had, we'd all be a lot better off," he said. "And our political leaders would have to make some intelligent long-range policy decisions on behalf of informed citizens and consumers."

The next step for UPC is to apply to the Vermont Public Service Board for a Certificate of Public Good under Act 248, which applies criteria similar to the better-known Act 250. UPC expects to file its application in late December or in January 2006. 

What WEC Members Most Want To Know About Surviving A Power Outage

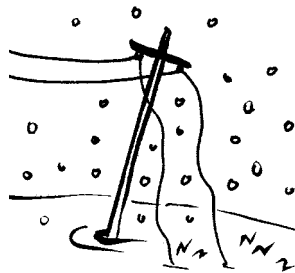
The October 25 snowstorm was a particularly bad one for WEC members and customers of other Vermont utilities, causing such extensive power-line damage around the state that thousands of Vermonters lost their power for four or five days. It was a fluke in a sense: the storm hit when the leaves were still on deciduous trees that could not withstand the weight of the snow.

But this is Vermont. We can count on severe storms occasionally causing widespread and long-lasting power outages. Calls to the Co-op during the storm revealed the issues that most concern WEC members during prolonged outages. Here is some information and recommendations that could come in handy the next time a prolonged outage hits. Washington Electric Cooperative's website contains further information, and the Co-op has a brochure that can be mailed to you upon request.

How can people be prepared for lengthy power outages?

A great variety of lifestyles exists among WEC members, but the thing to remember is that the more reliant you are upon electricity and electronics, the more you need to have a plan for when power is not there. The key is knowing what you're going to do ahead of time and being well-stocked with necessities.

Most important is having a supply of water. If your power goes out, chances are your pump will not operate (unless you have a backup



power source – a generator or Uninterruptible Power Supply, or UPS; see page 7 for more information). **You will want water for drinking, washing and for flushing the toilet as needed.** It's a good idea

to purchase a half-dozen or so plastic five-gallon containers, fill them with water and put them aside for use in an emergency. Also, if you know a major storm is coming fill your bathtub.

You should **lay in a supply of food that does not need to be refrigerated, and which needs little preparation.**

Canned vegetables, fruit, meat and soup; pasta; powdered milk; cereal; cookies and crackers; if you need baby food or are on a special diet have those items ready, too.

A camp stove could come in handy. Have the fuel ready, and always cook outside where the fumes can escape.

Set aside a supply of candles, flashlights and batteries, apart from those you use on a regular basis. Get a **manual can opener, matches,** a battery-powered radio. If you rely on medications and might not be able to get out in an emergency, try to have a supply stored up.

Consider installing a **backup heat source that does not need electricity to run.** Be well-supplied with whatever fuel it uses. Close off rooms that don't need to be heated. Have warm clothes and blankets available.

Be ready to reach out to people you



need (neighbors, adult children), or people who might need you (parents, elderly friends, neighbors with special needs). Cell phones are good, for as long as their batteries last, but if you don't have one the important thing is to **have a plan for keeping in touch and for checking up on one another.**

The most important thing is to make your plans and preparations when the lights are on, not after you've lost power. Then there'll be no need to panic.

What about folks with special needs, such as medical equipment?

There are people all over Vermont who rely on oxygen equipment, powered beds and elevators, dialysis machines and other life-sustaining devices. **The Co-op keeps a list of members with special needs so it can take measures especially to serve them.** This can include prior warnings (a telephone call) when outages appear likely, and special attention for getting power back to those homes as quickly as possible. If you aren't on that list and should be, call the Co-op today. If you're not sure, call to find out.

If you take medicines that need to be refrigerated, keep a cooler handy, and ice packs to put with the medicine inside the cooler.

How long will food last in freezers and refrigerators, and remain safe to eat?

For your safety, do not consider this the definitive answer to these questions. But here are some tips. **Do not open the refrigerator or freezer door if not absolutely necessary.** Refrigerators

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