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WEC CO-OP CURRENTS

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Co-op's Ten-Year Plan Pays Off

A Power-Line Connection In Orange Points The Way To WEC's Future

The "marriage" between the East Montpelier and Jackson Corner substations is the wave of the future, and will in time be replicated among other combinations of WEC's substations.

Just a little north of Route 302 in Orange Village, on a paved but rural road called George Street, stands Washington Electric Cooperative Pole #257.

There are other poles numbered 257 on WEC's 1,300-mile distribution system, but the additional hardware nailed to this pole gives it a more-specific identity. Just above the aluminum 257 digits and the WASH ELECT COOP strip is another sign, made of black letters on yellow construction paper, that reads **1-2 TO 8-1**. From left to right, what that tells us is that the electricity carried to this pole comes from Washington Electric's Substation **#1**(WEC's East Montpelier substation, which was totally rebuilt this summer) along Feeder **#2**, **"TO"** its intersection at the top of the pole with wires from WEC's Jackson Corner substation (Substation **#8**), Feeder **#1**. "Feeders" are the major sets of power lines that lead out of each substation and carry electricity to the Co-op's members, although the members often are more directly served by smaller circuits that branch off from the feeder. It's kind of like an aquatic system – lake, rivers, and streams – with the water running backwards. Each substation has two or three of these main feeders heading off in different directions over the countryside.

Which takes us back to **1-2 TO 8-1**.

This is a new, and in fact historic, power-line intersection for the Co-op. Because here, for the first time in WEC's 72-year history, Washington Electric is able to open or close a series of switches at the top of the pole to connect or disconnect two feeders from two different substations without so much as a blink of service interruption for the Co-op members who depend on them.

On the surface, that might not sound like a big deal. Here's why it is.

Thousands of WEC members get their power from these two substations (substations import high-voltage electricity from transmission lines, reduce the voltage, then send it out – along those feeders and smaller, local lines – to houses, farms, schools, and businesses on WEC's system). As

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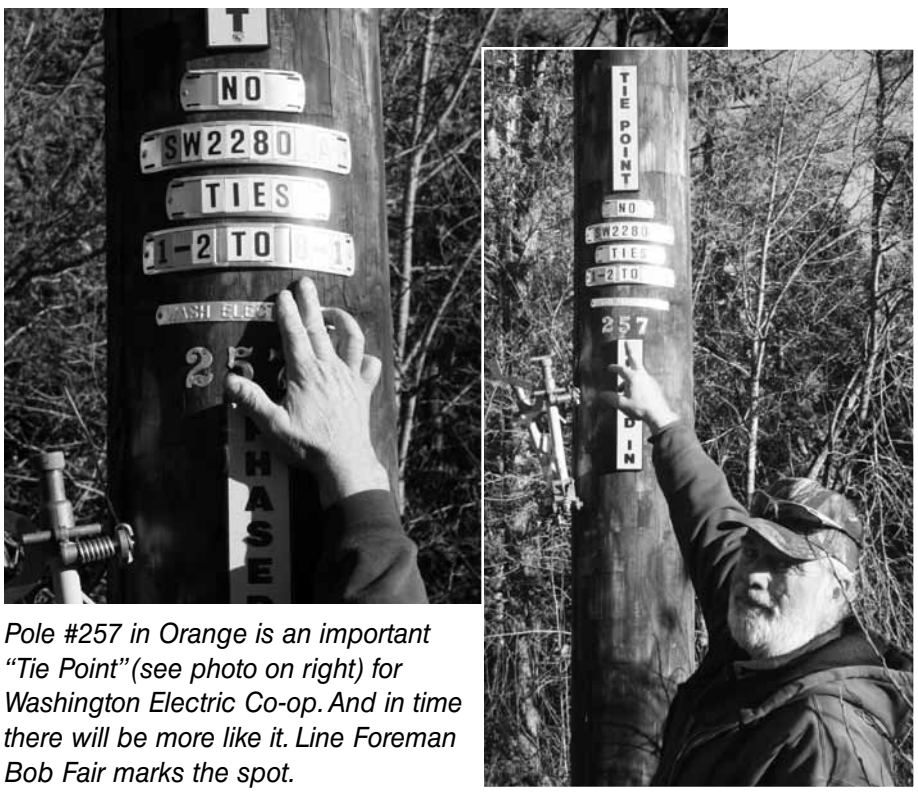

Pole #257 in Orange is an important "Tie Point"(see photo on right) for Washington Electric Co-op. And in time there will be more like it. Line Foreman Bob Fair marks the spot.

Washington Electric Cooperative
East Montpelier, VT 05651

President's Message

After The Climate-Change Impacts Of 2011, 2012 Will Be A Year Of Important Decisions

by Barry Bernstein

As 2011 comes to a close we have again had a year of weather that will be etched into our memories. Early spring was one of the wettest on record, even before the flooding that followed. The May 26 micro burst poured 5 inches of rain in a several-hour period that washed out roads in central Vermont, causing us to abandon WEC's office in East Montpelier, and begin planning to rebuild it. On August 28, Tropical Storm Irene brought severe damage to much of our state's infrastructure, businesses, and homes, creating hundreds of millions of dollars damage, havoc not seen since the famous flood of 1927.

This is following the warmest decade on record (2000–2010) and one of the two warmest years on record (2010, the other being 1998), according to NASA. The predictions that New England will experience more severe storm activity seems to

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Inside

Renovations are underway at WEC's office building in East Montpelier, which was damaged in the May 2011 flood. Insulation wrap (pictured above) and other energy-efficiency measures will make the Co-op a better corporate citizen.

HAPPY HOLIDAYS and HAPPY NEW YEAR from your Electric Co-op.

President's Message

President's Message

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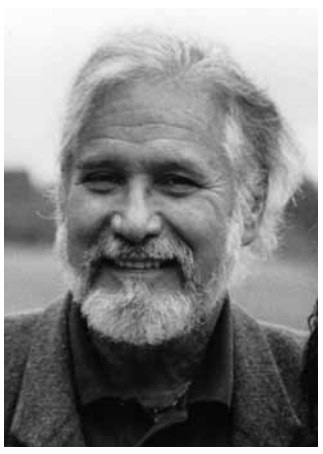
be unfolding, and Vermont, our Co-op, and our members, have begun to feel the significant impact of these changes.

How we respond to these changing times will require all of us to give serious thought to future decisions we will be called on to make, and their impact on our more-limited resources. Business as usual will not serve us and future generations well.



2011 Highlights

GMP/GAZ Metropolitan Buyout of CVPS

It would be impossible to begin a review of the highlights of 2011 without starting with the most significant change in the electric utility industry in Vermont in the past 100 years: Green Mountain Power and its Canadian owner, Gaz Metropolitan's, proposed takeover of Central Vermont Public Service, which would give that company control of the electric distribution lines serving 72 percent of the ratepayers in the state. Our General Manager's Report in the October issue of *Co-op Currents* provided an excellent overview. One of the significant issues that have been raised by the proposed merger (which must be approved by the Vermont Public Service Board) is the ownership makeup of VELCO, the statewide transmission company. VELCO's transmission system is the backbone of Vermont's electrical power infrastructure, which all power generation must flow through.

The WEC Board of Directors, at our October 26 Board meeting, voted unanimously to endorse the position "that VELCO be publicly controlled, and ideally publicly owned, " to ensure that use of the transmission grid and all future decisions regarding electric transmission are made in the best interests and on the behalf of Vermont's citizens. It's quite simple: A publicly owned transmission company has the fiduciary responsibility to make decisions on behalf of Vermont and its citizens, and a stockholder-owned company has the fiduciary responsibility to act in the best monetary interests of its owner/stockholders; in this case those are stockholders in an out-of-state, out-of-country Canadian company.

The importance of who owns and controls VELCO is less about the decisions of today than about the decisions that will be made far into the future. The WEC Board is in good company regarding the public ownership of VELCO, as public ownership of transmission infrastructure and local control of the distribution lines were positions advocated strongly by U.S. Senator and Vermont Governor George Aiken, and by Governor and Vermont Supreme Court Judge Ernest Gibson in the 1940s and '50s.

WEC and Energy Issues

Your electric co-op has a long history of speaking out on energy policy and issues that we feel affect our members and Vermont's energy future. In that tradition, your elected Board will continue actively participating in the public discussion of issues whose impact will have major significance for our electricity future. VELCO ownership and the closing of Vermont Yankee are two critical issues of concern, so expect us to be involved.

Other 2011 Highlights

Rate Increases

Our Co-op's first increase in 11 years was finalized in October at 19.44 percent, a reduction from the 23.81 percent we originally filed for. Unfortunately, it has been necessary for WEC to file for a small additional rate increase, on November 15, of 2.27 percent, to take effect in January 2012. We will continue to work with members who are having difficulty paying their monthly electric bills. If this is your situation I urge you to call our Member Services Department to try to avoid getting too far in arrears.

New Construction Work Plan (CWP)

WEC received financing approval from the Vermont Public Service Board on September 9 for our new Four-Year Construction Work Plan. The CWP drives vital construction upgrades of our electric system, including our generation facilities at our Wrightsville (hydroelectricity) plant and at our Coventry (methane-power generation) plant, and nearly 1,300 miles of distribution and transmission lines. The Plan includes installation of an automated metering infrastructure (sometimes referred to as "smart meters"), which we will begin changing to in the spring of 2012. WEC has chosen to use a power line carrier- (PLC) based system, utilizing the WEC distribution electric lines.

The East Montpelier substation rebuild was completed in October, further increasing the reliability of our system. It will allow us to pick up members between Jackson Corner and East Montpelier if either substation goes out (see article on page 1).

Our Co-op has made a conscious effort since the early 1990s to be more environmentally aware as we make decisions that affect our future. We will continue to be diligent concerning our long-term planning for power, the equipment we purchase for our distribution and transmission infrastructure, in our internal operations, and working with our membership to help each household and business conserve and use electricity efficiently.

WEC Headquarters Reconstruction Underway

As you drive by the Co-op offices you will see major changes starting to take place. The exterior envelop of the building is almost complete, being done to the highest efficiency standards. Work will begin on new mechanical and electrical systems, along with a complete remodeling inside. We hope to be able to move staff back in by sometime in March.

This is a project we would not have undertaken at this time had we not been forced to do so by the May flooding. But it is long overdue on a building that is made up of add-on sections 50 to 70 years old, and the alterations and energy-efficiency work we are doing now will serve our Co-op for decades into the future.

On behalf of the Board, I want to extend special thanks to all of our staff, who have endured a number of moves and for months now have worked in a doublewide in our parking lot. By the time the work is done, this dislocation will have lasted nearly a year. We appreciate their patience and endurance.

Members, when you call in please

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Co-op Currents

Co-op Currents (Publication No. USPS 711 -210 and ISSN No. 0746-8784) is published monthly except February, May, August and November by Washington Electric Cooperative, Inc., Route 14, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is $.48, which is included in the basic monthly charge to each member. Periodical postage rates paid at East Montpelier and at additional offices. Postmaster: Send address changes to *Co-op Currents*, P.O. Box 8, East Montpelier, Vermont 05651.

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

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.

Washington Electric Cooperative, Inc.

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, disability, sexual orientation, marital status, family status, status as a parent (in education and training programs and activities), because all or part of an individual's income is derived from any public assistant program, or retaliation. (Not all prohibited bases apply to all programs or activities).

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, 1400 Independence Avenue, SW, Washington, DC 20250-9410, or call, toll free, (866) 632-9992 (voice). TDD users can contact USA through local relay or the General relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice users). USDA is an equal opportunity provider and employer.

Complaints must be filed within 180 days after the alleged discrimination.

Confidentiality will be maintained to the extent possible.

Manager's Report

WEC Initiates Small Rate Increase For 2012

2.27-Percent Surcharge to Take Effect in January

By Avram Patt

On November 15, Washington Electric Co-op filed a 2.27-percent rate-increase request with the Vermont Public Service Board (PSB). **The details are included in the notice published on page 7 of this issue.** The notice is also included as an insert in members' December electric bills, has been posted on our website and e-mailed to members. The increase takes effect for energy sold beginning in January, and will first appear as a temporary surcharge on bills members receive in February.

What is causing the need for an increase?

WEC submitted detailed information about our costs in the filing. This relatively small increase is caused by a few factors. Our power-supply costs have gone up, not so much because of the cost of energy itself but because of increased charges from our transmission suppliers (a factor that has contributed to recent rate increases at other utilities as well). A number of other costs of providing service have also risen, and we continue to be affected by changes in the value of the Renewable Energy Certificates we sell.

Going forward, WEC's Board of Directors had adopted a strategy of filing for smaller increases as needed on a more-regular basis, rather than large increases less frequently.

We continue to improve efficiency and find cost savings, but are also committed to maintaining and improving service to our members. This is a modest increase that is below the current rate of inflation, and it is necessary in order to cover our costs.

Why is this increase needed after the very large increase in 2011?

When WEC filed for a 23.81-percent increase over a year ago, it was our first increase in 11 years, a period during which electric rates had increased by more than 40 percent nationally and by more than 27 percent in Vermont. We had been in the unique situation of having a major new revenue source from our Coventry landfill-gas plant's Renewable Energy Certificates (RECs), so we did not need to ask members to pay more in rates over that extended time. That case was resolved when the Public Service Board approved an increase of 19.44 percent this past fall.

Some members have understandably asked why we need this increase when members just received a refund in November for the difference between the 23.81 percent we requested last year and the 19.44 percent the PSB approved this fall.

Without getting too far into the complexities of ratemaking and regulation, our 2011 rate case was based on a comparison of known costs in 2009 and "known and measurable changes" expected for 2011. The fact that a comparison of 2010 and 2012 projected costs now shows the need for a small additional increase was not a part of the regulators' deliberations in the earlier case. And while it may be true that we might not have needed to file this additional increase if the last one had not been lowered to 19.44 percent, that is the amount the PSB ultimately determined was the right amount for WEC to collect in 2011.

How will the Co-op deal with rate increases going forward?

While RECs revenue will continue to play an important role in WEC's finances, and will continue to limit the need for rate increases, it will no longer be such a big factor that it enables us to avoid a rate increase for 11 years. While most members appreciated not having their rates rise for so long, many also commented that they would rather have seen smaller, more-regular increases instead of a big one all at once. In this unique situation, that would have required us to increase rates before we actually needed the money. Going forward, however, WEC's Board of Directors has adopted a strategy of filing for smaller increases as needed on a more-regular basis, rather than large increases less frequently.

What's next?

The Public Service Board will open a docket to investigate this request, and the Department of Public Service will again be reviewing the information we provided. Because this is a small increase and because the last increase was so thoroughly investigated, we expect that this case may be resolved more quickly than the last one.

While we do not like to raise rates, we do need this small increase in order to ensure that Washington Electric Co-op can meet its obligations and continue to improve service. As always, please feel free to contact me or any members of your Board of Directors with your questions or concerns.

WEC officials attended the ribbon-cutting at the First Wind Sheffield project on October 26. Pictured on the steps of a wind tower are, from left, WEC General Manager Avram Patt, Vice President Roger Fox, President Barry Bernstein, Secretary Marion Milne, Board members Richard Rubin and Roy Folsom, and Treasurer Don Douglas.

The Vermont Public Service Board requires all electric utilities to publish this Herbicide Use Notification periodically. Members of Washington Electric Cooperative are reminded, however, that it has long been the policy of this cooperative not to deploy herbicides in the right-of-way management program.

PUBLIC NOTICE **PUBLIC NOTICE**

HERBICIDE USE NOTIFICATION

Vermont utilities maintain electric line rights-of-way with several methods, including the selective use of herbicides on trees and brush. They also encourage low-growing shrubs and trees which will crowd tall-growing species and, thus, minimize the use of herbicides. The application of herbicides may start as early as April 1. **Requests to utilities for notice by mail, however, must be made by February 15.**

The Public Service Board requires Vermont utilities to carry out vegetation management techniques which allow maintenance of electrical systems in a cost-efficient manner.

The types of herbicide treatment used to keep utility lines clear are: stump, injection, basal, soil and foliar. These are the common methods used, although they may not all be used by the utility in your town. Landowners have the options of requesting herbicide treatment on cut stumps only, or that no herbicide be used at all. In the latter case, an administrative fee would have to be paid to the utility. Only electric utility rights-of-way which have tall-growing tree species with the potential of threatening the electric utility system are treated.

Utilities advertise by radio and newspaper prior to herbicide applications on all lines. Lines usually are treated only once in a four-to-six year period depending on the specific management cycle of the utility. Please check with your utility regarding the cycle of a particular line.

Some utilities use metal letters and numbers on distribution and transmission line poles. Others use them only on transmission lines. The letters, such as V.E.C. (Vermont Electric Co-operative), or V.E.L.C.O. (Vermont Electric Power Company), are not found on every pole. A check of several poles on a line should aid you in determining whether poles are marked and which utility is the owner.

Persons owning or occupying land within 1,000 feet of a utility right-of-way may request in writing that the utility notify them individually by mail anytime, but at least 30 days prior to treatment of the line with herbicides. The landowner or resident is responsible for contacting the utility, in writing, to request placement on the mailing list. The utility should be provided with sufficient information as to the exact location of the residence and land. It is the duty of each landowner or resident to make the utility aware of the location of any potentially affected water supply, and any environmentally sensitive areas where herbicide application ought to be avoided.

CONTACT YOUR ELECTRIC UTILITY WITH QUESTIONS OR SUBMIT THE COUPON PROVIDED

If you have further questions or concerns contact:

Agency of Agriculture
James Leland
116 State St., Montpelier, VT 05602
1-802-828-2431

Consumer Affairs & Public Information
Dept. of Public Service
112 State St., Montpelier, VT 05620
1-800-622-4496 or 1-802-828- 2332

COUPON FOR PERSONAL REQUEST

Name	Town/City of Affected Property
Street Address	Telephone Number (Home)
Town	(Work)
State Zip Code	O.K. to use Work Number: Yes ☐ No ☐
Electric Account Number	Best Time to Call

Property of Concern: ☐ Year Round Residence ☐ Summer Residence ☐ Commercial Property ☐ Water Supply ☐ Land ☐ Other

Line and Pole Identification: Utility Initials Numbers

We need all of this information in order to determine if you qualify for personal notification. If information is unobtainable, please state why. Use an extra sheet of paper if you need more space.

RETURN TO YOUR LOCAL UTILITY

VELCO12

Ten Year Plan Pays Off

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of Tuesday, November 29, when Pole #257 became an active connection point between East Montpelier Feeder #2 and Jackson Corner Feeder #1 (the Jackson Corner substation is in rural Williamstown), members in more than a dozen communities served by the two substations are now able to get their power from either one of them. In the case of a planned outage, for upkeep or repairs, WEC can send a two-man line crew to **1-2 TO 8-1** to establish the connection and provide uninterrupted power. That saves inconvenience to members who depend on constant power for their computers, for home oxygen concentrators and other health and safety equipment, and for other purposes. It also saves Washington Electric the time and expense of mailing advisory post cards to members who will be affected by a planned outage, and of following up those cards with individual phone calls to make sure everyone is warned ahead of time.

It's true that for unplanned outages, tapping into power from the unaffected substation will not be so instantaneous, nor unnoticeable. But it will be much quicker, necessitating only the throwing of the three switches at Pole #257 on George Street. Sometimes it's fairly easy for WEC's line workers to find the cause of an outage and get it fixed; some of the substations, including the rebuilt and modernized facility at East Montpelier, have equipment on their regulators that reveals how far out along the feeder line the fault has occurred, so a line crew can find it and perhaps repair it quickly. In such cases, going to George Street won't be necessary.

But for more extensive and involved emergency outages – a broken power pole, or wires knocked to the ground – the switches at Pole #257 could reduce the duration from several hours to 15 or 20 minutes.

Furthermore, in time, that 15-20 minutes might go away, too. As WEC members have heard, Washington Electric will soon begin installing AMI – automated metering infrastructure, or "smart meters" (using "Power Line Carrier" rather than wireless technology). A central part of that project will be installing a closed, private, broadband system with terminals at the substations.

"At the same time we're going to integrate fiber optic equipment that will give us the ability to open and close those switches remotely, from a PC in our outage-control center," said WEC Operations Director Dan Weston. That will eliminate driving to Pole #257.

That's not new technology. It's called SCADA (supervisory control and data acquisition), and many electric utilities have employed SCADA systems for years – predominantly larger companies serving high-density populations. Smaller, very rural companies like WEC are now getting into the act, and the AMI conversion, whose costs are covered 50 percent by the federal "Stimulus Act" of 2009, will boost the Co-op toward that goal.

But that's getting ahead of the story. The most important points for now are that:

1. The "marriage" between the East Montpelier and Jackson Corner substations is the wave of the future, and will in time be replicated among other combinations of WEC's substations, bringing enormous service improvements to nearly all Co-op members; and,

2. This didn't happen overnight. Washington Electric operates on, and is guided by, a carefully constructed 10-year work plan, and incremental improvements that provided other benefits along the way were also, in a sense, chess moves with a less-obvious strategy and a larger goal in mind. That goal became reality on November 29, 2011, when the feeders that meet on George Street were synchronized and made ready.

WEC's East Montpelier substation was dismantled this summer and replaced with a sturdier facility (above) offering better working conditions for staff, better environmental features, and the state-of-the-art equipment that enabled the connection at Pole #257 in Orange. At right: This is a "feeder" – three-phase power lines departing the East Montpelier substation and carrying lower-voltage electricity to a community of WEC members.

A new regulator at the East Montpelier substation. The voltage for each phase of the three-phase lines can now be more precisely regulated using the controls seen here (the box in normally kept closed).

"Rural electric systems are often 'radial' in their design, with all the power going out, away from a central point or a substation," explained WEC General Manager Avram Patt. "This was because of the need, when co-ops started, to send electricity out across the countryside to people at far distances. What we're working toward now is migrating from an entirely radial system to a system where power can be supplied from different directions. That's why this is a big step for the Co-op."

A strategy, all along

Back in January 2006, WEC Field Technician Mike Patterson was driving slowly along the eastern shore of the Thurman Dix Reservoir in Orange, surveying the less-than-ideal condition of WEC's poles and power lines as they zigzagged from one side of the Reservoir Road to the other. At George Street, a dirt road that turned to the east and climbed a hill, the lines disappeared into the woods and could be seen only intermittently among the trees. They were practically inaccessible, and since the poles and wires were also aged, outages would be hard to get to and repair.

After a slow mile or so, George Street curved to the right at a cemetery, turned to pavement, and headed toward Orange Village. The poles were closer to the road here, but they were two-phase lines (two wires running from cross arm to cross arm, with a neutral below them). It would be better if they were three-phase (three conductors, or wires, running parallel, with a neutral below them). A three-phase system can carry more electricity and sustain its voltage better over distances. Additionally, three-phase power is necessary for running many electric motors, so not having it can put a crimp on businesses and homes that use that kind of equipment.

Clearly, it was time for an upgrade. As Patterson drove along Reservoir Road and George Street he was mentally redesigning this long stretch of line, looking for ways to get it all close to the road, and replace it with three-phase line.

A few years passed, and the work was finished. WEC had established new, accessible, three-phase line all the way to Orange from East Montpelier. That was a major service improvement in itself, and could have been the end of the story.

But providing three-phase access to Pole #257 was part of a larger plan,

The three switches atop Pole #257 (left) are where it's happening — the culmination of a long-range construction effort that will enable significant service improvements. Above: the roadway back to WEC's very rural Jackson Corner substation in Williamstown. Below: Jackson Corner is an older, wooden substation, but it is equipped with the modern regulators needed to synchronize with the feeders from East Montpelier.

waiting to be executed.

Jump to 2011. This summer Washington Electric rebuilt its East Montpelier substation, a project started in May and concluded in October. It took considerable work to provide members in East Montpelier, Middlesex, Worcester, and other towns reliable power from temporary connections to four other Co-op substations. But the improvements to the East Montpelier facility were well-worth the effort, because the state-of-the-art equipment installed there gave WEC the ability to more-finely control the voltage on each of the three phases of the feeder going out to Orange (as well as on the two other East Montpelier feeders, to Middlesex and Cabot).

Connecting East Montpelier feeder #2 and Williamstown feeder #1 at Pole #257 wasn't as simple as plugging two extension cords together. WEC's electric lines conduct alternating current (AC), which peaks in cycles just a fraction (one/three-hundred and sixtieth) of a second apart. This is intentional, and over three phases has the effect of giving constant power transfer. But it means that the voltage in a three-phase system is out of synchronization.

"Think of it as a red line, a white line, and a green line coming from East Montpelier, and a red line, a white line, and a green line coming from Jackson Corner in Williamstown," said Weston. "Just by connecting them, you're not guaranteed that the green will match the green, the red will match the red… They are out of phase, out of time synchronization."

Jackson Corner may be an older-style, wooden substation, but it has up-to-date regulators that allow fine-tuning of the three-phase voltage. And now East Montpelier does, too – which is why the feeders that meet on George Road can be made compatible.

Here, for the first time in WEC's 72-year history, Washington Electric is able to connect or disconnect feeders from two different substations without so much as a blink of service interruption for the Co-op members who depend on them.

Eye now on Tunbridge

Several of WEC's other substations also have state-of-the art regulators, but as we have seen, that's only part of the battle. Jackson Corner could be similarly phased with the substation in Tunbridge, except that the three-phase line between them isn't up to snuff.

"We have it in our construction work plan to rebuild that line," said Weston. "Right now the wires are too small to be able to pick up that load from Williamstown, and the poles are pretty old. Those systems meet in the middle between Jackson Corner and Chelsea, but you'd have to worry about the conductors burning down because they're just not large enough to carry the load."

The substations themselves are ready, though. Which means that if Co-op members around Chelsea and Tunbridge start seeing linemen rebuilding stretches of WEC's system, planting new poles and moving them closer to the road, replacing the wires with larger, newer ones from cross arm to cross arm, these could be more than incidental improvements.

Because WEC has a ten-year plan in mind, and it's sticking to it.

Washington Electric Cooperative Inc.
Energy Efficiency Charge Rates for 2012

The Public Service Board has determined, based upon the calculations provided by the Department of Public Service, and pursuant to Rule 5.300, the 2012 Energy Efficiency Charge (EEC) rates to take effect with bills rendered February 1, 2012. This charge pays WEC's share of the services provided to Co-op members by Efficiency Vermont, a state-wide non-profit organization operating under the auspices of the Vermont Public Service Board. The EEC rates shall be as follows:

Rates for Customers Without Demand Charges		Rates for Customers With Demand Charges	
Residential	$0.00931/kwh	**Commercial Demand Customers**	$0.00513/kwh
Commercial	$0.00796/kwh	Plus	$0.8138/kw
Industrial	$0.00541/kwh	**Industrial Demand Customers**	$0.00348/kwh
Rates for Unmetered Street and Security Lights		Plus	$0.8944/kw
$0.00796/kWh times the nominal wattage of the lights times 360 hours per month			

ENERGY COACH

What's It Costing You To Run Your Household Equipment?

(And Why Should You Stand For It?)

Most people think about their home's electrical use in terms of how many dollars it costs them. That's logical, because that's what your electric bill tells you every month.

But your bill also provides other numbers that are just as important: your kilowatt-hours (kWh) of electric usage for the billing period, and your average kWh per day.

The energy consumption of every electrical device in your home – lights, appliances, TVs, computers, etc. – is a product of its wattage multiplied by the number of hours the device is in use. Since a watt is a very small unit of energy measure, your bill tracks your consumption in "kilowatt-hours." One thousand watts is one kilowatt, and kilowatt-hours denote the energy used by the appliance, the TV, the lighting source – in general, these are referred to as electric "loads" – over time. (A kilowatt-hour is one kilowatt of consumption over 60 minutes.)

main electric billing meter. By recording both the individual load and the whole house usage you will learn the proportion of that total drawn by the appliance you're testing, information that may guide your decisions about reducing energy consumption. WEC will provide a log sheet to help you track both sets of data.

The Kill-A-Watt test meter is for 120-volt loads only. *Most household items are 120 volts.* Here are examples of 120-volt loads that can be tested, with the most important (potentially most wasteful) underlined: refrigerators/freezers; portable heaters (including ceramic, oil filled, infrared, or radiant); dehumidifiers; oxygen concentrators; computers; chargers/power supplies for digital devices (cell phones, game boxes, etc.); TV/entertainment systems;

You should consider borrowing the Co-op's Kill-A-Watt test meter. It can measure the watts being consumed instantaneously by any 120-volt devices in your home.

Examples of what you get for a kWh of usage

Device	Watts	Time used/on	kWh	Service delivered
Fluorescent bulb	25	40 hours	1	8 evenings of lighting
Incandescent light	100	10 hours	1	2 evenings of lighting
Computer	200	5 hours	1	more than half a day's work
Dryer	5000	12 minutes	1	One-fifth of a drying cycle

Each electrical load in your home consumes power at its own rate. To reduce your rate of consumption and your electric bill, it helps to know what that rate is.

For that purpose you should consider borrowing the Co-op's Kill-A-Watt test meter. It can measure the watts being consumed instantaneously by any 120-volt devices in your home. We will provide instructions for using the test meter, but it's pretty simple – basically a matter of plugging the unit into the test meter and plugging the test meter into a standard 120-volt wall socket, and then following the instructions to push the correct buttons. The information appears on a screen. We also provide guidance concerning how long different kinds of loads (for example, lights, as opposed to refrigerators) should be monitored.

Knowing how much each 120-volt load consumes in its normal operation might encourage you to replace older units with newer, energy-efficient equipment. Or you may find that your increased energy awareness leads to savings through changes in behavior or in how you operate your equipment.

While the Kill-A-Watt device is in use, you should read and record the house's

air conditioners; block heaters; heat tape; game consoles; trough deicers.

Traditional incandescent lighting may be another significant electricity cost over the course of a year. Compact fluorescent bulbs (CFLs) use approximately one-third the power of the incandescent bulb for the same amount of light. LED lights (light-emitting diodes) will become more available in the market; LEDs use less power than CFLs. (In 2012, by federal law, stores will begin phasing out the sale of incandescent bulbs, starting with 100-watt bulbs.)

Special mention

Refrigerators: Today's best ENERGY STAR® refrigerators use about 1 kWh/day. (A freezer may use even less than a kWh/day). If you have an older unit the test meter may tell you it's using 3 or 4 kWh/day – possibly 400 percent more power than necessary, every day of the year. The cost of a new refrigerator that uses 1 kWh/day can be quickly recouped from the savings on your electric bill. But make no assumptions; the best way to determine whether a refrigerator or freezer should be replaced, at least for electricity purposes, is to measure its usage before buying a new unit.

Phantom power: The energy that some appliances use even when they are turned "off" is a growing portion of household usage, with an enormous impact on a national scale. These loads have "continuous standby" energy consumption. Even some appliances with ENERGY STAR labels use significant phantom power. And while the industry has made inroads in the reduction of power consumption by high-definition TVs, some of the new large-screen TVs still use more electricity when they're supposedly "off" than the old televisions they replaced did when they were "on."

A recent study by the Natural Resources Defense Council (NRDC), cited in the September/October 2011 issue of *Home Energy,* contained startling information about "set-top boxes" – the cable and pay-TV boxes provided by Comcast, Direct TV, Dish Network, and other companies (also digital video recorders, or DVRs, which people use to record programs). The NRDC reported that the set-top boxes operate near full power even when they're not in use. Basically, they don't shut off. The report said: "One DVR and one set-top box in a household typically use about as much electricity per year as a new refrigerator. These devices still run at near full power when the consumer is neither watching nor recording a show. Hitting the on-off switch merely dims the clock or display; it does not significantly reduce the amount of power used."

This energy waste comes at considerable personal and national cost. According to the report, there are 160 million set-top boxes in U.S. homes, and Americans spend $3 billion a year to operate them. Of that $3 billion, $2 billion is for the electricity they use when they're inactive. Says the NRDC: "It takes the equivalent of nine coal-burning power plants (500 megawatts a year) to operate these devices nationally." It's possible to design set-top boxes that go into a low-power mode when not in use, and these are showing up in Europe. But the U.S. is lagging. Prodding by customers could be the beginning of a strategy to reduce this exceptionally wasteful form of phantom power.

What else might you have in the way of phantom loads? Examples include anything with an LED light or digital display that remains energized when the item is "off" (microwave, TV, game consoles, etc.), as well as computers, copiers, fax machines, stereos, DVD and CD players, and satellite receivers. Generally, anything with a remote control.

WEC's Kill-A-Watt test meter can help you determine whether an appliance uses electricity when in the off position. Estimates are that up to 5 percent of the average home's electric use is from wasted "phantom" loads. One way to avoid phantom electric usage is to use a "Smart Strip" – a surge-protection device that allows for all connected loads to be automatically de-energized when a primary load is shut "off." (See www.energyfederation.org/washingtonelectric/default.php.)

Saving "the BIG Loads" for another time

The Kill-A-Watt test meter (and other 120-volt meters) cannot be used for measuring 240-volt loads, and those could be some of the largest electricity consumers in your home. They include baseboard electric space heating, electric water-heating tanks, electric clothes dryers, and electric stoves. However, there are ways to gauge the impact of these devices on your electric usage and your bill, and perhaps to reduce them. The Energy Coach will discuss 240-volt loads in this space *sometime next year!* (noting that next year is merely weeks away).

But you don't have to wait. You can call the Co-op anytime to discuss 120-volt loads, 240-volt loads, or how to borrow WEC's Kill-A-Watt test meter. Don't let 2012 go by without making inroads on your home energy consumption.

PSB To Hold Public Hearing on WEC's AMI Plan

The Vermont Public Service Board has scheduled a public hearing on PSB Docket 7810, Washington Electric Cooperative's plan to deploy Automated Metering Infrastructure (AMI, also known as "Smart Metering") system-wide beginning in 2012. The date for the public hearing is Wednesday, January 4, 2012. It will convene at 7 p.m., at the Old Brick Church, 64 Church Street, East Montpelier (next door to the Co-op).

President's Report

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remind folks that you appreciate their work; they are working for and on behalf of all of us.

Coventry

With five engines on line, with a total generating capacity of 8 megawatts (MW) of power – enough to eventually supply 75 percent of our members' electricity needs – our Director of Operations and Engineering, Dan Weston, has been working with NEWSVT (the division of Casella Waste Management that owns the landfill that provides our methane fuel), IES (our contracted plant operator), and John Murphy of our consultant, Stantec, to maximize gas production. We are presently running at the equivalent of four engines at 100-percent-plus capacity, while rotating the use of the engines. This has allowed us to rebuild three of the engines this fall and still keep up production.

Wrightsville hydro

We have completed a number of upgrades at our 900-kilowatt (KW) Wrightsville hydro site, which produces 3 percent to 5 percent of our energy requirements and has been in service since 1985. Last spring we needed to shut the plant down because there was too much water in the reservoir, exerting excess pressure on our turbines.

First Wind Sheffield

The 40-MW, 16-turbine wind-power project located in Sheffield began generating and supplying your Co-op with power on October 18. We are contracted to receive 10 percent of the output from the project for the next 20 years. While wind projects remain a controversial topic for many Vermonters, we feel First Wind has managed the construction of this project well. WEC will continue to work with First Wind to try to ensure that the Sheffield project is one of the best-managed wind sites in the U.S.

Right-of-Way

Your Board of Directors has continued to support a strong ROW program, including a danger-tree-removal program and systematic inspection/ treatment of our system's 24,000 distribution poles, which reduces outages and extends the life of our infrastructure. Operations and right-of-way management of our system is carried out under the direction of Operations Director Dan Weston, Operations and Construction Services Manager Brent Lilley, and Right-of-Way Management Coordinator Mike Myers. ROW maintenance is critical to our reliability, as a utility serving a primarily rural territory. We extend our special thanks to our line crew, in-house staff, and our ROW contractors for their dedication, especially during storms, to keeping the lights on.

Special Thanks and Season Greetings

I want to thank my fellow Directors for their service to the Cooperative in 2011, and also Board officers Vice President Roger Fox, Treasurer Don Douglas, and Secretary Marion Milne. Thanks, too, to our Co-op management: General Manager Avram Patt, Operations Director Dan Weston, Finance Director Cheryl Willette, Products & Services Director Bill Powell, Member Services Supervisor Susan Golden, and Administrative Assistant Debbie Brown, for their hard work and continued dedication.

WEC employees – in the office, the line crew, the engineering crew, our Manager of Information Systems Kevin Stevens, our accounting department, our ROW line-clearing contractors, our various consultants, and our general counsel Josh Diamond of Diamond and Robinson – all give many hours of work that ensures that our electric cooperative runs effectively and keeps our lights on. A heartfelt THANK YOU to them, from the WEC Board and all of our members.

Please remember that we always look forward to hearing from you, our members – the owners of our Co-op. We are fortunate to have a great Co-op and a team effort which I am proud to be a part of.

As 2011 winds down and we prepare to move into 2012, I wish all of our members, your families, and our employees and their families, a very healthy and happy holiday season and a great New Year.

Notice To Washington Electric Co-Op Members

Notice of Proposed Tariff Changes

On November 15, 2011, Washington Electric Cooperative, Inc. filed a request with the Vermont Public Service Board (PSB) for an increase in retail rates of 2.27%. The over-all increase in rates is due in part to increases in the costs of supplying and distributing electricity to members, increases in costs from transmission suppliers, as well as changes in the value of Renewable Energy Certificates associated with WEC's Coventry landfill gas generating plant.

This proposed change is to take effect for service rendered on or after January 1, 2012, and will be reflected on bills you receive beginning in February. The Public Service Board has no authority to suspend the rate increase request. If the Board decides not to open a formal investigation, the rates will take effect January 1, 2012, on a permanent basis. However, if it appears to the Board that the rates may be unreasonable, the Board may order a formal investigation and hearing on the proposed rate changes. Until completion of the formal review by the Board, the increase will be listed as a surcharge on your bill.

To determine the impact on your individual bill, use the present and proposed rates column and your average monthly consumption. For example, a residential member using an average of 500 kWh a month would calculate his or her bill as follows:

	Present Rates		Jan. 1, 2012 Proposed Rates	
Customer Charge		$11.53		$11.79
First 200 kWh	200 x $.09223	$18.45	200 x $.09433	$18.87
Usage over 200 kWh	300 x $.20595	$61.79	300 x $.21063	$63.19
		$91.77		$93.85

Any interested person may examine the rate increase filing at the office of the Public Service Board or at the Washington Electric Cooperative office during normal business hours. Any person wishing to comment on the proposed rate increase should file his or her views in writing with the Vermont Public Service Board, 112 State Street, Drawer 20, Montpelier, Vermont 05620-2701, or via e-mail to psb.clerk@state.vt.us by December 15, 2011.

	Present Rates	Proposed Rates
Residential		
Customer Charge	$11.53	$11.79
0-200 kWh/month	0.09223	0.09433
Over 200 kWh/month	0.20595	0.21063
Seasonal Residential		
Customer Charge (6 month prepayment)	$69.18	$70.74
0-300 kWh	0.09223	0.09433
Over 300 kWh	0.20595	0.21063
Small Commercial		
Customer Charge	$11.49	$11.75
Per kWh/month	0.16863	0.17245
Seasonal Commercial		
Customer Charge (6 month prepayment)	$68.94	$70.50
Per kWh/month	0.16863	0.17245
Large Power		
Customer Charge	$19.60	$20.05
Per kWh/month	0.08953	0.09156
Per kW/month	12.68	12.97
Time Of Day		
Customer Charge	$11.53	$11.79
0-60 kWh/month - Peak	0.09223	0.09433
Over 60 kWh/month - Peak	0.22799	0.23316
0-140 kWh/month – Off Peak	0.09223	0.09433
Over 140 kWh/month – Off Peak	0.19389	0.19829
Security Light		
Per 100 Watt Light/month	$17.95	$18.36
Per 400 Watt Light/month	35.88	36.69

WEC elections are coming. Think now about running for the Board of Directors.

WEC Unveils Its Revamped Website

From Bill Payments to Outage Reports, Your Source of Instant Information

The face of any business or organization in the 21st century is its website, and Washington Electric Cooperative has just gotten a new facelift. The Co-op's page on the Worldwide Web (http://www.washingtonelectric.coop/) has had a makeover – the first wholesale change of WEC's on-line presence since WEC originally launched its website in January 2001. The new site debuted in November.

"Website technology has changed a lot since our first site went up, and people's expectations for using a website are much broader than they used to be," said WEC General Manager Avram Patt. "Lots of people turn to websites seeking information, rather than calling, and they have high expectations of the functions a site should serve. We provided many of those functions on the old site, but it was hard to find things. We've addressed that by reorganizing the layout and providing better links from one page to another. The goal is to be more up to date and more useful for our members."

The home page at WEC's new and improved website, www.washingtonelectric.coop.

Two important functions concern bill paying and outage information. Both can be found easily from the home page. The top of the page features a rural scene – a road flanked by single-phase power lines, leading over a green hillside and past a homestead – with a series of tabs beneath the photo. The second tab from the left is "Member Services," and the first option beneath it is "Account Management." That opens up to links for "Billing Options," "Payment Options," and other information (instructions for closing your electric account, disconnection policies, etc.).

There's another way to get there, as well. On the right-hand side of the home page is a narrow box with options set off in eye-catching green letters: "YOUR ACCOUNT" followed by "Pay Bill" and "Review Account." Making this information easy to find and use was one of the main purposes of the website reorganization.

"Over time, more electronic payment options have become available," Patt explained. "There's the automatic bank draft system which members can sign up for and use regularly; the single-payment electronic option, which can be very useful under some circumstances; there's e-billing, the 'paperless option' that appeals to a lot of people; and there's paying by phone, and budget billing. These are increasingly important in an electronic age, but we had heard from members that it wasn't always easy, on the old site, to understand what their options were. I think we've remedied that."

"Website technology has changed a lot since our first site went up, and people's expectations for using a website are much broader than they used to be."
— Avram Patt

A feature that could attract a lot of interest is the website's front-and-center "Outage Alert." It notifies members of planned outages (when the Co-op shuts down service in certain areas for repairs and maintenance), and perhaps more important it provides information and updates when WEC is experiencing outages brought on by storms or other causes.

"Our phone lines can get very busy at those times," Patt acknowledged, "and people can have difficulty getting through to us. We're using the website to provide general information and updates, so people will at least know whether we're aware of outages in their area and about our progress in addressing them."

There's also a link to a statewide outage map, which includes WEC's territory and uses a color-coded system to show how severe the outages are (from green, signifying just one to 49 outages, to red, signifying more than 1,000; the numbers, of course, are approximate).

However, a question Patt hears frequently is how people are supposed to use the website for outage information when there's no electricity for their computers?

"People aren't just accessing the internet from their home computers," he explained. "People have Smart Phones, they have laptops that might pick up a wireless signal. A lot of people call us from work to check out the status of an outage at home or to see whether a storm has affected their power. We've made this information more easily available on the website."

The site is also a good vehicle for providing general news about the Co-op. Across the bottom of the home page a series of boxes draws attention to major themes (currently there are two articles under "WEC To Install Automatic Meters") and links to past and current issues of Co-op Currents under "Newsletter." There's also a link to the "Energy Coach," where Washington Electric's Products & Services Director Bill Powell provides energy-efficiency tips and information. This link is interactive, as the Coach invites people to post questions on line.

Redesigning the web page was a major project for the Co-op. The Board of Directors budgeted for the expenditure in 2011 and tapped into the institutional knowledge of staff members Kevin Stevens (Manager of Information Services), Susan Golden (Member Services Supervisor), and Debbie Brown (Administrative Assistant), as well as Powell and Patt, to guide and work on the redesign, with feedback from the Board's Members & Markets Committee. WEC hired Gregg Banse of Direct Design to create the website. Golden, Stevens, Powell, Brown, Patt and other staff members post news and information to keep it active, pertinent, and up to date.

Washington Electric Cooperative – by one measure (number of meters per mile of power line) the most rural electric utility in Vermont – encompasses a relatively high proportion of member/customers who do not have computers in their homes. In a November 2010 survey, 67.33 percent of WEC members who were asked said they used the internet – which means almost a third do not. But as state government works toward statewide broadband coverage, and as the Worldwide Web, Facebook, and Twitter become nearly universal (look for WEC to add icons to its site soon for these social/informational media), the web page will only gain in importance.

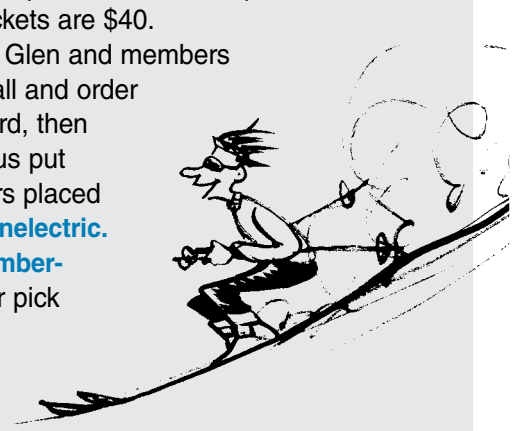
This article merely touches the surface of what the website offers. The site itself is the best source of that information.

But whether it's keeping up to date with the latest developments ("WEC Files for 2.27% Rate Increase"), studying your Co-op's bylaws, mission statement, and financial reports, reading up on WEC's power sources, or taking a virtual tour of Washington Electric's landfill gas-fueled generating station in Coventry, you "virtually" have the Co-op at your fingertips.

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; weekday adult tickets are $40.

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.washingtonelectric.coop/rates/member-specials/skiing-member-discount/**), 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!