

The Wildlife Philosophers

Taxidermists, hunter educators, and Co-op members Theresa and Rodney Elmer discuss craft, conservation, and the circle of life

A visit to Mountain Deer Taxidermy in Northfield is a lot like stopping by your best friend's house. You know, the one who always has something good on the stove and who'd rather do nothing else than talk over big ideas with you. Walk into Rodney and Theresa Elmer's workshop on a wet day, and you're greeted by a hot wood-stove and coffee, and a big red retriever named Annie whose job title is "wellness coordinator."

And of course, the Elmers themselves, the wise and welcoming ninth-generation Vermonters who own the shop. After raising five kids and several foster children, not to mention running a business together for more than 32 years, they are a solid team, listening carefully to each other and occasionally supplying a word of credit. Rodney, goateed and going silver, wears a ball cap; on this day it's a Vermont Fish & Wildlife Volunteer hat. Theresa's trademark is her long red hair. Both are healthy and relaxed, with the light in their eyes of those who love what they do all day.

Their workshop is lined by dozens of examples of their work: mounted deer, plus bears, moose, fish, a bobcat, an albino porcupine, and one distinguished looking rooster. There's also a tiny fawn whose story we'll get to later.

"I have a relationship with my deer. If I'm not hunting them, I'm out there working for them—and they're working for me. They eat the trees I can't eat, and I eat the deer. But I work for the trees, and they do well, and the deer do well, and the soil does well, and then I fit."

— Rodney Elmer

Cabela's kit. Both Elmers learned on their own deer and deer shot by "friends who were willing to take a chance on us," said Theresa.

The taxidermy process

A preserved game animal is often called a hunting trophy—but the Elmers suggest most of their customers don't think of their mounts

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Rodney and Theresa Elmer, owners of Mountain Deer Taxidermy in Northfield.

Order of Operations

How WEC's operations team triages major outage events

After the late October 2017 windstorm, many WEC members wanted to know how their utility decides when each break in the line gets fixed. After all, there's a big difference between going a day and going a week without power.

Mainly, there's a science to it, and then it becomes a bit of a dance. Utility-provided electricity flows downstream, explained Brent Lilley, Operations and Construction Services Manager. That's physics. The downstream pattern, he said, starts with high-voltage transmission lines that feed WEC's substations. Then substations energize three-phase distribution lines known as feeders, that split off to become main-line single phase feeders, then

drop to single-phase radial taps.

A fault (that's a problem on a line, in utility-speak) interrupts the flow of power beyond that location. Faults are caused by trees leaning on or falling through the wires, heavy snow or ice weight that causes one line to come into contact with another, or other factors. There's just no way to turn power on at the end of the line if the lines upstream are not energized. "We don't have a lot of transmission or substation outages, but if we do, those are given top priority. If a three-phase line isn't energized by the transmission line, there's no sense in starting there," he said.

Many of the transmission lines that feed WEC's substations are not,

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Washington Electric Cooperative

East Montpelier, VT 05651

Inside

The co-op difference: WEC members won't see a difference in bills from the federal tax overhaul because, as a not-for-profit co-op, WEC doesn't pay federal taxes. Instead, all excess revenues go to member owners—not shareholders. President's message, p. 2.

BOD elections: Three incumbents run for re-election to WEC's Board of Directors, p. 6.

Got to know your WEC: New feature profiles WEC staffers, p. 7.

RSVP for WEC's 79th Annual Meeting Form on p. 8.



A transformer in a tree? After every storm, crews work to improve reliability—long after your power comes back on. Sometimes, getting your power on might mean using a tree as a temporary pole. After the Event, p. 8.

Larry Gilbert

President's Message

Taxes and the Difference for Not-for-profit Cooperatives

By Barry Bernstein

I am always somehow surprised, as we close out a year and begin the next, how quickly time can fly. 2018 is no different, marked by the continued ups and downs of the temperature and over a foot of snow in early February. It is also a time of preparation for our 79th Annual Meeting, this year scheduled to take place on May 2 at WEC's operation center building in East Montpelier. As I prepare for the annual meeting, as staff finish the year end financials and the Board of Directors get ready to review our 2017 audited financial state-



ments with our auditing firm Kittell Branagan & Sargent, I also reflect on how fortunate we are to receive our power from an electric co-op: our Co-op, WEC. At WEC, the bottom line is service to our member-owners, not stockholders.

You may have heard about the federal bill that changed the tax code.

Some privately owned utilities, like our neighbors Énergir/Green Mountain Power, have announced that since they'll pay a lower corporate tax rate, some of those savings will be passed along to their ratepayers. So, you may be wondering if WEC will pass along

any credits from the change in tax law.

WEC is a not-for-profit and therefore does not pay federal taxes. As a result, the tax code does not impact us as it does for-profit utilities.

There's distinction to be made between for-profit utilities and not-for-profit co-ops, like WEC. Since WEC

is a not-for-profit exempt from federal taxes, we can not pass on a refund, as we do not collect funds from you in the first place. This is important. As a co-op, we work directly for our member-owners' interests, not stockholders or private owners. We don't include a "rate of return," or a profit margin, in our rates, which is what for-profit utilities do. The Public Utility Commission (PUC) approves Énergir/GMP to include a 9% profit margin, above the cost of service, on their rates. We don't do that, nor, as a co-op, are we allowed.

The co-op difference is we return excess revenues to our member-owners each year in the form of capital credits. In the 20 years we've been issuing credits, we've returned \$5.7 million to our members. The credit you receive is based on how much electricity you use—which is how much revenue you contributed to the Co-op. You receive this credit on your November bill (or if you are no longer living on the Co-op's system, we send you a check).

Many of our members sign up to donate those capital credits to our Community Fund. We distribute small grants to worthwhile non-profits that help those in need in the Central Vermont area and in the communities we serve.

As a co-op, we work directly for our member-owners' interests, not stockholders or private owners. We don't include a "rate of return," or a profit margin, in our rates, which is what for-profit utilities do.

For 79 years, Co-op members have contributed to making sure rural neighbors have electricity, where they previously had to do without. In the late 1920s and early 1930s Vermont's for-profit utilities extended service to many towns and villages, but there was no

financial incentive to bring electricity to those on the back roads. Through the Rural Electrification Act, federal dollars became available to help form cooperatives committed to building power lines in rural areas. That act allowed rural Americans, local Vermonters, to join together to set up electric cooperatives to borrow money and bring electricity to their communities for the first time. That is how WEC's 41 towns got their power.

WEC remains on the leading edge of working with and on behalf of our membership to provide you with 100% renewable energy power, to give you a reliable and environmentally based power supply, while also supporting and working with you in making your homes and businesses as energy efficient as possible.

And please remember: we don't factor profits into our rates, and when our revenues exceed our expenses, that money is returned to you in the form of capital credits. That's because our members own WEC, not shareholders.

I hope your winter of 2018 continues to be a safe one and I know all of our WEC employees will be working hard to keep the lights on and delivering our service with a smile.

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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$.51, 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.

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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 Dawn Johnson, at 224-2332.

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Rodney Elmer of Mountain Deer Taxidermy examines the nose pad of a mount in progress. This buck, he noted, has a mohawk-like brush of hair on his neck, a seldom seen trait caused by a recessive gene. The Elmers' story began on p. 1 and continues on p. 4.



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Manager's Report

Power Mix, Policies, and Politics

Plus: save the date for our Annual Meeting on May 2

By Patty Richards

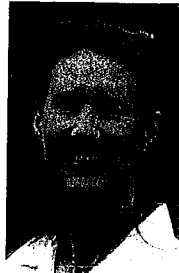
79th Annual Meeting May 2

Work is underway in preparation for our upcoming 79th Annual Meeting, which will take place on May 2. We are holding the meeting at our Operations Center building on Fassett Road in East Montpelier. This is a great opportunity to visit with the WEC Board of Directors and employees and an even better chance to let us know what's on your mind. We hope you will join us for a meal and the chance to talk with WEC board, staff, and other members. We also will have equipment WEC uses for storm restoration displayed for your viewing pleasure (which is always a hit, given the off-road work we do on our lines). So please save the date, send in your dinner RSVP on p. 8, and we hope to see you in early May!

Where your power came from in 2017

WEC is a longstanding leader and champion of energy efficiency and we are committed to providing our member-owners with reliable and renewable sources of electricity. WEC provides you with 100% renewable energy. Most of our power originates from within the state of Vermont: Coventry Landfill Gas to Energy Facility and Sheffield Wind are the main Vermont sources of power in WEC's power mix, and account for 75% of our portfolio. While WEC sells renewable energy credits (RECs) from the Coventry and Sheffield facilities, we keep our mix green by purchasing RECs from other low cost providers. This allows us to "sell high, buy low," practicing fiscal responsibility while keeping our portfolio 100% renewable. WEC is working to help all of us reach the state's 2050 goal to use 90% renewables for all energy, including heating and transportation, and to use energy more efficiently. Energy efficiency remains one of WEC's top values, as you, our members, have told us it should. We will also continue to explore new ways to supply and deliver energy to our member-owners.

As we tally up year-end numbers, it is a good time to summarize where your power came from throughout the year. WEC's power supply portfolio is made up of generation resources and long-term power contracts. The portfolio was constructed to hedge the financial cost of serving WEC's load from the New England markets.



WEC provides you with 100% renewable energy. Most of our power originates from within the state of Vermont: 75% of our portfolio.

All figures that follow are before REC sales. As shown in the chart below, in 2017, WEC's energy came predominantly from the Coventry landfill gas generation facility. In fact, 64% of WEC's energy came from Coventry, while 14% came from New York Power Authority (NYPA), 11% from Sheffield Wind, 4% from Wrightsville hydro, 3% from Ryegate, 2% from market purchases, and 2% from VEPPI hydro.

Record year for net metering

WEC had a record year in 2017 for members not only interested in installing solar at their homes, but actually installing systems.

The state's new net metering plan created a pace of installations that far exceeded projections. In 2017 we had 129 members install net metered solar systems that accounted for 894 kW. This was the largest single year in terms of members participating, and the largest amount of kW installed in a single year. In fact, 2017 was greater than the last four years combined!

WEC now has a grand total of 2,476 kW of generation, mostly solar, installed at members' homes and businesses that use the WEC grid every day. Net metering accounts for 15% of our peak and roughly four percent of our energy sales.

State regulators will look at the net metering program as part of what is called its biennial review. As part of that review, regulators will look at the pace of installations statewide and assess the impacts on Vermont electric



New Right of Way Management Coordinator Larry Gilbert spent nearly 20 years working on WEC's lines. Here he is in the bucket in the aftermath of the October 2017 storm. Get to know Larry on p. 7

consumers, whether net metered or not. You may recall WEC's current net metering plan is the result of an order issued by regulators in June 2016. In that order, the Vermont Public Utility Commission (PUC) established a revised net-metering program pursuant to Act 99 of 2014. WEC is tasked with implementing the state's plan for our members, and we will comply with the orders issued by the PUC. WEC will continue to support net metering programs, and as Vermont aims for 90% renewable energy in all energy sectors (including heating and transportation), we want to reach that goal in a fair, equitable, and sustainable way.

Rate design

The WEC board continues to think about how we charge for electric service. They took in feedback from the listening groups held in November, and we will continue to discuss next steps on this issue. Please see articles in the June 2017 and January 2018 issues of *Currents* for information and details about WEC's rate design and potential changes.

Legislative session

The 2018 legislative session is well underway and we are keeping an eye on bills that could impact WEC and our members. Since early January, the House introduced 618 bills and the Senate introduced 296 bills.

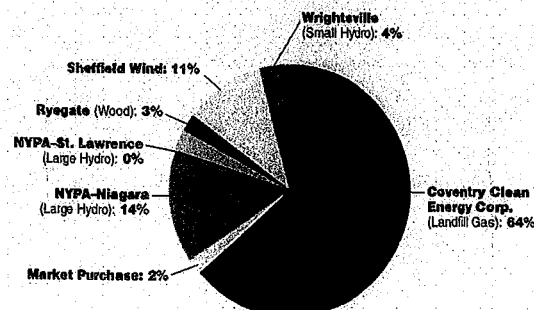
The Governor gave his state-of-the-State address on January 4. He reiterated his commitment to no new taxes or fees and the importance of fiscal discipline, particularly in these times of uncertainty at the federal level. He received a standing ovation when he emphasized the need for respect and civility in political discourse, which is refreshing when we look at the dysfunction going on at the federal level.

A lot of time is being spent trying to understand the impact on Vermont of the new federal tax bill, while also outlining at the leadership level and in committee what the priorities will be for the next 12 weeks. It looks like, at least initially, a good deal of attention and effort will be on the array of clean water bills and, as relates to healthcare, on universal primary care as well as controlling the cost of prescription drugs.

2017 Sources of Power

(Before REC sales)

WEC sells Renewable Energy Credits (RECs) associated with energy produced at Coventry and Sheffield Wind. However, WEC purchases sufficient RECs to keep our power mix 100% renewable.



Wildlife Philosophers

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as trophies, exactly. "Most of our customers don't want bragging rights. To them, it's a representation of a memory of when they were in a wild place, doing a wild thing," explained Rodney. In addition to that, it's a food source. He said it's the connection between humans and the world that matters: the mounted animal is "a representation of another intelligence."

Honoring that animal intelligence through representation, Theresa said, is the best part of their job. The Elmers aren't the creators here, she's quick to add. "We get to recreate it. Mother Nature did it the first time."

The taxidermy process, she said, is to measure the animal and ask the hunter to pick out its position and attitude, and then they'll order a mannequin from a taxidermy supply catalog.

Then they skin the animal, saw off the antlers (if a deer, moose, elk, or similar), and remove all the meat. They make a leather of the animal's skin and mount it on the mannequin using a flexible glue. After it's mounted, they blend its glass eyes and paint the nose pad. It takes a couple of weeks to dry, and then it's ready for pickup. Often, Rodney said, they'll have five or six going at the same time. The Elmers do between 250-350 mounts a year. An average deer takes about 15-20 hours of work—body mounts take longer.

The states of wildlife and people in the wild

As people who spend their lives attuned to wildlife and the woods, the Elmers have a long-term sense of environmental changes. "We've seen a high in a wave of bears, a high in a wave of moose," Rodney said, meaning they've seen these population peaks rise and fall. Rabbits, he added, tend to rise and fall in 10-year cycles and are peaking now, as are bobcats and otters. They've also seen a rise in parasites. Ticks picked up 15 years ago, Theresa



Mannequins come with a spectrum of "attitudes" to choose from. Here, mannequins with glass eyes and antlers already installed wait next to finished mounts.

said, and Rodney added they've been at a level high for about 6-8 years.

The bodies of the animals themselves tell a story about time and the environment—something the Elmers find really interesting. "To see a buck that's lived 14 years in Vermont—that's incredible," said Rodney, saying long-lived deer will show broken and mended bones and other evidence of a tough existence. They've found porcupine quills embedded deep inside coyotes.

Deer are resilient, Rodney said, and need to be to survive Vermont's icy winters. They can live six weeks without food, he said, but it's harder for bucks, who burn off most of their fat reserves breeding. But though game animals are tough, they're affected by human decisions. The Elmers observe how wildlife react to subtle shifts, so sudden big decisions make them wary. Animal behavior changes when ecosystems change, Rodney pointed out. "Watch how the timber industry operates, and you can predict what will happen to

the deer and moose." When humans make sudden changes, unintended consequences result, he explained. For example, he said, in other states, trapping bans have led to booming beaver populations, which led to just as much trapping and other methods of destroying the animals by private landowners—outside the oversight of wildlife authorities.

They are adamant that the people who are attuned to the natural world should have a clear voice in shaping policies that affect it. It's the reason Theresa joined the Fish and Wildlife board. "If you're involved in something, you see it. If you're hunting, you notice things," she said, and because she is interested in continuing Vermont's hunting traditions, her gift to the state is the expertise she's built through decades of hunting and studying wildlife.

Vermont's hunters are a declining population. Hunting used to be a major food source and way to connect with friends and family, she said, but

that's changing. "We put 4,000 people through hunter ed every year, but we don't have the retention," she noted. "I think everyone should go through hunter ed," she added, because of the federal excise tax levied to sportspeople through hunter education courses and hunting and fishing gear. That tax is distributed back to fund state Fish and Wildlife departments. "Sportsmen have always paid the wildlife bills for the public trust," she pointed out.

Mike Wichrowski, Lands and Facilities Administrator for Vermont Fish and Wildlife (and a WEC member in Calais) explained that over the past 50 or 60 years, there have been dramatic shifts in the ways we interact with our wild areas. "Attitudes have changed, people's interests have changed. More people are into wildlife photography and viewing," he said—Vermont has one of the highest national participation rates per capita of wildlife viewing. But that's categorized differently from sport, and while hikers and birdwatchers may enjoy and respect nature, only hunters and anglers pay into the Fish and Wildlife system through that tax. That's why, he said, there are sometimes misunderstandings about public land use—for example, when people want to backcountry ski or camp on wildlife management land. "We don't want you doing that during deer season or turkey season, because you're disrupting the hunters who pay for those properties," he said, or at other times disrupting other species, like breeding birds.

The "huge responsibility" of life and death

Not long ago, Rodney said, he got a call from someone who'd grown attached to a doe and fawn roaming around their property and worried that the fawn would, in time, be shot by a hunter. It's important to remember that we are all here because living things feed other living things, he said. Deer feed on trees. "The mountain lives in worry of the deer. The system is more important. The deer may well turn into a crow, or a coyote, or a little boy. Life feeds on life," he said.

But the natural world is the source—



Along with deer, the Elmers have practiced their art on many other animals: moose, elk, bears, fish, turkeys and other birds, porcupines, rodents, a snake, and many others. This bobcat is one example.



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The Elmers tell this fawn's story to illustrate the responsibility we all share in keeping wild and domestic separate. It's visited the Vermont state legislature and every sportsperson show in New England.

and we shouldn't consider it an endless resource, he added. During their classes, the Elmers often ask students what is the importance of nature. "We can't live without it. The human race depends on it. You don't cut a tree just because you feel like it—it's the other half of your lungs," Rodney said.

He added, putting another log on the fire, "I've always been a tree-hugger. I hug 'em right to the woodstove." That might sound like a brash anti-environmental joke spoken by someone else, but he is completely serious. The Elmers recognize the natural value of living beings from life through death. "I have a relationship with my deer," said Rodney. "If I'm not hunting them, I'm out there working for them—and they're working for me. They eat the trees I can't eat, and I eat the deer. But I work for the trees, and they do well, and the deer do well, and the soil does well, and then I fit."

As hunters, the Elmers work for the meat they eat, and they respect the animal that provides it. "Every time you put it on the table, you appreciate the gift," mused Theresa. "That's the disconnect: we don't care for the animal in the Saran Wrap. That's what I'm sad about. It's a huge responsibility when somebody kills something."

Back to the fawn in their shop: Tiny and adorable, it's visited the Vermont legislature and every sportsperson show in New England, say the Elmers. "He's probably done more good for the deer herd than if he grew to be a big buck," Rodney said, because the Elmers have told its story so many times.

Several years ago, a family kidnapped the fawn from its mother to keep it as a pet. Keeping a wild animal for a pet is both illegal and dangerous. Sweet as the fawn is, deer transmit disease. That was a danger not only to the family and their domestic animals, but had the deer ever returned to the wild, pathogens it picked up in domesticity could have compromised the deer herd.

In the end, the warden removed the fawn and brought it to the Elmers, where they had to euthanize it. Wild must remain wild, and domestic must remain domestic: the Elmers are adamant about this. "If you take responsibility for a life, you have to see it through," said Theresa, which

means care for domestic animals or find a proper way to transfer or dispatch them. Irresponsible release leads to ecosystem nightmares—like abandoned Burmese pythons decimating native fauna in the Everglades, like farmed salmon escaping into wild populations in Washington State.

Our small home in the universe

None of this is to say that the Elmers are anything but accepting of their place in the world. They believe in paying attention, in treading lightly, and in focusing on what you love and tuning out the noise. "Nature shows will scare the dickens out of you," noted Rodney. "When you're scared, you don't do your best work. When you're in love with something, that's when you do your best work."

They've stopped watching the news. From lives observing changes in nature, from the content of the soil to animal population waves to the growth of their kids and grandkids, they know we are all here for a cosmic instant in a tiny corner of the universe. The system of life on Earth is bigger than they are, and this isn't troubling to them. In fact, it's freeing. "Nature's been revealing her secrets over the years. What is Mother Nature's greatest lesson? The thing I came up with is: you can do it. You can destroy it. You can fix it. You can create it," explained Rodney, pointing out that nature always finds ways to regenerate life, and human imagination is capable of both nuclear war and the Hubble telescope.

"Our ignorance is boundless," he said, serious and cheerful at the same time. "We filter by what we know. We should identify with the unknown."

Currents seeks out stories about WEC members—both individuals and businesses—whose lives or work reflect one or more of the Seven Cooperative Principles. The Elmers, and Mountain Deer Taxidermy, practice principles five: education, training, and information; and seven: concern for community. See wec.coop or any October issue of Currents for the full list of seven principles.

Members Write

On A Late Night Outage When It's 30 Below

By Eva Gumprecht

When the power went out last Thursday, I did the usual: stumbling around in the dark, grabbing candles and flashlights, loading batteries into the emergency lamp, tripping over the cat, uttering some unprintable words, plugging in the emergency land line, calling neighbors to find out that no, it wasn't just our house.

Then came the panicked thoughts of what would happen to the pipes I'd been nursing through polar conditions if the power stayed out for any amount of time. These were extraordinarily bad conditions for a power outage. It was dark, the temperature was polar, and the winds were howling. Things could get really bad really quickly.

But the evening also offered reminders of community, generosity, and courage. Friends and neighbors offered help to each other. One even drove into town to buy fuel to help me start our generator. I stood outside with him, in my high fashion Vermont outfit of flannel nightgown over long underwear, two pairs of pants, sweatshirt, coat, mittens (does anyone know how to get the smell of gasoline out of mittens?) hat, hood, and scarf, praying for the hum of motor. Finally we were up and running, and at least for some hours, I would have heat and water.

We had no idea how long the outage would be, and it seems to be human nature to feel that "someone should be fixing this right now!" that THEY should be doing something. So I did the habitual mumbling and grumbling.

But then I began to imagine what it must be like to be one of the WEC crew who were out there working to restore power. I don't know enough to know exactly how an outage gets traced to its source, but I imagine it takes a lot of tramping around in the pitch black, through brush, trees, snow, ice.

And I realized that the crew who were doing that work were part of our community too: not a "THEY," but a "WE," and that they were working under conditions that I could stand for maybe 15 minutes, but that they were out there for hour after hour. I imagined how incredibly cold they must be. And as I imagined, my irritation shifted to deep gratitude for whoever was out there, working so hard, to take care of all of us as well as they could. So, WEC crew, I just wanted to offer my deep thanks for your work!

Special thanks to Eva Gumprecht of Calais for sending this in after experiencing an outage during the January deep freeze. To learn more about how WEC traces outages, see 'Order of Operations,' beginning on p. 1.



Winter conditions are no picnic! Crews work in snow, ice, and darkness to get power back on. File photo from December, 2015, in Tunbridge.

Got something to say?

Letter to the editor, comment, or a story tip? Drop us a line at currents@wec.coop or Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651, Attn: Co-op Currents.



Three Incumbents Seek Re-Election to WEC's Board of Directors

Annual Meeting Wednesday, May 2, at WEC's Operations Center in East Montpelier

Three incumbent members of WEC's Board of Directors seek re-election to another three-year term in 2018. To date, there are no challengers for these board seats.

Every year, three seats expire on WEC's nine-member board, giving the membership an opportunity to elect one third of the board that oversees management and staff and makes policy and leadership decisions for the member-owned electric utility. This year, the incumbent candidates are **Stephen Knowlton of East Montpelier, Roger Fox of Walden, and Richard Rubin of Plainfield**. Directors' terms expire at the Annual Meeting.

Election occurs either by mail in the weeks before WEC's Annual Meeting, or at the Annual Meeting itself. Your ballot will arrive in the mail: check to make sure when the deadline is to post your votes by mail.

WEC members may write in names of unofficial candidates on ballots if they wish. All board candidates run at-large, since WEC is not divided into districts.

The 2018 Annual Meeting will be Wednesday, May 2 at WEC's Operations Center on Fassett Road in East Montpelier. All members are invited to attend the meeting. Reservations are required for dinner, which is provided at no cost to the membership. Please see the reservation form on p.8. More details will follow in the April issue of *Co-op Currents*.

Please see a brief biographical sketch of each candidate below. The April issue will feature their responses to questions about issues related to board service, providing readers a broader sense of their interests, viewpoints, and experience.

Stephen Knowlton

Residence: I live in the White Pine Co-housing community off of Dillon Rd. in East Montpelier, where I manage a 9.5 kW group net-metered solar array. I have lived there since 2012, and I have been a member of Washington Electric Cooperative since 2001. Members may contact me by mail at 160 White Rock Dr. #2, Montpelier, VT 05602, by email at knowlsf@auburn.edu, or by phone at 223-2230.

Background: I have lived in a number of different places in the US and abroad as a result of having been raised in a military family. I graduated from Middlebury College, and received my PhD in physics from MIT in 1984. I have spent my working life as a physics professor, and as a researcher in the science of alternative energy experiments both domestically and overseas. I spent most of my career at Auburn University, where I taught full-time at all levels from introductory physics to graduate courses. Furthermore, I led a federally supported experimental fusion energy research laboratory comprised of students, post-docs, technician, and staff scientists. I retired from this position in 2012, although I continue to perform work with my old group to a lesser extent.

Community Service: In December 2014, I was appointed to serve on the Board of Directors of Washington Electric Cooperative to replace a deceased board member, and I have served out one full term as a board member since May of 2015. During that time, I have served on the Power and Operations Committee, Policy Committee, and Members and Marketing Committee, which I now chair.

In local education efforts, I have acted as a mentor in U-32 high school's Branching Out program on several projects, and also serve as a science advisor to the Vermont Energy Education Project. I am a member of the Vermont Academy of Science and Engineering, and currently serve on its board as treasurer of the organization.



Stephen Knowlton

Roger Fox

Residence: I live at Dows Crossing in Walden, in the northern part of WEC's service territory, and I've been a Co-op member in Walden since 1971. You can contact me by mail at 2067 Bayley-Hazen Road, East Hardwick, VT 05836, by phone at (802) 563-2321, or by email at rfox@pivot.net.

Background: I received a bachelor's engineering degree from M.I.T., and I worked on aerospace engineering projects in Florida and Massachusetts prior to becoming a Vermont resident. Since 1974, I've operated a printing and graphic design business, Apocalypse Graphics, in Walden.

Community Service: I currently serve as Walden's town moderator, and as a justice of the peace and chair of the Board of Civil Authority. I've previously served as selectman and town energy coordinator. I'm a longtime member of several other Vermont consumer cooperatives, including Buffalo Mountain Food Co-op, VSECU, North Country Federal Credit Union, and Co-operative Insurance Companies.

I was first elected to the WEC board in 1991, and have served as the Co-op's vice president since 1998. My current assignments include membership on the board's Finance, Administration, & Power Planning; Power & Operations; and Policy Committees. I also confer with and provide support for the board president in the execution of his duties. In the past I've served on the Members & Markets and Editorial Committees, and as treasurer of the Northeast Association of Electric Cooperatives (covering the upstate New York and northern New England area).

While a faculty member at Auburn, I served on and chaired numerous committees involving research, hiring, campus life, and faculty governance. I have been active in scientific outreach activities, including annual Science Olympiads, presentations at urban and rural schools, and local science fairs and open houses. In my professional service, I continue to participate actively in scientific program



Roger Fox

Richard Rubin

Residence: I have lived on East Hill in Plainfield for more than 40 years. I am 72 years old and am married to Jayne Israel. We have three children (two still in Plainfield) and four grandchildren. I enjoy hiking, skiing, gardening, golf, and hanging out with my grandchildren. My email address is rrubin@sover.net.

Background: I was born and raised outside of Boston. I attended Harvard College, and law school at the University of Pennsylvania. I have practiced law in Barre for 38 years. My law firm is Rubin, Kidney, Myer & Vincent. Our firm is also the public defender for Washington County. My practice has involved representing people with all kinds of legal problems. Mainly, I am a trial lawyer.

Community Service: I have served as a WEC director for 18 years. I was first elected after being appointed to complete the term of a board member who had resigned. In the community, I was a member of the Twinfield School Board for five years, helped establish the original food co-op in Plainfield, and served on the board of Vermont Legal Aid. I have also been active in various legal organizations and am now a member of the board of the Vermont Association for Justice. Many years ago I was involved with my brother, Mathew Rubin, in creating the Wrightsville hydroelectric facility and the Winooski 8 hydroelectric plant in East Montpelier.



Richard Rubin

Remember to RSVP for the Annual Meeting! See the form on page 8.



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Order of Operations

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In fact, owned by WEC. As a distribution utility, WEC is downstream from Green Mountain Power, VELCO, and ultimately ISO-NE. During the late October windstorm, faults on transmission lines owned by upstream utilities meant WEC substations were without power. A consequence of this was that two of WEC's computer systems—automated meter infrastructure (AMI) and outage management system (OMS)—could not electronically troubleshoot the distribution system outboard of the substation.

Such was the case with WEC's Jackson Corners, East Montpelier, and Maple Corner substations. While WEC waited for GMP to repair the transmission lines that serve those substations, WEC crews patrolled its three-phase main line feeders, so when the substations came back on, the three-phase feeders could be immediately reenergized.

When a problem occurs with a line, it causes the upstream fuse to blow. That de-energizes the line—and that's when your power goes out. The next step is for a member to call in the outage.

Field Technician Brian Wilkin takes a weekly shift as dispatcher and was on duty during the October windstorm. He showed *Currents* how the computer system identifies open fuses, which allows the dispatcher to direct a line crew to a specific location on the line. When a member reports an outage and their location is logged into the OMS, "the OMS arbitrarily checks meters around the fuse that's out. It rolls back closer to the substation until it finds a meter that's on," he explained. When the system identifies the nearest upstream blown fuse, dispatchers double check the location and send the line crew to that point. There, the crew patrols the line until they find the fault and make repairs.

"If a three-phase line isn't energized by the transmission line, there's no sense in starting there."

— Brent Lilley,
Operations and
Construction Services
Manager

Operations and Engineering Director Dan Weston added, "The accuracy of the OMS is well above 95%. What that allows us to do is instantly know which fuse has opened up and how many people are affected. That gives us location information and identifies how many people are out, and we feed that

into our triage process."

Weston recalled that before they had this computer system, WEC staff would sit at a long table with a map, usually in the early morning hours, calling each member along the distribution line where the outage was reported until they reached a member whose electricity was still on.

Once upstream faults are resolved, WEC's team looks at a number of factors to determine where each crew goes next. First and foremost, said Lilley, they look at the numbers. If two lines are down, he explained, and one is a three-phase line that energizes 500 homes, and the other is a single phase line that serves four members, the three-phase line gets repaired first. Weston added it usually takes the same amount of work to restore power to a single phase line that serves four members. However, he added, the team always approaches restoration knowing that the work is not done until power to every member has been restored.

As the numbers decrease, the team looks at location. "We attack it by numbers until we get it down to the lines that have, give or take, 30 people on them," said Weston. Then, he said, they'll factor in where each crew is already located. "If I've got a crew in Walden and there's a line there that serves 20, it doesn't make sense move them down to Vershire, an hour and a half away, for a line that serves 30," Weston explained.

But if there are scattered outages, each affecting roughly the same number of members, how do they decide? If multiple three-phase lines are out, the team will look to see if

one line energizes a school or clinic or other critical need building. As the numbers drop, Lilley said that if all else is equal, he factors in availability: "How many guys do we have out there?"

What do we need for equipment?" he asked. If one line repair requires a bucket truck, but the closest crew doesn't have one, he said, then it

continued on page 8

Get to Know Your WEC

Sy Daubenspeck and Larry Gilbert

WEC welcomed several new staff members in recent months. In this issue, we meet two of them: Sy Daubenspeck, Plant Accountant, and Larry Gilbert, Right of Way Management Coordinator. Look for more new faces in upcoming issues.

Have you ever wondered who that is fixing the line up your road, or who you spoke to when you called in about an outage or a bill? Going forward, *Currents* will regularly profile Co-op staff in this new feature: Get to Know Your WEC.

Sy Daubenspeck

What he does

Sy started in August 2017 as WEC's Plant Accountant. "I process work orders and materials for inventory. In processing work orders, I work with Sandy (Geidron, Information Database Technician) in getting the substation books updated, and with Elaine (Gonier, Member Services Representative) on new connects and disconnects."



How he met his wife

After attending UVM, Sy wasn't sure at first which direction his career would go. He started at Kmart "because I know how to mix paint," he said. His finance degree caught the attention of a colleague's spouse—a Green Mountain Power worker looking for a plant accountant. He's worked in power ever since.

As a second job, Sy drove for Yellow Cab. One evening, he had a particularly memorable fare. "I saw her eyes in my mirror, and that was it," he said. They were married within six months.

Glutton for pun-ishment

Sy loves to hang out with his grandchildren (ages eight, six, and one on the way), and also enjoys reading and bowling. He has an ongoing interest in theater and used to volunteer with the Green Mountain Guild doing ticketing and set design.

His main hobby, however, is building with wood. "I'm not a fine cabinetry guy. I construct things," he explained. Those include an addition on his South Burlington home and a playscape for his grandkids.

Sy proudly admits to enjoying another pastime that's more of an acquired taste. "I love bad puns," he said.

Larry Gilbert

What he does

"I'm in charge of the right of way crews and trim schedules," Larry said. Right of way crews manage vegetation growth in the easements along WEC's power lines.

If Larry looks familiar, that's because he's no stranger to the Co-op. Larry was a First Class Lineman at WEC for about 18 years, and most recently served as Construction Foreman. So, he knows a thing or two about the Co-op's service area. "I'm very familiar with the lines," he laughed. Larry started as Right of Way Management Coordinator in January.



Hometown guy

Larry grew up in Woodbury and lives there still. He loves hunting and fishing and spending time with his family and friends. If he's not home, you can probably find him not far away, at his camp on Greenwood Lake. He has two sons, two stepdaughters, and a stepson. And Kona, Kona is Larry's beloved basset hound / bulldog mix. "She's a house dog," he said.

Changing times

Moving to an office in WEC headquarters is a big shift for Larry after nearly 20 years working on the lines. He'll miss seeing fellow line crew every day, he said: "We've had a lot of fun times." But, he added, they'll still work together during storms and other restoration work. And he's up for a new adventure. "I'm looking forward to the change," he said.

Quick guide: How does WEC figure out when my power gets restored?

1. Electricity flows downstream. Transmission lines serve WEC's substations, that serve three-phase feeder lines, that serve two-phase and single-phase distribution lines. Any upstream faults must get fixed before any downstream faults.
2. When a member calls in an outage, the computer checks fuses in the direction of the substation until it finds one that's on. That shows the team the location and range of the outage.
3. Once restoration progresses to distribution lines serving about 30' or fewer members, WEC's teams consider several factors when deciding where to send each crew for their next repair:
 - the number of members affected by each outage
 - where crews are already working
 - the type and extent of the damage (if known)
 - special equipment each crew has (bucket, etc)
4. If your neighbors' power is restored but yours isn't, call WEC. It's possible, especially during major outage events, that a new fault is causing your outage. But until your report is entered into the OMS, the team won't be able to tell.

WEC's only measure of success for power restoration is 100%. Every outage is important, and the crews don't stop until everyone's power is on.



After the Event

Storm cleanup doesn't end when the power returns.
What WEC is doing now to improve reliability

Wind, ice, heavy snow, wet soil. If you're a big white pine at the end of your life, one or more of these factors is likely to bring you down.

Members in Fayston, Moretown, Northfield, Williamstown, and nearby areas may understand this a little too well—in 2017, large tree blow downs caused several outages and broken poles along the three-phase lines fed by the Jackson Corners and Moretown substations. "We're focused on the Northfield feeder out of our Jackson Corners substation and the Fayston feeder served out of our Moretown substation. The windstorms were uncommonly brutal to those two areas. The members served by those feeders had less than acceptable reliability, from my perspective," acknowledged WEC's Operations and Engineering Director Dan Weston.

That's why the right of way clearing crews WEC contracts with focus on preventative maintenance—it's safer and more cost-effective to cut down hazard trees before they fall through wires, taking transformers and sometimes poles with them. That's what's happening on those three-phase feeder lines now. However, as happened several times last year, tall trees sometimes fall from outside WEC's right of way, going through the lines and breaking poles.

So after a storm event, WEC has three big jobs. The first is to get the power back on quickly and safely. The second is to address any broken poles and unsafe conditions noted during the restoration process. The third is to patrol the main-line feeders and cut leaning or threatening danger trees.

It's a team effort. After the November storm, Rick Stergas, WEC's Safety and Environmental Coordinator, and First Class Lineworker Kevin Lanphear worked together to patrol all of WEC's transmission lines and most of the

three-phase feeders, marking danger trees as they went. They were followed by right of way crews who cut the marked trees.

Larry Gilbert is WEC's new Right of Way Management Coordinator (read more about him in "Get to Know Your WEC," p. 7) and worked as a WEC lineworker for nearly 20 years. The priority, after a storm, he said, is to restore members' power safely. If a pole breaks, that sometimes means a workaround, he said. "Sometimes we do wires up in a tree temporarily to get customers power. When I was a lineman we actually took a tree and put a transformer and the wires in the tree to get those people power back that night."

In utility-speak, a temporary repair like this is known as "floating the wires." "We use whatever safe method we have at our disposal so we can reenergize the line," explained Weston. "Then we make note of these spots and send an engineer out after restoration has occurred and they look at what broke. Do we need a larger pole? Can we relocate it so it won't break again next time? The cleanup phase requires us to go out and look at physical damage to the infrastructure."

Sometimes it makes sense to move a section of line out of a heavily forested region and relocate it in a less vulnerable location, like along a road. But changes like this, not to mention addressing hazard trees outside WEC's easement, require permission from

"Our members own the Co-op, so we're looking out for their interests. We're trying to increase the reliability of our system so we don't have a lot of lengthy outages."

— Larry Gilbert,
Right of Way
Management Coordinator

landowners.

Right now, Gilbert and tree crews are identifying trees outside WEC's rights of way that are likely to come down in the next weather event, and contacting landowners about them. "It takes a lot of cooperation with the members," he said. "They own the Co-op, so we're looking out for their interests. We're trying to increase the reliability of our system so we don't

have a lot of lengthy outages. A lot of people work from home today," he pointed out, saying that's a financial incentive to do what it takes to keep power reliable—on top of all the other reasons homeowners want the lights on.

After a major outage with a lot of downed trees, homeowners actually tend to approach WEC crews about taking down trees. "We've had a lot of members ask to take down the big pines behind their houses that are heading toward the lines. They're cooperating with us as we work with them. There are a lot of trees that have been marked, and we're going to take them one by one," Gilbert said.

The big pines, especially the oldest, weakest ones that rise above the rest of the canopy, catch the wind like full sails. A lot of smaller, deciduous trees—like birches, poplars, and red maples—are susceptible to leaning. Heavy snow and ice weigh down those smaller trees and bend them toward the line, changing their shape, Weston said. "They permanently fix that way. They lean right over the conductor," he said.

Leaning trees are more susceptible to high winds and also get marked for removal.

WEC's plan to tackle danger trees includes a device that puts hearts in the eyes of every seven-year-old who sees it: a huge machine called the Brontosaurus. Basically a large excavator with a mowing head on a boom, it's able to simultaneously mow and shatter stumps, which appears to help prevent regrowth. "Because we don't use herbicides, we look at any method we can to slow or stop the stem growth after we cut," explained Weston. It also creates a path for crews to get into dense areas and trim danger trees—which is quick and cost-effective, added Gilbert. They said the Brontosaurus has been working on the Northfield feeder line, and both the Northfield and Fayston feeders will continue to see tree crews through the winter.

Those include crews from WEC contractors Rich's Tree Service, Matt Foster Logging, Trees R Us, and New England Tree Experts. "They're an absolutely critical component of storm cleanup. 90% of the burden of removing trees after the storm falls on them," said Weston. He pointed out that once the power is back on, these crews are tasked with taking trees down in a way that doesn't break a line or smash a pole. "They're just so good at it," he said appreciatively.

"You're working by a power line with high voltage on it. It's not as easy as going out and saying, 'Yeah, I'll go cut that tree out in the backyard,'" agreed Gilbert. "They're very good, and very cautious. We want to make sure they go home at night, too."

DINNER RESERVATION (BUFFET DINNER) WEC'S 79th Annual Meeting

230 Fassett Road, East Montpelier, VT • 4:30pm Registration 5:00pm Buffet Open

Order of Operations

continued from page 7

makes sense for the nearby crew to proceed to a break they can fix quickly, and they'll wait for a bucket to free up to fix the first fault.

One thing to keep in mind, Weston mentioned, is that WEC's eight substations are the points of delivery for all power downstream—and in the Co-op's mountainous terrain, a substation may be located in a microclimate quite different from the members it serves. "It may be sunny where you live, but you're out of power because 15 miles north there's heavy wet snow and high winds," he pointed out. "Electricity works just like dominoes. If it is out at the substation, it is out at the end of the line."

Dinner (at no charge) is by RESERVATION ONLY – To make your reservation, return **this form no later than Wednesday, April 18**; walk-ins on May 2 will be charged \$20 each (no guarantee meals will be available for those who do not register in advance.)

Cost: Dinner is free for reservations made on or before April 18. Walk-in on 5/2: \$20 – Adult; \$10 – Child (ages 10-6); Children under 10 free.

Buffet will have a variety of dishes including vegetarian and gluten free options. For special food requests please contact Dawn Johnson at (802) 224-2332 by April 2.

Return by April 18 to: WEC, PO Box 8, E. Montpelier, VT 05651

	Member	Guest	Child/Age
Name: _____ (Please print clearly)	☐	☐	☐
Name: _____ (Please print clearly)	☐	☐	☐
Name: _____ (Please print clearly)	☐	☐	☐
Name: _____ (Please print clearly)	☐	☐	☐
Map/Account # _____	Tele. # _____		

(Please do not return in ballot envelope).



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

2018 Annual Meeting

He'll Be Seeing You in the Garden

Ready for a sign of spring? The speaker at the Co-op's 79th Annual Meeting is gardener extraordinaire Charlie Nardozzi.

Nardozzi, based in Addison County, is host of Vermont Public Radio's "Vermont Garden Journal" and is known through New England and beyond as a gardening expert, speaker, and writer. He's also an old friend of WEC's. In 2015, the Co-op won one of nine Green Thumbs at Work grants sponsored by the state Department of Health and the Community Garden Network to help staff of small companies develop workplace community vegetable gardens ("Green Thumbs Sprouting at Washington Electric," June 2015). The grants provide cash, a Gardener's Supply gift certificate, "and you get me!" said Nardozzi, to consult on the project.

While Nardozzi has already helped WEC staff succession-plant their salad greens, General Manager Patty Richards thought it would be nice to extend the same benefit to members at the Annual Meeting. "Charlie is a fountain of knowledge when it comes to organic gardening," she said. "Whether you own acres of land or have a raised bed on a rental property to work with, he can help you get as many healthy vegetables as possible out of that plot. And because his practices are good for our bodies, soil, and waterways,



Courtesy Charlie Nardozzi

he fits right in to the Co-op's environmental and wellness values."

So, both Nardozzi and Richards urge, come to the Annual Meeting

Come to the Annual Meeting with your garden questions ready, both Nardozzi and Richards urge.

with your garden questions ready. Because the May 2 meeting is timed before most of Vermont starts planting, Nardozzi will cover a lot of ground. He'll talk about pest control and veggie growing tips, he says, and will also talk about edible landscaping. He has a book on the topic, in fact, called *Foodscaping: A Practical and Innovative Way to Create an Edible Landscape*. Vegetables can be beautiful, he explained, and starting a garden that's both beautiful and productive doesn't need to be a giant undertaking. "If people are thinking, I don't want to have a whole new

garden to take care of, maybe you can transition a few flower gardens from around your area so they look nice, but you can eat things from them too," he suggested.

He's looking forward to checking in with WEC's gardens, and with Dawn Johnson, Administrative Assistant, whose initiative it was to apply for the Green Thumbs at Work grant. WEC's raised beds are built into the hillside behind the Co-op's headquarters in East Montpelier.

Three years after the grant was awarded, staff are still enjoying the opportunity to grow fresh veggies at work. "Gardening is part of WEC's wellness program," explained Johnson. "People can get outside, and they have the option to volunteer in the garden if they want. We've got a picnic table out back now. Everyone loves to eat the soups and salads when we bring it in." She added that some staffers who had never really gardened before got their start in WEC's raised beds, and now have extensive home gardens.

The affable Nardozzi and his friends at WEC all believe that growing good food at home, or at work, is a step in the right direction. So take quick stock of what you'd like to accomplish with the sun and soil you have available, and plan to leave the Annual Meeting with some good ideas—and in a few months, a bountiful harvest. 🌱

WASHINGTON ELECTRIC COOPERATIVE, INC.

Wednesday, May 2, 2018

79th Annual Membership Meeting

WEC's Operation Center, 230 Fassett Rd., E. Montpelier, VT

Agenda

- 4:30 p.m. Registration—Ballot Boxes Declared Open
- 5:00 p.m. Buffet Open
Reservations required—see form on Page 8
- 6:00 p.m. Business Meeting Called to Order
Ballot boxes open 4:30 - 6:30 p.m.
- Employee Recognition
- Officers Reports
- Voting Results
- Question/Answer Session
- 7:00 p.m. "Gardening With Charlie Nardozzi"
- 8:00 p.m. Tentative Adjournment

Door prizes to be drawn at the end of the evening.
(must be present to win)

Inside

WEC's 2017 Service Quality and Reliability Performance Monitoring and Reporting Plan. The Co-op's annual "SQRP" report is filed with state regulators and made public for WEC's members to read. See the 2017 report on Page 6.

Officers' Annual Reports: WEC's President (page 2), General Manager (page 3) and Treasurer (page 6) update you on your Co-op.

Four candidates for the Board of Directors seek your support. Meet them on page 4.

Official Notice and Annual Report

President's Message

A Look Back at WEC's Accomplishments in 2017

By Barry Bernstein

Looking back, 2017 proved to be very busy. Unfortunately, that included the most expensive major storm in WEC history. High winds on October 29 caused some members to be without power for six and a half days. It caused outages to 7,930 WEC members and over 1.5 million homes and businesses throughout New England.

Our previous most expensive storms were Winter Storm Daron, 2014 and Irene, 2011. We are always at the mercy of Mother Nature, perhaps more than ever because of an escalation in



severe and erratic weather events.

Co-op Team

On behalf of your Board of Directors, I want to take this opportunity to thank our great Co-op Management team: Patty Richards, our General Manager; Dan Weston, our Director of Engineering & Operations;

Cheryl Willette, our Director of Finance & Administration; Operations & Construction Services Manager Brent Lilley; Bill Powell, Director of Products & Services; Susan Golden, Supervisor of Member Services; Administrative Assistant Dawn Johnson, and all of our employees who are there for our

Capital credit distributions totaled \$720,000 in 2017.
For members who qualified for all three allocations, the net effect was equivalent to a one-time rate decrease of up to 5.11% off your bill.

members under all conditions: our operations, engineering, accounting, and member services staff. Thanks, too, to our consultants, for their continued commitment to your Co-op.

Special thanks to fellow Board officers Vice President Roger Fox, Treasurer Don Douglas, and Secretary Anne Reed, Committee Chairs Don Douglas (Finance, Admin, Power & Policy) Roy Folsom (Power & Operations), Steve Knowlton (Members & Marketing), and Directors Jean Hamilton, Richard Rubin, and Mary Just Skinner for their leadership and thoughtful focus on WEC issues. Together we all work on behalf of you, the member-owners of WEC.

consultant John Murphy of Stantec, Dennis Plaster and the staff of Aria Energy who operate and maintain the Coventry plant for WEC; plant operators Eric Carrier and Justin Carpenter, and regional supervisors Rick Covell and Dave Usherwood. I also thank NEWS-VT landfill staffer Shane Wigett and Casella Waste's Joe Gay. Credit goes to WEC's accounting staff as well.

Capital Credit Distributions

Your Co-op Board of Directors allocated capital credit distributions totaling \$720,000 to many of our members in 2017. That is the largest amount since we started making distributions in 1998.

In 2017, we distributed to members who received Co-op power in 1994, 2013 (those who contributed to their line construction), and 2016. For members who qualified for all three allocations, the net effect was equivalent to a one-time rate decrease of up to 5.11% off your bill. See the box below for specifics.

Net Effects of 2017 Capital Credits Distributions

If you were a member in these years, you received a one-time rate reduction on your November bill equivalent to:

2016 0.7%
2013 2.44%*
1994 1.97%

If you qualified for all three allocations, your reduction was up to 5.11% off your 2017 bill.

*Members who contributed to own line construction

Commitment to Safety and Wellness

October, WEC received the Governor's Award for Outstanding Workplace Safety. This was the second year in a row, and third time, that our culture of employee safety has been recognized this way. Rick Stergas, our new Safety & Environmental Compliance Specialist, accepted the award on behalf of WEC from Governor Phil Scott.

In 2017, WEC also received the State of Vermont's Worksites Wellness Award, sponsored by the Vermont Department of Health. Congratulations to the WEC team for another year of prioritizing safety and wellness.

WEC Community Fund

In 2017, the Co-op distributed more than \$38,000 in grants to 74 local nonprofit organizations that provide an array of services to people in our communities.

A full 14% of our membership—

continued on page 5

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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$.51, 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.

Board of Directors

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Vice President	ROGER FOX (May 2018)	2057 Bayley-Hazen Rd., East Hardwick, VT 05836-9873 rfox@pivot.net	563-2321
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	STEPHEN KNOWLTON (May 2018)	160 White Rock Drive, #2, Montpelier, VT 05602 knowlsl@auburn.edu	223-2230
	RICHARD RUBIN (May 2018)	3496 East Hill Rd., Plainfield, VT 05667 rubin@sover.net	454-8542
	MARY JUST SKINNER (May 2020)	P.O. Box 412, Montpelier, VT 05601 maryjustskinner@gmail.com	223-7123

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TIM NEWCOMB
Layout

Editorial Committee

Patty Richards Donald Douglas Jean Hamilton Anne Reed Katie Titterton

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 Dawn Johnson, at 224-2332.

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To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Manager's Report

Making Wise Choices in Times of Change:

Weather, new technologies come online, new Button Up incentives

By Patty Richards

As we close out another fiscal year at Washington Electric Cooperative, we look forward to WEC's 79th Annual Membership Meeting on May 2. Throughout the year we navigated changing waters driven by legislative mandates. We continued our own innovations, such as the installation of our final electric vehicle charging station. We rolled out the state's new net metering program, and we launched our Button Up program to help members reduce fossil fuel use. We also, always, work toward greater reliability, improved service, and responsiveness to our members.

Our performance, as measured by our Service Quality and Reliability scores (see page 8), indicates that we were successful in the majority of measures and that it was another good year despite challenges. Our employees worked safely with no lost time injuries. Safety is a core principle at WEC, and we are proud that our employees give great attention to safe work practices.

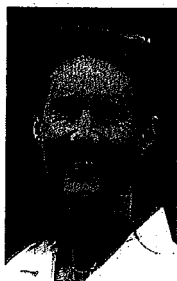
Operations and the weather

We had five major storms in 2017, including one that was declared a disaster by the federal government. We had two major storms in May, two others in July and December, and the October 29 wind event that, at its height, knocked out power to 70% of our members. It took a week to fully restore power to everyone.

Barry Bernstein talks more about the storm's effects in his President's Message (p. 2). In the meantime, we continue to work on making our system more resilient so we have fewer outages. We have increased tree trimming in our rights of way and are working to remove danger trees as we assess power line vulnerabilities. We also work to keep our costs as low as possible and maintain a power mix that is 100% renewable. These are hallmarks of a good year at your member-owned electric utility!

WEC's stellar staff

A big thank you to all WEC employees. Day in and day out they work hard to deliver high quality service to members, and they do it with



In 2018, WEC is adding a \$1,900 incentive for low- and moderate-income members to help with the cost of an electric vehicle or plug-in hybrid.

a smile. Our dedicated employees are focused on our mission to provide an essential service as a not-for-profit utility to the 41 rural communities we serve.

A few new faces came aboard at the Co-op in 2017 and they are excited to join our team and provide our members exceptional service. We love their enthusiasm and the new energy they bring. These include Rick Stergas, who joined us as our Safety and Environmental Compliance Coordinator. On our line crews, Jaime Dailey came to us as a Lineworker, and Tyler Skinner joined as an Apprentice Lineworker. In the office, Sy Daubenspeck

took the position of Plant Accountant. We welcome them all.

100% renewable power at the right price

Our sources of power for 2017 are detailed in Treasurer Don Douglas' report on page 6. Washington Electric Co-op's Board of Directors has consistently supported renewable sources of power and moving toward clean, low-carbon energy sources. In addition to a clean power mix, WEC's power costs are among the lowest in the state and region.

EV charging stations all installed

We successfully installed the last of five electric vehicle charging stations. These installations were enabled through a generous grant from VLITE (Vermont Low-Income Trust for Electricity, funded primarily by the state's electric utilities). The final station was installed in East Montpelier at the newly developed park-and-ride. There are also two stations in Middlesex at the park-and-ride and at the Rumney School; one in Duxbury at Harwood Union Middle/High school; and one in Fayston at Cabot Cooperative Creamery's administration building.

Net metering installations breaking records

In 2017, WEC saw a record year of members installing net metered solar at their homes. 129 members installed solar, accounting for 894 kW. This was the highest participation in a single year, and the largest amount of kW installed: greater than the previous four

years combined!

WEC now has 2,476 kW of mostly solar generation on its grid installed at members' homes and businesses. Net metering accounts for 15% of our peak and roughly 4% of WEC's energy sales.

The state's new net metering plan created a pace of installations that far exceeded projections. Regulators will look at net metering as part of its biennial review. They'll assess the impacts of the pace of installations on all Vermont's electric consumers, whether net metered or not.

You may recall WEC's current net metering plan is the result of an order issued by regulators in June 2016. In that order, the Vermont Public Utility Commission (PUC) established a revised net metering program pursuant to Act 99 of 2014. WEC is tasked with implementing the state's plan for our members and we will comply with the orders issued by the PUC. WEC will continue to support net metering programs, and as we aim for 90% renewable energy in all energy sectors, we want to reach that goal in a fair, equitable, and sustainable way.

Rate design still under board consideration

The WEC board continues to think about how WEC charges for electric service. They took in the feedback from the listening groups held in November, and we are now discussing next steps on this issue. Please see articles written in the June 2017 and January 2018 issues of Currents for more about WEC's rate design debate.

Rate case for 2018

As you'll see in the Treasurer's Report, WEC received approval to file a 5.95% rate increase in 2017. While no one likes to increase prices to members, it is necessary to assure the financial health of the Co-op. We are working on 2018 financials and at this time it appears we will need to file for an increase partway through the year. As soon as we know more about timing and the amount we will let our members know.

Renewable Energy Standard (RES) and WEC's Button Up program

In 2015, the state passed Act 56; An Act Relating to the Establishing a Renewable Energy Standard. It mandates efforts in three categories for Vermont's utilities to move away from reliance on fossil fuels. The Co-op and all Vermont utilities are required to meet certain targets by the end of 2017.

The good news is that WEC already

fulfilled the first requirement (Tier I) by being 100% renewable. We will meet the requirements of Tier II—pertaining to distributed generation—as long as we continue to accept net metering systems in our service territory, which we fully intend to do.

Tier III resulted in WEC's Button Up program. This program is the Co-op's way to help members reduce fossil fuel consumption (such as oil or propane used to heat homes, or gasoline used to drive cars), by giving members cash toward investment in renewable, energy-efficient technologies. We've also invested in EV charging stations. The state requires WEC members reduce fossil fuel use at an equivalent of at least 2% of our retail energy sales in 2017, increasing each year to 12% by 2032.

These are Button Up's cornerstone incentives:

- home weatherization;
- replacing fossil fuel-fired water heaters with ENERGY STAR® heat pump water heaters;
- installing solar water-heating units;
- switching to pellet boilers as the primary home-heating source;
- installing cold-climate heat pumps as a component of a home's overall heating plan.

In 2018, WEC is adding a \$1,900 incentive for low- and moderate-income members to help with the cost of an electric vehicle (EV) or plug-in hybrid. The EV cash incentives come from remaining funds from the VLITE grant that helped WEC install five Level II EV charging stations at strategic locations in our service territory. The leftover grant monies help the Co-op support more rural Vermonters interested in transitioning to an EV from a gas-powered car. We'll roll out the details soon; in the meantime, call Bill Powell for more: 224-2329.

Integrated Resource Plan available online

We finished our long-term planning tool, which utilities refer to as an Integrated Resource Plan, or IRP. We are required to file a detailed, 20-year outlook for providing electric service to our members at the lowest cost while taking into account environmental impacts. The IRP outlines our power supply decisions, how we bring service to members' homes through the wires and substations used to move power, and regulatory and rate issues.

This document, available on WEC's website, is useful for learning more about your electric utility.

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Position Statements of the 2018 Candidates for the Co-op Board of Directors

Steven Farnham



Steven Farnham

Three generations of my family have been WEC members since WEC first strung power lines across our farm in Plainfield, which has been my home since I was born in the sixties. The farm's WEC membership has been in my name since the late nineties. I may be reached at Steven4WEC@gmail.com, or 802-917-2581.

After graduating from the local school system, my education came from VTC, from which I secured an Associate's in Electronics, with Honors, and subsequently furthered my studies in Business Administration at UVM. My early engineering career consisted of work in Quality Assurance, Manufacturing, Technical Support, not to mention a summer job servicing substation equipment at Green Mountain Power. My recent endeavors have included bus, truck, and heavy equipment operation, selling agricultural products, carpentry, and machinery repair and restoration.

My community service includes present or past stints on boards of the Hunger Mountain Food Co-op, the Cutler Library, the Vermont Philharmonic, the Plainfield planning commission, and as a Justice of Peace. I have current membership in good standing in two food co-ops, an insurance co-op, and a banking co-op (credit union). I have past memberships (in good standing) in four other co-ops. One could say I've got the bug. I see co-ops as the ideal business model with which to

continued on page 5

Roger Fox



Roger Fox

I live at Dows Crossing in Walden, in the northern part of WEC's service territory. I've been a Co-op member in Walden since 1971. You can contact me at 2067 Bayley-Hazen Road, East Hardwick, VT 05836, by phone at (802) 563-2321, or by email at rfox@pivot.net.

In 1968 I received an engineering degree from M.I.T. and worked on the Apollo Project at the Kennedy Space Center in Florida, followed by an aerospace technology job in Massachusetts. I moved to Walden in 1971, and I've operated a printing and graphic design business, Apocalypse Graphics, since 1974. After a stint on the Walden selectboard, I've served as a justice of the peace and chair of the Board of Civil Authority for more than 25 years, and as town moderator since 1997. I'm a longtime member of several other Vermont consumer cooperatives, including Buffalo Mountain Food Co-op; VSECU and North Country credit unions; and Cooperative Insurance Co.

I was first elected to the WEC Board in 1991, and have served as the Co-op's vice president since 1998. My current assignments include membership on the Finance, Administration & Power Planning; Power & Operations; and Policy Committees. As Board VP, I also confer with and provide support for the Board president. In the past I've served on the Members & Markets and Editorial Committees, and as treasurer of the Northeast Association of Electric Cooperatives (upstate New York and

continued on page 5

Steven Knowlton



Stephen Knowlton

I live in the White Pine Co-housing community off of Dillon Rd. in East Montpelier. I have lived there since 2012, and I have been a member of Washington Electric Cooperative since 2001. Members may contact me by mail at 160 White Rock Dr. #2, Montpelier, VT 05602, by email at knowlsf@auburn.edu, or by phone at 223-2230.

I have lived in a number of different places in the US and abroad as a result of having been raised in a military family. I graduated from Middlebury College, and received a doctorate in physics from MIT in 1984. I have spent most of my working life as a physics professor, and as a researcher in the science of alternative energy both domestically and overseas. Most of my career took place at Auburn University, where I taught full-time at all levels from introductory physics to graduate courses. I also led a federally-supported experimental fusion energy research laboratory.

Locally, I have acted as a mentor in U-32 high school's Branching Out program on several projects, and also serve as a science advisor to the Vermont Energy Education Project, and as a board member of the Vermont Academy of Science and Engineering. I continue to contribute to scientific program reviews and advisory panels at the request of the U.S. Department of Energy and the National Science Foundation.

While each of us chooses where we're going to live, I doubt that many of us decide based on which electric utility is going to provide us service. It is not necessarily a voluntary choice on our part that we are enrolled as member-owners of a cooperative utility; but it is the system that we are given, and we need to be responsible stewards of our joint venture. In doing so, it is important to reflect on how our co-op and others came into being. Eighty years ago, no utility provided electric power to our rural territory. In his remarks at Washington Electric

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Richard Rubin



Richard Rubin

I have lived on East Hill Road in Plainfield for more than 40 years. I have been a Co-op member since 1973. I can be reached by mail at 3496 East Hill Road, Plainfield, VT 05667 or by phone at 454-8542. My email is rrubin@sover.net.

I am 72 years old and have lived in Plainfield since I moved to Vermont 42 years ago in 1972. I was born and raised in the Boston area, attended Harvard College, and then the University of Pennsylvania Law School. After graduating law school in 1970, I practiced law in Boston, representing low-income clients for two years before moving to Vermont. I have practiced law in Central Vermont since 1972, and in Barre since 1977. My law firm — Rubin, Kidney, Myer & Vincent — has been in downtown Barre since 1982. We handle a wide variety of cases, and we are primarily trial lawyers. We also have been the public defenders for Washington County for many years.

I am a member of VLITE, a non-profit organization that uses funds from VELCO stock to award grants to groups and projects that further the goals of Vermont's Comprehensive Energy Plan.

I am also a member of the Board of Directors of the AAJ, an organization of Vermont trial lawyers, as well as on the Board of the Dragon Dance Theatre and Upper Valley Arts. I am a former board member of Vermont Legal Aid and served for five years on the Twinfield School Board.

I am married to Jayne Israel and have three grown children, two of whom live in central Vermont. We also have four grandchildren.

Several years ago, I was involved with my brother Mathew Rubin and John Warshaw in the development of the Wrightsville and Winooksi 8 (East Montpelier) hydroelectric facilities.

I enjoy hiking, gardening, golf, and generally being outside with my family.

I have been a Co-op board member for 15 years and have enjoyed it a great deal. I enjoy working with my fellow

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Report of the 2018 Committee On Candidates

The 2018 Committee on Candidates convened a teleconference on Thursday, February 15, at 7:00 p.m. to review the petitions and qualifications of those members who submitted their names as candidates for the Board of Directors prior to the teleconference. Another review was conducted by electronic mail for those candidates submitting documentation by the March 2, 2018 deadline. There are three (3) positions to be filled. Four (4) members of the Washington Electric Cooperative, Inc. submitted their names as candidates for the three (3) Board positions to be filled. The Committee on Candidates hereby affirms:

- that each candidate submitted a valid petition in accordance with Article III, Section 3A of the Bylaws;
- that each has signed a statement of affirmation indicating that they:
 1. have been a member of the Co-op in good standing for at least six months;
 2. are residents of Vermont;
 3. are not employees of the Coop;
 4. do not have a conflict of interest as defined in Article III, Section 2 of the Bylaws; and
 5. have received and understand the responsibilities and time commitments required of a director.

Therefore, the Committee determines all of the candidates to be qualified for the position of director in accordance with the Cooperative's Bylaws, and hereby presents the following official listing of candidates for the Washington Electric Cooperative 2018 election of Directors:

Steven Farnham
Roger Fox
Stephen Knowlton
Richard Rubin

2018 Committee on Candidates:

Dale Bartlett	Ben Hewitt
Michael O. Duane	Dorothy Naylor
*Cathy Frey	Carla Payne
Bud Haas	*Polly Stryker

*did not participate in teleconference

Candidate Profiles

Four candidates seek election to three available seats on WEC's Board of Directors. Each member of the nine-person board serves a three-year term. Members may vote or write-in a maximum of three candidates. Ballots may be returned by mail if received by the Barre Post Office before the May 1, 3 p.m. deadline, or may be cast at the Annual Meeting on Wednesday, May 2.

Each candidate submitted a statement in response to five prompts:

1. Please introduce yourself.
2. Please briefly describe your background.
3. Why are you seeking a position on the Co-op board? Why would you make a good director?
4. What do you think are the most important issues that the Co-op must face in the next few years? What should WEC do about those issues?
5. Is there anything else you would like to tell the membership?



Steven Farnham

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face these uncertain times: a model beholden to us, its members, and bound to serve our interests, not those of corporate bosses.

A lifetime of technical, hands-on experience enables me to steer conversations in a direction that is grounded in practicality and common sense. I bring a layperson's viewpoint that is often sorely lacking in groups focused on lofty processes of governance. However, that is not to say I do not have the capability of outside the box thinking.

While WEC is a stellar organization, I believe any business should always look for ways to improve. I would like to see WEC explore the possibility of improving services to its community by providing for a wider variety of end-user energy needs, whether for members or potential members in the WEC service territory. To simplify and standardize home-based alternative energy producing technology, whether grid-tied or off-grid, and increase its affordability and availability—a Co-op whose end goal is energizing homes, not merely reselling electricity distributed through wires on poles.

With more frequent and more severe weather events now the norm, I also think it's time to explore ways to keep members' homes at least minimally energized during prolonged outages. It takes very little electricity to run a heating system and a refrigerator, yet when the power is off, it's all off, and the lack of it places affected members back in the stone age. Moreover, when vast swaths of members are without power, the demands on the line crews to hasten power restoration are staggering. While outages will likely always be a part of the energy distribution business, members' ability to produce at least a minimal amount of power at home until utility power is restored can sharply diminish the extreme (sometimes life-threatening) impact of outages for both crews and Co-op members alike. If it is in any way possible, it's time to make days-long breakneck power restoration marathons a thing of the past. 🐾

President's Report

continued from page 2

1,357 member-owners—donated their 2017 capital credits to the Community Fund, totaling \$46,000, rather than taking them as deductions in their November electric bills.

Community Fund grants normally range from \$100 to \$1,500. To apply, submit a brief letter to General Manager Patty Richards, describing your organization and how the money will be used for community members.

We encourage all our members to consider donating. There are no overhead costs. Every dollar contributed by our members goes to supporting good works in our local communities.

Roger Fox

continued from page 4

northern New England.)

I've maintained a longstanding appreciation for and commitment to cooperatives as tools for promoting local environmental and economic sustainability. I've specifically focused on developing WEC's value as a community resource and an advocate for our members and the broader public interest in Vermont and beyond. We're fortunate to have a capable, active, and proactive Board—a resource that's essential to your Co-op's ongoing success.

As a long-serving WEC director, I bring to the Board's deliberations a broad perspective and familiarity with the Co-op's mission, history and governance, and I assist newer Board members with negotiating the utility sector's steep learning curve.

WEC has achieved major goals over the years with such projects as developing cost-effective 100%-renewable power sources, deploying automated system metering and monitoring technology to improve power reliability and quality, and providing enhanced member service and support. Still, challenges to sustaining your Co-op's economic and organizational viability, as well as opportunities for future advancement, continue to surface and evolve, such as:

- negative public perception of utilities (including local consumer-owned, 100%-renewable ones like WEC);
- the effects of electricity and other energy pricing on efforts to moderate the impacts of climate instability;
- the economics of providing widely-available high-speed internet access in rural areas.

Building a better WEC calls for creativity, perceptiveness, and persistence. My focus will be on continuing and strengthening efforts to collaborate with other stakeholders, and promoting effective public education and engagement, and rational, equitable policy development.

Each WEC member's participation in the democratic decision-making process is important. Sustaining your Co-op's capacity to provide electric service across its backwoods territory doesn't just happen; it takes a lot of behind-the-scenes hard work. Please take your role as a member-owner seriously: Vote in elections and attend annual and area member meetings. Let us know what you think of our efforts, and offer suggestions. Consider Board service, or encourage others with appropriate skills and knowledge. Talk with your neighbors and friends about the value of WEC and other local democratic community institutions. 🐾

Annual Meeting 2018!

Please join us on May 2, when we hold our 79th Annual Membership Meeting at WEC's Operations Center in East Montpelier, just off route 14S. And don't forget to vote in this year's elections for WEC's Board of Directors.

Stephen Knowlton

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Co-operative's dedication in December 1939, then-Governor Aiken of Vermont spoke to the issue: "These lines have been built into territories which private corporations have consistently refused to serve at prices within the reach of the people." Regardless of governmental oversight that has since arisen to address citizens' needs to a greater or lesser extent, fair and equitable treatment of its member-ratepayers remains a core value in a non-profit cooperative utility like Washington Electric.

As a member of this Co-op, I wish to serve on its board to perform public service to my local community. I have already served one full term, and I have enjoyed learning how our utility works, the challenges it faces, and how WEC as a 100% renewable utility fits into the landscape of energy policy within the region. If I am returned to the board, I intend to use my developing experience to act effectively in the interests of my fellow members in this rapidly changing landscape.

Richard Rubin

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board members and management and would like to serve another term. I believe in cooperatives and cooperative principles and I am committed to keeping our co-op strong. My experience as an attorney brings a critical perspective to the board and helps me ask the hard questions.

I am particularly proud that our Co-op obtains its energy from renewable sources such as the Coventry landfill methane generation plant and the Sheffield wind farm.

Washington Electric Co-op has been able to rid itself of dependence on fossil fuel to generate our energy. Much of our power is also produced inside Vermont. Our Co-op's example is an important one to our policy makers and to other utilities. It was exciting to see the Sheffield project come on line. It took a long time, but as a result, we now have a 20-year contract for energy from that project at very favorable rates.

Our landfill gas-generation plant in Coventry was also an excellent investment. We are able to produce renewable electricity from garbage at rates below market.

I am proud of the efforts of our Community Fund, which donates roughly \$20,000 each year to non-profit groups in our service area, thanks to members donating their capital credits. I urge all members to sign up and contribute. It's a good way to help our

neighbors. Like many utilities today, WEC faces the challenge of growing upward pressure on its rates. Many of the factors that are driving increased costs lie largely beyond the Co-op's influence. Some factors are bringing positive change to the utility world in the form of increased efficiency and the distributed generation of renewable electric power by consumers. Nonetheless, there are increasing financial stresses imposed by technical and regulatory change, stresses that ultimately are borne by the ratepayers. It is also a challenge for WEC to continue to incentivize low usage and solar net-metering while fulfilling its stated mission of fostering local economic development and reduced use of fossil fuels through the use of 100% renewable electric power. WEC needs to review what constitutes an equitable rate structure in light of the change going on around us, and consider updating its rate structure to ensure that its customers are fairly treated in the long-term. I look forward working with the rest of the board and WEC staff on this and other issues to explore effective policies appropriate to the 21st century utility landscape. 🐾

neighbors.

In addition to becoming 100% renewable, we have redone our office building using the best and greenest building techniques. I am particularly proud of our entire staff and the work they do for all of us in good weather and bad. Everyone came together last fall when we were faced with a catastrophic power outage with a cooperative community effort that was truly remarkable. Patty Richards, our manager, and Barry Bernstein, our Board President, continue to provide strong and clear-headed leadership.

We are a small business with high rates largely due to our rural nature and lack of large commercial and industrial customers. We run a tight ship, but are continually faced with rate pressure outside our control. We also must adapt to a new energy future in which more of our members are using solar energy and installing energy efficient heat pumps which save fossil fuel, but burn more electricity. We need to be nimble and creative to adapt what we do to meet our members' needs and fulfill our mission.

I am confident the Co-op can continue to lead in both the energy arena and as a model for how locally owned and non-profit cooperative enterprises can provide our essential services while keeping our capital and "profits" in our local communities. Green Mountain Power is owned by a Canadian company and pays its management very high salaries. All its profits and return on its investments leave the state and the country as well. This is not a model I support.

I am committed to a Co-op that is a leader in environmental stewardship based on non-profit cooperative principles which operates reliably to provide electricity at all times to our members. 🐾



Treasurer's Report

Coventry Helps Offset Drop in REC Value, Rise in Costs; Capital Credit Retirements Help Offset Rate Increases

By Don Douglas
Treasurer

While we had to raise rates in 2017 by 5.95%, we also gave back more in capital credits than any prior year. WEC works hard to keep its costs as low as possible and we have been challenged with rising transmission costs and power costs while the sale of renewable energy credits has declined substantially. Rather than implementing larger rate increases, we are trying to do smaller and more frequent increases to avoid sticker shock in any single year. The prior rate increase was in 2014 in the amount of 3.78%. Looking back over the past fifteen years, WEC's rates, on an annual basis, have risen roughly 2% per year, which is in line with inflation. We anticipate we will need another increase in 2018, but we will be looking at the numbers in the near term to make that determination.

We've had a full year using the new Siloxane Removal System (SRS) at Coventry, and the device is performing well. Over 99% of siloxanes are removed and emissions from the plant have been dramatically reduced. The engines are running smoothly with less down time and because there's far less silica buildup, they need fewer repairs.

We created a new program for net metering to comply with an order issued by the Public Utility Commission, and we had more installations in a single year than ever before. In fact, in 2017 we had more installations (both in number and size) than the last four years combined.

We rolled out a new program plan for members to save money switching off fossil fuels in other forms of energy (heating and transportation). Originally known as WEC's Tier III plan, WEC now calls it Button Up.

Purchase power costs increased significantly in 2017. In 2016, the total



The main issues for the Co-op are the value of RECs, the cost of transmission, the increasing costs of the capacity market, and flat to declining sales of electricity.

cost of purchased power was \$4,113,662. In 2017, the total increased by \$324,031 to \$4,437,693. The Renewable Energy Credit (REC) market continues to be lower than in previous years. WEC still sold more than \$2,000,000 worth of RECs in 2017. Most of the RECs sold come from the Coventry plant and the Sheffield Wind project. We hope that the Coventry plant can continue to produce more each year to help offset the decline in the value of the REC market.

In addition to increased costs and lower REC values, our kWh sales continue to decline as members use energy saving appliances and new net metered solar installations come on line. The outlook over the next few years is for WEC to have higher transmission and power costs due to charges in the regional markets, and we will focus on ways to lower the impacts.

The main issues for the Co-op are the value of RECs, the cost of transmission (both regionally and from inside the state), the increasing costs of the capacity market, and flat to declining sales of electricity. Lower sales and increased expenses are a recipe for rate pressure.

Margins

Washington Electric Cooperative ended the year with positive net margins of \$771,780. Margins are revenues WEC collects that exceed expenses. WEC reports margins in two categories: net and operating. Operating margins come from the revenues and expenses directly related to providing electricity to our members. Net margins include non-operating

margins from interest on investments (mostly VELCO) and other items that are not directly attributed to keeping the lights on.

We actually had a net operating loss for 2017 of -\$156,324. This was primarily driven by increased expenses associated with the October storm and the decision to hold off recognizing the deferred revenues. The increase in non-operating margins over 2017 is mostly due to the additional investment in VELCO (Vermont's high voltage transmission provider), which helps to offset some of our transmission costs. Interest for the investment in VELCO can be found in the Non-Operating Interest line in the Statement of Operations report.

Operating Revenue

Total revenues (member electric sales and REC sales) decreased \$56,411 from 2016. This decrease is mostly attributed to the decline in the market for REC sales. While member sales and revenues rose due to the rate increase, kWh sales actually continue to decrease.

Also included in total revenue are sales from RECs. The sale of RECs from our generating facility in Coventry and from the Sheffield Wind farm help to keep our electric rates down and mitigate upward pressure on our rates. In 2017 WEC collected \$2,054,115 in REC revenues, which is a drop from 2016 of \$631,179. This decrease was offset by the increase in member sales for a net decrease of \$56,000. Even though the REC market has declined, it is still a significant source of revenue for the Co-op and keeps WEC's rates much lower than if we did not have this revenue.

Cost of Purchased Power

Looking at the charts on page 7 you can see where our power comes from and what each source costs. Coventry remains our largest single

source of electricity and is very nearly our least expensive. Coventry accounts for approximately 64% of all energy produced and nearly 70% of the Co-op's load requirements, as measured by the Independent System Operator of New England (ISO-NE).

Given the large amount of power it provides relative to other sources, Coventry has a significant impact on WEC's finances. In addition, the energy generated at Coventry also produces RECs, and accounts for the majority of RECs sold each year.

The chart that shows where the dollars went (page 7) demonstrates how WEC is very different from other electric utilities. For most other utilities, the cost of power is the largest expense; many utilities report it ranges from 60% to 80% of their total costs. For WEC, the cost of power is only 37% of WEC's total cost. WEC's rates would be much higher had we not become owners of the Coventry plant and had secured long term and stably priced purchase power contracts.

Capital Credits

Capital credits are unique to co-ops. It's a major difference between WEC and most other Vermont utilities: municipal utilities and GMP do not return dollars to their customers. In 2017, WEC reported \$771,780 in net margins. These margins belong to members and are returned through the capital credit process. Capital credits are a two-step process in which amounts are first allocated to members, and then eventually dollars are returned to members through credit retirement. This is when credits or checks are issued.

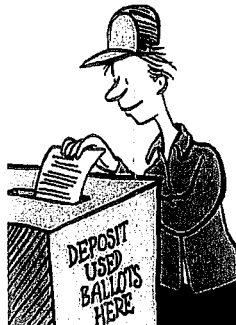
Each year excess margins, if we have them, are allocated to members based on your power use in a given year. Then the Board of Directors decides how much we can afford to return to members. WEC's Board has been returning capital credits for the past 14 years. In 2017 the WEC Board approved returning \$720,000 to members. So far, members, both former and current, have received more than \$6 million through retirements. WEC's practice is to also retire a small amount each year to current members as an educational tool to help current members understand what it means to belong to a cooperative.

On behalf of the Board of Directors I want to thank our entire Finance Department for their hard work, attention to detail, and for their dedication to WEC. Copies of our audit are available on line at our website: www.wec.coop as well as hard copies at the Co-op office.

Notice

Members may vote at the Annual Meeting on May 2 or by ballots accompanying this issue of *Co-op Currents*. Mailed ballots must be received at the Barre Post Office no later than 3 p.m. on Tuesday, May 1 in order to be counted. Please allow 3-4 days for in-state delivery and 6-8 days for out-of-state delivery. Ballots mailed or dropped off at the Co-op will NOT be counted.

Contact Dawn Johnson with questions: 802-224-2332.



Copies of the audited financial statements of Washington Electric Cooperative are available by contacting the Co-op's office, and will be available at the Annual Meeting. The audited financial statements are also posted on our web site (www.washingtonelectric.coop) under "About WEC."



Balance Sheet

Assets and Other Debits

	12/31/16	12/31/17	Increase (Decrease)
Utility Plant			
Total Utility Plant in Service	\$77,281,918	\$79,009,350	\$1,727,432
Construction Work in Progress	1,788,613	633,841	(1,154,772)
Total Utility Plant	79,070,531	79,643,191	572,660
Accum. Provision for Depreciation	28,661,555	29,082,808	421,253
Net Utility Plant	\$50,408,976	\$50,560,383	\$151,407
Other Property and Investment - At Cost			
Invest. in Assoc. Org. - Patronage Capital	343,266	379,942	36,676
Invest. in Assoc. Org. - Other	452,086	448,452	(3,634)
Other Investments	6,772,162	7,878,963	1,106,801
Total Other Property and Investments	\$7,567,514	\$8,707,357	\$1,139,843
Current Assets			
Cash - General Funds	654,021	620,054	(33,967)
Restricted Cash	509,279	400,000	(109,279)
Notes Receivable - Net	99	99	0
Accounts Receivable - Net	3,045,681	3,453,278	407,597
Materials and Supplies	275,665	252,341	(23,324)
Prepayments	310,493	339,133	28,640
Total Current and Accrued Assets	4,795,238	5,084,905	289,667
Deferred Debits	1,196,475	1,069,735	(126,740)
Total Assets and Other Debits	\$63,968,203	\$65,402,380	\$1,434,177
Number of Consumers	11,014	11,057	43
RWh Sold	69,809,811	68,821,561	(988,250)

2017 Statement of Operations

Item	Actual 12/31/16	Actual 12/31/17	Increase (Decrease)
Operating Revenue	\$16,951,163	\$16,894,752	(\$56,411)
Cost of Purchased Power	4,113,662	4,437,693	\$324,031
Cost of Generated Power - Wrightsville & Coventry	2,128,254	2,093,208	(\$35,046)
Total Cost of Power	\$6,239,916	\$6,530,901	\$290,985
Other Operation & Maintenance Expense			
Transmission Expense	87,104	86,701	(403)
Distribution Expense - Operation	1,765,405	1,858,442	93,037
Distribution Expense - Maintenance	2,147,093	2,356,299	209,206
Consumer Accounts Expense	697,381	688,322	(9,059)
Customer Service & Education	194,425	221,532	27,107
Administrative and General Expense	1,483,892	1,449,166	(34,726)
Total Other Operation and Maintenance Expense	\$6,355,300	\$6,660,462	\$305,162
Fixed Expenses			
Depreciation and Amortization Expense	2,287,887	2,360,611	72,724
Tax Expense - Other	155,928	156,519	591
Interest on Long-Term Debt	1,357,253	1,339,174	(18,079)
Interest Expense - Other	2,581	3,409	828
Total Fixed Expenses	\$3,803,649	\$3,859,713	\$56,064
Total Cost of Electric Service	\$10,396,865	\$10,051,078	(\$345,787)
Operating Margins	\$6,594,887	\$6,843,674	\$248,787
Non-Operating Margins - Interest	798,459	884,524	86,065
Non-Operating Margins - Other	70,041	43,580	(26,461)
Net Margins	\$1,420,798	\$771,780	(\$649,018)
Times Interest Earned Ratio (TIER)	2.05	1.58	(0.47)

Manager's Report

continued from page 5

Sheffield-Highgate External Interface (SHEI)

Following the construction of the Kingdom Community Wind plant owned by GMP and Vermont Electric Cooperative, Vermont created an area of the electric grid known as the Sheffield-Highgate Export Interface (SHEI). This electrical system area was created to monitor the capacity of the grid relative to load and the amount of plant-generated power, primarily from wind, hydro, solar, and our landfill gas generator.

Generation resources inside this area have been limited to avoid transmission outages. The practical effect of the SHEI is that large resources, like wind projects and the Hydro Quebec contract, have been asked to reduce production.

In addition, dollar credits for energy produced at these power plants have declined substantially. WEC calculated the cost of reduced energy payments for power it produced in the SHEI area cost WEC members over \$180,000. WEC is working with the state's transmission provider VELCO, other Vermont utilities, and other stakeholders to identify solutions and plan for upgrades.

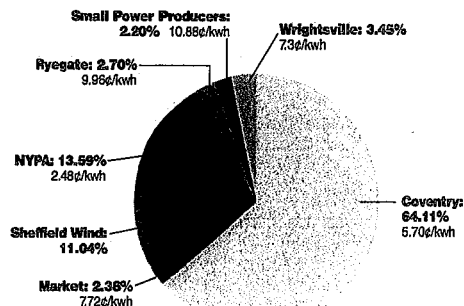
In summary, 2017 was a year in which WEC continued to innovate, improve our services to members, and provide reliable electric service, while striving to keep costs in check. It was also a year in which Vermont's energy policies continued to evolve, setting new goals for the state's electric utilities. Co-op members with questions, suggestions, and concerns are always welcome to call me at our central office in East Montpelier: 802-223-5245.

Liabilities and Other Credits

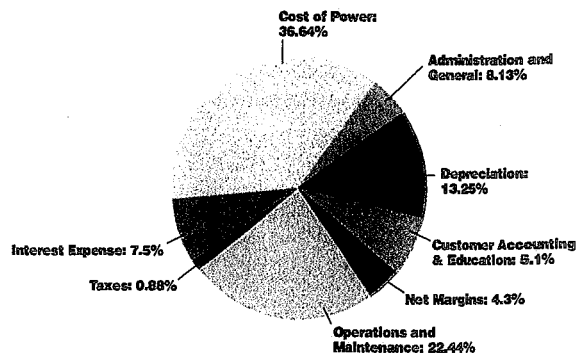
	12/31/16	12/31/17	Increase (Decrease)
Memberships	\$135,435	\$138,715	\$3,280
Patronage Capital Credits	21,834,028	22,579,428	745,400
Operating Margins - Current Year	552,298	(156,324)	(708,622)
Non-Operating Margins	868,500	928,104	59,604
Other Margins and Equities	255,104	264,284	9,180
Total Margins and Equities	\$23,645,365	\$23,754,187	\$108,822
Long-Term Debt			
Long-Term Debt - RUS	4,655,823	4,347,909	(307,914)
Long-Term Debt - FFB	15,215,859	16,394,239	1,178,380
Long-Term Debt - NRUCFC	15,191,828	13,822,893	(1,368,945)
Total Long-Term Debt	\$35,063,510	\$34,565,031	(\$498,479)
Current Liabilities			
Current portion of Long Term Debt	2,219,526	2,293,320	73,794
Line of Credit - CFC	0	1,710,181	1,710,181
Accounts Payable	1,463,948	1,448,127	(15,821)
Consumer Deposits	213,152	203,822	(9,330)
Other Current and Accrued Liabilities	796,774	810,062	13,288
Deferred Renewable Energy Certificates	400,000	422,231	22,231
Total Current and Accrued Liabilities	\$5,093,300	\$6,887,743	\$1,794,443
Deferred Credits	166,028	195,419	29,391
Total Liabilities and Other Credits	\$63,968,203	\$65,402,380	\$1,434,177

2017 Sources and Costs of Power

(Total kWh Purchased and Generated)



2017 Where the Dollars Went



Considering going electric?

WEC now offers \$1,900 toward the cost of an EV or plug in hybrid car for low- to moderate-income members through the Button Up program. Contact the Energy Coach for details: 802-224-2329



WEC's 2017 Report Card: Service Quality and Reliability Results

By Patty Richards

Each year, WEC must report how we did in terms of service and reliability to its members. WEC, like all Vermont utilities, is required by the Vermont Public Utility Commission to report our performance through what is known as a "Service Quality and Reliability Monitoring and Reporting Plan" (SQRP). The SQRP measures the quality of our service to members and our reliability in 12 separate categories. Also, we are required to report our performance to Co-op members each year at this time. There are measurements and targets, established by regulators for each category, and WEC is assessed on our performance in each area. This allows WEC to measure service, track trends, focus decision making, provide public accountability, and compare our performance with other utilities. The SQRP is basically our report card.

WEC usually does well meeting the targets, and we did again in 2017, meeting the majority of our requirements. In many categories WEC performed significantly better than required.

Our system reliability was a challenge in 2017 due to the number of storms that hit us throughout the year. Please note that outage and reliability measures are affected by one major factor outside our control: weather.

1. Worker Safety Performance.

We care greatly about the safety of our employees, both for their own well-being and as an indicator of how safely we operate as a utility. As members may know, the work many of our employees do is high risk, strenuous, and physically demanding.

Our target is that we have no more than six incidents that result in lost work time, and that there be no more than 39 days of lost work among all employees in a year. In 2017, we had no lost-time incidents and no lost time days.

2. Outage incidents. The "System Average Interruption Frequency Index" (SAIFI) measures the average number of outage incidents that occurred per member (exclusive of major storms like the windstorm that occurred at the end of October). Our target was no more than an average of 3.8 outages per member. We averaged 3.05 last year, meaning that excluding major storms,

WEC's Board of Directors and staff send condolences to Mrs. Darlene Grundy and her son Matthew for the loss of their husband and father, David Grundy. David was a WEC member since May, 1971, and for several years each spring, he served on WEC's annual member meeting ballot committee. He will be truly missed.

we were better than the target.

3. Outage duration. The "Customer Average Interruption Duration Index" (CAIDI) measures the average time it took to restore power when there was an outage (exclusive of major storms). Our target was no more than 2.7 hours average duration. In 2017, our average interruption rate was 2.85 hours, meaning we missed the requirement this year. The reason for missing the duration outage statistic was due to the number and severity of storms we experienced in 2017. This was an unusual weather cycle, with repeated storms that swept through WEC's 41 towns. In fact, many storms seemed to cluster and wreak havoc in the same areas.

4. Calls not answered within 20 seconds. Our requirement is that no more than 15% of WEC's incoming calls take more than 20 seconds to answer. Our Member Services Representatives and our backup service from CRC answered approximately 37,746 calls last year, and just 13% of those took longer than 20 seconds to answer: target met. The unusually large volume of calls was due to the number of calls received during the October windstorm.

5. Bills not rendered in seven days. Our target is that no more than 0.10% of bills (one in 1,000) are issued more than seven days after their intended mail date. No bills were issued late in 2017.

6. Bills found inaccurate. No more than 0.10% of all bills (one in 1,000) sent should be found inaccurate. WEC sent out 127,909 bills in 2017. We met our target here too, with just 24 bills for the year reported inaccurate, or 0.019% of bills issued.

7. Payment posting complaints.

Our target was that no more than 0.05% of members (one in 2,000) have complaints about payments not promptly and accurately posted to their accounts. We had 9 complaints in 2017, or 0.007%, meaning we came in well below the target.

8. Meter readings per month.

Although there are situations where a meter can't be read and we have to issue an estimated bill, this should be kept to a minimum of no more than 5% of bills (five in 100). We had 114 estimated meter reads in 2017, which is unusually high, though we still came in below the target at 0.09%. The higher number for the year was due to the October windstorm.

9. Requested work not done on time. When we extend lines to new homes or perform work requested by members, we want to complete the work efficiently and according to the member's timeline. Although schedules for a project may change, our engineering staff and line crews stay in touch with the member to complete the project in a timely manner. Our goal was that no more than 5% of requested jobs be completed later than expected. In 2017, as in past years, all jobs were on time. Out of 213 projects, we had no late complaints.

10. Average delay days after missed delivery date. Not applicable. If we had missed our timeline estimates in #9 above, we would have needed to report how long these delays actually were.

11. Customer satisfaction. WEC's SQRP requires a professional survey be conducted every five years that contains customer-satisfaction questions. We

conducted a survey in late 2015 and received high marks. We reported the results in the December 2015 issue of *Co-op Currents*, which is available on our website. The five-year cycle calls for a new satisfaction survey to be performed in 2020. To highlight a few sections of the last survey, we note that reliability was the most important service attribute to WEC members and we received high scores in this area, but we need to do more. We will continue to work to improve reliability in towns with rugged terrain. In addition, we continue to invest in equipment that will harden the grid system, with the goal of improving reliability in our remote areas. Having competent, knowledgeable, and friendly staff also ranked high as a member priority, as well as value for the money you spend for your power. We will work on all these attributes to improve service and keep our rates affordable to all members.

12. Complaints to DPS/Consumer Affairs. Vermonters with complaints about their utility can report their concerns to the Consumer Affairs Division of the Department of Public Service (DPS). The DPS then contacts the utility to get more information about the matter. In most cases, issues are resolved by discussion, or the DPS determines that there is no basis for the complaint.

However, when the DPS determines that a utility has not done something right and requires that it be corrected, this is recorded as an "escalation." WEC's SQRP requires that the number of escalations not exceed 0.07% of our membership (or about seven per year). In 2017, no escalations were reported.

DINNER RESERVATION (BUFFET DINNER)

Dinner (at no cost) is by RESERVATION ONLY - To reserve, return this form no later than Wednesday, April 18; walk-in on May 2 will be charged \$20 each. (No guarantee meals will be available for those who do not register in advance.)

79th Annual Meeting on May 2, 2018

WEC's Operation Center

230 Fassett Road, East Montpelier, VT • 4:30pm: registration • 5:00pm: buffet open

	Member	Guest	Child/Age
Name: _____ (Please print clearly)	☐	☐	☐
Name: _____ (Please print clearly)	☐	☐	☐
Name: _____ (Please print clearly)	☐	☐	☐
Name: _____ (Please print clearly)	☐	☐	☐
Map/Account # _____	Tele. # _____		

(Please do not return in ballot envelope.)

Cost: Dinner is free for reservations made on or before April 18. Walk-in on 5/2: \$20-Adult; \$10-Child (ages 10-6)
Children under 10 free. Buffet will have a variety of dishes including vegetarian and gluten free options.

For special food requests please contact Dawn Johnson at (802) 224-2332 by April 2.

Return reservation form by April 18 to: WEC, PO Box 8, E. Montpelier, VT 05651



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Resilience and Innovation at WEC's 79th Annual Meeting

Welcome to the Operations Center!" said Patty Richards, WEC's General Manager, at the 79th Annual Meeting on May 2. It was a glorious, warm day, and members arrived in East Montpelier comparing how much snow many received just two days earlier while looking over the Co-op's fleet of bucket trucks and all-terrain vehicles parked in front of the center's stunning landscape mural. Hosting the Annual Meeting at home base for WEC's operations team "is a nice way to showcase the hard work that gets done here," she said, and the rows of white tablecloths and china looked festive in the spotless warehouse.

WEC welcomed 230 members to its annual business meeting, which kicked off with a delicious dinner, free with reservation, catered by Bon Temps Gourmet, a WEC member company based in Worcester. Members sat with friends and neighbors to mingle and swap stories.

For members interested in taking advantage of WEC's Button Up program—financial incentives to help members reduce their carbon

footprint—vendors were on hand to demonstrate products. Outside, Joe Canales of Cody Chevrolet parked an all-electric Chevy Bolt next to WEC's trucks. Thanks to a new Button Up

incentive, income-eligible WEC members may receive a discount on all-electric and plug-in hybrid vehicles. Inside, Tim Smith of Building Energy talked with members about home weatherization. "I like folks to look at it like your whole house is a system," he said,

explaining strategic changes can improve the efficiency of the whole. That illustrates why WEC has long recommended Building Energy, as achieving efficiency first is the hallmark of WEC's mission.

In his welcome comments to the membership, Board President Barry Bernstein recognized notable guests (see sidebar on p. 4) and extended a special welcome to Gene Reed, Board member Annie Reed's 98-year-old mother. When Bernstein asked WEC's lineworkers to stand, members—well aware crews spent much of 2017 out in the elements, fixing broken poles and rewiring lines during the multiple weather events that pummeled WEC territory—

continued on page 4

When Bernstein asked WEC's lineworkers to stand, members rewarded the crews with the longest and loudest round of applause of the evening.



Dawn Johnson, Administrative Assistant, welcomes Charlie Nardoizzi, master gardener and special presenter at WEC's 79th Annual Meeting. Johnson, who just celebrated her five year anniversary at WEC, applied for the Green Thumbs at Work grant that led to the creation of WEC's workplace garden and launched Nardoizzi's relationship with the Co-op.

Heart in the Highlands

Ray Shatney and Janet Steward's beef gift to WEC staff is built on years of hard work and friendship

Vickie sports long blonde hair, and she won't let just anybody brush it. "She hates everybody but me," Ray Shatney said affectionately.

Shatney is a former WEC tree contractor and a lifelong farmer who's raised and shown Highland cattle like Vickie since 1967, when his father, Carroll Shatney, bought one of the "hippie cows" as a novelty to show at fairs and cover the farm's taxes. "Ray's been showing Highland cattle longer than anyone in the US," said his wife, Janet Steward.

The 160-head Shat Acres

Highland Cattle herd is divided between the couple's home in Plainfield and the original, 103-year-old Shat Acres Farm in Greensboro Bend. It is the oldest registered herd in the nation, among the largest, and genetically strong thanks to Carroll and Ray Shatney's careful breeding practices. Shat Acres Highlands rake in prizes: Cinnamon Raisin, the most awarded cow in the breed's history, won more than a dozen Grand Championships at the National Western Stock Show; two of her daughters are also cow/

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Washington Electric Cooperative
East Montpelier, VT 05651

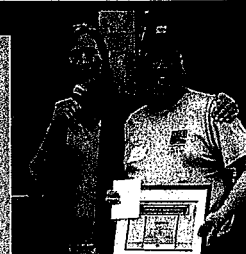
Inside

PUC issues new rules for new net metering installations. P. 2.

New President and GM message: In a new approach, Patty and Barry discuss Co-op issues in a joint message. See what you think! P. 3.

Staying in front of the weather: A member writes in asking how WEC can be proactive with storm related outages. P. 5.

Watch that flagger: Work zone safety takes all of us. P. 8.



WEC's dedicated workers tend to serve long tenures: At the Annual Meeting, General Manager Patty Richards presents a service award to 30-year WEC employee Transmission & Distribution Technician Ed Schunk.

Net Metering Reimbursement Changes Under New PUC Order

On May 1, the Public Utility Commission (PUC) issued a new order drawn from its required biennial review of Vermont's net metering program. To balance the pace of net metering installations and the impact of net metering on electric utilities' rates, the order said, over the next two years the PUC will reduce reimbursement rates by a penny each year to homeowners installing solar. The changes apply only to Certificates of Public Good (CPG) issued on or after July 1. Those members with net metering systems online or with CPG permits in hand before July 1 will continue to be paid the existing program's rates.

"The state regulators took comments from anyone who wanted to weigh in. There were hundreds of filings. My inbox was filled with feedback from the general public, solar developers,

and utilities, just to name a few stakeholders," commented WEC General Manager Patty Richards. "While the lower credits may upset some, the Commission is working to

Summary of Changes to Adjustor Values and Compensation

Category	2017	2018	2019
Category I (up to 15 kW)	\$0.189	\$0.184	\$0.174
Category II (>15 to 150 kW on preferred site)	\$0.189	\$0.184	\$0.174
Category III (>150 to 500 kW on preferred site)	\$0.169	\$0.164	\$0.144
Category IV (>15 to 150 kW on non-preferred site)	\$0.149	\$0.144	\$0.134

strike a balance. The PUC recognizes that utilities are paying subsidies to encourage Vermonters to install solar systems, but these subsidies should be lower going forward. The payments for net metered systems are causing rate increases and the PUC is mindful of the effects of passing along costs to others. It shows the PUC is paying attention to the consequences, both positive and unintended, of the pace and cost of net metering. The commission continues to support folks who want to install solar, and through this order is taking a step toward finding balance."

The order also reduces reimbursement to large-scale solar farms and arrays. In its press release, the commission wrote, "Specifically, there will be a gradual reduction in the incentive payment for customers who transfer their RECs [Renewable Energy Credits] to their utility, by 1 cent per kWh in each of the next two years. In addition, there will be a 1-cent reduction in the price paid to the very largest net-metering systems (over 150 to 500 kW), which have better economies of scale than residential-sized systems." A chart published by the PUC is printed above.

Many Vermont utilities, including WEC, embrace Vermont's Renewable Energy Standard and incentives that help electric customers become personally invested in renewable power. However, the 2017 net metering incentive structure was so popular, and so many customers took advantage of it, that it resulted in increasing rate

pressure in utilities throughout the state.

WEC and other Vermont utilities were consistent in their comments to the PUC about the rise and impact of net metering on their balance sheets. The commission reported, "a number of Vermont utilities expressed concern about the effect on rates of continued high net-metering prices. Vermont Electric Cooperative and Washington Electric Cooperative each reported that in 2017, the total number of net-metering applications and their capacity exceeded the totals during the prior three and four years combined." In addition, the report says, Green Mountain Power confirmed each year of net metering installations at today's pace and price adds \$2.3 million of upward rate pressure on its ratepayers.

2017 incentives require utilities to support home solar installations, and then to buy the energy back from those homeowners' installations at a rate significantly higher than market prices. At the same time, homeowners with net metering installations continue to use the utility's grid, but compared with other ratepayers, contribute little through their bills to the cost and maintenance of that grid. As the utility pays out more for power and receives less from customers, rate pressure increases.

"WEC's power mix is already 100% renewable. Those members who want to do more and go solar, we fully support you," said Richards. "The balance is to compensate net metering in a way that doesn't pass along costs to others. Solar is expensive and subsidies help folks get started, but they don't have to be as high as they are currently to incentivize Vermonters. The PUC order recognizes we were paying too much. To be true to our mission we support our members who want to generate their own solar, protect those members who may be economically impacted by that, and keep our environmental commitment at the forefront." She respects the PUC's decision, she said, and believes this order is a shift that brings more balance to the finances of net metering while maintaining the net metering incentive system.

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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$.51, 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.

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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 Dawn Johnson, at 224-2332.

This institution is an equal opportunity provider and employer. If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or call (866) 632-9992 to request the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.



Happy Birthday VEC!

Congratulations to our fellow rural electric cooperative, Vermont Electric Co-op. VEC, WEC's big sister by one year, turns 80 in 2018.



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

President's and General Manager's Message

In Their First Regular Joint Column in Currents, Barry and Patty Discuss What's Happening Right Now at WEC

Every issue, **Currents** publishes reports from the Board President and General Manager. This month, we're launching a new, conversational format: instead of writing separate columns, Barry and Patty talk to each other about the timely issues facing WEC. We hope this approach keeps a light touch but lets us go a little deeper on each important issue.

3.72% Rate Increase Filed; Takes Effect July 1

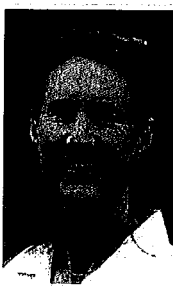
Patty: We filed for a 3.72% rate increase with the PUC [Public Utility Commission] to go into effect July 1, and we'll collect \$535,000 in additional revenue. The main driver for this comes from transmission costs. We're seeing increases from [regional grid operator] ISO-NE, GMP [Green Mountain Power], and VELCO [Vermont Electric Power Company]. VELCO's increase is substantial: over half the rate increase is due to VELCO costs going up. We were able to offset some of the transmission increases with reductions in other areas, but the total dollars in transmission were simply too large.

We're also seeing impacts from the SHEI [Sheffield-Highgate Export Interface]. Basically, there's too much generation in the northern part of the state. The power lines are not able to move that much generation. The results for WEC are reduced energy payments for the energy we produce at Coventry and Sheffield Wind. And we're also seeing revenue losses from net metering.

So, the largest driver is power supply: transmission, the SHEI, and net metering. Other drivers, like operation and maintenance cost increases, add up to a lesser extent.

Barry: It's important for our members to know that the board interacts quite intensively with management on how to keep rate increases as low as possible before filing. It's not something done in a short period of time: it's done over a period of months with management and board as a team, using any offsets we may be able to find.

The second important thing is that in May, the board approved our 18th year of capital credit distribution, where we return money to our members from their margin accounts. We're returning



Any kWh that is not used is the most environmentally benign kWh. We want members to remember that.

—Patty Richards

\$750,000 to members this year based on your kWh usage. Since we began the program, we've returned \$5.7 million to members.

We want you to remember the Co-op difference is we return margins to members, and that will help reduce the impact this rate increase has on your bills. The amount you receive in November depends on how long you've been on the Co-op lines.

Patty: That's exactly right. It's unfortunate we have to increase rates, but that's going to be partially offset when our members get a credit or a check in November 2018 when we issue capital credit retirements.

Annual Meeting at WEC's Operations Center

Barry: This was a unique year in that we held the Annual Meeting at our Operations Center, where we store all the trucks and where the crews work from. Patty made a great point that the members got to see where the action is.

I think the thing that amazed all of us was when we introduced the linemen, there was a five minute ovation from the members who were present. It floored all of us. It was really nice. It was really a special recognition of them, and members' appreciation for the work everybody does.

Patty: It was a beautiful evening and typical Vermont weather. Six inches of snow on Monday, 80 degree weather on Wednesday. The operations center is the core function of our business. For me, holding the annual meeting there ties everything together. We were proud to invite members to the Operations building so they can experience this part of WEC firsthand.

We also had a great turnout. And we loved having Charlie [Nardozzi] there to bring in the spring season. Members really seemed engaged and appreciated his keynote talk. We also got a lot of compliments on the food. Bon Temps Gourmet from Worcester, who catered it, is a local WEC member business, actually. All around it was a great night and a great location for a meeting.

Barry: It got high ratings!

Patty: I think people like hearing from

Dan [Weston, Operations Director]. Especially at the Operations Center and talking about storm impacts and grid resilience, it's important to hear from him given the weather events we've had. It's been a brutal few years of storm work here.

Barry: There was some discussion about net metering and larger renewable projects, and I thought it was important that our Board Treasurer [Don Douglas] highlighted members are already receiving 100% renewable power from WEC. We've invested \$20 million in our Wrightsville hydro plant and Coventry landfill projects. That's already part of our bills. We're already paying for 100% renewable power that we get at our homes.

Patty: I don't want to leave the perception that that's an expensive choice we've made. In fact, it's an inexpensive choice. Our power costs are among the lowest of any utility in the Northeast, and that's with an all-renewable portfolio. We want members to invest in solar, if they want to go that route. At the same time, we've gone out and made power purchase decisions to be 100% renewable, but at a much lower cost.

Major Storm May 4-5

Patty: We had another four day restoration event. We had over half our membership out: 5,100 members out between Friday night, May 4, and Saturday May 5 due to high winds. Some members didn't get power back until Tuesday. Orange County got hit particularly hard.

Barry: There was a large number of broken poles and spans of wire down.

Patty: It's very unusual, the number of major storms we've had.

Barry: We've had six major storms within 18 months. I would just like to say once again our line crew and people in the office just—well, if you see them when they come back from the field, you really know these people have put out all of their energy.

I'm so proud of this Co-op and the people who work here. The applause they got at the Annual Meeting reflects



We've invested \$20 million in our Wrightsville hydro plant and Coventry landfill projects. That's already part of our bills. We're already paying for 100% renewable power that we get at our homes.

—Barry Bernstein

that the members see that too. It's where I think the Co-op difference really stands out.

PUC Issues New Net Metering Order

Patty: We have a story on the new PUC order in this edition [p. 2]. The key thing is: we're hyper-conscious about cost increases to WEC members. We're filing a rate increase and part of that is driven by net metering.

At the same time, we want to offer net metering in a way that's fair to all our members. The PUC has recognized the pace is too rapid, and they've made some changes to the rates being paid. This will help reduce and offset some of that cost shifting and some of that pressure. My

reaction to the PUC's order is favorable because they're heading in the right direction.

Barry: Our WEC management had discussions with the renewable community, and found some common ground in that we all want net metering to head toward long term sustainability. We think over the next year we'll have to continue that healthy dialogue. It's a complex issue and we all want the same end goal: to meet the state's 90% renewable goal in all energy use by 2050. We're all committed to that and we'll keep talking about it to find the best solutions possible.

Rate Design Recommendation Coming Soon

Barry: The WEC board and management have been discussing a rate design change over the last one to two years. Over the next several months we'll be hosting a community meeting to talk to our members about how we got here.

I think it's extremely important for members to know there are a lot of different aspects that need to be balanced. The Board and the Co-op are committed to our members having the lowest carbon footprint that they can, using electricity wisely, and moving away from fossil fuels toward using electricity from renewable resources. That's what we've been dialoging on

continued on page 8



Annual Meeting

continued from page 1

rewarded the crews with the longest and loudest round of applause of the evening.

It was a moving moment. Richards noted that the way storms hit, line crews worked virtually every weekend during the summer of 2017. Later, Bernstein issued a call for volunteers who live near the Co-op's headquarters in East Montpelier who can help feed crews doing round-the-clock restoration work after major storms.

Every year, the membership votes to fill three seats on WEC's nine-member board. This year, three incumbent candidates all won re-election: Vice President Roger Fox received 637 votes; Stephen Knowlton received 549; and Richard Rubin received 558. Candidate Steven Farnham of Plainfield was a close fourth, with 525 votes.

Getting down to business, Bernstein told members that they would see a rate increase on their July bills. The Public Utility Commission (PUC) will determine the final percentage, but "we're hoping to keep this under 5%," he said, adding that member feedback shows more frequent, small rate increases are easier to tolerate than infrequent but hefty increases. The last rate increase was 18 months earlier.

He also said WEC's board would move ahead with rate redesign soon, examining increasing a monthly fixed cost and offsetting that by reducing cost per kilowatt hour. "We're at a crossroads," he said. "We're trying to make that step toward the next decade."

Treasurer Don Douglas reported that the Coventry landfill methane generation plant is running more



Paul Sipple of Waltsfield asks Operations Director Dan Weston what replaces the old porcelain fuse cutouts that cracked with temperature fluctuation. Polymer, Weston replied, which pops out safely, just like a breaker in your home fuse box.

Richards announced that WEC's safety record remains stellar. "We've had 939 days without a lost time accident," she announced, and WEC vehicles have traveled nearly 1.3 million miles without an accident. The Co-op is regularly recognized by the state for its commitment to safety and wellness.

The Co-op's Community Fund, supported by members' voluntary donations of capital credits, continues to grow, Richards said. Currently, about 14% of the membership donate their credits. Last year, the fund gave \$38,465 to small nonprofits that share service area with WEC. That marked a \$10,000 increase over 2016 donations, Richards said, and it makes a big difference. "These are the small organizations that help folks get by in all 41 towns we serve," she said. Members interested in donating their capital credits to the Community Fund can sign up to do so once or in perpetuity, she said, simply by contacting the Co-op.

Operations Director Dan Weston told members that WEC is improving its notification system of planned outages. In June, he said, a new \$7 million construction work plan (CWP) launches. "There won't be a town we don't touch," he promised. He showed members a few pieces

efficiently than ever, producing two thirds of the Co-op's electricity. "We decided to go green in 2003. This was not a popular decision when we did it. We are one of only a few utilities in the whole country that is 100% renewable," he reminded applauding members. In other good news, he said, last year WEC returned \$720,000 in capital credits to the membership. This money represents excess revenue that, in a for-profit utility, would simply enrich investors and shareholders. Under the cooperative model, it's returned to the members who own the utility. He also reported that FEMA (Federal Emergency Management Agency) funding will hopefully come through for the October windstorm: while for-profit utilities will pay for windstorm damage through rate increases, WEC's

not-for-profit status means FEMA funds will cover about three-quarters of the damage costs. Finally, he said, WEC's audit was clean, with no issues reported.

Richards said that the relentless weather and clustered major storms affected reliability in 2017. Consumer hours out were 46% higher in 2017 than the average of the previous five years. "The weather's getting weird and it seems to be staying that way. Monday, some of you had six inches of snow. Today, it's like the Bahamas out there. We're working to harden the system. We're working on grid resilience," she promised.

Despite difficult weather conditions,

Service Awards

Whether it's the mission, the appreciative culture, the commitment to health and wellness, or a little bit of all of the above, WEC staff tend to stick around. Every year at the Annual Meeting, the Co-op recognizes staff anniversaries with a service award ceremony marking the long tenures of its dedicated employees. In 2018, WEC celebrated:

Fifth anniversary:

Dawn Johnson, Administrative

Assistant

Patty Richards, General Manager

10th anniversary:

Jason Preston, Maintenance

Foreman

Amos Turner, Construction Foreman

15th anniversary:

Brian Wilkin, Utility Field Technician

30th anniversary:

Ed Schunk, T&D System Technician

35th anniversary:

Linda Nelson, Assistant Director of

Finance

Notable Guests

Several notable guests at the Annual Meeting included Deputy Attorney General Josh Diamond, WEC's former legal counsel; Senator Mark MacDonald of Orange, who sits on the Senate Committee on Natural Resources and Energy, the Joint Energy Committee, and the nuclear decommissioning citizens advisory panel, among others; and Barre's newly inducted Mayor Lucas Herring.

Industry notables included Olivia Campbell Andersen, Executive Director of Renewable Energy Vermont; Coventry consultant John Murphy of Stantec; and representatives from Vermont Electric Co-op (VEC); Vermont Electric Power Company (VELCO); and the Vermont Energy Investment Corporation (VEIC).



Deputy Attorney General Josh Diamond (L) and Senator Mark MacDonald



Linda Nelson, Assistant Director of Finance (center), is honored for 35 years of service to the Co-op. General Manager Patty Richards offers her congratulations while Board President Barry Bernstein looks on.



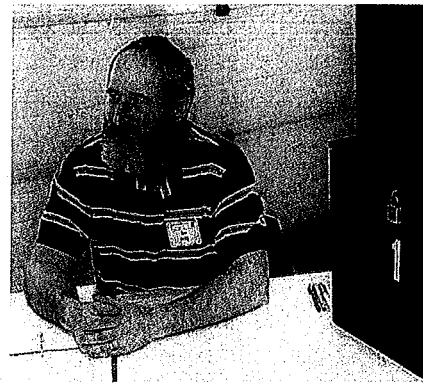


Goddard and Suzy Graves of East Calais enjoy dinner from Bon Temps Gourmet before the Co-op's 79th Annual Meeting commences.

of outdated equipment—fuse cutouts and pole top insulators—that tend to break in extreme weather and cause outages. Crews are replacing them with improved polymer models, he said.

Weston also noted a dreaded threat that is now real: "We've got a new critter out here: the emerald ash borer," he said. The ash-destroying insect was discovered in Orange, a town located within WEC's service area. Take a hard look at ash and white pines near power lines on your property, Weston advised.

In the question and answer period, John Rosenbloom of Calais explained he is pro-renewable and wants to install solar. He loves WEC's environmental mission, and is driven to step up personally, he said, so "it's discouraging I can't contribute without harming Washington Electric's economy." How, he asked, can WEC not just ask members to rely on their Co-op's 100% renewable credentials, but empower members to have personal agency when it comes to committing to



Joe Kelly, co-chair with Nancy Fuller of the Co-op's Ballot Committee, accepts members' votes for the Board of Directors. Kelly, of Williamstown, has served 21 years on the Ballot Committee.

renewables?

Richards said that the WEC board is also interested in stepping up: "We're going to put a voice to climate change by making a policy statement about that," she promised. In terms of where individual members can start, she said, "First thing: use energy wisely. Second: let's do it with renewables. We're not discouraging folks from doing solar. We want you to have as small a footprint as possible." WEC can work with individual members to shrink their footprints—and to offer financial incentives to lower carbon use through its Button Up program.

Bud Haas, a former Board member

from Bradford, said, "I believe we're at another turning point now. The Co-op is going to have to go outside the box and not just be poles and wires." He wondered what the leadership direction is. Richards agreed: "We're going to have to innovate. You're going to see WEC shake things up over the next couple of years," she said. Battery storage, for example, will dramatically change the power landscape, she said. But, she added, WEC will look at new technologies with good old-fashioned Vermont skepticism instead of jumping on the next hot thing. "Whatever we deliver, we want to do it well," she promised.

Members Write

Let's Prepare Better For Extreme Weather

In at least two places in the current [April] issue WEC leadership give weather events as reasons for outage incidents (Patty on p. 8, and Barry on page 2). I found that jarring. We live in Vermont. We all have to adapt to winter (and other) storms in the ways we dress, the ways we insulate our houses, the backup systems we have. We don't like climate change and the storms it brings, but, while we work against the factors that cause climate change, we have to adapt to what it is throwing at us, just the way our plants and wildlife do.

What I want from my electric company is an organization that looks ahead to weather events we can expect to have in the future, rather than what happened in the past, and prepares for responses that will get our power back on fast. Patty says that "the reason for missing the duration outage statistic was due to the number and severity of storms." This Vermont! That's what we have.

When we lose power, as we did for two long days in October, we lose water, heat, stove, food in the freezer, and computer, as well as light. Perhaps you should measure not only average outage duration but the number of outages that last longer than 2.7 hours. Outages of 2.7 hours are no big deal but outages that last more than 16 hours are a big deal, and, as a member, I would like to know how often they occur.

— Gail Falk, Plainfield

Many thanks to member Gail Falk for writing in. Dan Weston, WEC's Operations Director, responds:

Gail, we agree with you, and we are on it! In fact, back in 2001 it was clear to WEC the weather was changing. Increased storm severity led to increased damage to the distribution infrastructure, and ultimately increased outages to our members. We realized that simply clearing right of way corridors was not enough to reduce the impact of more severe weather. We had to develop and implement a plan to "harden" the system in a manner that reduced, or at least limited, the impact of severe weather events. Since 2001, WEC has invested over \$14 million into hardening the system. Here's what we've done so far:

- Completed a system wide protective device study and installed over 3,000 fuse points along the distribution system to minimize the number of members affected by any one problem
- Reconstructed or updated all nine distribution substations with state of the art transformers, reclosers, and fault distance locating
- Tested 100% of the 25,000 wooden poles on the system for strength and durability

- Reconstructed nearly 200 miles of line, replacing deteriorated poles and weak conductors, making them less vulnerable to wind and ice events
- Installed an automated meter infrastructure that coordinates with our Outage Management System. This computer system receives signals from meters that tell which lines are experiencing issues or have lost power. It quickly determines which fuse points have opened, allowing outage diagnostics and restoration to occur quickly
- Since 2000, tracked the reliability of every circuit out of every one of the nine substations to identify which lines need more outage prevention work
- Installed more durable hardware on all new lines, including polymer insulators and dead-end insulators, polymer line disconnects, and wildlife guards, minimizing both weather and non-weather related outages
- Implemented a plan to back-feed all of WEC's substation circuits from alternate sources to minimize the duration and effect of widespread outages. As of 2017, we are able to back-feed all but two of WEC's nine substations
- Increased our right of way budget fivefold since 2000 to identify and remove danger trees and dense growth
- Implemented alternative methods of clearing ROW corridors using excavators with special cutter heads in an efforts to slow regrowth

WEC has done much to harden our substations and 1,200 miles of line from the effects of severe weather events, and there's still more to do. Other issues include the maturing of some forested areas, and an increase in insects such as the emerald ash borer that add to the declining health of the trees that line the corridors through which the electrical lines traverse. An increase in insects harmful to trees and forests weakens healthy trees and greatly accelerates the deterioration of the maturing forest, increasing the chance that high winds will topple large, relatively healthy trees well outside the line corridor, breaking both the wire and poles.

Got something to say?

Letter to the editor, comment, or a story tip?
Drop us a line at currents@wec.coop or
Washington Electric Cooperative, Inc.,
P.O. Box 8, East Montpelier, VT 05651,
Attn: Co-op Currents.



Heart in the Highlands

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calf champions.

Since 2007, Shatney and Steward have also produced top-quality, grass-fed beef. After the October 2017 windstorm, when Shatney's old friends at WEC restored the power that keeps their water and beef freezers running, the couple showed their thanks by giving 50 pounds of their superb ground beef—a \$500 market value—to WEC employees. The gift was much appreciated. "It was a nice surprise. And it made for a great burger night," said Member Services Representative Gordon Matheson.

Much of WEC's membership recognizes the tireless effort staff puts in after a big storm, but Shatney and Steward's gift was doubly meaningful. It was thanks for restoring power, recognition of the work that goes into storm cleanup, and continuing gratitude from Shatney for the time he spent doing tree work for WEC: a job he loved and, he believes, helped save the family farm.

A legacy of work and respect

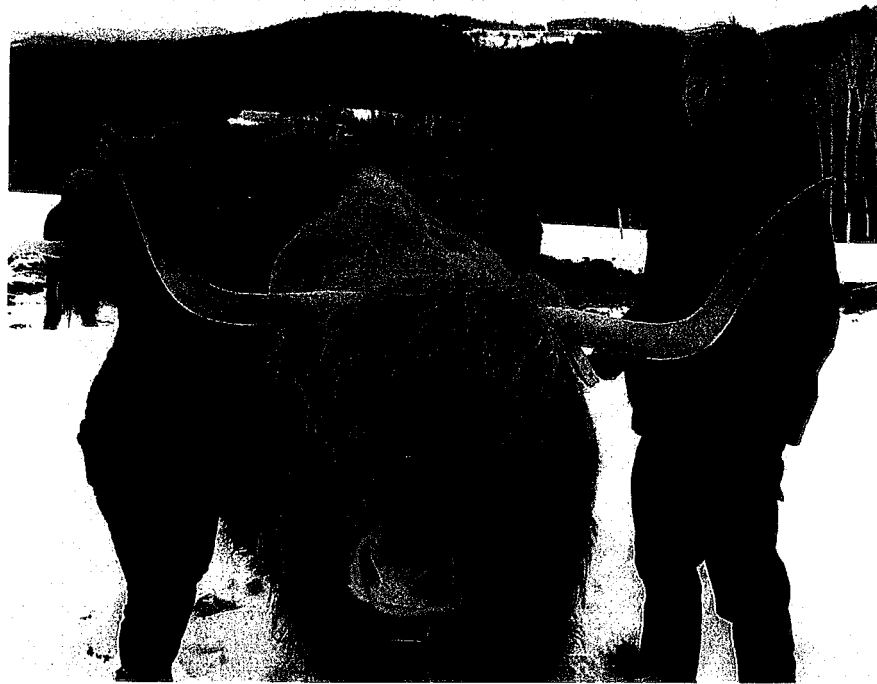
In 2000, Shatney's elderly father came to the couple for help with a shocker: the farm was going into bankruptcy. Shatney's income contracting for WEC allowed them to leverage the loans that kept the farm going and saved their beloved Highlands. "We wouldn't have the cattle anymore if it weren't for Washington Electric," Shatney said.

For many years, Shatney worked to keep WEC's rights of way clear from danger trees and dense growth. He has the powerful build of a man who's spent his life farming and climbing and the half smile of a storyteller who knows a joke is sometimes better when you tell only part of it. For a man who claims to be constitutionally unable to work indoors (he tried once, and lasted two shifts), the miles he walked on WEC's lines were "23 years of doing a thing where you had a purpose."

It's quite a legacy of work. While Shatney worked full days on WEC's lines and managed his small business, Shatney Tree Service, he was also doing farm chores and caring for the Highlands before sunup and after sundown every day.

He also accomplished all this without the fingers and thumb of his left hand, taken by a defective winch in a logging accident in 1977.

There's plenty of evidence of Shatney's attention to and impact on others, from his easy friendliness to his business decisions. Just two generations back, his white grandfather and Abenaki grandmother crossed into Canada to marry, because they weren't permitted to in Vermont. As a small business owner, Shatney was responsible for helping diversify the tree industry in Vermont, hiring the first



Janet Steward and Ray Shatney with Vickie, one of their prize Highland cows, at their family home in Plainfield.

female and African-American tree crew members to work on WEC's lines.

Shatney has respect and affection for WEC staff. He still enjoys chatting with folks in the office; he has a deep kinship with folks in the field. He

worked many storms with WEC crews. "We knew each others' families. They were doing storm work when they didn't have power at home," he said. "These linemen put up with a real lot, and they're always polite to their customers."

Still, his favorite part of his work with WEC was interacting with members. He cherishes a memory of arriving onsite during a Christmas Eve outage, and out in the cold and dark, "there's a little boy at the end of a driveway with his arms crossed because he didn't have his Christmas lights," waiting impatiently for tree and line crews to get them back on in time to guide Santa's sleigh. He loved talking with homeowners and the kindness of members who brought cookies or lunch out to crews working their property. Once, Mike Myers (WEC's ROW manager until 2017) asked him how come people told him so much, Shatney recalled, shrugging.

"I think the fact that you're a farmer and lived outdoors your whole life made people comfortable, Ray," suggested Steward. Later, Steward said, "He has done, and endured, so many things that he is able to be empathetic to anyone, regardless of their work or life situation."

Reinventing the farm together

Steward and Shatney met when she called him to examine some trees on her Plainfield property. He called her

afterward and explained he'd need to come back, because as they'd talked for hours, he'd forgotten to look at the trees.

In a twist of fate, they discovered that years earlier, Steward's late husband had bought a Highland calf from Shat Acres for his son to show.

Steward is petite, with an open and friendly manner. She's a Long Island native who, through life's turns, ended up farming in Vermont. For decades, she was a treasured Morrisville first-grade teacher—in 2002, she was awarded Vermont Teacher of the Year—and retired in 2010. She now teaches graduate level classes at Castleton University and at the Stern Center for Language and Learning and is a talented photographer in addition to raising Highlands. Every day, doing chores, she says, she thanks the cattle for "helping me to be real and connect to the earth, the land."

She loves being part of Vermont's food system. "We're really lucky to live in a place where people appreciate local food," she reflected. The original business model was for the herd to fund itself through breeding stock sales. After a hip replacement forced Shatney to stop climbing trees, they changed the model and formed Greenfield Highland Beef. Now, about three-quarters of income from the cattle comes from beef, their Highlands crossbred with Shorthorn cattle, and one quarter from selling breeding stock.

"People say, 'You're in the beef business.' I say, 'Nope, we're in the business of preserving Highland genetics. The beef allows us to do that,'" said Steward. Because the shaggy Highlands take longer to mature than other cattle, the flavor is

exceptional and complex—"aged on the hoof," as Steward says. More and thinner muscle fibers than other breeds mean the meat is more tender, and the Highlands' thick hair is so insulating

that their fat develops within muscles instead of forming as a cap, so the meat is marbled even though the animals are 100% grass fed. Crossbred beef cattle mature a little earlier while maintaining these desirable qualities.

They make a good team, the couple agree, using their different

strengths and mutual respect to run the farm efficiently together. Between raising award-winning show cattle and outstanding beef, Shatney and Steward's efforts were recognized in 2016, when their farm was awarded the Small Business Association's Vermont Family-Owned Business of the Year. As Steward put it, "Our respect for hard, physical labor, our belief in stewardship of the land, our core values of integrity, decency, and respect for all, and our love and admiration of our Highlands have served us well both in our relationship and our business endeavors."

Currents seeks out stories about WEC members—both individuals and businesses—whose lives or work reflect one or more of the Seven Cooperative Principles. Ray Shatney, Janet Steward, and Greenfield Highland Beef practice principles four: autonomy and independence, and seven: concern for community. See wec.coop or any October issue of Currents for the full list of seven principles.



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Health, Wealth, and Wisdom in the Garden

Charlie Nardozzi nodded his trademark brimmed hat to WEC members and announced, "Welcome to summer!" Nardozzi, a familiar face and voice to Vermont gardeners, was the keynote speaker for WEC's 79th Annual Meeting. Nardozzi is one of Vermont's most prominent gardeners: an expert in organic gardening and edible landscaping, host of VPR's Vermont Garden Journal, author, and speaker, he also consulted with WEC on the Co-op's workplace garden. Friendly and funny, he kept members rapt, contemplating tomato and carrot varieties, raised beds and floating row covers.

The nice thing about workplace gardens, Nardozzi said, is they bridge over the barriers to gardening many people face: lack of space, lack of time, and lack of knowhow, by allowing workers to share knowledge and grow food together on office property. In addition, he said, workplace gardens offer health benefits to employees, like better nutrition and reduced stress, and efficiency benefits to companies, by promoting team building and creative energy in addition to improving employee health. "And if you do it really well, you'll have beautiful grounds, too!" he added.

In 2015, WEC won a Green Thumbs at Work grant, a workplace garden startup package supported by the Vermont Department of Health, the Community Garden Network, Gardener's Supply, and Nardozzi. "When you're swinging by WEC's offices this summer, say, 'I want a tour of the garden,'" he directed members, and read a letter from Member Services Supervisor Susan Golden—Nardozzi preserved Golden's anonymity, but her laughter gave her identity away—about how participating in WEC's garden affected her life. "It's become an obsession, but thankfully, a healthy one," he read from her note. "I think if I can successfully grow a garden, anyone can do it."

Nardozzi went on to recommend

heirloom varieties for Vermont gardens. "Heirlooms are regional, passed down through generations," he said, and added that they often have fun stories. He relayed the tale of "Radiator Charlie's Mortgage Lifter," a delicious tomato variety created by an amateur botanist from West Virginia whose seedling sales paid off the mortgage on his truck radiator repair shop.

Nardozzi is also at the forefront of the edible landscaping movement. At a time when environmentally conscientious homeowners are looking for ways to reduce lawn and improve soil and water health, Nardozzi suggests growing beautiful gardens full of things you can eat. He donated a signed copy of his recent book, *Foodscaping: A Practical and Innovative Way to Create an Edible Landscape*, to WEC's Annual Meeting door prizes, and stayed after the meeting to sell and sign copies for interested members.

As hoped, members came prepared with questions for the master gardener, and he didn't disappoint. General Manager Patty Richards wanted to know how to combat slugs. Nardozzi had lots of tips: crushed seashells, sharp sand, the organic pesticide Sluggo, copper flashing around raised beds, even raw wool. "Of course, you can always do beer traps, but who wants to waste good beer on slugs?" he asked rhetorically.

A member concerned about soil possibly contaminated by a fuel spill was coached to get rid of the soil, either by digging it out and replacing it, or putting down a barrier under a raised bed. One battling the invasive plants Japanese knotweed and horsetail was advised to keep cutting them down right before they flower. "Theoretically, it will get exhausted," said Nardozzi, and then offered some straight talk, to chuckles from the crowd: "Or, since you have both, move."

Another member asked about bringing mason bees onto his property to pollinate plants. Nardozzi recommended not getting too far ahead: better to plant a pollinator garden to attract local bees and other pollinators instead of trucking in the beneficial insects.

As members left the Operations Center after the meeting, with the day's heat still hanging in the air, they could smell good, damp earth warming after months of winter freeze. It's time to start gardening in Vermont.

Charlie Nardozzi cracks a garden joke during his presentation at WEC's Annual Meeting.



Get to Know Your WEC

Jamie Dailey and Scott Matheson

Have you ever wondered who that is fixing the line up your road, or who you spoke to when you called in about an outage or a bill? Going forward, Currents will regularly profile Co-op staff in this new feature: Get to Know Your WEC.

Jamie Dailey

What he does

Jamie was hired as a Journeyman Lineworker at the end of September 2017. Since he started, he's been working on off-road construction with Construction Foreman Amos Turner's crew.

Veteran of the lines

"I was Head Lineman at Hardwick [Electric Department] for a number of years," explained Dailey. He grew up near Hardwick, and now lives in Walden with his family. He's a WEC member himself.

Family matters

Jamie's job requires long hours, but his family understands. "They support what I do, and that makes it all that much better," he said.

So, his favorite thing outside work is to spend time with his family—especially during the summer. "We do all the outdoor fun stuff we can't do cooped up all winter," he said, like boating, riding ATVs, and especially camping. "We stay at campgrounds and tent. That's what my wife and daughter like," he said.

Jamie's son is stationed with the Navy in San Diego, and he has a five-year-old granddaughter and another grandchild on the way. Soon, he hopes, his son's family will be stationed closer to home. He also has two daughters; his 21-year-old daughter is nearby and works at Eden Central School, and his youngest daughter is nine, "going on 21."

Scott Matheson

How he got started

In February, Scott was promoted to Journeyman Lineworker from Class 2 Apprentice Lineworker. He's been at WEC for four years. Before that, he worked at a creamery filling many roles, from mechanic to the warehouse to loading trucks.

He became interested in linework by talking to some of his friends. "Their dads were linemen, so I talked to them, and they told me about the line school in Georgia," he explained, the Southeast Linemen Training Center. "So I put myself through that."

Hands-on

Scott's hobbies complement line work, he said. "I like to build things and fix things," especially if he's working with wood or metal. "I've always built random stuff, or taken it apart. Fixed them or made them worse," he smiled.

Right now he's finishing a woodshed. For inspiration, he looks around his house to see what his family needs. "I usually build what we need around the house, end tables, stuff like that," he said.

Wedding celebration

Scott grew up in Northfield, and now lives in Topsham in a house he and his fiancée bought two years ago. They've been together six years and have two little kids. "We're pretty outdoorsy," he said. They love to hike, but with kids ages three and one and a half, "it gets hard planning around naps and food and stuff."

This month, the couple will get married at their home. They're looking forward to a small and simple celebration, Scott said.



Scott Matheson (L) and Jamie Dailey caught together, just after they finished repairing a line felled by a tree in Duxbury.



Manager's and President's Report

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and debating and we hope we'll have the support of our members going forward.

Patty: It's not hard and fast. We're trying to coalesce around one rate structure, and we want to start talking to members about it in more detail. We want to start getting people's reactions.

We're not filing anything with regulators at this point. We're walking around to members with one rate structure, saying, "This is what we're tinkering with, what do you think?"

We're going to have to do more outreach. We did the listening group in November—that was a major undertaking and very helpful. We're not abandoning our emphasis on energy

efficiency. Any kWh that is not used is the most environmentally benign kWh. We want members to remember that.

That said, in order to make a dent in climate change, we need to get people off gasoline-powered cars and fossil fuel heating at home. In order to do that and pursue electrification, it means changing our rate structure. The state is moving toward 90% renewable by 2050. With a 100% renewable electric utility in place, we can make a big difference with each kWh.

The reason we're doing this is about the environment. It's about moving forward with a 100% renewable product and getting people off fossil fuels and shifting them over to renewables, but doing it in a fashion that is still energy efficient.

Barry: We keep in mind the total energy a member pays for. Our goal

is, as they switch from fossil fuel to electricity, their total energy bill will be equal to, and hopefully less than, they're paying now.

Patty: Right. It has to make sense financially.

Barry: Our members are using energy wisely and with less impact

on the environment, which is what this Co-op is totally committed to. It's the reason we've invested in a 100% renewable power portfolio before anyone else was talking about this. We've been working toward this, along with energy efficiency, since 1990. We've got a 28-year commitment and we're going to continue with that strong investment.

NOTICE TO WASHINGTON ELECTRIC CO-OP MEMBERS

Notice of Proposed Tariff Changes

On May 17, 2018, Washington Electric Cooperative Inc filed a request with the Vermont Public Utility Commission (PUC) for an increase in retail rates of 3.72%. The main driver of this increase in rates are increasing transmission and power cost related expenses.

This change will take effect with power sold on or after July 1, 2018 and will be reflected on the next bill you receive, in August. If the Public Utility Commission opens a formal investigation of this matter, this increase will be shown as a separate surcharge on your bill until the Commission finishes its investigation.

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	July 1, 2018 Proposed Rates
Customer Charge	\$12.97	\$13.45
First 200 kWh	200 x \$.10373 = \$20.75	200 x \$.10759 = \$21.52
Usage over 200 kWh	300 x \$.23160 = \$69.48	300 x \$.24022 = \$72.07
	\$103.20	\$107.04

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. Comments regarding the rate filing may be submitted to the Public Utility Commission by June 18, 2018 via mail at 112 State Street, Montpelier, VT 05620-2701, via email at puc.clerk@vermont.gov, or through the e-PUC at <https://epuc.vermont.gov/?q=node/32>. Comments filed after June 18, 2018 will also be accepted and considered by the Commission.

	Present Rates	Proposed Rates
RESIDENTIAL		
Customer Charge	\$12.97	\$13.45
0-200 kWh/month	0.10373	0.10759
Over 200 kWh/month	0.23160	0.24022
SEASONAL RESIDENTIAL*		
Customer Charge (6 month prepayment)	\$77.82	\$80.70
0-50 kWh/month	0.10373	0.10759
Over 50 kWh/month	0.23160	0.24022
SMALL COMMERCIAL		
Customer Charge	\$12.92	\$13.40
Per kWh/month	0.18962	0.19687
SEASONAL COMMERCIAL*		
Customer Charge (6 month prepayment)	\$77.52	\$80.40
Per kWh/month	0.18962	0.19687
LARGE POWER		
Customer Charge	\$22.05	\$22.87
Per kWh/month	0.10067	0.10441
Per kW/month	14.26	14.79
TIME OF DAY		
Customer Charge	\$12.97	\$13.45
0-60 kWh/month - Peak	0.10373	0.10759
Over 60 kWh/month - Peak	0.25637	0.26591
0-140 kWh/month - Off Peak	0.10373	0.10759
Over 140 kWh/month - Off Peak	0.21802	0.22613
SECURITY LIGHT/SEASONAL SECURITY LIGHT		
Per 100 Watt Light/month	\$20.18/121.08	\$20.93/125.58
Per 400 Watt Light/month	40.35/242.10	41.85/251.10
Per 101 Watt - LED	20.16/120.96	20.91/125.46
Per 91 Watt - LED	19.36/116.16	20.08/120.48
Per 87 Watt - LED	19.01/114.06	19.72/118.32

* Seasonal rates to be eliminated to be replaced with monthly commercial and residential rates.

Staying Safe in Work Zones

After another battering Vermont winter, summer is the season of maintenance and repair. WEC's lineworkers and subcontracted tree crews are out clearing danger trees and repairing infrastructure to keep your electricity safe and reliable. When this work is done on roadside lines, watch for flaggers directing traffic. It's critical that drivers, pedestrians, and crews practice road safety in work zones.

Rick Stergas, WEC's Safety and Environmental Compliance Specialist, said throughout the state there have been 10 work zone deaths in the past five years. "In Vermont, those are big numbers," he said. As a result, VOSH—Vermont's regulatory arm of the Occupational Safety and Health Administration—is emphasizing road safety. Stergas just completed his training as a traffic control technician and flagger trainer. That allows him to train and recertify WEC crews as flaggers. Flaggers require a four-hour training every two years, and every WEC lineworker gets that training. "Everyone's responsible for safety. I'm there to give them the tools to get the work done and do it safely," he said.

When crews set up a work zone, there's nothing left to chance. "It's all delineated," Stergas explained. Training covers "how to set it up, how to keep it safe, not just for the traveling public but pedestrians, people with disabilities," and anyone who may be using the road.

While WEC has an outstanding safety record, Stergas points out that "you can't rest on your laurels. You have to be vigilant." A major variable is driver behavior. "In the work zone, you have distracted drivers, you have impaired drivers. We're just out there with cones," Stergas said, pointing out that crews can't secure the site and are vulnerable to factors beyond their control. The stop/slow paddle is a legal device, Stergas said. If a driver were to disregard a

flagger's instructions, their license plate may be recorded and passed along to state police.

The most important thing drivers can do, Stergas emphasized, is to remain aware in work zones. That means drive slowly, follow the flagger's instructions, and, in accordance with Vermont law, don't use handheld devices. Being stopped in a work zone does not mean it's OK to check text messages.

Upon hearing this, Board Treasurer and Orange resident Don Douglas drily noted that one factor may make much of WEC territory safer than other parts of the state. "It's just a little bit safer since there's not much cell service," he said.

Because WEC is owned by its membership, Stergas said, members have an extra investment in keeping crews safe. "As members, they're owners of a company that has guys out here," he pointed out.

Work Zone Dos and Don'ts

- Don't drive distracted or impaired. Be alert at all times, especially in work zones.
- Please be aware of flaggers, equipment, and workers in the work zone.
- Flagger paddles are legal devices. Please adhere to flagger paddles and hand signals.
- Everyone on WEC's operations team is trained and tested on work zone safety, setup, and flagger control. "It's not just about holding a stop/slow paddle," said Stergas. "Our job is to get you through a work zone as quickly and efficiently as we possibly can."
- Please be patient and drive slowly. "It goes a long way toward keeping our guys safe, and our crews appreciate folks who drive slowly through our work zones," said Stergas.



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With New Rate Design Structure, WEC Looks to the Future

Higher service charge, lower kilowatt hour charge encourages clean energy use among membership—more affordably and more fairly

By Patty Richards and the
WEC Board of Directors

WEC's Board of Directors and management are proposing a new way to charge for electric service. A new rate design gives WEC an opportunity to leverage its 100% renewable power sources to encourage beneficial electrification: using clean and green electricity instead of fossil fuels for our daily power needs.

A new rate structure is an exciting opportunity for WEC consumer-members as we look toward the future. Combined with WEC's Button Up incentives for purchasing energy-efficient appliances and vehicles, this plan will help WEC members reduce their carbon footprints while contributing to Vermont's ambitious renewable energy goals. WEC has long been a green energy leader among state utilities: this change supports WEC's commitment to fight global warming.

Changing the way WEC charges for power also creates a more equitable payment system for every member on our lines. The new rate structure will help our Co-op plan for a sustainable, viable future within

a dynamic energy landscape.

How it works

The current rate structure includes a fixed charge of \$13 per month, a low block of 200 kWh charged a rate of about 11 cents per kWh, and a charge of about 24 cents per kWh for energy use over 200 kWh per month. This two-tiered energy rate structure has been in effect since 2011 and, with the low block at a low rate, was intended to encourage conservation and discourage high energy use. The structure has been successful, since on average WEC members use 489 kWh monthly—well below the state average of 560 kWh.

The new proposed rate structure includes a higher fixed charge of \$25 per month. The low block is maintained, but drops to 100 kWh, and the low block rate drops to about eight cents per kWh. Energy use over the first 100 kWh drops from 24 cents to roughly 18 cents per kWh.

In this new method, WEC continues to emphasize energy efficiency by retaining a low block at a lower rate to encourage and reward low energy use. Energy efficiency and

continued on page 4

"He held my hand and assured me everything was going to be okay."

At WEC, kindness matters. Read more. Members Write: p. 7



Brandle Litchfield and Bob Purvis, the Facilities Manager and Executive Director of Turning Point Center of Central Vermont, which supports people in recovery. A donation from WEC's Community Fund helped Turning Point improve its website to better reach the folks who need their help.

Community Fund Recipient Turning Point Center of Central Vermont: A Port in the Storm

By Will Lindner

Each year, Washington Electric Cooperative's General Manager, Patty Richards, receives dozens of inquiries from nonprofits, bootstrap municipal organizations, and groups and individuals engaged in activities that benefit Co-op members and other residents of central Vermont. These hopeful callers and correspondents are seeking contributions from WEC's Community Fund to support their efforts. And many of them receive it. In 2017, the Community Fund provided \$38,000 in grants to 74 recipients, including social-services groups,

libraries, food shelves, advocates for the disabled, health care and ambulance operations, educational groups, arts programs, and environmental organizations. The Community Fund was instituted in 2002, and all dollars come from Co-op members who generously donate their capital credit distributions.

But an unusual thing happened on one spring day in 2017. Rather than fielding an inquiry from an organization, Richards placed the initial call herself. She called Robert Purvis, Executive Director of the Turning Point Center of Central Vermont located on North Main

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Washington Electric Cooperative

East Montpelier, VT 05651

Inside

Blown in the wind: Meteorologist Roger Hill talks weather, p. 2, and WEC comes out with climate change statement, p. 4.

PUC approves 3.72% rate increase: P. 4.

The Co-op gives back: Organizations that received donations from WEC's Community Fund are listed on p. 7.

Coventry open house: Learn how garbage becomes clean electricity at the Coventry Landfill, P. 8.



WEC's Button Up program now offers incentives for electric vehicles like this Chevy Bolt parked in front of the warehouse. Learn more about what WEC can chip in toward members' energy-efficient purchases on p. 5.

This Weatherman Knows Which Way the Wind Blows

When Worcester-based meteorologist and WEC member Roger Hill was a child, he drove with his family from Los Angeles up North America's Western spine to visit his mother's family in Edmonton, Alberta. In big sky country—somewhere outside Butte, Montana—a massive thunderstorm hit. "The hail was so strong it broke the windshield, with me in the backseat scared to death," he remembered. He's been fascinated by weather ever since—and awed by nature's power.

Since the mid-2000s, Hill's skillful storm forecasting has benefited WEC and all of Vermont's utilities. And as a daily observer of weather patterns, he

We're not putting a value on [good weather]... A sunny winter day in Vermont is such a high value.

— Roger Hill

feels an obligation to speak up about what those patterns indicate: "Climate change is much stronger than people realize, and it's happening faster, and it's causing our weather to behave more and more oddly," he confirmed.

It's more accurate to call it anthropogenic global warming, Hill added. "We'd be slipping into an ice age if not for human interference," he said. Asked about the Co-op's recent statement about global warming—see p. 4—Hill said he was grateful to WEC for addressing the issue and hoped others would follow suit.

As a forecaster, Hill's daily attention to the weather means he's highly sensitive to changes in patterns. While many of us may note that winters look



Meteorologist Roger Hill surrounded by screens and weather models in his home office in Worcester.

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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$.51, 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.

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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 Dawn Johnson, at 224-2332.

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different from 20 years ago, Hill's close observations over those decades eliminate any doubt this is just a sense, or a trick of memory.

Weather report suite

Hill enlisted in the Army near the end of the Vietnam War. He served as a ballistic meteorological crewman, sending up weather balloons to supply artillery data that helped hit targets accurately. After the war, he joined the National Weather Service as a meteorological technician, and spent three years in Hawaii.

He moved around the country working for the National Weather Service: to Missouri and back to the big western states of Montana, Nevada, and California; to Cape Hatteras, NC "where I learned East Coast weather," he said, and was introduced to hurricanes. From there he moved to Albany, where he met his wife Michele, who grew up in Montpelier. The couple moved to Vermont and raised two kids, and Hill left the National Weather Service.

For the most part, he's worked independently since, from an office in the Hill home on the side of a mountain in Worcester. "I prefer living out in the boondocks because I like wildlife and less dense population," he said, noting that growing up in Los Angeles, he always wanted to experience seasons. But, he pointed out, rural living forces issues of sustainability: you can't drive up the road to get to his house without using a combustion engine.

Hill is a blues-rock drummer and a music fan, and during 1990s, his reputation for site-specific forecasting snagged him the opportunity to work for the Grateful Dead and Bob Dylan concerts in Highgate. Forecasting for

massive outdoor concerts requires juggling a special set of variables, he said: "Lightning's critical, dust, what a crowd will do." Both times he was there, he said, the wind blew down fences intended to contain 100,000 people. "Weather is highly critical in so many niches," he explained. "From maple syrup runs to sunny day forecasts for outdoor concerts."

Hill has been forecasting for VELCO (Vermont Electric Power Company, the upstream utility that provides transmission services to all Vermont utilities) since 2007, and as a result, utilities statewide benefit from his expertise. But he began utility forecasting with WEC a couple of years before that, hired by his neighbor, former General Manager Avram Patt. He also consults for the U-32 school district, Radio Vermont WDEV, individual towns, and others.

Forecasting requires long days. "I get up at about 4:45 in the morning, and unless there's ongoing weather, which there often is, I'll do a last broadcast for WDEV at 4:30" in the afternoon, he said. He takes breaks when he can, and has been known to duck out of lunches in Montpelier to file a report over his cell phone.

Before major storms, Hill holds conference calls with all utilities. His home office is well equipped: he has a backup generator and backup internet, and he subscribes to multiple weather sources and models. His workstation is a nest of screens set up directly across from his drum kit. "I run a lot of computer models. I'm keeping track of different conditions for analysis purposes," he explained. "Without good analysis and good situation awareness, you're not going to get a good forecast."

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President's and General Manager's Message

Big Changes Take Effect This Summer

Rate Increase Approved, WEC's New Rate Design, Board's Climate Change Statement, State's Net Metering Rules, Button Up Incentives, NEAEC Recap

Rate increase approved by PUC

Patty: While no one likes to raise rates sometimes it's something we have to do. To remain a viable business we must face the hard facts about rising costs. We kept this rate increase to a bare minimum. The 3.72 percent rate increase went into effect July 1. The Public Utility Commission (PUC) approved it at the recommendation of the Public Service Department (PSD)—that's the state entity that reviews all the numbers to make sure what we are filing for is just and reasonable.

We've tried to give as much notice as possible: through the WEC website, *Co-op Currents*, at the Annual Meeting in May, through the *Times Argus*, and on bill messages.

Barry: The rate increase was set to go into effect on July 1 as a temporary surcharge. However, the PUC approved it before July 1, so we consumer-owners will see the new rates on our bills that will arrive late July and in August.

Patty: The PSD said we're all set and recommended not proceeding by the PUC. It's not that we file and there's no scrutiny—the PSD looked at all our numbers, checked everything, made sure we did all the analysis correctly. They're a second set of eyes to make sure we're filing only for exactly what's needed.

Barry: The PSD does due diligence and works closely with WEC management and staff to make sure they understand all the details that go into the Co-op's filing.

WEC presents new rate design to members

Barry: After 18 months of discussion, at our May meeting the Board of Directors came to consensus on a new rate design we'll file with the PUC in late fall of this year. The article is in this issue (p. 1). As part of our decision we will have a public meeting with our members, scheduled for Wednesday, September 19, at the Old Brick Church, next door to the Co-op office. We're interested in hearing any questions our members have about how we got here and why we're doing it.



Part of the reason to make a public statement [about climate change] is to continue to demonstrate our leadership on environmental issues. As an electric cooperative, this will help guide our future actions and discussions as we talk to lawmakers, our members, anyone in the climate and renewables sector, other utilities, and beyond.

—Patty Richards

Patty: That's right. We held listening groups last November to get member input, and that factored heavily in our design. At the last board meeting our board approved a plan, recognizing our rate design needs to evolve.

Barry: The board recognizes this is a significant change, especially since we haven't had a rate redesign in roughly 15 years. Times have changed, and we have to change with them. Global warming is no maybe. It's here now. WEC can address it by working with you, our members, in making our total energy use greener—remember, the Co-op's power portfolio is 100 percent renewable. To do that, we needed to make sure our rates are affordable for people switching their fossil fuel-powered cars and heating systems over to electric power.

Patty: If anyone wants to give feedback, come to the meeting, write letters, or call us. See the article

on the rate design on page 1 and you will find details about the September 19 meeting and how to write in.

WEC issues climate change statement

Barry: The Board felt it was extremely important to adopt a climate change policy statement, both to acknowledge what we've already been committed to for the last couple of decades, and also to clearly guide how we address global warming going forward.

Patty: The importance to me, as your General Manager, in putting this down on paper was really significant. We've been operating all along under the premise that climate change is real, but now that it's in writing, that helps me as the manager and our staff in taking positions on climate change.

It's important for us to be open and outspoken about this. It's one thing to say "Yeah, we believe in climate change," but codifying what we stand for is a really important step. Quite frankly, words matter.

Barry: We are and will continue to make a difference. Since 1990, we've been committed to working with our

members on energy efficiency, conservation, and developing a 100 percent renewable power supply, ensuring every kWh you use is green. Now 20 percent of our peak is supplied by our members' net metering installations. We've fully supported the state's goal of reaching 90 percent renewables in all sectors by 2050. We're in our second year of our Tier III Button Up program to work closely with our members to get off fossil fuels. We feel this pulls it all together in a transparent statement so our manager and staff can have a unified voice on this issue.

Patty: So all of us can go out and talk about climate change. We want to make noise on this issue! We've done all these steps. We have some of the lowest use in Vermont on average. Part of the reason to make a public statement is to continue to demonstrate our leadership on environmental issues. As an electric cooperative, this will help guide our future actions and discussions as we talk to lawmakers, our members, anyone in the climate and renewables sector, other utilities, and beyond.

State's new net metering rates in effect

Patty: On July 1, the new net metering rates went into effect per the PUC's order. We fully support net metering and we want to see it continue.

Barry: In 2013, net metering supplied 10 percent of our peak. Now in 2018, 20 percent of our peak is

supplied by our members' net metering installations.

New Button Up incentives for 2018

Patty: We're on year two of our Button Up program, which is an effort to move members off of fossil fuels and onto clean and green electricity WEC provides in order to meet the state's renewable energy requirements. We've got incentive dollars for people to move over to new heating systems and new vehicles—electric and plug-in hybrid vehicles. I'm looking forward to seeing more people taking advantage of those incentives.

Barry: It may be driven by a state mandate, but our Button Up program goes along with everything we've been committed to over the last 30 years, and that's working closely

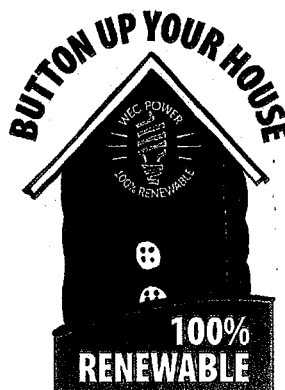
with our members to use energy as efficiently as possible. The mandate requires we work with you to move away from fossil fuels and use electricity for transportation, heat, and hot water. And we're excited about it. It supports how we address climate change and goes hand in hand with the new rate design structure we've proposed.

Northeast Electric Co-ops annual meeting report

Barry: In May, a number of our board members and our manager attended the Northeast Association of Electric Cooperatives (NEAEC) annual meeting, which brings together representatives from New York, Vermont, New Hampshire, and Maine to talk about common issues we have as electric co-ops, and common issues facing our members. It's really a wonderful opportunity to hear about the progress each co-op is making individually and to share solutions to issues we all have in common. These co-ops range in size with the largest representing 80 thousand members, and the smallest a couple thousand.

For me, at these meetings, I really realize how much I have grown to appreciate the cooperative difference. We're all working on the same issues, we're working on behalf of our members, all board members are members of their respective co-ops,

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Rate Design

continued from page 1

conservation are still the best ways to reduce environmental impact. However, lower kWh charges for the second block helps to incentivize using clean electricity in new ways, which hopefully has the effect of reducing members' fossil fuel use.

These changes will affect all members' bills. Some members will see lower monthly electric bills; others will see an increase. Those who use near 500 kWh a month will see very little difference.

Goals

1. Align with Vermont's Renewable Energy Standard (Act 56) and state goal to move 90% of total energy use to renewable sources

Because 100% of WEC's electricity comes from carbon-free, renewable sources, shifting household energy use from fossil fuels to electricity is a way for WEC members to significantly contribute to a more sustainable future.

We also look forward to electricity's expanding role in reducing air emissions and combating the effects of climate change. Most of our use fossil fuels to drive cars and heat our homes, and these are the greatest producers of harmful air emissions in Vermont.

WEC members are in a position to transition now to appliances and vehicles that use electricity, as appliances powered by fossil fuels eventually become less common, harder to service, and more expensive to run.

2. Potentially reduce spending on total household energy use

While realigning our rates to meet state goals intended to reduce air emissions, we also look to reduce household spending for all uses of energy. Shifting toward renewable electric sources of power for members' energy needs may cut down on the total energy dollars members spend. Total energy dollars include electricity as well as gasoline, propane, fuel oil, and other fossil fuel sources. Yes, your electric bill may go up as you use more electricity to power cars and home heating and cooling; at the same time, your gasoline and fossil fuel home heating bills will shrink or perhaps disappear as you make the shift. WEC's new rate design lowers the kWh charge in part to help members nudge down overall household energy spending.

3. Share the Co-op's infrastructure costs more equitably among members

Fairness was a major concern among participants in WEC's November listening groups ("Listening for Consensus," January 2018). By increasing the fixed monthly fee and decreasing the kWh charge, everyone using WEC's lines—high energy users and careful conservers, net metering members and power purchasing members, renters and owners, households and businesses—contribute to and benefit from the Co-op's grid in a way that makes more sense than the current structure.

How it will help

Vermont is at a crossroads. Controlling air emissions is not only the right thing to do but is now a state requirement. The reality is replacing combustion engines and appliances with electric ones is part of the solution to fight climate change and reduce harmful air emissions. Beneficial electrification will also help minimize future rate increases for all members: as WEC's sales increase, the Co-op requires fewer, smaller rate increases over time. Compared to fossil fuels, WEC's electricity is a cleaner, smarter, more efficient way to power household energy needs.

1. Reduce greenhouse gases and global warming

WEC can help members make a real impact in reducing harmful greenhouse gas emissions by switching off fossil fuels and moving to clean, renewable electricity. WEC is one of only two utilities in the state that provide power from 100% renewable sources.

Changing how we charge for electricity encourages beneficial electrification, reducing fossil fuel use overall. This aligns with the state's Renewable Energy Standard mandate, passed by the legislature in 2015 through Act 56. WEC's Button Up program is a direct response to these new laws and helps members afford to purchase new energy efficient appliances, home weatherization, and new this year, electric vehicles.

Helping members afford electric vehicles is also a big part of the solution. So is helping members heat homes and water with efficient technologies that use electricity rather than propane and oil. Global warming has a dramatic effect on our environment—locally. We see it firsthand in more frequent and extreme storms. We are also seeing the onset of invasive bugs and disease brought by changing weather in our region. The effects of climate change caused the Co-op Board to issue a statement on the topic—the first among state utilities (p. X). This and Vermont's Renewable Energy Standard drive our efforts to help members switch from fossil fuels to clean electric energy.

2. Cost savings

Whether your bill is lower or higher at the onset of the new rates, we want you to look at how much you spend on all forms of energy. Under the new rates, switching from gasoline powered cars to highly efficient electric vehicles may decrease dollars spent in total on energy. Your electric bill may increase, but if you are saving more on other forms of energy, you may see less money out the door while also investing in locally owned infrastructure that supports the much needed shift to renewable energy sources. These savings are especially strong if you use WEC incentives to lower the cost of weatherizing your home and purchasing renewable electric appliances and tools, such as electric vehicles.

Timing and member input

The Board has been discussing rate design for over a year. In November, 2017, listening groups provided valuable

input from a representative sample of WEC members. WEC developed this new plan based on the board's review and member feedback.

Late this year, WEC will file the new rate structure with the Vermont Public Utility Commission (PUC). We anticipate the regulatory process to take several months, meaning the new structure will likely go into effect in 2019 or even possibly in 2020.

This article is the first step in going over WEC's plans with members. Before filing with state regulators, the Co-op Board and management welcome open discussion of the new rate design proposal with all members. A public meeting will be held on Wednesday, September 19, 2018 from 6:30 to

8:00 pm at the Old Brick Church in East Montpelier (next door to WEC's main office: 40 Church Street, East Montpelier).

Members are also invited to send their questions and feedback to the Board at wecmembers@wec.coop or send written comments by mail to Dawn Johnson at PO Box 8, East Montpelier, Vermont, 05651.

Read past Co-op Currents stories about WEC's rate redesign:

- "Listening for Consensus," January 2018
- "WEC Eyes Changes to Its Rate Structure," June 2017

WEC First Utility in State to Release Climate Change Statement

WEC is the first utility in Vermont to take a formal position on climate change. In keeping with the Co-op's longtime commitment to the environment and its members' quality of life, the Board of Directors adopted the following statement at the Co-op's May 30 board meeting.

The statement reads in full:

The WEC Board of Directors acknowledges that rapid global warming and associated climate instability are real, and are significantly attributable to human activities. We are concerned that global warming presents great risk of serious and negative economic, environmental and health ramifications to humans, along with challenges to the continued existence of numerous other forms of life on this planet.

WEC urges NRECA [National Rural Electric Cooperative Association] and NEAEC [Northeast Association of Electric Cooperatives] to support meaningful efforts on the part of the electricity sector to address global warming, including legislation at the federal, state, and local levels to mitigate the harmful effects of climate change. An effective response must also address financial impacts incurred by cooperatives burdened with legacy power supply commitments.

In a press release, General Manager Patty Richards said, "As with everything, change starts at home: our primary focus is on the four rural Vermont counties we serve. We intend this statement to have a local impact, guiding policies that positively affect our members. On a national level, we will work within our member organizations to rally support for utilities concerned about climate change."

State Approves WEC Rate Increase, Eliminates Seasonal Rates

On June 29th, Vermont's Public Utility Commission (PUC) approved a 3.72 percent rate increase for WEC members, following the recommendation of the Public Service Department (PSD).

The rate increase took effect July 1. In an order, the PUC noted that WEC announced the increase over several platforms (at the Annual Meeting, in Co-op Currents, in a press release, in the Times Argus, on its website, and on bills) and no public comments were filed. The order also noted that the PSD went over the proposed increase thoroughly with WEC staff and "the Department stated that WEC has demonstrated that its proposed revenue requirement is both necessary and sufficient to cover its costs and expenses during the rate year."

The PSD agreed with WEC's request to eliminate seasonal rates, which affected fewer than 400 WEC members. Most seasonal accounts were originally set up because electric use was low during many months of the year and it was difficult for members to keep the meters accessible to WEC meter readers. Since WEC converted to automated meters, access is no longer a concern.

Members used to seasonal rates may see several advantages in converting to the regular Residential Rate class. The first is a possible reduction in cost. Another advantage is the comfort in knowing that if there is an unexpected use of electricity at the location (such as a pump failure or appliance left plugged in), members will be alerted by the next month's bill. Under seasonal billing, members with unexpected seasonal energy use were occasionally surprised by a much larger bill than anticipated at the end of six months. With monthly billing, problems become obvious quickly and can be addressed right away.

Satisfied that WEC's proposal was sound, the PUC agreed with the PSD's recommendation and passed the rate increase without a hearing or investigation.



2018 Button Up Offers Announced, Including New Electric Vehicle Incentives for Income Eligible WEC Households

Program helps members replace fossil-fuel burning devices to use clean energy and improve efficiency

WEC's Button Up program offers members cash incentives toward energy-efficient weatherization and heating equipment installations. 2018 brings a new incentive in the Button Up menu: loan pay-downs toward all-electric and plug-in hybrid electric vehicles for income eligible members. WEC is also continuing to offer cash toward purchasing other items, like cold-climate heat pumps and pellet boilers.

WEC's Button Up program grew out of Vermont's Renewable Energy Standard, which aspires to get the state to use 90 percent renewable sources to power across all sectors, including heating and transportation. Also known as Tier III, Button Up is WEC's effort to help members retire fossil-fueled devices. Cash incentives directly help members afford to transition instead to energy-efficient appliances and vehicles that use WEC's 100 percent renewable power mix. "The idea is to reduce the harmful emissions that contribute to global warming and climate change. Members may want to switch to cleaner cars and home heating, but there's

often a financial hurdle in making an investment of that size. Button Up cash can bridge that gap," said General Manager Patty Richards.

Income-eligible members may receive \$1,900 to write down the auto loan for a purchase or to offset the full lease of a qualifying EV, or \$950 towards a new plug-in hybrid, from any dealership.

WEC's EV and plug-in hybrid incentives come from remaining funds from a grant from Vermont Low-Income Trust for Energy (VLITE). The grant helped WEC install five Level II EV charging stations in its service area. VLITE has agreed to let WEC repurpose remaining monies to help qualifying members afford the shift to an electric car.

Members interested in claiming the EV incentive may fill out a form available on washingtonelectric.coop or by contacting Bill Powell (energycoach@wec.coop, 802-224-2329). That form includes income guidelines. For example, for a family of two to qualify for the incentive, their gross income may not exceed \$52,750;

for a family of four, the limit is \$65,900.

In addition, VSECU is partnering with WEC to streamline the financing process of EV's for members interested in securing loans with VSECU. Financing through VSECU allows members to apply the incentive directly, without having to pay costs up front and wait for reimbursement.

"These EV incentives make transitioning away from fossil fuel vehicles as easy and affordable as possible for our members," said Richards.

One of the most significant fossil fuel reduction improvements is through home weatherization. Indeed, it makes little sense to invest in major home heating appliances if the home itself is not properly weatherized. A weatherized home has a measured heat load, which is achieved through comprehensive diagnostics, insulating, and reducing air leakage through the building shell.

Members may now receive up to \$2,000 for home weatherization costs. WEC also offers \$250 toward cold climate heat pumps (HP) when the building is verified to meet thermal standards, \$250 toward heat pump

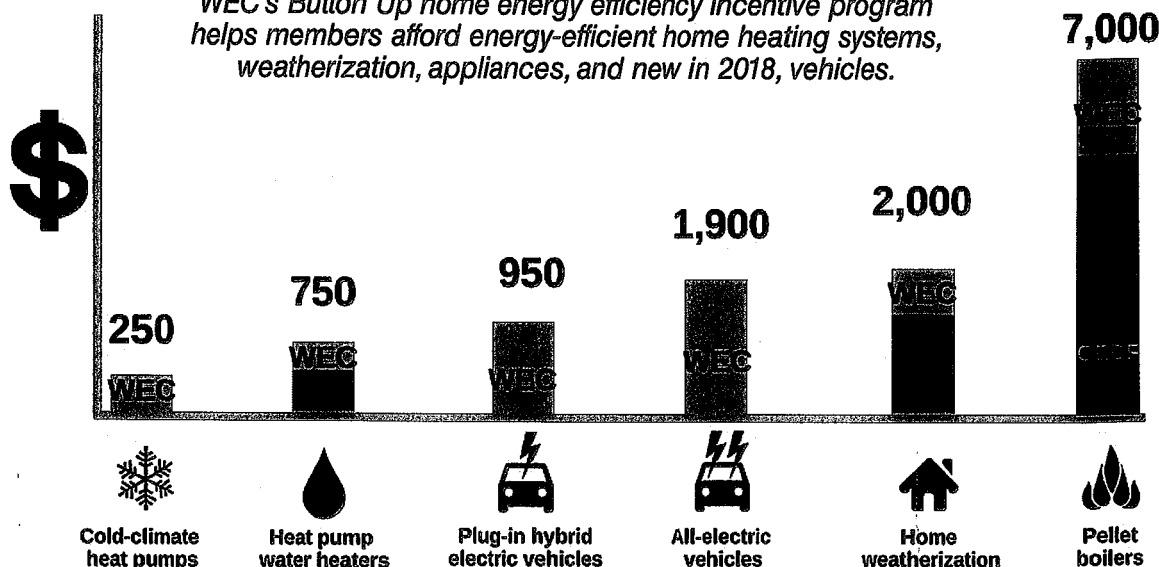
water heaters (HPWH), \$950 toward solar hot water heaters, and \$1,000 toward pellet boilers and pellet furnaces. See the adjacent chart for a handy list of WEC's Button Up offerings effective July 2018.

Efficiency Vermont offers separate incentives that, combined with WEC's increases, can amount to substantial savings. Powell invites members to contact him when considering major purchases in energy-efficient home heating, weatherization, or transportation. Not only can he guide members through WEC's incentives, but he can help members uncover other incentives, solve root causes (for example, you may not need the dehumidifier if your home is properly insulated and ventilated), and connect members with qualified contractors.

There are a limited number of dollars available for each type of purchase. Members interested in taking advantage of any Button Up incentive should call Powell as soon as possible to discuss how to switch to a greener choice as affordably as possible. 

What's My Incentive to Button Up in 2018?

WEC's Button Up home energy efficiency incentive program helps members afford energy-efficient home heating systems, weatherization, appliances, and new in 2018, vehicles.



EV = Efficiency Vermont; CEDF = Clean Energy Development Fund. Plug-in hybrid and all-electric vehicle incentives are available only to members who qualify as low- or moderate-income. Additional incentives may be available. Before you buy any new appliance or vehicle, contact Energy Coach Bill Powell to learn how much you can save.

802-224-2329

energycoach@wec.coop



Turning Point Center

continued from page 1

Street in Barre, which supports people in recovering from substance misuse. Richards asked Purvis if he'd like to apply for a Community Fund grant.

Obviously, his answer was yes.

It isn't easy for Turning Point to raise money, he explained recently. "Eighty-five percent of our budget comes from the state health department, and we've been struggling with level funding [from that source] for four years. It's really not sustainable. It's hard for a program like ours to raise additional money because, with human services, there's a feeling among people that the state is supposed to do that."

Turning Point also contends with geographical limitations to its fundraising. "There are twelve recovery centers in Vermont," Purvis said. "Which means that we're confined to our local area for fundraising."

Purvis and a small group of supporters work to supplement the state's allocation with local fundraising, but it's an uphill climb. The unsolicited, unexpected call from Richards was like the sun coming out.

"I was stunned," he said. "In all my years, I had never had a donor ask me if I wanted to apply for a donation!" Purvis learned his organization was recommended to WEC by a recovery center outside WEC's service area. "Shortly thereafter we received an extremely generous donation. Fundraising is difficult in our area of work. Patty's initiative in reaching out to us made us feel valued in the community. My experience with Washington Electric Cooperative has been uniquely gratifying in my 35 years working in the nonprofit sector."

As Richards explained, the executive director of Turning Point of Chittenden County, in Burlington, called her to inquire about a donation (most, but not all, of the state's recovery centers have Turning Point in their name.)

"I was very moved by his explanation of the work they do to help people suffering from addiction," said Richards. "The Turning Point staff are people who have dealt very personally with their own addiction issues, working intimately with others who are suffering and struggling, and trying to lead them and stand with them as they seek to become sober and straighten out their lives, and their families' lives."

"Unfortunately," Richards continued, "I had to tell the director from Burlington that our Community Fund limits its donations to central Vermont, where our members' money will have a local impact. That's when he told me about Bob Purvis and Turning Point Center of Central Vermont, and that's what led me to call Bob."

All of the Fund's donations are



Turning Point of Central Vermont's Bob Purvis and Brandie Litchfield outside the recovery center's office on North Main Street in Barre.

good ones, in Richards's view. They all enhance the quality of life in our towns and villages.

"But this one, the Turning Point Center, is one we wouldn't have wanted to miss," she said. "What could be more important than helping people empower themselves and basically save their own lives? And become contributing members of society as well?"

Peer-to-peer and tailored programs

"Once you have a few years of sobriety, it really enhances your own recovery to do service and give back."

That's how Brandie Litchfield, the facilities manager at Turning Point Center of Central Vermont, described the experience of working with others who are trying to overcome their own addictions. Litchfield is one of just two full-time employees at the Center. "And 'facilities manager' doesn't reflect all the things she does," said Purvis, who's the other one.

"We provide peer services," Purvis explained, "and we don't charge for the work we do. What we bring to our work is our personal experience with addiction and recovery. We're at great pains to make a distinction between the clinical world and the peer world. It doesn't start with an appointment and payment, and end with the completion of a course of treatment. It lasts as long as people

want it to last, and for some, that's years. That's the key: we're a place where our visitors can always talk to someone."

Turning Point reaches people grappling with different and multiple addictions, from opioids to alcohol. "Alcohol is actually the most dangerous substance to withdraw from without medical assistance," said Purvis.

One way that people get acquainted with Turning Point is through Washington County Mental Health's

"Lighthouse Public Inebriate Program."

An alternative to jail or a hospital, it provides a safe and comfortable residence where police can take someone badly intoxicated. Later, with that person's permission, Brandie Litchfield reaches out to offer support and assistance.

But despite the dangers of alcoholism, it's opioids, Purvis said, that present the most terrifying form of addiction. The opioid epidemic plaguing our state and the nation has received a great deal of attention. The Vermont Department of Health has reported a precipitous rise in overdose deaths each year since 2014.

"They create a level of craving that's unknown in other areas. Your brain is telling you from the bottom up that you need these drugs to survive," said Purvis. "The person who goes down into that serious addiction has caused a lot of problems, for themselves and others, so it takes many years to repair the damage."

Turning Point's staff and volunteers work to build skills beyond their impressive patience, good will, and intuition. Litchfield, for example, will soon take a five-day, 30-hour course provided by the statewide recovery network to become a recovery coach.

The training "sharpens their understanding of things like how to listen accurately to people," Purvis said. Coaches also become knowledgeable about the array of services available to help people in varying circumstances, such as employment assistance, income support, and medical care. An insightful thing that coaches do, highlighted in a program brochure, is to help people "focus on the present and the future, not the past."

There is, in the addiction recovery world, a divergence between abstinence-based recovery and medically assisted therapy (MAT). Both approaches can be accessed at Barre's Turning Point Center. The facility makes its spacious meeting room available to abstinence groups like Alcoholics Anonymous and Narcotics Anonymous, which run their own sessions and pay rent for the space.

For some people addicted to

opiates, however, abstinence programs aren't the right fit. MAT programs support people using medications like methadone, which Purvis describes as a "partial opioid." Purvis is particularly pleased that his center provides a "Pathways guide," a volunteer trained in the Vermont Recovery Network's "Pathways to Recovery" program. He calls it "the gold standard for opioid addiction." Pathways guides collaborate with inpatient treatment centers, and work with individuals and in groups to help people set goals in recovery and attain them.

"Last year there wasn't a single death of a person engaged in medically assisted treatment," said Purvis. "If there's one thing we know about addiction, it's that almost nobody gets it right the first time. People relapse. People stumble. As long as they don't give up, that's all we care about."

WEC gift leads to new website

No organization these days can maximize its potential without an effective media platform. An addiction recovery center is no exception.

"Everybody that we deal with," said Purvis, "has a phone, and they all have Facebook. But our social media was in tatters; it was basically useless. We needed to bring someone in who could redo it."

When he received Patty Richards' call, he knew immediately how he wanted to use a Community Fund grant. Combined with a small amount of money he had set aside from another source, WEC's donation enabled Turning Point to hire a consultant to redesign and update its website.

"He had to start from scratch," said Purvis, "so it's still a work in progress. But when it's done the website will be the repository for information about what we do. It's something we've really needed, and thanks to WEC we're going to have it."

Check out the site at www.tpccv.org.

"The consultant we hired," Purvis added, "is in recovery himself. That's the beauty of it. People who get into recovery often have a commitment to help other people."



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Community Fund 2017 Report

In 2017, the WEC Community Fund gave \$38,465 to 74 charitable organizations in our service area. These nonprofits address a range of causes: hunger, mental health, arts, youth and senior programs, natural resources, and many others.

The fund, overseen by a volunteer board and staff committee, responds to requests for donations on a monthly basis. Donation amounts range from \$100 to \$1,500.

All money in the Community Fund comes from the 14% of WEC members who generously donate their capital credits in order to support community causes. To redirect your capital credits to the Community Fund, please fill out

the form below, or call Dawn Johnson at 802-224-2332. Thank you!

2017 Community Fund donation recipients are:

All Star Hockey Classic
Barre Area Veterans Council
Barre Heritage Festival
Barre Opera House
Bleke Memorial Library
Brookfield Community Partnership
Capstone Community Action - WARMTH
Central Vermont Adult Basic Education
Central Vermont Council on Aging
Central Vermont Home Health & Hospice
Central Vermont Humane Society
Champlain Valley Exposition - Vermont
Agricultural Hall of Fame
EarthWalk

Faith in Action Northern Communities - Cabot
Food Share
Friends of the Winooski River
Girls/Boys First Mentoring
Good Beginnings
Good Samaritan Haven
Green Mountain Council
Green Mountain United Way
Green Up Vermont
Groton Community Club
Hardwick Trails
Home Share Now
Jaquith Public Library
Keeping Track
Kellogg-Hubbard Library
Lotus Lake Discovery Center
Mad River Valley Rotary Club
Montpelier High School Project Graduation
Montpelier Senior Activity Center
North Branch Nature Center

People's Health and Wellness
Plainfield Historical Society
Prevent Child Abuse Vermont
Rural Vermont
Spaulding High School Project Graduation
Tender Loving Respite House
The Governor's Institutes of Vermont
Turning Point Center of Central Vermont
Vermont Center for Independent Living
Vermont Community Fund
Vermont Council on Rural Development
Vermont Farm Bureau
Vermont Foodbank
Vermont Horse-Assisted Therapy
Vermont Land Trust
Washington County Mental Health Services
West Danville Community Club
Woodbury Volunteer Fire Department
Worcester Fourth of July Committee
Youth Service Bureau

Members Write

Dear Washington Electric Co-op, Inc.,

I wanted to write and tell you what exceptional people you have working for you. In a society these days where it seems sometimes like there is no kindness, no compassion, it is refreshing to know there are people like your employees. Last weekend when Mother Nature slammed us with yet another storm, it hit around my place bad. Like so many others, there was destruction everywhere. I live alone with my kids (Willow - my horse, Libby - my dog, Charlie, Buddy, Sammy - my cats) - all rescues, my family. Being without power from Friday to Monday as you can imagine was very difficult.

By the time Monday rolled around I was an emotional mess, to say the least. The drinking water was gone, my Buddy/Kitty is diabetic and I had to ship him and the insulin out of here by four-wheel drive, which added to the stress. The reason I am going into a little depth of my story is to affirm how I was.

When I saw through the maze of broken trees the yellow flashing light of the power company truck at the end of the road, hope welled up inside that it was maybe my turn. Next thing I saw was that pickup truck driving up to me, and it was your man Larry. He held my hand and assured me everything was going to be okay. This man gave me his lunch (my food was gone) and made sure I had fresh drinking water. I could not have asked for anyone to have been more considerate. Larry was wonderful and I want you to know this and be proud to have people like him in your company.

Others in your company deserve my recognition and thanks. Dawn, Elaine, and Beth to name a few. They have always been so kind when I have called.

I felt it was important for you to know this and know how much I sincerely appreciate the kindness that has been given to me, not only last weekend but in all the years I have been a customer. You have set the bar high and other companies can only hope to achieve this.

Thank you again, Larry, from my heart for everything you did for me; thank you to all the men in the crews.

May God always bless you all and keep you safe in the hard work you do.

Sincerely and best always,
Deidra J. Thurston



Right of Way Manager Larry Gilbert is recognized for his consideration in this letter. Many thanks to Deidra Thurston for writing in.

Got something to say?

Letter to the editor, comment, or a story tip?
Drop us a line at currents@wec.coop or
Washington Electric Cooperative, Inc.,
P.O. Box 8, East Montpelier, VT 05651,
Attn: Co-op Currents.



Capital Credit Authorization to WEC Community Fund

Capital credit donations support worthwhile non-profit groups and projects in WEC's service territory and in central Vermont.

☐ I wish to donate this year's and all future years refunds

☐ I wish to donate only this year's refund (Year: _____)

Name _____ Date _____

Address _____

Capital credit and/or Account # _____ Telephone _____

Signature _____

Please return to WEC, P.O. Box 8, East Montpelier, VT 05651

Thank you for your considerate donation to the WEC Community Fund!

Roger Hill

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That means, he said, knowing all the factors that affect the picture: from local microclimates to the behavior of the jet stream.

The cold rain and snow

Global warming is changing the picture entirely. And much of the warming that affects our weather, Hill said, is not so much the atmosphere warming—but the oceans. 96% of warming is absorbed by the ocean, and just 4% enters the atmosphere, Hill explained, and melting sea ice causes the jet stream to slow down, which causes weather to get stuck in hazardous patterns. "There'll be some years we have a super cold winter and the rest of the world is on fire," he explained. "While we were below zero, they had 90 degrees in LA. Drier areas are getting drier; wetter areas are getting wetter."

But paradoxically, climate change also leads to wide swings in the weather. Hill points to January of this year, when the mercury dove to 40 below, then to 40 above, then back down and up again. To those who point to those 40 below days as evidence that global warming is nothing to worry about, Hill said, "40 below used to be more common. It's less common. When you do get it, it's a function of climate change, it's a function that that warming went into the ocean, which melted the ice, which displaced arctic air south into New England."

And this, in addition to high winds,

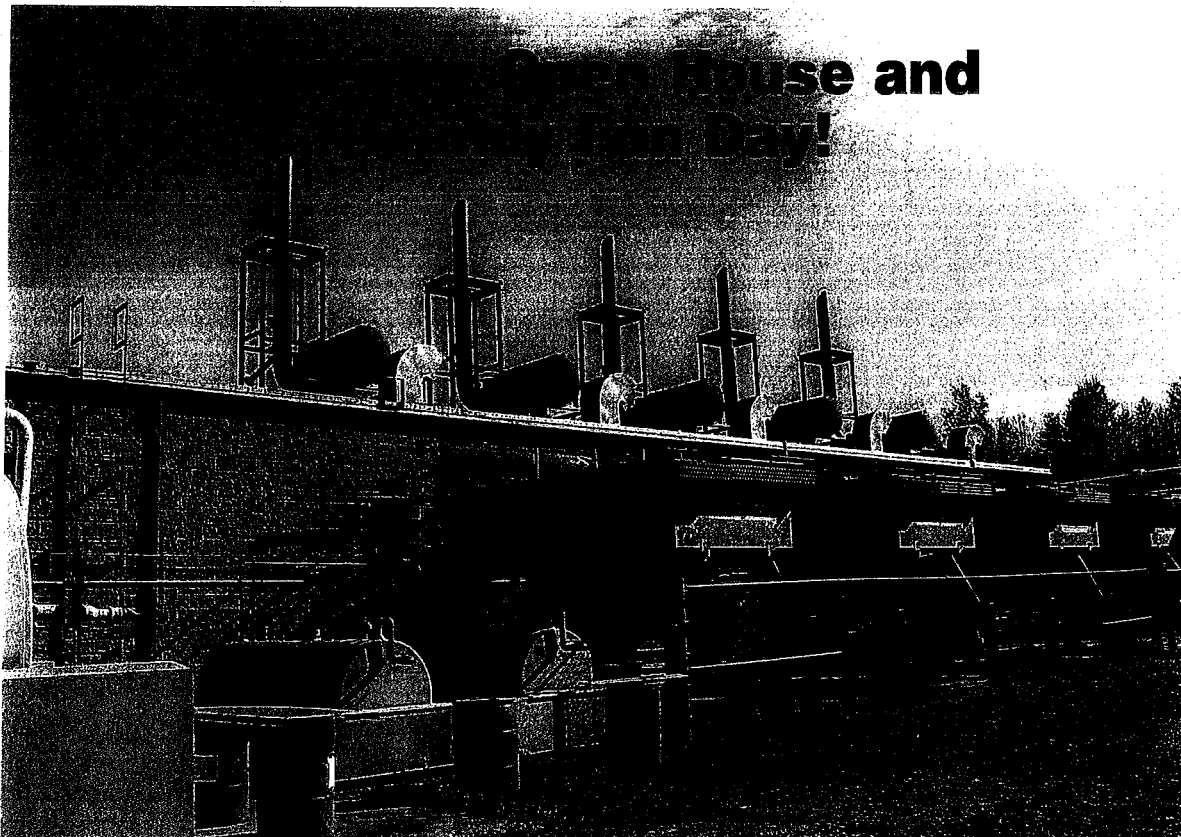
affects utilities. Snow used to be more powdery, but now it's wetter, Hill says, and wet snow, freezing rain, and ice storms cause outages. Damaging weather is expensive, Hill says, but we haven't figured out a way to attach financial value to good weather—to incentivize preserving it. "We're not putting a value on it. That's my biggest complaint," he explained. "To me, a smoggy day in LA is such a low value, and a sunny winter day in Vermont is such a high value."

Shelter from the storm

That's part of why Hill is pleased to be a member of the Co-op. "We really have to turn the corner and get off fossil fuels. I'm really glad WEC has no fossil fuel footprint," he said, adding that WEC's transition to 100% renewable energy proves that other utilities can make the change without demanding people change their lifestyles.

We're on the cusp of energy change, he said, and "WEC is small enough that it's not unwieldy for it to do the creative thing." That means investing in Coventry and Sheffield Wind, offering incentives toward members' electric vehicle purchases, issuing a policy statement against climate change. "Who would have thought we have cars that run on electricity and drive themselves?" he asked. The immediacy of climate change's threat also makes now a time of innovation and excitement, he suggested. "It's the equivalent of getting off the horse and buggy and moving to the automobile. Now we're moving off the automobile."





Join WEC and Casella Waste Management on September 15 for an open house at Coventry Landfill!

Tour WEC's generating plant and learn how WEC uses renewable landfill gas to make electricity. Lunch and activities provided. Plus: great prizes!

Saturday, September 15 • 10:00 am - 2 pm • Rain or shine
21 Landfill Lane (off Airport Road), Coventry, VT 05825

RSVP to Dawn Johnson: dawn.johnson@wec.coop or 802-224-2332
See you there!

Tim Newcomb



Summer guests: Layout guru and WEC member Tim Newcomb hosted a robin family on his house in Worcester this summer. He snapped a photo of these baby birds a day before fledging.

Manager's and President's Report

continued from page 3

and we're furthering a history that began in the 1930s to bring electricity to our communities and support the communities that make up our co-op family.

Patty: It's a great opportunity to bounce things off other co-ops. They're just like us: they're not for profit, they're figuring out how to meet members' needs in rural areas. That rural landscape is a fundamentally different thing. At the meeting we can ask each other, hey, what are you doing on this challenging issue? We can ask, what else could we be doing? We learn from others to make sure we are doing the best we can.

We're all focused on reliability. We've got most of our lines away from the roadside, and we've got significant right of way clearance areas. How best do we manage that? That's the benefit

of talking with other co-ops. We had a linemen panel, which was great. When we learn about what other co-ops are doing we're better able to meet best practices.

Barry: The meeting also brings in speakers from the National Rural Electric Co-op Association (NRECA) network so we can learn what other electric co-ops in the country are doing. It's important for all of us to remember there are close to 1,000 electric co-ops in very rural areas that have a long history of bringing electric service to the farms, homes, and small businesses of our members on the back roads, when investor-owned utilities refused to because there just was not enough profit for them to make.

For our members, it's about fulfilling a very basic need. Electricity is something we take for granted, but without these lines going to our households, we'd still be in the dark. 



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Reliability is About to Get a Whole Lot Better in Northfield

WEC digs under the interstate as part of improvement plan

Imagine every time the wind blows, you worry you'll lose power. That's been the situation for many WEC members in Northfield. The Northfield feeder line – a three-phase line that heads toward East Roxbury from the Jackson Corners substation – and a single-phase line off that feeder are being targeted for reliability improvements.

The main problem is the extreme terrain the three-phase line traverses. Utility Field Technician Brian Wilkin, who is managing the project, said members of the operations team have been working on the line since January of this year. In the wake of the destructive late October windstorm of 2017, they've been spotting trees at risk of falling on lines from outside the Co-op's right of way and looking for damaged insulators on top of poles – which involves a rugged hike with a pair of binoculars to look for cracks in the equipment at the top of each pole. "We've tried to get ahead of equipment failure by physically walking the line," he said. In the meantime, tree crews have been working nonstop to clear the line of undergrowth and danger trees.

When members call in to tell us about outages, we're listening. We got all these calls from this one area, and we said, ok, what the heck was going on?

– Patty Richards

"We've heard loud and clear from our members that reliability in this area is not good, and we are going to fix that," said General Manager Patty Richards. "When members call in to tell us about outages, we're listening. We got all these calls from this one area, and we said, ok, what the heck was going on? Then we could fix it." The line, which serves 1,301 Co-op members, travels about 14 miles through heavy woods away from roadways. A three-to four-mile long single-phase tap near the end of the feeder serves 128 members and has been affected the most by outages. "It's not acceptable," Operations Manager Dan Weston says of that line's reliability. "But it is fixable and we have a plan in place to improve reliability."

That single-phase line ends very close to Interstate 89, near the Northfield exit. So WEC is working to connect that line to the line on the other side of the interstate, putting poles as close to the highway as possible and then running line underneath the road.

When the power goes out for either an unplanned outage (a tree falls

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Nancy Clark checks in with a Zienzele youth in a Zimbabwe village. The Zienzele Foundation pays school fees for kids orphaned by AIDS.

Weaving Self-Reliance

Nancy and Jim Clark's Zienzele Foundation empowers women's artisan co-ops and AIDS orphans in Zimbabwe

Nancy and Jim Clark of West Topsham, a nurse and retired climate scientist, did not expect their life paths would have them selling baskets at craft fairs. Nor did Nancy anticipate co-founding a nonprofit based halfway around the world, or spending 5-10 weeks each year in Zimbabwe. "What always strikes me is we just fell into it," mused Jim. "It" is the work of the Zienzele Foundation, which supports AIDS orphans and their caregivers by providing a market for baskets and other crafts produced by women's cooperatives in tiny Zimbabwe villages. "If anyone is willing to listen to the story," said Nancy, "they'll buy a basket."

Zienzele means "self-reliance,"

which is the core value of the foundation. There is some kismet in how Zienzele began: in 1998, the Clarks' daughter worked on a project with Earthwatch, an international environmental research and action nonprofit whose field expeditions immerse participants in global sustainability issues. Nancy flipped through the catalog and grew interested in a program addressing women and children's nutrition in Zimbabwe. She called and secured the only volunteer spot left. The team was led by Prisca Nemapare, a Zimbabwean nutrition researcher and professor at Ohio State. After two and a half weeks working on health assessments, nutrition, and

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Washington Electric Cooperative

East Montpelier, VT 05651

Inside

Share your thoughts about WEC's new rate design: Meeting is September 18, P. 2

Seconds count: WEC's fleet is now outfitted with lifesaving AEDs: P. 2

Fall is refund season at WEC: P. 4



WEC's annual Community Meeting is October 26 at the Groton Community Building. Dinner is free with RSVP and benefits the Groton Rec Committee. RSVP form on p. 7.

Affairs of the Heart

WEC Deploys AEDs in Its Service Fleet

By Will Lindner

People are seeing them, more and more, in public places: AED cabinets, mounted on the walls in airports, shopping malls, office buildings, and schools. Like many workplaces, Washington Electric Cooperative keeps an AED in plain sight in its headquarters in East Montpelier, and another in its operations center a mile away. AED stands for "automated external defibrillator," and it's a lifesaving device that even a layperson can use in an emergency to rescue someone experiencing sudden cardiac arrest.

The best way to get rapid assistance to people suffering such an episode, the

We're hoping they're just eye candy. We don't want to have to use them.

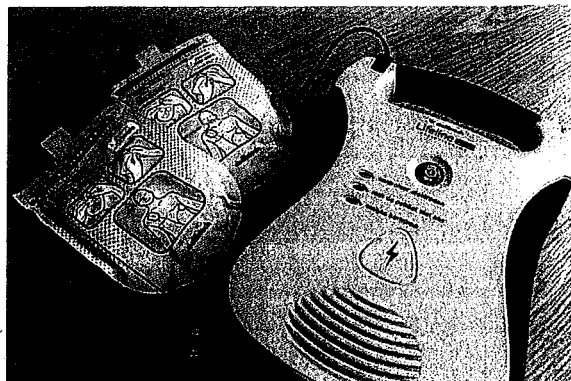
— Rick Stergas, Safety & Environmental Compliance Specialist

American Heart Association says, is by providing access to AEDs that bystanders, friends, or coworkers can use to defibrillate a victim's heart.

That's why another place that AEDs can be found nowadays is in the Co-op's trucks and off-road vehicles. Nearly half of Washington Electric's employees work in Operations; they're

lineworkers, engineers, and others whose work takes them out into WEC's far-flung, very rural territory. If there's a heart emergency in the field, the AED unit back in the garage won't do them any good.

And because they work in close proximity to 60-cycle (Hz) alternating current — the standard for AC current in



An AED, or Automated External Defibrillator, can save the life of a person experiencing cardiac arrest.

the United States — line workers are at somewhat elevated risk of a fibrillation incident. Exposure at just a fraction of a second can cause a life-threatening injury.

"First and foremost, we preach safety," said WEC Engineering & Operations Director Dan Weston. "That means de-energizing the lines before working on them, making sure to ground the current, wearing insulated gloves and all other protective gear. But things can happen. For example, during a storm, they might be working where there's a downed wire, and someone nearby has turned on a generator that's not properly disconnected from the system and it sends current down the line from where they're not expecting it."

"If something like this were to occur and send one of our workers' heart into irregular rhythm," Weston said, "the AED greatly enhances the odds that he'll survive. Normal chest compressions will not get the heart back into the correct rhythm."

Perhaps the most remarkable feature of the AED is that it provides its own voice instructions. "You open it up and activate it, and it tells you what to do," said Weston. "If you don't do it right, it won't work."

The AED kit includes sensors that the operator applies to the victim's torso. There's a razor for clearing away body hair, and voice commands tell the operator where to attach the sensors. Once they're in place, the internal computer monitors the victim's heart to determine whether defibrillation is needed. If it is, the operator follows the

command to press a "shock" button that stuns the heart and allows it to resume its correct rhythm. The machine then provides a tempo for performing chest compressions.

All the while, presumably, a medical emergency team is on its way, summoned by a call someone has made to 911.

The website "AEDs Today" says that if someone in cardiac arrest receives defibrillation within the first minute of his or her affliction, the survival rate is 90 percent. But every moment counts. Citing statistics from the American Heart Association, AEDs Today says a cardiac arrest victim's "chance of surviving drops by seven to 10 percent for every minute a normal heartbeat isn't restored." That's why Weston and Board President Barry Bernstein both cite an additional benefit to outfitting Washington Electric's vehicles with the life-saving device:

"We serve a rural membership, who are usually miles away from any kind of medical assistance," said Bernstein. "We want people to know we have these AEDs in some of our vehicles, in case it presents an opportunity to get help to someone quickly in an emergency."

Going mobile

WEC purchased its first three AEDs for its vehicle fleet about three years ago. With input from lineworkers, one went in WEC's large digger truck (used, among other tasks, for installing utility

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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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$.51, 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.

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Patty Richards Donald Douglas Jean Hamilton Anne Reed Katie Titterton

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 Dawn Johnson, at 224-2332.

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To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Rate Design Community Conversation: September 19

Please attend a special meeting with WEC staff and Board at the Old Brick Church in East Montpelier, next door to WEC's offices. September 19, 6:30 p.m. Come with questions and comments about WEC's new rate design structure.

President's and General Manager's Message

Fall at Co-op Brings Members Cash and Conversation

Employee appreciation, revenue returns, rate design meeting, Button Up funds available, Coventry Open House, Community Meeting

Barry: August 9 was WEC Employee Appreciation Day—not that every day isn't. I have so much respect for and am proud of the whole Co-op culture. I was talking with Mike Patterson in the engineering department and we were talking about his 27 years as part of the Co-op. One thing Mike said is he's so proud to be part of an organization that puts the member first, and always has, and all the employees here grow up within that culture. Remember last issue's letter from a member about how Larry [Gilbert, Right of Way Manager] gave his lunch to her? That's just second nature to our employees.

Patty: Barry, that was spot on. You really captured the essence of the Co-op. For a small group of hardworking employees, we're always thinking about the members and how to do best by them.

Barry: Mike also mentioned that he was so appreciative of the Co-op board, the time we spend on things, and that members of the board serve meals to employees at the church next to our office during storms. From my perspective, that's a time our board gets to look at everybody working during these storms and know even though they're tired they're still going out there. It's a very special spirit you don't see anywhere but here.

Patty: I agree completely.

Co-op returns extra revenue in November

Patty: As a co-op, not only is our culture about the people and communities we serve, but capital credits are a distinction between co-ops and other utilities in the state. When we take in more money than we need to keep the power on, we give

Last year WEC's Community Fund donated nearly \$38,000 to Central Vermont nonprofits helping our neighbors. To donate your capital credit refund to the Community Fund, call Member Services: 802-223-5245 or 800-932-5245.



I continually have members ask why they got a credit on their bill in November... My response is, that's the Co-op difference. Co-ops give back excess revenues to the people we serve.

— Barry Bernstein

it back. Only WEC and Vermont Electric Co-op give money back to their members. For-profit utilities keep profits for their shareholders. Municipal utilities are not-for-profit, but they don't return excess dollars each year. We return our extra funds. It's a process unique to co-ops.

Barry: I continually have members ask why they got a credit on their bill in November, or former members ask why they got a notice saying they have money waiting for them even though they're no longer on the Co-op line. My response is, that's the Co-op difference. Any funds left after annual expenses are met are returned to members over time: both members

who've been on the line a long time and current members who are getting electricity for the year. We give it all back.

We're going to be distributing \$750,000 back to our consumer-owners this fall. It will come to people who were on the lines in 1995, current members, and members who were on line in 2013. Those three pockets will get refunded in the fall. Current members will see it as a credit on their bill; former members will get a check in the mail. Every year, in this issue of *Co-op Currents*, we print a list of former members we've lost contact with who have money waiting for them. If you see someone you know on that list, tell them to contact WEC for their refund!

Patty: The other fun thing we do is the WEC Community Fund, which gives grants to local not-for-profit organizations in our service area. Every year we ask folks if they'll consider donating their capital credits to the Community Fund. It makes a world of difference to small mom-and-pop nonprofits helping folks in central Vermont.

Barry: For myself, I donate my capital credits to always go to the Community Fund. It's such a worthwhile way to give to people and organizations in our service area. There's no administrative cost in giving those funds.

Patty: Right. Every dollar we collect we give back in donations.

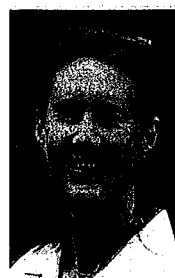
Rate design meeting September 19

Barry: We're going to have a meeting at the Old Brick Church, next to the Co-op office in East Montpelier, on September 19 [see p. 2]. We're looking for more member input as we move ahead with our new rate design.

Patty: We're getting feedback from members in response to the rate design story we ran in the last *Co-op Currents*. We encourage people to come to the meeting if they can attend. At the end of the day, we're fundamentally doing this to address two things: climate change and energy costs—that's the total energy bill people pay, not just electricity. I'm happy to discuss this, one on one or at the meeting. People can call or email me at the office: 802-223-5245 or patty.richards@wec.coop. I'm happy to talk and I respond to emails.

Button Up funds available for home and transportation updates

Patty: The Button Up incentives continue! I want to remind members we have to meet energy requirements from the state, and if we don't, we have to pay penalties. The requirements increase each year. We have money to give away and if we don't meet the state's goals, we're going to get charged. Given the choice between basically paying a fine to the state



We're fundamentally doing this to address two things: climate change and energy costs—that's the total energy bill people pay, not just electricity.

—Patty Richards

for not becoming more efficient, and giving money to our members to do upgrades to be more energy efficient, we choose the second. We'd much rather spend that money helping our members.

Barry: Button Up is an extension of what we've been working on since the 1990's, with conservation and efficiency in mind. Everybody benefits when our consumer-owners take advantage of these incentives: you, the planet, the Co-op.

Patty: Button Up goes hand in hand with rate design. Moving away from inefficient and fossil fuel energy is something we

need to be doing anyway, regardless of whether the state set the goals or not. It's part of our mission as an electric co-op.

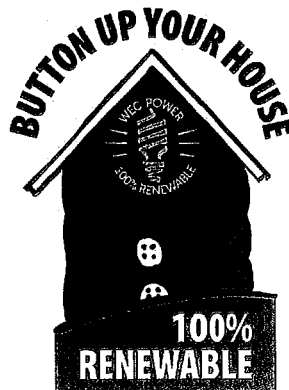
We have two electric vehicle incentives: there are Button Up incentives for low to moderate income members, and Freedom Nissan is offering another deep discount on their all-electric Leaf. There's something for everyone.

Coventry Open House September 15

Patty: This year's Open House is September 15 from 10-2. It's not only the generating plant but the entire landfill. It's an opportunity to see the whole process, from taking in waste, to sending methane into WEC's power plant and making electricity. Folks can see the whole cycle from waste to electricity.

Barry: When we entered into an agreement with Casella Waste Management in 2003 to build our generation plant, it was in partnership because they wanted to make sure the methane gas was used as productively as possible instead of just flaring it. Methane is 20-40 times as potent as carbon dioxide and this way it's being used to energize 6-7,000 homes. I'm proud of that and want to commend Casella for working with us to use that gas. And the Co-op just spent two million to put a new SRS device in to make the air coming out of the plant

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Co-op Returns \$750,000 in 2018 Refunds; Seeks Former Members for Distribution

When for-profit utilities take in excess revenue, it makes their shareholders richer. But when electric cooperatives like WEC take in excess revenue, that money is returned to the co-op's members. This fall WEC will issue these refunds, commonly called capital credit retirements, to current and former members.

This year, the Board will refund eligible members on the Co-op's lines in years 1995 and 2017. An additional amount will be returned to members on the lines in 2013 for what WEC calls Contribution in Aid of Construction. The Co-op will return \$750,000 altogether, or approximately \$30,000 more than was returned in 2017.

All individual refunds will be reduced by any uncollectible or delinquent amounts owed to the Co-op, and no early retirements will be made to the estates of deceased members. WEC will issue this year's refunds in November, 2018.

How it works

Refunds are allocated to Co-op members for those years in which WEC's revenues exceed its operating expenses. The credit a member receives for a particular year is determined by two factors: the amount of excess revenue the Co-op received, and the amount that member paid for electricity.

WEC's practice is to divide distributions between several years back and the most recent year the Co-op took in excess revenue. The idea is to include everyone: new members get a taste of the benefits of belonging to an electric cooperative; longtime members reap refunds from both recent and past years on the lines.

People who have moved off WEC lines also receive refunds. Former members must have a minimum \$20 capital credit distribution, and must submit an authorization form to the Co-op by September 28, 2018 to be eligible. Earlier this summer

WEC sent Capital Credit Patronage Refund Authorizations to eligible former members. Listed below are the names of people or accounts whose authorizations were returned as undeliverable. If you know any person on this list or their rightful heirs, please have the former member or beneficiary contact Washington Electric Cooperative directly, at 802-223-5245.

Eligible current members receive refunds as a credit on their November electric bills, regardless of the amount.

Co-op Community Fund

WEC's Community Fund exists through the generosity of current and former Co-op members who donate their capital credit refunds. Any current or former member may direct their refund to the Community Fund, as a one-time gift or in perpetuity.

The Community Fund supports small not-for-profits serving Central Vermont communities. The people served by these organizations are often WEC members. Managed by WEC staff and a committee of board members, the Fund has no administrative costs. "The Community Fund is inspiring and rewarding all in one. Every dollar we collect from our generous members goes right back out into Central Vermont communities. It is a terrific way to help small non-profits in their missions and it makes a real difference locally," said General Manager Patty Richards.

In 2017, generous refund donations from Co-op members allowed the Community Fund to give \$38,465 to 74 causes in Central Vermont; the recipient list is in the July 2018 issue of *Co-op Currents*. A year-end report on 2018 Community Fund activities will be published in *Co-op Currents* in 2019.

Abare Jr, Robert	Bent, Robert	Burke, Francis	Cole, Virginia	Degrass, Kenneth	Enriken, Jane	Garone, Gregory
Adams, Earle	Bergeron, Laurie	Burnell, Robert	Collins, Bonnie	Delaney, George	Erwin, Cody	Garrett, Nancy
Adams, Steven	Bernard, James	Burnett, Candis	Collins, Donald	Delisle, Maurice	Erwin, Cody	Garron, Edmund
Aiken, Garrett & Tiffany	Bernier, Judy	Burnham, Ellen	Collins Estate, Norbert	Delorenzo, Andrew	Estes, Brian	Gauthier, Eric
Aiken, Kenneth	Berry, Alan	Burton, Elise	Colley, George	Demers, Arthur	Facini, Chris	Gauthier, Julie
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		Colbeth, Roger		Engborg, Evelyn		
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Harrington, Claudette	Justice, Marjorie	Magoon, Laurie	Nichols, Trust	Reed, William	Smith, Sarah	Wagner, Howard
Harrington, Dean	Katz, John	Magoon, Lori	Nishiyachi, Etsuro	Reese, Brenda	Smith, Stuart	Wakelield, H Paul
Harrington, John	Keane, James	Magon, Robert	Nobla, Gregory	Rold, William	Smith, Trent	Walbridge, Frances
Harris, Fredrick	Kelth, Gail	Mahon, Patricia	Nobla, Lara & Gregory	Renaudette, Sheila	Smith, William	Walbridge, Gerald
Harris, Susan	Kelth-Hynes, Meghan	Males, Amanda	Noel, Lorenzo	Renfrew, Rosalind	Snyder, Marvin	Walsh, Christopher
Hart, Amy	Kelley, Leslie	Mallory II, R D	Norman, Shawn & Tami	Resource, Of	Snyder, William	Walsh, Deborah
Hart, John	Kelly, Kevin	Manavola, Joseph	Northland, Tel	Revers, Peter	Somers, Steven	Ward, Marion
Hart, Lillian	Kelton, Mary	Manchester, Jessica	Noyes, Catrina	Richards Estate, Alfred	Sorensen, Mary	Wardley Estate, W
Hart, Mark	Kemp, Marla	Mangene, Jim	Nye, Dorothea	Richardson, Elizabeth	Sousa, Jose	Wasley, Randall
Hartson, Ray & Shirley	Kenefick, Marie	Mangino, Albert	Nye, Jason	Richardson, Joseph	Spear, Neil	Wasow, Mona
Haskins, Peter	Keyser Jr, F Ray	Mangum, Thomas	O'Brien, David	Richer, Raymond	Spencer, Carolyn	Watker, Wayne
Hatch, Dale	Khan, Omar	Manning, Kelly	O'Brien, Richard	Richmond, William	Spencer, Fred	Watkins, Timothy
Hatch, Margaret	Kiefer, James	Marcello, Robin	O'Brien, Sandra	Ricker, Ryan & Tina	Spinnell, Michael	Watson, Bryant
Hatch, Marguerite	Kiley, Matthew	Mark, Marion	O'Donnell, David	Ridder, William	Spitzer, Steven	Watts, Barbara
Hatch, Ralph	Killian, Jon	Markwood, David	Oliver, Sheila	Riddell, Douglas	Spooner, Forrest	Webster, Daniel
Hathaway, Lynn	Kimball, Allen	Marone, William	Olsen, Kathy	Rider, John	Spooner, Howard	Webster, Lori
Hathaway, Lynn & John	Kimball, Brian	Marsh, Christine	O'Meara, Kelly	Riley, Thomas	Spooner, June	Webster, Michael
Hawkes, Glenn	Kinder, Pamela	Marsh, Douglas	O'Neill, Myrlam	Robar, Don	Spoornire, Terry	Weed, Jennifer
Hawkins, Wanda	Kindestin, William	Marshall, Jill	Ormsby, Deborah	Robb, David	Squires, Jeffrey	Weiner, Susie
Hawley, Melvil	King, Tammy	Martin, Catherine	O'Rourke, David & Lorna	Robertson, Dale	St Cyr, Marcia	Weiss, Daniel
Hay, Terri	Kirchick, Scott	Martin, Edward	Ottoli, Ronald	Robertson, Ella	St Germain, Victor	Weiss, Deborah
Haynes, Larry	Kjer, Christin	Martineau, Mary	Ottol, Ronald	Robertson, Walter	Staples, Charlott	Weiss, Stephen
Haystack, Elizabeth	Klinefelter, Douglas	Martineau, Joseph	Ottol, Ronald	Robinson, Jeremy	Stark, Anita	Weich, Michelle
Hazelton, Shawn	Knap, Eric	Masoveia, Mary & David	Ottol, Ronald	Robley, Bonnie	Stark, Ivy	Weich, Patrick
Healey, Robert	Knap, Leo	Masi, Victor	Ottol, Ronald	Rode, Mary	Starr Estate, William	Weich, Stanley
Heath, Donald	Knowles, Florence	Mason, Carroll	Ottol, Ronald	Rodriguez, Sarah	Stead, Cynthia	Weiss, Dwight
Heath, Parker	Knowlton, Deborah	Maxfield, Terry	Ottol, Ronald	Rogers, Abria	Stein, Gretchen	Weiss, Marjorie
Heath Estate, Richard	Koepf, Violet	Mayer, Frances	Ottol, Ronald	Rogers, Nancy	Stein, Nancy	Wendel, Bart
Hebert, Ernest	Kohl, Ariene	Mayer, Christy	Ottol, Ronald	Rogers, Joyce	Stender, Angeline	Wentworth, Rodrick
Heft, David	Kokoszka, Lawrence	Mayer, Cheryl	Ottol, Ronald	Rogers, Kimball	Stevens, Alan	Westcott, Ronny
Hein II, William	Kramer, Donald	Mayer, George	Ottol, Ronald	Rogers Jr, Scott	Stevens, Richard	Westover, Dean
Helburn, Margaret	Krause Jr, John	Mayer, George	Ottol, Ronald	Roggensack, John	Stetson, Harvey	Whalen, Mary
Henderson, Gary	Krauss, Coleen	Mayer, George	Ottol, Ronald	Ronner, Arthur	Stevens, Craig	Wheatley, Gail
Henning, Robert	Krutz, Cindy	Mayer, George	Ottol, Ronald	Ronner, Arthur	Stevens, Mae	Wheeler, Gerald
Henry, Bernard	Labbe, Joseph	Mayer, George	Ottol, Ronald	Rossi, Douglas	Stewart, Candace	Wheeler, Lucy
Henry, Tom	Laberge, Gerard	Mayer, George	Ottol, Ronald	Rossi, Mark	Stiles, Lewis	Wheeler, Richard
Herman, Sylvia	Labrie, Hughes	Mayer, George	Ottol, Ronald	Rossier, Kelley	Stillwell, Speer	Wheeler Estate, Helen
Hernick, James	Lacasse, Robert	Mayer, George	Ottol, Ronald	Rossignol, Boyd	Stoekel, Ronald	Whitcomb, Lawrence
Herniot, Cynthia	Lacelle, Walter	Mayer, George	Ottol, Ronald	Rossier, Donna	Stone, Gayle	White, Frank
Herzig, Thomas	Lackey Jr, H John	Mayer, George	Ottol, Ronald	Rouelle Estate, Alfred	Stone, Gregory	White, Sherry
Heskett, Marilyn	Ladall, Joan & Aime	Mayer, George	Ottol, Ronald	Rounds, Stanley	Storto, Joseph	Whitely, Thomas
Hetzler, Gregory	Ladd, Gordon	Mayer, George	Ottol, Ronald	Rousse, Norbert	Strait, Carla	Whitmore, Keith
Higgins, Amy	Laforgue, Bertha	Mayer, George	Ottol, Ronald	Routhier, Donald & Lynn	Stratton, Robert	Wies, Thomas
Hill, Arthur	Lagerstedt, Robert	Mayer, George	Ottol, Ronald	Roux, Robert	Strayhorn, Alvin	Wild, David
Hill, Camellia	Lahart, Russell	Mayer, George	Ottol, Ronald	Roy, Danielle & Joseph	Stridsberg, Joseph	Wild, David
Hill, Rodney & Amy	Lalanc, Frank	Mayer, George	Ottol, Ronald	Roy, Kristy	Stryker, Jon	Wilker, Wayne
Hill, William	Lakatos, Peter	Mayer, George	Ottol, Ronald	Roya, Leonard	Suarez, Donald	Wilkinson, Dean
Hiner, James	Lalli, Luciano	Mayer, George	Ottol, Ronald	Rutledge, Roy	Sullivan, C	Willow, Delene
Hinton, Henry	Lambert, Gordon	Mayer, George	Ottol, Ronald	Rutledge, Shirley	Sullivan, Robert	Williams, Gwen
Hiscox, Lisa	Lamotte, Valley	Mayer, George	Ottol, Ronald	Ryan, Eria	Sullivan, William	Williams, Leslie
Hoblin, Harry	Lamp, Michael	Mayer, George	Ottol, Ronald	Sainsbury, Scott	Sweeney, Ethel	Williams, Steven
Hodgdon, Clara	Landa, Anita	Mayer, George	Ottol, Ronald	Sald, Robert	Sweet, Rheagene	Willis, Kandall
Hoeft, Heather	Lander, Lorraine	Mayer, George	Ottol, Ronald	Sales, Suzanne	Sweet, Sidney	Willis, Virginia
Hoffman, Jake	Landis, Joshua	Mayer, George	Ottol, Ronald	Sallerson, Mary	Sweetser, Clyde	Wilmot, Kathy
Hoffman, Marion	Langevin, Wilfred	Mayer, George	Ottol, Ronald	Salmoea, Edward	Sweezy, Mark & Karyn	Wilson, Cindy
Holden, J Kent	Langford, David	Mayer, George	Ottol, Ronald	Salter, Gary	Symons, Helen	Wilson, Edward
Holman, Patrick	Langford, David	Mayer, George	Ottol, Ronald	Sanborn, Beth	Szulo, Alfred	Wilson, Nicole
Holmes, June	Langford, David	Mayer, George	Ottol, Ronald	Sangermano, Peter	Tamez, Halie & Jesus	Wilson, Richard
Holmstrom, Raymond	Langford, David	Mayer, George	Ottol, Ronald	Sarville, Jason	Tanner, Michael	Winnle, Gregory
Hood, Lynn	Langford, David	Mayer, George	Ottol, Ronald	Sarazin, Jennifer	Taplin, Roger	Winter, Heidi
Horton, Marilyn	Langford, David	Mayer, George	Ottol, Ronald	Sargent Estate, Gaynor	Taylor, David	Wintle, Serena
Hotchkiss, Alex	Langford, David	Mayer, George	Ottol, Ronald	Sarquiz, Ronald	Taylor, Frederick	Wires, John
Hotchkiss, Sarah	Langford, David	Mayer, George	Ottol, Ronald	Sassi, David	Teliebbaum, Maurice & Mary	Wiseman, Warren
Houghton, Estate	Langford, David	Mayer, George	Ottol, Ronald	Saunders, Monica	Thanhauser, Chaya	Wishnisk, Peter
Houston, William	Langford, David	Mayer, George	Ottol, Ronald	Saunders, Stephanie	Therrien, David	Witham, Estate
Hovey, Cindi	Langford, David	Mayer, George	Ottol, Ronald	Savidge, Evelyn	Thibault, Georgette	Wnukosi, Joseph
Howe, Mandevill	Langford, David	Mayer, George	Ottol, Ronald	Savioli, Catherine	Thibodeau, Timothy	Wolf, Guenther
Howell, Gail	Langford, David	Mayer, George	Ottol, Ronald	Sawyer, Edward	Thivierge, Roger	Wood, Gregory
Hoyt, Samantha	Langford, David	Mayer, George	Ottol, Ronald	Sawyer, James	Thomas, Alison	Wood, Harriet
Huestis, Thomas	Langford, David	Mayer, George	Ottol, Ronald	Schelder, Thad	Thomas, John	Wood, Patrick
Hughes, J Norman	Langford, David	Mayer, George	Ottol, Ronald	Schibuk, Norman	Thomas, Judson	Wood, Susan
Hunt, Dana	Langford, David	Mayer, George	Ottol, Ronald	Schlipf, Steve	Thomas, Kathleen	Woodard, Stanley
Hunter, M Kelley	Langford, David	Mayer, George	Ottol, Ronald	Schlosser, Frank	Thomas, Trudy	Woodbury, David
Hurley, Rowen	Langford, David	Mayer, George	Ottol, Ronald	Schneider, Eleanor	Thompson, Constance	Woodbury, Gordon
Hutchins, Ruth	Langford, David	Mayer, George	Ottol, Ronald	Schneider, Rodney & Debra	Thompson, Richard & Rose	Woodward, Joanne
Hutchins, Tammy	Langford, David	Mayer, George	Ottol, Ronald	Schumaker, Esther	Thompson, Robert	Woodworth, Shelly
Isaak, Jacqueli	Langford, David	Mayer, George	Ottol, Ronald	Schumaker, Esther	Thompson, Velvet	Wootton, Matthew
Isam, Christine	Langford, David	Mayer, George	Ottol, Ronald	Schwarz, Robert	Thorne, Philip	Wright, Christine
Izzo, Anthony	Langford, David	Mayer, George	Ottol, Ronald	Schwarz, Lucille	Thurston, Andrew	Wright, Florence
Jackson, Robert	Langford, David	Mayer, George	Ottol, Ronald	Searles, Pauline	Thurston, Diana	Wright, Nancy
Jackson, Stanley & Shirley	Langford, David	Mayer, George	Ottol, Ronald	Seffen, Nola	Thurston, Pamela	Wyeth, Dianne
Jackson, Stuart	Langford, David	Mayer, George	Ottol, Ronald	Selly, Lynn	Thurston, Germaine	Wynkoop, Karen
Jaeger, Paul	Langford, David	Mayer, George	Ottol, Ronald	Sellen, Cecilia	Tibbets, Germaine	Yates, Bartlett
Jamelle, Peter	Langford, David	Mayer, George	Ottol, Ronald	Selvig, Diane	Tid, Robert	Yates, Steven
Jane, Dana	Langford, David	Mayer, George	Ottol, Ronald	Shatney, Lori	Tierney, Patricia	Yates, Margie
Janes, Melissa	Langford, David	Mayer, George	Ottol, Ronald	Shaw, John	Tight, Scott	York, James
Jarrett, Gabriel	Langford, David	Mayer, George	Ottol, Ronald	Shear, Steven	Tiftson, Shirley	Young, J Peter
Jarvis, Jessica	Langford, David	Mayer, George	Ottol, Ronald	Shepard, Cornie	Tilling, Rosa	Young, Jackie
Jauhola, Estate	Langford, David	Mayer, George	Ottol, Ronald	Sherman, Charles	Tocher, Marion	Young, Judy
Jenner, Amy	Langford, David	Mayer, George	Ottol, Ronald	Sherman, Patricia	Toussignant, Edith	Young, Marla
Jensvold, Erik, Chris,	Langford, David	Mayer, George	Ottol, Ronald	Shirman, David	Towle, Bruce	Young, Roland
Andrew	Langford, David	Mayer, George	Ottol, Ronald	Shor, Betty	Towle, Susan	Young, Wayne
Jerome, Sarah	Langford, David	Mayer, George	Ottol, Ronald	Shumway, Sheri	Trepanier, Tracie	Zaremski, Thomas
Jewell, Adelaide	Langford, David	Mayer, George	Ottol, Ronald	Shuttle, John	Trombley, Aldis	Zdon, Victor
Johnson, Gregory	Langford, David	Mayer, George	Ottol, Ronald	Sicely, Brent	Trombley, Joanne	Zedick, Mark
Johnson, Harold	Langford, David	Mayer, George	Ottol, Ronald	Sicely, Grace	Turner, Lisa	Zeno, Nancy
	Langford, David	Mayer, George	Ottol, Ronald	Sicely, Michelle	Unverzagt, Daniel	
	Langford, David	Mayer, George	Ottol, Ronald	Simard, Jane		



Zienzele Foundation

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food access, Nancy was hooked. She returned the following year as team leader, and when Zimbabwe's instability caused Earthwatch to pull the program in 2000, Nancy returned on her own to work with Nemapare. Eventually, Nemapare retired from her professorship and relocated to Harare, Zimbabwe's capital.

At that time, the AIDS epidemic was killing thousands of Zimbabweans, and scores of children were orphaned. A group of grandmothers approached Nancy and Nemapare for help. "These women said, 'We've had all these grandchildren dropped on our doorstep as our children are dying of HIV. We can't feed or clothe them or send them to school. You have to help us,'" said Nancy. While she and Nemapare wanted to help, they didn't have any simple solutions to such a monumental problem. So they asked the women what they could do for themselves.

The women of the village had several marketable skills, Nancy said. Many wove traditional baskets, though they lacked a market for them. Others could sew, but had no sewing machines; or could garden, but lacked plots.

With this framework, Nancy and Nemapare founded Zienzele; a year later, Jim applied for nonprofit status in the U.S. They figured if they could provide the market, the women could sell crafts to support their households. Zienzele buys baskets directly from the artisans, at their asking price. The foundation resells them. Then, all proceeds from Zienzele's basket sales pay for orphans' school fees.

Which is how the Clarks came to spend "at least 15 weekends a year peddling baskets wherever we can," they said, at Vermont fairs like the Quechee Balloon Festival, and in Massachusetts and New York. Baskets are also available on their website, zienzele.org.

Zienzele began working with one group of weavers, and "now there are 46 groups of women making baskets," said Nancy. Zienzele works with 350 women and pays for 900 kids' school fees each year. Jim added, "We figure we've paid school fees for over 14,000 kids."

"It's not like we brought in brilliant ideas to solve their dilemmas"

The structure works something like this: Nancy is the president of Zienzele; Prisca Nemapare is the vice president; and Jim serves as secretary/treasurer—all volunteer. Each village elects a Zienzele representative to watch over the children. Three coordinators oversee these representatives. Nancy has 20-year relationships with most of these people, dating back to her earliest work in Zimbabwe. Each women's group functions as a cooperative. Nancy and Nemapare offered guidance as the women developed a business structure and helped them develop a simple but effective budget plan: "They save a third, reinvest a third, and share a third," she explained.



Above: Members of a Zienzele cooperative making baskets. At right: Traditional handmade Zimbabwe baskets, made by women in artisan co-ops affiliated with the Zienzele Foundation.

And, she said, it's critical that Zienzele is homegrown—she and Nemapare didn't swoop in with a prepackaged fix. "One of the reasons we've been so successful is Prisca and I didn't know what we were doing," she exclaimed. "It's the women's work and their ideas. It's not like we brought

in brilliant ideas to solve their dilemmas." The women artisans of Zienzele decided to do something to help themselves and the children of their communities, she said. "They've been empowered when before they were marginalized."



Nancy and Jim Clark of West Topsham display Zienzele baskets for sale. Nancy Clark and Prisca Nemapare of Harare, Zimbabwe are co-founders of the Zienzele Foundation. The foundation buys traditional Zimbabwe baskets from artisan co-ops and resells them to pay the school fees of Zimbabwe children and youth orphaned by AIDS.

Paradoxes of market growth

The Clarks are now examining how to expand Zienzele's markets. Several of the elements that make Zienzele unique—and successful—also create growth paradoxes: for one, because the organization's mission is to foster self-reliance, Jim said, they've chosen to not seek grant funding (though rotary clubs, church groups, schools, and hospitals have all given gifts or supplies). For another, the organization's smallness is an asset: surging incomes, Nancy explained, would risk attracting Zimbabwe's notorious corruption.

Other forays quickly become complicated. Partnering with retail outlets to sell baskets would make sense if the organization were serving only the artisans. But because 100% of resale profits pay for orphans' school fees, they're wary about any deal that might compromise that financial commitment. So they're looking at finding bigger markets willing to distribute according to the working model. "These all take a lot of involvement and time, but it's the direction we need to go to let it be a bigger business model," said Nancy, adding that like many nonprofits, their goal is to eventually solve their way out of their work.

Child Headed Households

A generation of AIDS orphans has grown up in the two decades Nancy has been working in Zimbabwe. "People were dying all the time in the beginning," said Nancy, adding that now, while HIV cases are still high, people are living with access to medicine. Three years ago, she said, they held their first wellness clinic that wasn't entirely focused on HIV. As far as human systems go, it's hard to



predict what happens when the dust settles. "It's difficult to look at the impact of HIV on the country—we don't have any idea what that will be because all these kids have lost the scaffolding of a family unit," Nancy said.

These kids are the focus of Zienzele's Child Headed Households program. Usually in their early teens, they're either solo or caring for younger siblings, sometimes living with an elderly grandmother, sometimes entirely on their own. Zienzele matches donors with these families: donors' annual gifts provide quarterly packages of food, clothes, and other support items, plus the comfort of a proxy family relationship thousands of miles away. Nancy packs suitcases full for them when she goes to Zimbabwe, and Jim said she builds a relationship with every single child Zienzele supports while she's there.

One recently told her, "When I was little, and you used to tell me, 'I'll see you in September,' I would go home and cry, because I wouldn't see you till September," she recalled. "These are kids!" Of 15 Zienzele youth in postsecondary education now, she says, 13 are from child headed households. "They've had the resiliency chip plugged in out of necessity," she said.

Now is a pivotal, though uncertain, moment in Zimbabwe's history. Last year the military forced president Robert Mugabe to resign after a nearly 40-year reign marked by violence and corruption. People maintained hope for years, said Nancy, even as AIDS devastated families, and food, education, and economic systems were all depleted. The political climate was too unstable for her usual spring trip this year, she said, "but I'm going

in September, by God!" If all goes as planned, she said, she'll be there with Prisca Nemapare as well as fellow volunteer Cynthia Stadler to lead cervical cancer screenings and lead workshops on adolescent health and reproductive health. And she'll check in with the kids. The kids are waiting for her.

For more information, visit zienzele.org.

*Currents seeks out stories about WEC members—both individuals and businesses—whose lives or work reflect one or more of the Seven Cooperative Principles. The Zienzele Foundation, a cooperative itself, practices all seven. See *wec.coop* or any October issue of Co-op Currents for the full list of seven principles.*

WEC Deploys AEDs

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poles) and two went in the bucket trucks the crews use for aerial work at the top of poles, along the wires, and for cutting back tree limbs.

Recently, WEC purchased three more AEDs. The Operations team decided one would go in the largest of the bucket trucks, another in the truck vehicle used for work in hard-to-reach locations, and the third rides in the on-call truck that crews use for responding to outages at night and on weekends.

But since the AEDs are portable, they can be switched among any of the vehicles. "The idea is to have an AED in at least one vehicle on every project," said WEC Safety & Environmental Compliance Specialist Rick Stergas. These can include line-reconstruction and relocation projects, or restoration projects involving multiple crews after a storm or other incident.

"We're hoping they're just eye candy," Stergas said. "We don't want to have to use them."

Even though AEDs provide their own voice instructions, Stergas brought in a certified trainer to demonstrate their use. "People respond differently under pressure," he explained. "The AED tells you what to do, but it will certainly help faster in an emergency if they've had practice and are familiar with the device." AED, CPR, and First Aid trainings for the line crews are annual requirements under VOSHA (Vermont Occupational Safety and Health Administration).

The cost of AEDs has dropped significantly since WEC purchased its first ones for about \$4,000 apiece. They now cost around \$1,600, and the price is expected to go down further. WEC intends to purchase a few more.

"That sounds like a lot of money," Weston conceded, "but you're talking about a tool that can make a difference between someone living or dying."

Get to Know Your WEC

Tyler Skinner

Have you ever wondered who that is fixing the line up your road, or who you spoke to when you called in about an outage or a bill? Co-op Currents profiles Co-op staff in this feature.

Tyler Skinner

How he got started

Tyler is an Apprentice Lineworker who started at WEC in July 2017, right after graduating from Southeast Lineman Training Center. Before training to work on the lines, he worked as an electrician in Milton, his hometown. "I always wanted to be a lineman," he claimed, saying since he was a child he studied crews at work: "I watched these guys working in my parents' woods, and I was just mesmerized by what they were doing," he said. He's always liked working with electricity, he added.

Multi-sport athlete

Tyler lives in Barre with his longtime girlfriend. They enjoy biking together and being outdoors. Tyler also likes to make time for metal detecting with his dad and helping out family members who need electrical or handy work done around their homes. "I like to help people," he explained.

As someone who loves adrenaline and being outside, Tyler pushes himself to try new activities and improve on skills. He fishes, and recently discovered he enjoys golf ("My best last year was an 83. It only happened once, though," he said) and got a pass to keep working on his game this summer.



You Are Invited— Thursday, October 25, 2018

WEC Community Meeting

Doors open at 5:30 p.m.

Dinner begins at 6 p.m.

Please join WEC staff, directors, and members at a dinner meeting and informational discussion on Thursday, October 25, 2018.

The meeting will begin with dinner at 6 p.m. followed by discussion on topics of interest to you and your community. While reservations are required for the dinner, it is not necessary to preregister for the informational portion of the meeting which will begin at approximately 7 p.m.

The dinner meeting, to benefit the Groton Recreation Committee will be held at the Groton Community Building, 1476 Scott Hwy, Groton, VT 05046. The buffet menu for the evening includes spaghetti (meat and vegetarian), rolls, salad, beverages and ice cream and brownie dessert.

To make a reservation for the dinner meeting, please fill out the reservation form and return it to WEC, Attn: Dawn Johnson, PO Box 8, East Montpelier, VT 05651 or by email Dawn.Johnson@wec.coop.

There is no charge for the meal.

Reservations must be received at the Co-op by the morning of October 12. Thank you.

Dinner Reservation

(No charge for the dinner.)

2018 Community Meeting

Groton Community Building • October 25, 2018 • 5:30 to 8:00

Doors open: 5:30 • Dinner: 6:00pm • Meeting: 7:00pm • Wrap up: 8:00 pm

Meeting Agenda:

- Meet and greet WEC staff and Board of Directors
- Reliability • Rate Design • What's on your mind

Name _____ ☐ Vegetarian ☐ Member or ☐ Guest

(Please print clearly)

Name _____ ☐ Vegetarian ☐ Member or ☐ Guest

(Please print clearly)

Name _____ ☐ Vegetarian ☐ Member or ☐ Guest

(Please print clearly)

Name _____ ☐ Vegetarian ☐ Member or ☐ Guest

(Please print clearly)

Address _____

Account # _____ Map # _____ Telephone _____

Email _____

Special needs (food or accommodations): _____

Reservations must be received at the Co-op by the morning of October 12.

Return to WEC/ Attn: Dawn Johnson, P.O. Box 8, East Montpelier, VT 05651
or by email: Dawn.Johnson@wec.coop



Reliability in Northfield

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through the wires) or a planned outage (a line crew shuts off power to fix broken equipment) it's disruptive to the people who rely on that line's power. One way to improve reliability is to have a backup route for power to reach members.

That's why WEC is taking a multi-pronged approach to improve reliability for all members on the Northfield feeder line, and especially for the 128 members on the single phase at the end of the feeder, explained Wilkin. Clearing danger trees and replacing faulty equipment prevents outages. A new line under the interstate connecting the two lines will ensure when an outage does occur, members will get the lights back on much faster with power from a redundant source. It's called backfeeding. "We'll keep people energized while we're fixing the problem," he said. "We have these types of things throughout the system to try to limit the amount of people that are out. This one's a little unique in that we're going underneath the interstate."

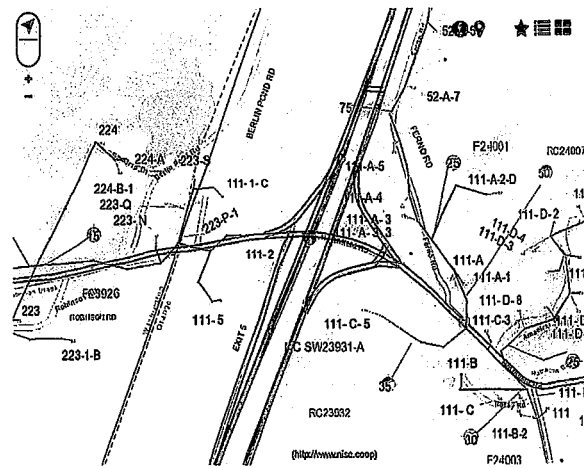
WEC has already reached out to VTrans, the state Agency of Transportation, to make sure the project is doable. The state gave a preliminary nod to the idea, and Wilkin said they

need to map the line and finish the highway permitting process. Once that's done, he said, the "tentative plan is to get it in by the time the snow flies."

"This is what our rural co-op looks like," said WEC Board Member Annie Reed of Marshfield. Electric co-ops were developed to serve rural communities left behind by for-profit utilities, she pointed out, and WEC's plan for Northfield is an investment that directly benefits WEC's rural consumer-owners. "We're committed to making the deep investment to take care of our members. We're paying for lines through challenging terrain to improve reliability for 128 people," she said.

Weston said those 128 members should see their reliability improve dramatically, but to not expect perfection. "That area gets hammered by microbursts and heavy snow. And then there's the problematic emerald ash borer we're all now facing," he said, referring to the invasive pest that kills ash trees. Dying trees is a problem in general; a grove of dead trees near a power line is a problem too.

Wilkin reiterated that success comes only with a comprehensive improvement plan: removing trees that pose a risk to lines, spotting faulty equipment before it fails, and building in redundancies. It makes a big difference for those



WEC members along a single-phase line near the end of the Northfield three-phase feeder will see marked improvements in reliability after WEC puts a line under I-89 to connect them to another source of power. The new connector will go under the interstate off Ferro Road, near the exit. The line construction is part of WEC's comprehensive plan to improve reliability for members along the Northfield feeder.

members whose power is especially vulnerable and who brace for an outage every time a storm rolls through. The line going under the interstate is

one "piece of the puzzle to improve reliability," he said. "We're trying to be as proactive as possible."

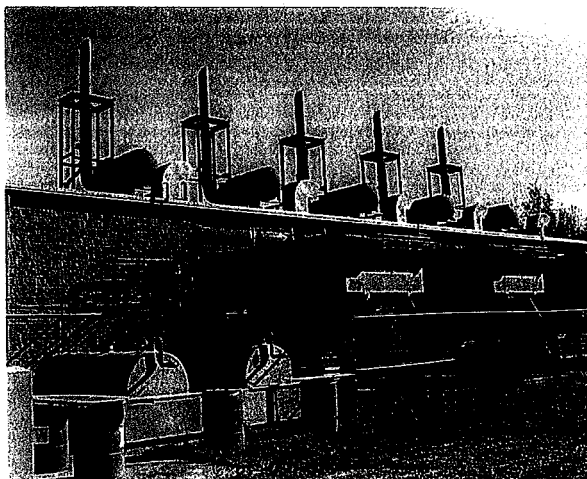
Manager's and President's Report

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even cleaner.

There's been discussion about the Coventry expansion in the news, and there will be a number of public hearings on that. Even though that's not part of our direct connection with the landfill, we're hopeful Casella will work with the Agency of Natural Resources and concerned people to address their issues.

Patty: There's a high quality renewable generation plant at the landfill. The expansion of the landfill will allow continuation of the generation plant for the long term.



On September 15, WEC and Casella Waste Management hosted an open house at Coventry Landfill. Visitors learned about landfill operations as well as WEC's landfill methane electricity generation plant. More to come in the October issue.

Community Meeting in Groton October 25

Barry: When is the Community Meeting, Patty?

Patty: October 25 in Groton! This is another difference between electric co-ops and other utilities: we hold meetings with our consumer-owners. We'll have details and signup info to come; mark your calendar for dinner out with your Co-op on the 25th.

Barry: We've had great member turnout for these meetings over the last few decades. It's a really great opportunity for Co-op staff and board to sit down and share a meal with members and listen to them, and

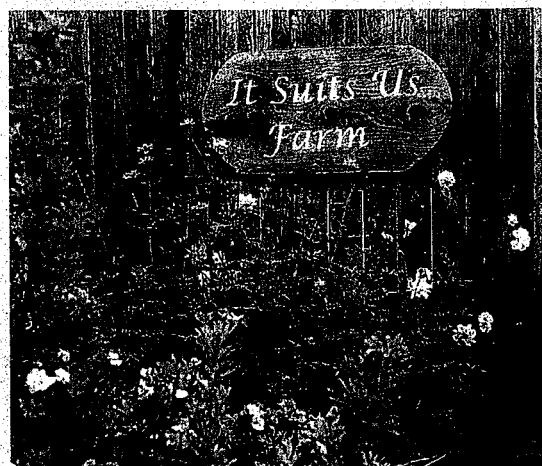
for members to hear about different aspects of the Co-op's operations, and for us to answer any questions you have. I'm always excited for these meetings. As a co-op we work to make sure every member has input and that they're heard.

Patty: We dig into substantive issues and we really hear what's on consumer-owners' minds. People stand up and ask great questions. I really enjoy these meetings.

Barry: Another thing we've done successfully is work with community

groups where the dinner is held, so the dinner benefits a local nonprofit organization or effort. It's always something for the community, whether the school or a community club or a playground or a rec club. That added benefit is the Co-op is helping those organizations support a project in their community.

Patty: If any local organization trying to do a fundraiser wants to know more about participating in a Community Meeting, we're always looking for local folks to help with the meal and clean up. Any folks interested can contact me at the office at 802-223-5245.



Peter and Pearl Keene of It Suits Us Farm in Topsham planted the seeds WEC gave out at the Annual Meeting in May. By August, the seeds had grown into a riot of orange and gold cosmos flowers. The Keenes wrote, "They were a nice surprise as we did not know what we were getting! They add a good color palette to our many different flowers and plants that abound in our gardens." Many thanks to the Keenes for the picture!



Members Speak Up at Public Forum on Rate Design

Low energy users push back on changes to WEC's rates; all agree raising fixed charge is necessary

On Wednesday, September 19, more than a dozen WEC members came to a meeting at the Old Brick Church in East Montpelier to discuss the Co-op's changing rate design with staff and the Board of Directors. The Co-op plans to raise the monthly fixed rate from 13 to 25 dollars, lower the low-use block to 100 kilowatt hours (kWh), and lower the energy rate on both the low-use block and standard use.

In his welcome remarks, Board President Barry Bernstein polled the room. Most in attendance had been on WEC lines for 10 to 20 years or more; most held a positive opinion of the Co-op and liked that as consumer-owners of WEC's electricity, they had a voice and, as one gentleman put it, "the money stays in the room."

Rate design intent and bill examples

General Manager Patty Richards gave a presentation before opening the floor for questions. She wanted to emphasize that the rate design change is not a rate increase: "This change does not generate more revenue for Washington Electric

Co-op," she confirmed. "We collect the same amount of total dollars from all our members as we did under the old structure." Some members may pay more under the new rate structure, others will pay less, she said.

The driving reasons for the change, she said, are to combat climate change and to comply with Vermont's renewable energy standard, which mandates the state shift 90 percent of all forms of energy off fossil fuels by 2050. Since the laws went into effect, the state is looking to electric utilities to make systemic changes that get Vermonters using electricity instead of fossil fuels, she explained. "We have to do things outside of the electric sphere. They've tapped electric utilities on the shoulder to say, 'We regulate you, and now we're going to get you to do more' to cut emissions from transportation and home heating — which represents most of the state's emissions

Though mandated, these changes, she added, fit within WEC's environmental mission. The Co-op has embraced opportunities to help its members switch from fossil fuel

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Farmer Walter Jeffries stands in the doorway to his USDA butcher shop and future processing plant at Sugar Mountain Farm in West Topsham.

Engineered for Efficiency

Sugar Mountain Farm in West Topsham is designed to bring profitability to small-scale sustainable pig farming and processing

High on a hill in West Topsham is a USDA-inspected, energy efficient butcher shop and pork processing plant that features classical arches throughout the interior. The plant is on Sugar Mountain Farm, the work of inventor, entrepreneur, and farmer Walter Jeffries. Like a Renaissance engineer building an aqueduct or cathedral, Jeffries combines science and elegance to create a highly efficient and sustainable frame for the work of pig farming and pork processing.

Jeffries has been raising pastured pigs for 15 years and farming for 30. His herd numbers about 400 at any given time, and as demand grows, he's allowing it to increase a little. The farm is organic but not labeled

as such.

The butcher shop has been operating for about three years and took seven to build. This spring, after a few years operating with a state license, Jeffries applied for USDA inspection, which would allow the farm to ship out of state. The head of the northeast region's USDA food safety inspection service team, Dr. Paul Cole, came personally to inspect the plant, Jeffries said. "After the inspection he pulled me aside and told me that I should be really proud of this amazing facility that we had built. His words," Jeffries said. Sugar Mountain Farm passed with a 100 percent score.

Part of the reason for that is every

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**Washington Electric
Cooperative**
East Montpelier, VT 05651

Inside

Businesses, municipalities, and other landowners can apply for EV charging station grants through the state's VW emissions settlement. More in the President and General Manager's interview, p. 3, or contact the Energy Coach: energycoach@wec.coop

Talking renewable landfill gas power: Visitors learned how waste becomes electricity at the joint open house held by WEC and Casella at the Coventry landfill. P. 4.

It's Co-op Month: Board member Stephen Knowlton muses on participation in the Co-op and in our community. P. 5.



FEMA is reimbursing WEC for 75 percent of the restoration and repair costs associated with the October 2017 windstorm that caused week-long outages and 22 broken poles — like this one. WEC is also receiving funds for future hazard mitigation. Story on p. 2.

FEMA Reimburses Co-op for October 30, 2017 Storm, Funds Future Hazard Mitigation

Almost a year after the late October storm that knocked out power throughout the Northeast and caused some WEC members to go seven days without electricity, the Federal Emergency Management Agency is reimbursing WEC nearly \$72,000 dollars. That figure represents 75 percent of the Co-op's restoration and repair costs.

Of the four counties in WEC's service area, three were determined to be disaster areas. As a not-for-profit electric cooperative, WEC is eligible for FEMA funding when the damage that occurs is deemed a disaster by presidential declaration. For-profit utilities must absorb the cost of storm damage, often passing those costs along to ratepayers as a storm surcharge. "This is another example of the benefits of being part of a cooperative" noted General Manager

Patty Richards. "The financial help will go far to keep our rates in check. Without it, WEC would need to file for almost a 3 percent rate increase to cover the cost of restoration."

FEMA funding covers permanent repairs, emergency restoration, and debris removal. After the storm, WEC crews worked around the clock to remove and replace 22 broken poles and 259 spans of line conductors.

WEC is also receiving 140,000 dollars for a Hazard Mitigation Project to proactively reduce risk to people and property caused by future storms. According to Engineering & Operations Director Dan Weston, the focus for this project is the three-phase feeder line coming from the Moretown substation and serving Duxbury and Fayston.

The line was constructed in the 1960s, Weston said, and long spans

between poles increases the risk of outages when trees fall. Funding is spent on removing trees that have a high risk of falling on the lines, and installing 32 new poles to shorten the distance between conductors and

minimize the damage and duration of outages when trees or branches do fall on this rural line. According to FEMA, spending on these projects saves four dollars in future damage mitigation for each dollar invested.



WEC lineworkers and tree crews work on line damage on Hampshire Hill Road in Worcester after the October 2017 storm.

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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$4.7, 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.

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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 Dawn Johnson, at 224-2332.

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Co-op Principles



1. Voluntary and Open Membership

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

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

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

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

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

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

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



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President's and General Manager's Message

"We Are Going To Continue To Lead On This"

Response to rate design meeting, FEMA funding comes in, Button Up incentives, EV charging station grants available from state

Thoughts after September's rate design meeting

Barry: Patty and I want to thank the people who came out to talk about the rate design process. It's been a long endeavor for the board. Every person on the board is a Co-op consumer-member. We're a good mix of low users and higher users. We come from the business community, we come from varying lifestyles, and we've been debating how we meet all of these issues and mandates that we have to respond to: global warming, the state's goal of 90 percent renewables by 2050, and the new mandate that electric utilities work with their members to help move them off of fossil fuels. That's the context in which we've been talking about this for 18 months.

There are two points I want to make. The first is, we're not collecting more money through the new structure. We're collecting the same amount of money.

Patty: Right: it's not a rate increase. WEC collects the same amount, whether it's the old design or the new design.

Barry: The second is, we've been so successful with our message of conservation and efficiency over the last three decades that, as our members are using less, and more people are using net metering, we're selling less and less electricity. We need to pick up a greater percentage of our fixed costs up front. That will help to lessen our rate increase pressure, because we know we'll have that money for the poles and wires. Now we're collecting around 15 percent of what we need in the fixed costs on our bills in the monthly member charge; under the new structure, we'll collect 30 percent. It's just the nature of trying to keep a business going as you're trying to get people to use less. We've been able to promote conservation over the years because we're an electric cooperative, trying to help our consumer-members, instead of pushing growth to enrich stockholders.

Patty: That underscores that we're a not-for-profit. If we collect more



We've been so successful with our message of conservation and efficiency over the last three decades that we're selling less and less electricity. We need to pick up a greater percentage of our fixed costs up front. We've been able to promote conservation over the years because we're an electric cooperative, trying to help our consumer-members, instead of pushing growth to enrich stockholders.

— Barry Bernstein

than we need, we give it back in capital credit refunds. We're trying to find the fairest equation to keep the Co-op running and be a trusted energy partner for our membership.

I want to make sure our members understand why we're doing this. It's a new day for electricity. If a family switches to electric vehicles and electric home heating, they do away with fossil fuels and oil and gas bills, and by changing our rate design to accommodate that household's new electric energy needs, we can help that family have a lower total energy bill. And reduce emissions.

Also, we haven't abandoned valuing of energy efficiency. We still want people to conserve, and you can still save money by conserving. The 100 kWh block is still there, and the cost per kWh is lower than the present low block. We're not abandoning that premise and philosophy.

Barry: One thing Patty said at the meeting that I think is important is this change isn't going to happen immediately, but we have to set the stage for the change. I've spent the last five decades of my life investing in energy efficiency and trying to have the lowest carbon footprint I can. I'm down to 150 kWh a month, and I'm going to feel the financial impact of this on my electric bill, but I'm also thinking about all my energy use. I've got to consider the world is changing.

All of us on the board feel it sets us on the right direction. We're going to work with our members every way we can to try to find ways that we can help everybody make this change as economically as possible.

Patty: We need to go through the regulatory process to get approval. We'll follow up with the Public Utilities Commission in early 2019 and then it's a six to nine month process with them. The PUC must ensure the structure of the rate design is what's called "just and reasonable."

Barry: After the meetings, articles in *Co-op Currents*, and talking with many members, we're coming to the next part

of the process, which will be more formal and regulatory. We welcome that, too. By the time we have a new rate design in place, it will have been about three years of process.

Patty: This rate effort is comparable to building the foundation of a house. We need to get the base rates set first. We're also going to be coming in with different rate structures at a later date. This first step represents the core offering that most people will likely use, but we're going to consider time of use rates, perhaps low income rates, and peak rates. I call these next rate offerings "boutique rates" as typically smaller groups opt to use them. We'll try to be as creative as possible to reach people's needs. The first thing we have to do is get this base rate structure in place.

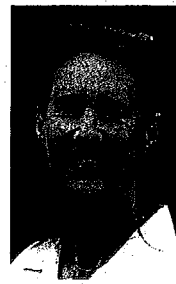
Barry: The bottom line is we, as an electric cooperative, as a member driven organization, are going to continue to lead on this. We're looking at our members' total energy bills. We're asking our members to continue to trust us that we're doing the right thing moving forward.

FEMA reimbursement for October 2017 storm

Patty: We're approaching one year after that awful storm on October 29-30, 2017. It hit all up and down the East Coast, and especially hard in New England and throughout Vermont. It was the first time the state outage map went all red, showing massive outages for every utility in the state. It was unprecedented. FEMA just reimbursed us 372,000 dollars for WEC's repair and replacement costs.

That's another thing: as a not-for-profit, we're eligible for FEMA, unlike the investor-owned utilities. And we got another 140,000 dollars for what's called hazard mitigation, to hedge against future storms.

Barry: My only comment is for those of us who've been on Co-op lines for a long time, we know how much better our reliability is than it was in the 70s, 80s, and 90s, when there was little money spent on right of way clearing. When the board changed the Co-op's direction, we didn't have to be told by



If a family switches to electric vehicles and electric home heating, they do away with fossil fuels and oil and gas bills, and by changing our rate design to accommodate that household's new electric energy needs, we can help that family have a lower total energy bill. And reduce emissions.

— Patty Richards

regulators or anybody else to put a lot more money into right of way and to make reliability our number one goal.

The article in last month's *Co-op Currents* about us investing a significant amount of money in the Northfield line shows that as a cooperative, reaching the biggest number of people isn't exactly our priority, because all of us are part of the Co-op. So we target an area if those members suffer more outages.

We have heard from members who were out of power for seven days after last year's storm. But as Patty pointed out, it was New England wide. When that event happened, this organization was 100 percent there for our members in restoring power and now we're doing all we can to lessen the impact the next time around. Everybody at WEC has done a great job about that.

Community Meeting in Groton, Oct. 25

Barry: The meeting is happening right after this issue goes to press. As members pointed out at the meeting we had on rate design and as I'm sure they will in Groton, these things don't happen at investor-owned utilities, that consumers are invited to meet with staff and board about issues like the rate design restructuring long before they're filed with regulators. I'm so proud of being a Co-op member and so proud of Washington Electric.

Patty: Our members have a voice. If you want to use that voice, you can. Members call me, they call Barry, and they talk to other members of the Board.

Button Up incentives available

Patty: I want to remind people we have incentive dollars to give away to get people into electric vehicles and to put toward home heating systems. The weather's getting cold, so if you're thinking about weatherizing or buying a new appliance, call Bill Powell and he'll walk you through the incentives. We have money we'd really rather give to our members to buy efficient devices and vehicles than to turn over

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Feeling the Burn

WEC Shows Public Landfill Gas-Fired Plant at Coventry Landfill Open House

Once a year, WEC hosts a members' open house at its landfill gas energy plant at the Coventry Landfill; and once a year, the landfill's owner, Casella Waste Systems, hosts an open house of its own.

This year, the partners held a joint open house on Saturday, September 15. With a bouncy house and petting zoo, vendors and free food, the open house was presented as a family fun day with plenty to learn about Vermont's waste systems. Visitors hopped on school buses for a tour of the landfill, learning about what is and isn't recyclable, watching trucks dump trash, culminating with WEC's generation plant.

"It's a fact of life that we all produce waste. Casella's been very forward thinking in their management, like implementing single-stream recycling to separate waste and partnering with WEC to use the methane produced by decomposing landfill matter instead of flaring greenhouse gas into the atmosphere," said WEC General Manager Patty Richards. "It's considered a renewable source of power. If our power plant wasn't there, the gas would be wasted. Instead we use the gas to make electricity. We



Board officers were happy to be on babysitting duty during tours of WEC's landfill gas to electricity plant at Coventry Landfill. From left to right: Board President Barry Bernstein, Treasurer Don Douglas, Editorial Assistant Malcolm Titterton, Vice President Roger Fox. "This picture reminds me we're doing what we do for the next generation. We've got to try to fix what we can in this world for our kids," said General Manager Patty Richards.

appreciate that Casella is educating the public, and Co-op members, about how we work together to use this methane byproduct to power about 6,600 homes."

Member Services
Supervisor Susan Golden and Administrative Assistant Dawn Johnson staffed a booth in the vendors' area, introducing attendees to the energy cooperative that draws two-thirds of its all-renewable portfolio from the plant at the landfill. Down at the generation plant, Dan Weston, Director

of Engineering & Operations, and Bill Powell, Director of Products & Services, greeted visitors, along with Board President Barry Bernstein, Vice President Roger Fox, and Treasurer Don Douglas.

Weston described for visitors how methane produced by decomposition is piped down into the plant, where each of five 2,250 horsepower combustion engines turn the gas into 1.6 megawatts of electricity. A highlight of the tour is WEC's new Siloxane Removal System, or SRS, which scrubs the gas of the slippery substance found in many modern cleansers. From the plant, electricity travels to Irasburg, to a high

voltage transmission substation owned by VELCO, bringing power to the Vermont grid.

David Shea, of Fairfax, missed his daughter's soccer game because he was so interested in taking the tour. "Just amazing," he said, after confirming with Weston that since the SRS was installed, the plant's huge engines go three times as long between oil changes.

"Maintenance costs went way down," added Weston.

Shea has been interested in power since he took a college class on energy and the environment in 1992, he said, that included tours of different power plants—including the now-defunct Vermont Yankee nuclear plant. That was before WEC's landfill gas plant was built. Saturday's tour was useful professionally, he added. Shea owns a demolition company, Complete Demolition Service, in Fairfax. "I can talk to customers about what the landfill does," he explained. "So now I can talk to them about turning trash into power as well."

Several enthusiastic kids, many sporting tiger whiskers from the



(inset) WEC's new Siloxane Removal System dramatically improves the performance of its five 1.6 megawatt engines.

Left: A truck dumps a load of trash into Casella's NEWS-VT landfill in Coventry.



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face-painting booth, toured the plant. After snacking on doughnuts and cider while Weston described the plant's equipment and operation, attendees inserted heavy-duty earplugs and walked through a heavy door to see the giant, booming machines at work. A mother from Newport, who had just discovered the generation plant was there, said her young sons enjoyed their whole visit, from watching trucks dump trash to the demo on recyclables. The perk of WEC's plant? "Big machines," she said.

David Barlow of Coventry said he comes on Casella's tour every year to see what's new at the landfill. Though his power comes from Vermont Electric Co-op, he said, as a neighbor to the landfill he'd worked with Weston to run power lines through his property. He can hear the plant from his home, he said, but it doesn't stop him from supporting its purpose. WEC's good faith is important, like installing the SRS, and Weston's sympathy for his noise concerns. "The effort to

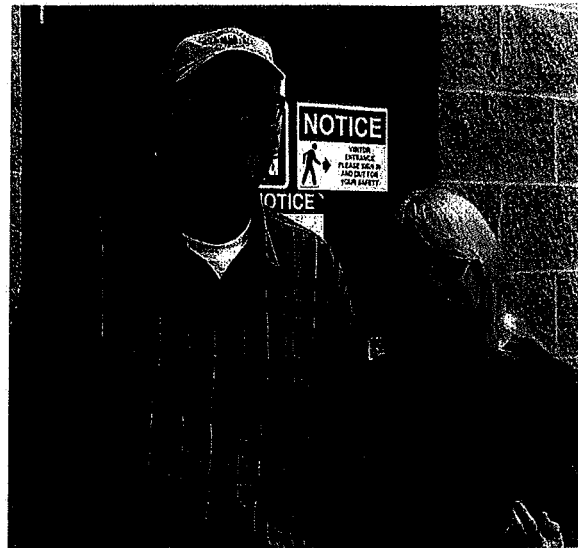
constantly make it better—I appreciate that," he said.

Anne Page is a WEC member who divides her time between Walden and Newport. Given that commute, "we drive by it all the time," she explained. "We saw it would be open and thought it would be interesting." She came on the tour with her husband Woodman Page—the first time either of them had visited the landfill or the generation plant.

Douglas was pleased with the turnout and with how the event took shape. "I'm thankful we could do this in conjunction with Casella," he said. "It's nice to share WEC's processes to source renewable power alongside our partners at the landfill."

For more on WEC's SRS system, see past articles in *Co-op Currents*: "Cure for the 'Siloxane' Problem," September 2016

"The Gas is Still Cooking in Coventry," January 2018



WEC members Woodman and Anne Page outside WEC's landfill gas to electricity plant at Coventry Landfill.

Cooperative Community Service

This Co-op Month, a board member considers what makes WEC unique, and what it means to participate in a cooperative community

By Stephen Knowlton

Earlier this year, running for my second term on the board of Washington Electric Co-op, I reflected on what it means to be a member and customer of a cooperative utility. Admittedly, I hadn't given the idea that much attention when I first became a member. After all, once my wife and I decided where we were going to live about 18 years ago, we didn't have a choice about which electric utility provided our service. Nonetheless, I recall I was intrigued by WEC's encouragement of its members to be energy-efficient, and by its growing ability to supply renewably generated power to all its consumer-members.

My perception at the time was that WEC was doing a good job, and for several years I wanted to give something back to the community I live in. When I think about how energy policy impacts the way most of us live, a utility is where the rubber meets the road. My motivation to serve on the board is based mainly on helping our members adapt to the new energy world with its promise and pitfalls.

I learned something of Washington Electric's history after we became members; that eighty years ago no corporate utility provided electric power to our rural service area, because there wasn't enough profit to be made to justify the cost of running the lines to serve the sparsely-distributed population of what became WEC's territory. As in many rural areas of the country in that era, the local community banded together to create a utility to provide itself with electric power.

Here in the 21st century, this story may seem a little quaint in the re-telling. No longer a luxury, access to electricity at any time of day or night, wherever we are, is one of the givens of modern life. It doesn't seem that we pay much attention to electricity, which we take for granted regardless of whether it is provided by a public utility or by a profit-seeking group of investors.

As I considered this during my re-election bid, I recalled that as a new WEC member, I would read many of then-General Manager Avram Patt's reports in *Co-op Currents*. He would typically describe an important issue facing the Co-op, be it the sale of the Vermont Yankee nuclear power station or the Co-op's construction work plan. The depth and detail of these reports informed me about what is required to reliably provide electricity to a rural community such as ours. They also educated me on many of the larger issues dealing with the nature and cost of our power sources. I felt I was treated not just as a consumer of electricity, but as a responsible and potentially



At the heart of being a member of a cooperative is that I'm a member of a community, in the same way I can choose to be a part of the community I physically live in, and I can have a voice in that community if I choose.

responsive member of a cooperative community.

WEC continues to supply the same community that built the utility eight decades ago. This community is still rural, largely residential, and we are still spread out, which uniquely shapes the operation of the Co-op.

As such, WEC's territory presents challenges that a profit-motivated utility might still prefer to avoid. Because of our terrain, we probably cannot offer the lowest electric rates in the state while maintaining our standards of reliability and service. But as a Co-op member, I can be assured that whatever we pay on our bills goes directly toward the operating expenses of producing the power and sustaining the lines in the face of the challenges of time and Mother Nature. The Co-op is not tasked with making a profit for investors, because there are no profits—the revenue is used for operation, and all excess revenue is shared among the community served by the Co-op.

At the heart of being a member of a cooperative is that I am a member of a community, in the same way I can choose to be a part of the community I physically live in, and I can have a voice in that community if I choose. WEC's board of directors consists of fellow consumer-members. We are from the community, we experience the same problems as all other members, and we listen to our neighbors. While board members are concerned about the challenges of energy usage within the state and in the larger world, as you may also be, our first responsibility is to act on behalf of and to the benefit of the Co-op's members. This is not always straightforward, since almost any community consists of a diverse group of people of different backgrounds, interests, financial means, and often divergent opinions.

Nonetheless, the board attempts to proceed in the best interests of the ensemble of all WEC members, because that is the essence of being a cooperative. WEC has been an early adopter in supplying renewably-generated electricity for its members. We have been able to undertake and maintain this long-term approach because most of the Co-op's members have agreed that this is a major priority for them, and not because the state told us to do it. WEC remains a leader in the state in the provision of renewable electricity 24/7. Without the support of its members, WEC could not remain 100 percent renewable.

Ultimately, it is the right and responsibility of our members to shape the Co-op's policy to fit our unique needs. Serving on the board is one way to carry this out, though it is important to recognize that any member is encouraged to contact the Co-op's staff or board members for a dialogue about their concerns.

While the times and technology of publicly-provided services will continue to change, I expect that cooperative model will continue to be successful for us as long as we perceive that we are part of a community in which we can participate when we have the time and need to do so.



Sugar Mountain Farm

continued from page 1

element of Sugar Mountain's shop and plant is intentional. Efficiency is built in to every step, including the pigs themselves. "The cost of a pig is 30 percent for the pig itself, 30 percent for feed, 30 percent for processing, and the remaining 10 percent is overhead. That leaves no room for income," Jeffries explained. To make Sugar Mountain profitable, he said, he looked at the pig as an equation. Having his own breeding herd eliminated the need to buy pigs; pasturing pigs kept the cost of feed down. That left processing.

The farmer

But before we get to processing, let's get to know the farmer. Walter Jeffries is bright eyed and neat, with a crisp speech pattern and an ageless appearance: it's somewhat startling to learn he has adult children. He has a mind that can filter, sort, and retain seemingly endless details. This is a gift, and he's generous with it. His blog at sugarmtn.com shows both his exhaustive cataloging of Sugar Mountain's processes and his eagerness to share them with other farmers interested in doing what he's done.

Jeffries knew he wanted to farm when he was 15, he said. His uncle raised pastured Highland cattle and Jeffries dreamed of following suit. After studying science and engineering at Dartmouth (and every other class the college offered, he added), he decided to make money first and then buy a farm. "So," he said, "I invented some things in high tech."

He invented a type of dry heat transfer toner called BlackLightning, and out of that grew a manufacturing company based in Hartland, as well as a magazine (*Flash*) and books (*The Underground Guide to Laser Printers*, *A Flash Compendium*).

During his years manufacturing and



Walter Jeffries, inventor, entrepreneur, and farmer, in the butcher shop of Sugar Mountain Farm.

publishing, he said, he bought the land in West Topsham and started turning his attention toward farming. The economics of cattle farming dissuaded him from his childhood dream. He briefly considered farming mice for labs. Then he learned how to raise sheep and poultry from longtime West Topsham postmaster Russell Batten. But to make money raising sheep, he pointed out, "you need to do huge numbers. I didn't want to get that big. I wanted to have fun." Enter the pig: hardy, delicious, and useful from snout to tail.

The butcher shop and product

That brings us back to processing the pig—the final third of the pork profit equation. There are a lot of elements involved in processing an animal, which means when starting from scratch, there are a lot of opportunities to build in efficiencies. Jeffries noted that his three highest costs are labor,

energy, and maintenance. So, he said, he designed the plant to be energy efficient and easy to maintain.

Currently, just the butcher shop section of the plant is open for business, plus several carefully calibrated coolers holding processed pork ready for delivery. Jeffries is doing everything himself, with his sons' help: design, architecture, plumbing, wiring, concrete, doors. The only piece he isn't doing is septic. "Heating water and cooling meat are the two biggest energy costs. Next is heating and cooling the building itself," he said, so he designed the building to require no heat.

Then it was time to start building. A slaughter room is the most expensive part to build out, but cheapest to hire, he said, so he'll build the slaughter room last and currently sends his pigs to the slaughterhouse at Adams Farm in Athol, MA.

"At the other end of the scale,

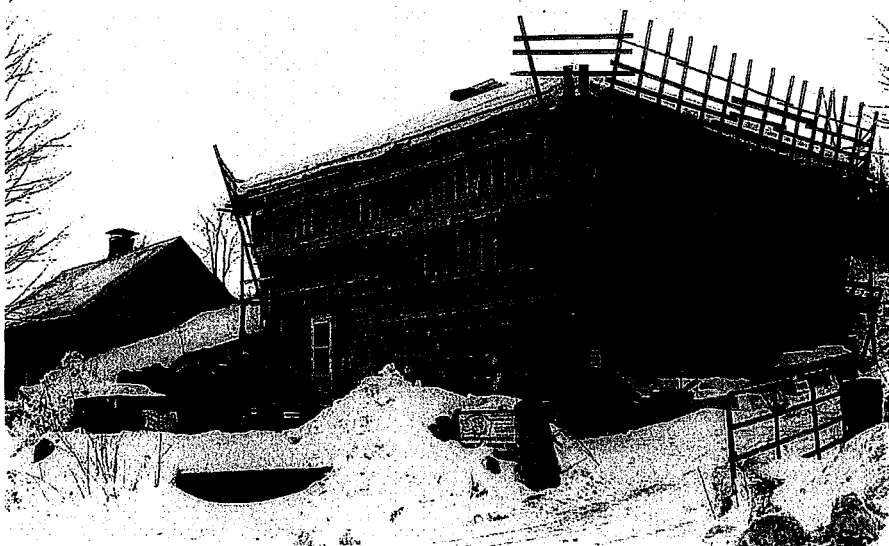
butchery is by far the most expensive thing to hire out," he reasoned, but was less expensive to build. That's why he decided to build the butcher shop first. He trained as a butcher and discovered a side benefit to doing it himself: an increased yield of about 14 percent. "That 14 percent shows up in profit, not setup," he pointed out. It also allows him to give customers custom cuts, and to experiment with making new products: porchetta and sausages, including the top selling Farmhouse Sausage and Maple Breakfast Sausage. Sugar Mountain offers products seldom seen in market aisles: salt pork, whole slabs of bacon. Jeffries' custom orders include deboning a whole pig and stuffing it with sausage. Meat eaters who think they know pork eat Sugar Mountain products and rediscover how delicious and versatile top-quality pork can be.

The plant design

Beyond the butcher shop is the rest of the processing plant, still under construction. The building is six shells, each contained within the next, "like Russian dolls," Jeffries said. The arched ceilings in the shells are each representative of a different classical style. The well-insulated outermost shell weighs 1.6 million pounds. "That much weight doesn't fluctuate much, but tends toward mean" in temperature, Jeffries said. Instead of normal environmental temperature spikes, the building's temperature shows a shallow curve around 35 degrees. That first shell contains the future slaughter room.

Inside the second shell is a chiller room with a high ceiling for hanging and aging meat. There's a subtle temperature change even though there aren't doors between the shells. In summer "the inner room is cold even if it's 80 degrees outside. With no doors. I like to design things to be passive," said Jeffries. The coldest air, at the center of the plant, leaks outward to cool the rest of the building.

The third shell is the future cutting



The exterior of the butcher shop and future pork processing plant on a snowy day. The outside, still surrounded by scaffolding, will be the last part of the plant completed.

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To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Rate Design Meeting

continued from page 1

home heating and transportation to electric—what's known as beneficial electrification. Because WEC's portfolio is 100 percent renewable, Richards pointed out, cutting out combustion engines means "we can make a huge dent in our carbon footprint."

The Co-op's new rate design raises the fixed monthly member charge from 13 to 25 dollars per member. Individual infrastructure costs—each home or business's transformer, pole, wire—are closer to 80 dollars a month per member, said Richards. The difference is made up through kWh sales. WEC is not suggesting a jump from 13 to 80 dollars in fixed charges, she said, but asked members questioning the hike in the monthly charge to keep in mind that members with bills lower than 80 dollars have a portion of their infrastructure costs subsidized by higher users.

Using a handout and slides that show different potential energy bills,

she described how the Co-op staff and board considered members' total energy spending on gas, oil or propane, and electricity in the design. She showed how using cold climate heat pumps and an electric vehicle can bring a home's total annual energy costs down from 6,000 to under 5,000 dollars under the new rate structure. "Yeah, your electric bill went up. But what's happening is your home heating drops substantially. Same with your transportation costs for your car. The key is your total energy spending went down. You can, under this rate structure, save money," she said. And, she said, incentive dollars available through WEC's Button Up program help members offset the cost to purchase and replace appliances and vehicles.

Questions and comments

Bud Haas of Bradford asked if there was research to back up the savings scenario. "We have to take you on faith," he pointed out. Richards noted that nationally, utilities are moving to

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Board members Jean Hamilton and Richard Rubin, both of Plainfield, listen to members' comments during the Co-op's meeting on September 19 to discuss its new rate design.



Stewart Clark of Worcester listens intently to another member's comment during the Co-op's meeting on September 19 to discuss its new rate design. Products & Services Director Bill Powell is in the background.

Sugar Mountain Farm

continued from page 6

room, and the fourth is the cave, where meats will cure. The fifth shell contains the brine room for hams and dry rubbed cuts. In rooms like this where salt is a concern, Jeffries built with spun basalt instead of metal rebar. The insulation gets thicker between each shell.

The sixth shell contains the supercooler, which will run at 27 degrees, and at the center, the freezer, which will be 45 below zero "and have a tornado inside," Jeffries said, because fusion forms the smallest crystals in the freezing process. Once the freezer is cooled down, he said, if air is not exchanged, it will never lose its temperature.

Upstairs, an insulated attic acts to cool all the rooms below — "Think of it as an ice pack on top of the building,"

Jeffries said. A tower provides space for warm air downstairs to rise. And Jeffries plans to install lunar panels—his invention—on the roof: to collect energy from the moon, but to reflect the building's heat back to the night sky.

There's a timeline to complete all of this, room by room. Jeffries expects to have the cold interior processing rooms finished within three years, the slaughter room finished within five years, the attic and exterior finished after that.

In the meantime, Jeffries has the attention of others interested in his small and efficient plant. "A lot of people said it's impossible to build a USDA plant. They're wrong," he declared. Indeed, it's possible to build a USDA plant that gets a perfect score on the first inspection. On this rural hill is perhaps the model of future agriculture and meat processing: small, innovative, and above all, efficient.

UNITED STATES POSTAL SERVICE® (All Periodicals Publications Except Requester Publications)		Statement of Ownership, Management, and Circulation	
1. Publication Title	2. Publication Number	3. Filing Date	
Co-op Currents	IS EN 07 46 8 7 8 4	9/30/18	
4. Issue Frequency	5. Number of Issues Published Annually	6. Annual Subscription Price	
Monthly except February, May, August, and November	8	\$3.75	
7. Complete Mailing Address of Known Office of Publication (Not printer) (Street, city, county, state, and ZIP+4®)		Contact Person	
Washington Electric Cooperative, Inc. PO Box 8, 40 Church Street East Montpelier, VT 05601-0008		Dawn Johnson Telephone (include area code) 802-223-5245	
8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Not printer)			
Same as 7 above			
9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do not leave blank)			
Publisher (Name and complete mailing address)			
Same as 7 above			
Editor (Name and complete mailing address)			
Katie Yltesen Washington Electric Cooperative, Inc. Same as 7 above			
Managing Editor (Name and complete mailing address)			
Patty Richards Same as 7 above			
10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)			
Full Name		Complete Mailing Address	
Washington Electric Cooperative, Inc.		PO Box 8, East Montpelier, VT 05601-0008	
11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box			
☐ None			
Full Name		Complete Mailing Address	
Rural Utilities Service		US Department of Agriculture, Northern Regional Division, 1400 Independence Avenue, SW Washington, DC 20250	
National Rural Utilities Cooperative Finance Corporation		2201 Cooperative Way, Herndon, VA 22071-2925	
12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)			
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes: Has Not Changed During Preceding 12 Months			
☐ Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement)			
13. Publication Title	14. Issue Date for Circulation Data Below		
Co-op Currents	October 2018		
15. Extent and Nature of Circulation	Average No. Copies (Each Issue During Preceding 12 Months)		
		No. Copies of Single Issues Published Nearest to Filing Date	
a. Total Number of Copies (Net press run)		8609	8668
b. Paid Circulation (By Mail and Outside the Mail)		9565	9610
c. Total Paid Distribution (Sum of 15b (1), (2), (3), and (4))		35	25
d. Free or Nominal Rate Distribution (By Mail and Outside the Mail)		9601	9635
e. Total Free or Nominal Rate Distribution (Sum of 15d (1), (2), (3), and (4))		153	178
f. Total Distribution (Sum of 15c and 15e)		35	33
g. Copies not Distributed (See Instructions to Publishers #4 (page 80))		97	9756
h. Total (Sum of 15f and 15g)		29	25
i. Percent Paid (15c divided by 15f times 100)		9783	9846
j. Percent Paid (15e divided by 15f times 100)		9885	9885
17. Publication of Statement of Ownership			
☒ If the publication is a general publication, publication of this statement is required. Will be printed in the October 2018 issue of this publication.			
☐ Publication not required			
18. Signature and Title of Editor, Publisher, Business Manager, or Owner		Date	
General Manager <i>Patty Richards</i>		9/28/18	
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Manager's and President's Report

continued from page 3

to the state in penalties because we didn't do enough to get our members weatherized.

Barry: There's also money available through Efficiency Vermont which couples with our incentives, and for folks of limited income, there are grants through the Community Action Fund that can help you tighten up your house. Our members up in the Northeast Kingdom can get an energy audit through December for 100 dollars through Heat Squad that will give them a road map of what they need to do and what will give them the

best investment for their dollars.

Patty: Call Bill Powell, the Energy Coach here, at 802-223-5245. He'll give you the details and will refer you to Heat Squad staff.

Volkswagen settlement leads to grants for charging stations

Patty: Through Vermont's share of Volkswagen's emissions settlement, grants are now available to build electric vehicle charging stations. The application is set up for municipal organizations and companies to apply



directly to the state. Rather than call WEC, apply directly to the state. Applications are due November 30 for the first round of grants.

Barry: Our members can talk to their municipalities and encourage them to apply. If there's someplace you shop a lot, you can go in and talk to the business about applying. Building out the network of charging stations will make people less anxious about going to EVs if they know they can get a 15 minute charge while they're shopping or doing town business.

For more information:

Rate Design: "Members Speak Up at Public Forum on Rate Design," this issue; "Listening for Consensus," January 2018; "With New Rate Design Structure, WEC Looks to the Future," July 2018

Button Up: "What's My Incentive to Button Up in 2018?" July 2018; or contact Bill Powell, the Energy Coach: 802-224-2329, energy-coach@wec.coop

Volkswagen settlement grants for EV charging stations: <https://accd.vermont.gov/community-development/funding-incentives/electric-vehicle-supply-equipment-evse-grant-program>

Rate Design Meeting

continued from page 7

a higher monthly fixed charge and lowering the energy rates charged on the variable portion of use. Our neighbors in Montreal are also leading, she said: "They have very low energy rates, to the tune of eight or nine cents per kWh, and they're a whole lot more electrified than we are"—that is, Quebecois use more electricity for all their energy needs and less fossil fuel. Haas asked about the capital costs it takes to switch to electric. Richards assured him the Co-op isn't talking about changing over appliances and vehicles overnight, but rather when each appliance currently in use comes to the end of its natural life: "When it's time to replace your gasoline powered car, that is when we want you to consider buying an EV."

Lee Cattaneo of Orange said that his decision to net meter was based on the current rate structure, not the new one, and generally opposed a structure that favored higher energy use. "If you want to encourage solar, this is a discouragement," he said, of the new rates. "This is giving a break to the person who's using a lot of electricity."

That's because as rates are lowered, members who use more electricity will see lower electric bills compared to their bills today. As electricity becomes less expensive, WEC hopes that will prompt members to switch from fossil fuel engines to electric. "We want WEC's electricity to be the fuel of choice!" said Richards. But the concept of lowering bills for higher energy users was uncomfortable for many in the audience. Stewart Clark of Worcester put it this way: "I'm troubled by the switch in emphasis from conservation to 'let's use electricity.' I'm troubled because these rates are regressive."

Betsy Barstow of East Montpelier didn't want to see fellow members wasting energy, but wondered if it's possible to compromise, encouraging conservation and rewarding members who can prove their higher use comes from switching fossil fuel appliances to electric—for example, those who take advantage of WEC's Button Up incentives.

Bernstein agreed that conservation

is a core value of the Co-op, and said that the Co-op's kWh sales have been declining as members conserve and net meter. Richards added that the primary messages WEC heard from listening groups in 2017 was that a low block should be retained and that the fixed charge was too low.

Clark proposed expanding the low-use block to the first 300 kWh to encourage conservation. He said new electric appliances and vehicles were "more efficient, but not more effective than fossil engines. You need to structure for conservation and recognize that heat pumps and electric vehicles aren't the best solution for Vermont."

Richards, taking the long view, disagreed. Electric vehicles have a range of 200 miles or more now, she said, and the technology improves every year.

Board member Richard Rubin of Plainfield told the group, "The regressive nature of this bothers me the most," to nods of agreement. He continued, "But unless we get more revenue into the Co-op, we're in real trouble." He explained that if WEC can sell more kWh, rate increases will be lower over the next decade. In other words, high users, buying lots of kWh of renewable energy, contribute to keeping costs lower for all members. Or to flip the scenario, if all members were low users, it would create artificial scarcity, which would drive up rates.

Given the Co-op's need to sustain revenues, Barstow said she'd rather see the fixed rate raised higher than 25 dollars than to see higher electric use incentivized. Board member Mary Just Skinner put this to the audience: should WEC raise the fixed rate above 25 dollars? Clark considered this and said yes: "I wish there was a way to structure it to favor low users. I think it would be more acceptable to have a higher base."

Steven Farnham of Plainfield questioned if the cooperative structure was fair to low users, and Richards and board members suggested it was fairer in its participative nature, in contrast to for-profit utilities. Cattaneo said his real concern is that members who waste electricity will be rewarded with lower rates.

Board Vice President Roger Fox noted that the meeting was mainly populated with members able and willing to conserve electricity. "There's a sense in this room that people who use a lot of electricity are wasting it. I wish there were some farmers, or people with medical needs or large families here to talk about how they use electricity. I feel that perspective is part of the conversation that's missing," he mused.

Fox went on to wonder how rates could be redesigned—to accommodate low users, should the Co-op charge higher rates and offer a subsidy to low-income members? He admitted to

concerns about that idea, and Bernstein added, "We've struggled with this."

Garfield Barnes of Plainfield echoed Barstow's thought that there might be room for compromise in creating steps off the regressive nature of the design—incentivizing both moving off fossil fuels and conservation, and building a progressive structure for the highest users, who seem to demonstrate an ability to afford their energy use—"At 1,200 kWh a month, maybe they shouldn't get a break!" he offered.

Next steps

The meeting came to a close, and Richards and the Board of Directors thanked members for coming out and participating in the cooperative process. In return, members thanked WEC for holding the meeting and for the opportunity to speak up. Several members, including those opposed to the change, acknowledged they better understood why the Co-op is pursuing it.

After the meeting, Barstow explained that after 2017's Community Meeting in Worcester, she'd ruled out net metering, because she understood the Co-op invested in renewable energy sources on behalf of all its members, whether net metering or not. But she's reconsidering, she said, since as a low user, her bill would go up under the new structure. "Maybe I do need to bring my family down to the 100 kWh level and conserve," she said, and use a solar installation to supply her family's electricity needs over the low-use block. "I appreciate the Co-op and this meeting," she added. "There's no easy solution, that's for sure."

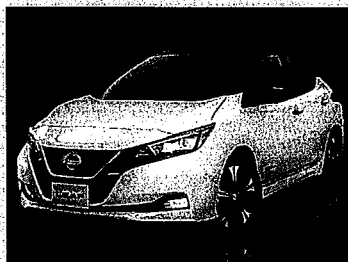
Later, Richards confirmed that in developing the new rate structure, the board and staff relied on the feedback from listening groups, because that was a representative sample of members—including of low, medium, and high users; owners and renters; low and high incomes, and other measures of diversity.

Richards said the next step is to work with state regulators to propose a new pricing plan. The earliest the new design could take place is late 2019. "We have a lot of work to do" before the rate design can go into effect, she said.

Save Big on Electric Vehicles

WEC members are eligible for \$5,000 off MSRP for the all-electric 2018 Nissan Leaf, with a range of 151 miles.

Plus, income-eligible WEC members receive extra incentives toward electric vehicles and plug-in electric hybrids through the Button Up program.



Visit washingtonelectric.coop or contact energycoach@wec.coop to learn more.



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

WEC Announces Rate Increase in 2019 at Community Meeting

Declining market value of WEC's renewable energy credits behind increase of 5.49 percent. Rate redesign, Button Up, Coventry expansion also discussed at Groton meeting



Angela Manning of Orange seldom misses a Community Meeting. "It's important to support the people who try to support us," she said.

At WEC's annual Community Meeting, WEC Board President Barry Bernstein and General Manager Patty Richards announced that the Co-op is forced to apply for a rate increase in 2019, largely due to the dropping cost of renewable energy credits, or RECs.

The October 25 meeting in Groton was attended by about a dozen and a half members. After dinner, the proposed increase was first on Bernstein and Richards' agenda. The Co-op's last rate increase went into effect July 2018.

Because WEC's portfolio is 100 percent renewable, it is able to sell renewable energy credits on the market to other utilities looking to make their own portfolios greener. RECs have different quality levels, like maple syrup. In order to make the economics work, WEC has traditionally sold a portion of its highest quality credits and bought back credits that are lower quality, though still green. It allows the

It's a classic supply and demand situation. What's happened in the Massachusetts market is the demand [for RECs] has dried up.
— Patty Richards

Co-op to sell its renewable product on the market and make electricity cheaper for its members. And unlike carbon credits, with which they're often confused, RECs aren't a way for other utilities to buy a clean image while still using dirty power. Instead, all RECs

represent displacement of fossil fuel or otherwise unsustainable power sources, since the grid can only transmit as much power as is needed at any given time.

However, more and more renewables have come online in recent years. That's a good thing, but it means the market for RECs is flooded. "It's a classic supply and demand situation," Richards explained. "What's happened in the Massachusetts market is the demand has dried up."

None of this takes WEC's leadership by surprise. "That money from RECs has been a good cushion

continued on page 4

Two Major Snow Storms Hit Vermont In November

Heavy snow causes repeat outages. Tens of thousands affected statewide; 5,500 WEC outages at peak

In their President and General Manager's discussion on page 3, Barry Bernstein and Patty Richards discuss the mid-November snowstorm. Then, right as we were wrapping up this issue, another storm of heavy, wet snow hit Vermont on November 26-28: Winter Storm Bruce. Crews are working into December to repair lines and restore power.

It's yet another major, multi-day storm event. Heavy snow and cold temperatures mean sagging lines and tree limbs — a recipe for repeat outages. Some forecasters are already calling this storm one of the worst in recent years.

"This walloped us," said General Manager Richards. "We have snow

weighing down our lines and blowing fuses, we have trees bending and breaking under the snow weight. Heavy snow falls and weighs down the trees and lines, causing outages. As the weather changes and trees and lines offload their snow, we have repeat outages. And then it snows again."

WEC's crews are working around the clock and will be repairing lines and restoring power for several days. Several other municipal and cooperative utilities sent mutual aid. Stowe Electric and Burlington Electric sent two and four lineworkers, respectively; municipal utilities from Littleton, Middleton, and Wakefield,

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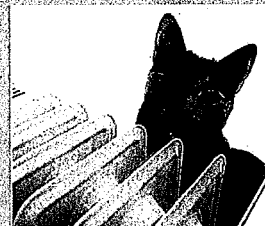
Washington Electric Cooperative
East Montpelier, VT 05651

Inside

Considering running for WEC's Board of Directors? Start planning now: deadlines are in February. P. 6.

WEC is turning 80! We're looking for your stories and holding a photo contest to celebrate and commemorate. Details p. 7 and 8.

Holidays are about community. So is WEC. Learn more about WEC's caring efforts on p. 8.

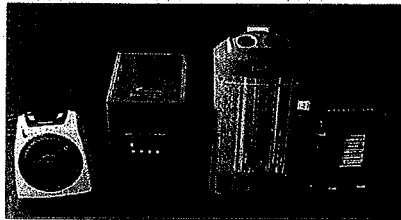


Space heaters may keep you (and your furry friend) toasty, but in our climate, it can come at a steep cost. Pennies per day to operate? Not exactly. Learn more - and how WEC can help your family stay warm - on p. 2.

Space Heaters: Low Maintenance, High Cost

Say you live in one of Vermont's old farmhouses. When the mercury plunges this time of year, you notice all those drafts and cold spots. It can be tempting to plug in a space heater or two – sometimes necessary, to keep pipes from freezing. After all, many of them advertise they operate for mere pennies per day.

The trouble is, the manufacturer might make that claim based on testing the device in Florida, not in January in Vermont. It's fudgy advertising. Member Services Supervisor Susan Golden has heard before. Here, that space heater can double or triple your daily kWh load. With a space heater plugged in, "it's nothing for your use to



youremidgas.com via Creative Commons

go up to 40-60 kWh per day, and the Vermont state average kWh per day is 22. That's a huge jump," observed Golden.

That leads to cold-weather related spikes in member bills. A standard 1500 watt space heater left to run 24 hours a day adds about eight and a half dollars a day to your monthly bill. That could add 250 dollars to your

monthly bill, and that is a lot of money. "It takes people by surprise because they've heard it costs pennies per day. Well, not in Vermont," said Golden.

Which is why, if your WEC bill leaps during the cold months and you call the Member Services team for assistance, they'll probably ask you first whether you've been doing anything differently – such as using a space heater.

Diagnosing the source

The problem is simple: we need to stay warm when it's cold. Golden is no different from other WEC members in that regard. Last year, during the deep freeze, she was forced to use space heaters to keep pipes from freezing in her sheep barn. Her next bill was eight times her average bill. The only difference is, she wasn't surprised by the high cost.

The Member Services team tries to keep consumer-members from being surprised, too. They send out high bill notices when a household or business is showing use 20 percent or more above average. When the member calls to inquire, the team does some diagnostic work to determine why the member's energy use is rising.

Often, the next step is a call to Products & Services Director Bill Powell, known throughout WEC country as the Energy Coach. Powell

counsels members that while space heaters are easy to use, there's a real tradeoff. "The convenience of a space heater can be outweighed by the cost to operate it," he said. "There are no good units. There are bad units, meaning some are less effective than others."

Members skeptical about what is drawing power – that "pennies per day" claim is awfully hard to shake – can use a digital kWh meter to determine the cause. WEC has a number of small meters Powell regularly loans out to members. Calling it the "do-it-yourself" option, he said, "When a member has a question about load, I send them in the mail. The member plugs it into the face of the meter. Then you have evidence" to determine which device is causing the increase in load. Powell is quick to caution that the device only addresses 120 volt devices and appliances – not 240 volt appliances, like electric dryers or water pumps.

Economic catch-22

Golden pointed out that a lot of space heater use comes from an economic catch-22. That is, other sources of home heating, like oil, propane, or wood, require pre-payment. You need to purchase the fuel before you can heat your space with it. Electric heat, on the other hand, is paid for only after it is used.

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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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$.47, 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.

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Editorial Committee

Patty Richards Donald Douglas Jean Hamilton Anne Reed Katie Titterton

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 Dawn Johnson, at 224-2332.

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Plant Accountant Sy Daubenspeck and General Manager Patty Richards fill their shopping carts during the Stuff-A-Truck food drive. Every year WEC's Community Fund donates 1,000 dollars worth of food to the drive, which benefits the Central Vermont Salvation Army Emergency Food Shelf.

Got something to say?

Letter to the editor, comment, or a story tip? Drop us a line at currents@wec.coop or Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651, Attn: Co-op Currents.



To call the Co-op, dial 802-223-6245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

President's and General Manager's Message

Crash in REC Market Leads Co-op to File for 5.49 Percent Rate Increase

Also: November storms and outages; new rate design will help reduce impact of future rate increases; facing down the emerald ash borer; taking care of each other this holiday season

Rate increase

Patty: We filed with the Public Utility Commission (PUC) on November 15 for rates to go into effect January 1, 2019. It's an increase of 5.49 percent. This is driven predominantly by the REC market collapsing. It's really like a single cost line issue.

The REC price was in the mid-20 dollar range six months ago. It plummeted and we're down to four dollars now for RECs sold in 2018. Think of it like this: we collected 2.5 million dollars in REC revenue last year, and this year we're down to 1.6 million.

Barry: We had to go in for this rate increase in such a short time as a result of a collapse in the REC market over a period of only a few months.

Patty: Our labor costs are in check, our expenses are in check, we're keeping pace on all the other expenses. It's just this one thing. We're laser focused on expenses and there's no way we could avoid an increase.

Barry: As a cooperative we just have to cover our expenses. We're not concerned with profits.

How new rate design softens future rate increases

Barry: The board and management have begun a vision process for the next decade or 15 years. One thing that came up, Roy [Folsom, board member from Cabot] pointed out: "We haven't stopped wanting to conserve energy – we're just broadening the definition of the energy we want to conserve." Our legislative mandate is to expand



Until we get the rate redesign in place, we're going to continue to have rate increase pressures. The rate redesign won't eliminate the pressure, but it will help reduce the size of the increases, because every month we collect more in the fixed cost piece in the monthly bill.

– Patty Richards

the energy we want to conserve into fossil fuels.

People are going to make appliance, heating, and vehicle changes over the next decade or two as a normal course of replacement as things wear out.

Patty: As we talk rate design, we're also talking about all fuels: electric, heating, and gasoline. If you electrify, yes, your electric bill will increase, but your total energy costs and your carbon footprint will decrease.

We've got these rate increases going on while we're doing a rate redesign. Until we get the rate redesign in place, we're going to continue to have these rate increase pressures. The rate redesign won't eliminate the pressure, but it will help reduce the size of the increases, because

every month we collect more in the fixed cost piece in the monthly bill. We're still going to have rate increases,

but the redesign will lessen the percentage.

Barry: It will lessen the impact on the percentage of rate increases.

Impacts from unavoidable costs

Patty: We had a nasty mid-November wet snowstorm. The weekend before the wet snow came in, we had between Friday, November 9, and Sunday, November 11 a series of outages affecting anywhere from 500-800 members. Then the wet snow came in on Tuesday on the heels of the weekend mess, and we got hit with heavy, wet snow loading on the lines and tree branches. We had over 90 different places we had to go to fix something, like a fuse opening up.

Barry: The amazing thing about this storm – at one time we had 2,500 people out, and the largest we had in any one spot was



The amazing thing about this [mid-November] storm – at one time we had 2,500 people out, and the largest we had in any one spot was 100. In some cases we had just 5 or 10 people out. You can imagine how that spreads us thin over 1,300 miles of distribution line.

– Barry Bernstein

100. In some cases we had just 5 or 10 people out. You can imagine how that spreads us thin with employees needing to fix every break over 1,300 miles of distribution line.

Patty: We had a lot of onesie-twosies. They were sprinkled all along the ends of the lines.

This was not just a WEC issue – all Vermont utilities had outages. GMP, VEC, and it hit south as well. We got help from Stowe and BED on November 14 and cleared everything up by about 3 pm.

Barry: I have heard comments from members about our outages during these kinds of events. I want to remind people we have eight members per mile which is in some of the most rural and forested

land in the United States. It's where we live. If you live in Manhattan, you don't have these issues.

Patty: We always want people to have a plan. Know what your issues are: if you have medication that needs to be refrigerated, if you have a backup person you can contact to stay with. Think about that in advance because you never know when we're going to get hit with a multi-day storm.

I want to thank all the employees for all the work that they do. All the work, all the dedication, getting here early, staying late. I can't thank our employees enough for all the work they do.

Editorial note: Just before this issue went to press, Winter Storm Bruce caused multi-day outages in WEC territory and throughout the state. See more on the front page and in the box at left.

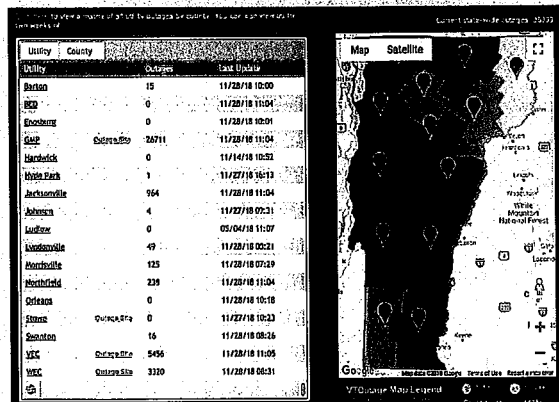
Emerald ash borer

Patty: A new rate pressure on our near term horizon is from a nasty bug: we need to address issues caused by the emerald ash borer beetle, which is attacking trees all across Vermont. The issue with the ash tree is it's three to ten times more expensive to take down a dead tree than a live tree. The

Outages from Winter Storm Bruce

Utilities throughout Vermont saw thousands of outages between November 26-28. Some of these are projected to last for days – possibly after this issue goes to press. Some forecasters are already calling this storm one of the worst in recent years. WEC's crews, with help from mutual aid crews from Vermont, Massachusetts, and Pennsylvania, will be working through the weekend to repair lines and restore power.

The nature of the storm caused repeat outages around the state. At peak, WEC saw up to 5,500 outages. VEC also had around 5,500 out at peak. GMP peaked at about 35,000, and announced they had about 90,000 customers lose power total. See more on p. 1.



Did You Know?

WEC's Community Fund is funded entirely by members who donate their capital credit refunds. Last year, the Fund gave nearly 38,500 dollars to small nonprofits supporting causes in our service area, including the Stuff-A-Truck benefit for the Central Vermont Salvation Army Emergency Food Shelf. See p. 8 for more.



Community Meeting

continued from page 1

for us," said Bernstein. And, he said, "we're not going to get hit by the full impact of the drop," thanks to Richards' careful work diversifying the Co-op's market portfolio to hedge against exposure to fluctuation.

Gary Eggleston of East Barre said he'd thought more wind and solar coming online would make prices drop. Not when those renewables are competing with WEC on the REC market, explained Bernstein. But renewable generation collectively owned by WEC, such as the Coventry plant, does help members' wallets, he pointed out, because the Co-op is locked into those rates.

Rate redesign

The other reason behind rising rates is the Co-op's declining kilowatt hour sales - as members conserve more or install net metering, they buy less electricity. Declining sales are also a factor in the rate redesign that WEC's board is working to implement. To better manage uncertainty in kWh sales while continuing to emphasize conservation and to help members minimize fossil fuel emissions, WEC is changing its rate design. "What we're looking at is changing the formula. We're collecting the same amount of money. Our plan is to stabilize the revenue portion," explained Richards. Part of that is a greater monthly fee - of 25 dollars up from 13 dollars - that supports the Co-op's infrastructure costs. WEC has high infrastructure costs because it has so few members along each mile of line, and because so much of its line is located in rugged terrain offroad.

The Co-op is committed to combating climate change. The



Groton Recreation Committee members Lisa Hart (left) and Carrie Peters (right), along with Linda Nunn, Janet Page, Anne Hatch, and Torie Peters, provided dinner for WEC's Community Meeting at the Groton Town Center. The Groton Rec Committee's mission is to provide free recreation activities for everyone. It'll receive a contribution from WEC for hosting.

state also mandates that electric utilities help move members who use fossil-fuel burning home heating and transportation over to using cleaner (or in WEC's case, entirely clean) electric energy. So to incentivize this clean energy use, WEC is dropping the kWh price. "We're going to drop from ten to eight cents [per kWh]," said Richards, "but [the low use block] is going to go from 200 kWh to 100 kWh."

"I've been working really hard to stay under 200 kWh," said one member.

Richards nodded sympathetically. "You're in the bracket that's going to go up," she told him. Board member Annie Reed, whose use is also 200 kWh or less, chimed in to say the average increase in their bracket will

be about 13 dollars. That's about even with the increase in the monthly fee. The shortening of the low use block is somewhat offset by lowering kWh rates.

Bernstein, whose use is also low, told the group, "I've had to change my thinking about this." Over time, he's said, he's weatherized and insulated his home to make it as efficient as he can. "Our footprint has gotten as small as it can get. But in order to get people off fossil fuels, you can't do it at 24 cents per kWh." As cars or furnaces need replacing, he said, he hopes the Co-op's incentives will help members choose efficient electric options, like electric vehicles and cold-climate heat pumps, over traditional combustion models.

Board member Roy Folsom pointed out another dimension in redesigning rates to make them more fair. "The cost of a transformer is 700 dollars," he said. "If you have a 50 dollar electric bill, it takes a lot longer for us to pay for that transformer, because the equipment costs are the same."

A member recalled that Northeast Telephone used to have a local rate close to its Barre headquarters, and outside a certain radius, a mileage fee would kick in. She asked if this model might work for the Co-op.

It's just not a match with the mission or model of a rural electric cooperative, responded Bernstein, citing as an example the project to bring greater reliability to members along a spur line in Northfield ("Reliability is About to Get a Whole Lot Better in Northfield," September 2018). "Our goal is to make sure people have reliability, and to share" the costs - and benefits - of accomplishing that, he said.

Angela Manning of Orange wondered how people on fixed incomes would do with the rate redesign. Bernstein responded that some folks on fixed incomes are high users, so they would see their bills go down. And indeed, he said, the board is looking at creative ways to support low-income members. In other parts of the country, he suggested, some utilities use prepaid meters. The whole conversation has been a tough one, he admitted. "I told the board I thought [rate redesign] was going to be the hardest decision we'll ever make," he said.

Other items on the table

Michael Raboin of Orange thanked Bill Powell, WEC's Products & Services Director, for helping him improve his home efficiency and save in the process. "We went through Button Up.

A Co-op Family Welcome from Groton

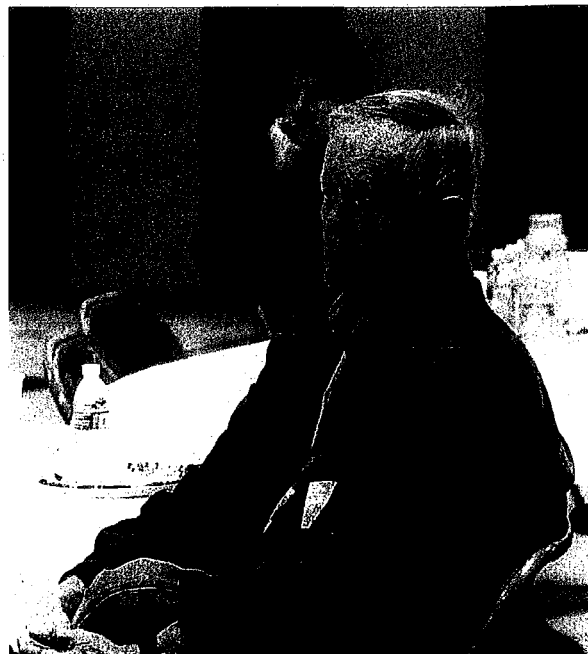
Each year, the Co-op hosts a Community Meeting in one of the 41 towns that make up its service area. WEC works with a local organization to host the dinner and meeting, and in return makes a contribution to their cause.

This year, the Groton Rec Committee - rec for recreation, that is, not renewable energy credits - hosted at the town center. Groton, on the southern border of Caledonia County, is a rural town with a good chunk of its landmass taken up by state forest and an old-Vermont feel. With just over 1,000 residents, it describes itself on a roadside sign as a place "where a small town is like a large family."

That civic pride and hospitality were in full display as members of the committee, including town clerk Linda Nunn, Janet Page, Lisa Hart, Anne Hatch, and Carrie and Torie Peters, cooked and served a spaghetti supper with salad, rolls, and for dessert, brownie sundaes. General Manager Patty Richards loved the home-cooked vegetarian sauce option so much she was sent home with an extra container of it.

Groton Rec Committee member Lisa Hart said their mission is to provide free recreation opportunities for everyone. That includes yoga and zumba, floor hockey and Latin dance. People come from miles around to participate in activities that are healthy, social, and fun as well as being free, Hart said. She's not yet sure what WEC's contribution will fund: "There's a lot of stuff that needs upkeep," she said, like the town ball field's bleachers and dugout.

Board members in attendance, including Barry Bernstein of East Calais, Don Douglas of Orange, Roy Folsom of Cabot, and Annie Reed of Marshfield, extended warm appreciation to their host town. "Groton says they're a small town that feels like a big family. Which is perfect, because we're the small co-op that feels like a big family," said Douglas.



Peter Lyon of Groton at the 2018 Community Meeting. As the president of Groton's Community Club, a regular beneficiary of WEC's Community Fund, he says General Manager Richards and the Community Fund are "always there to help."



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We spent well over 7,000 dollars in efficiency improvement, and WEC and Efficiency Vermont paid a third of that," he said. Powell acknowledged Raboin's proactivity in seeking him out. "It starts with you," he reminded the audience.

Gary Eggleston wondered where WEC leadership stood on the question of a Vermont carbon tax. Bernstein said he thought it would happen eventually, but that Vermont would first watch larger areas, like Washington State, implement theirs to see how it might work. "We'll see a lot of local governments looking for a way to address climate change. The question is how," he predicted.

Richards said WEC territory is feeling the effects of climate change now – "Three FEMA-recoverable storms in a five year period," she said, pointing to Winter Storm Damon of 2014 and the late October windstorm of 2017.

Angela Manning said that during the windstorm, a WEC truck, parked on Orange Heights during the outage, had a very responsive crew member answering all the questions of members without power. "It made people feel better because there was someone there to answer questions," she said.

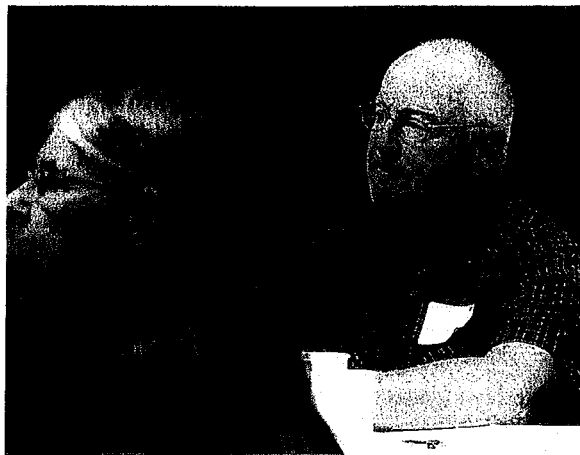
Eggleston, concerned about wild ladyslippers growing near a transmission line near his property, asked about WEC's herbicide policy in its rights of way. It turned out that the transmission line was a VELCO line not owned by WEC, but Bernstein and Richards assured him that WEC does not use any herbicides on its rights of way. "We use chainsaws and hand clearing," said Richards. "We've held strong against using herbicides," added Bernstein. WEC is in fact the only utility in the state that categorically refuses to use herbicides in its rights of way.

Peter Lyon of Groton wondered if the Co-op is participating in the Coventry landfill expansion. "We have not taken a position, because this is the landfill's issue," said Richards. "That said, we have an investment in it," since two-thirds of the Co-op's energy comes from methane gas produced by the landfill. "[Landfill owner Casella Waste Systems] has been very responsive about managing waste in a responsible fashion."

Bernstein said, "[Casella's] responsibility is to respond to the state through Act 250," and added "I respect them for approaching us," to use the methane instead of just flaring the greenhouse gas into the atmosphere.

From there, Richards and Bernstein checked off a few timely reminders and thanked members to close the meeting. On the near-anniversary of the 2017 windstorm, Bernstein asked community members willing to pitch in with storm meals to contact the Co-op. When a bad storm causes crews to work around the clock on repair and restoration, the Co-op feeds them at the Old Brick Church next door to WEC headquarters in East Montpelier, and volunteer cooks and servers are welcomed. "It means a lot to our staff to see board members and the community feeding them," said Bernstein.

In November, Richards said, one of



Gary Eggleston of East Barre listens to General Manager Patty Richards and Board President Barry Bernstein's presentation at WEC's Community Meeting in Groton on October 25. WEC is facing a 5.49 percent rate increase as a result of the crashing market for renewable energy credits (RECs).

the key benefits of Co-op membership takes effect: capital credit refunds. This year "the board essentially doubled what it is giving back in capital credits: 750,000 dollars," she said. Members in good standing will see refunds as a

credit on their November bills.

She also put in a plug for WEC's Community Fund. Entirely funded by donations of capital credit refunds and requiring zero overhead costs, the Community Fund supports

causes within WEC's service area. "We give out small grants to small local nonprofits. It's really the basic stuff. Helping people so they don't fall through the cracks," she explained. Over the last few years, she said, the generosity of members donating their capital credits, once or in perpetuity, has grown the fund from 20,000 to 50,000 dollars in annual donations. Members can sign up to donate credits through wec.coop or by calling 802-223-5245 or 800-932-5245.

Peter Lyon is president of the Groton Community Club, a regular beneficiary of WEC's Community Fund. After the meeting ended, he said his main event, the annual chicken pie supper and Fall Foliage Festival, is a 63-year tradition. "The money I get for advertising is a really big help," he said. "Patty is always there to help." The Groton Community Club sponsors town activities and provides scholarships to members of Groton's graduating high school class.

Angela Manning has lived on Co-op lines for 30 years. She said after the meeting she tries to attend the Co-op's Community Meeting every year, if she can. "I think they were very informative. They did their homework," she said. "I think it's important to support the people who try to support us."

Board Candidate and Bylaws Petition Deadline Announcement

Washington Electric Co-op turns 80 in 2019!

The Co-op will host its 80th Annual Membership Meeting on Thursday, May 2, at WEC's Operations Center in East Montpelier.

Considering running for a seat on WEC's board of directors? It's time to start planning. Every year, elections are held for three of WEC's nine board seats. In 2019, incumbents Barry Bernstein, Roy Folsom, and Annie Reed are all expected to seek reelection. Any member of the Co-op is eligible to run.

Contact WEC Administrative Assistant Dawn Johnson at 802-224-2332 to request a candidate's packet that contains the materials necessary to run for a seat on the board. The deadline to submit all

materials, including a petition signed by a minimum of 25 WEC members, is Sunday, March 3.

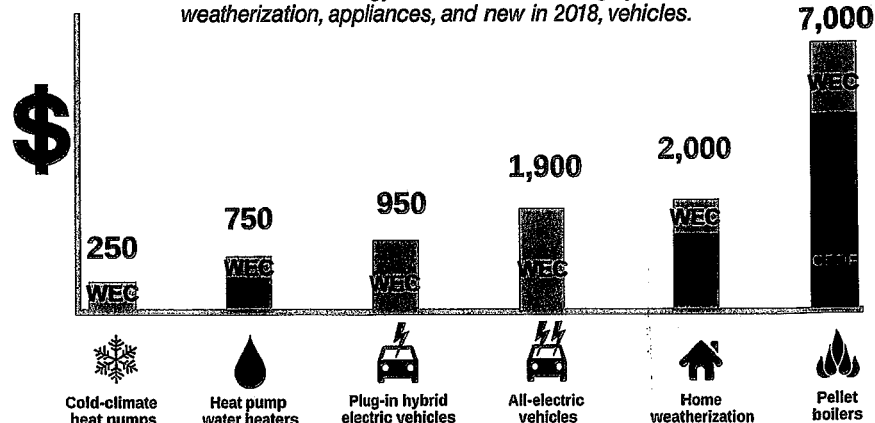
In March, *Co-op Currents* begins Board election coverage, with candidate introductions, areas of interest and expertise, and policy priorities.

Members of the Co-op have the right to petition for changes to the Co-op's bylaws. The bylaws are available on washingtonelectric.coop, or you may contact WEC for a hard copy. To petition for a change, you are required to collect signatures in support from a minimum of 50 WEC members. Petitions to bylaws changes are due February 10.

Look for more information about board elections and bylaws in the January 2019 issue of *Co-op Currents*.

What's My Incentive to Button Up in 2018?

WEC's Button Up home energy efficiency incentive program helps members afford energy-efficient home heating systems, weatherization, appliances, and new in 2018, vehicles.



EV = Efficiency Vermont; CEDF = Clean Energy Development Fund. Plug-in hybrid and all-electric vehicle incentives are available only to members who qualify as low- or moderate-income. Additional incentives may be available. Before you buy any new appliance or vehicle, contact Energy Coach Bill Powell to learn how much you can save.

802-224-2329

energycoach@wec.coop



Manager's and President's Report

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only solution is to cut them when they are healthy. So it's a new expense for our tree trimming budget we're going to have to address, because if we don't address it, it will be three to ten times more expensive to deal with it later.

Barry: We're estimating it could be more than 1.5 million dollars over the next 10 years to deal with this issue. Add to that: most of WEC's territory is forest.

Space Heaters

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"It's tough," she said. "When people are in a bind, space heaters are what they turn to." It's a short term solution with long term implications. Not usually meant to heat more than a small, closed area, those space heaters then drive up bills that can become a real burden for people already on very tight budgets.

Adding to the stress, Golden said, is that there's a misconception that electric service can't be cut off for nonpayment during the winter months. It's a last resort, and the Co-op really hates to do it, she said, but "it's not impossible to get disconnected over the winter – there are rules about it, but it can still happen."

Solutions

Nobody wants it to go that far. The Member Services team and Energy Coach are available to help.

Golden and Powell both say to start by diagnosing the problem. MSRs can look at your SmartHub readings and Powell's digital kWh meters can help identify which devices contribute an outsize amount to your power load – humidifiers and dehumidifiers are also frequent culprits, Golden added.

WEC Can Help You Take Control of Winter Bill Spikes

Whether you never use a space heater again, or can't imagine living without one, Energy Coach Bill Powell and Member Services Supervisor Susan Golden recommend being proactive instead of reactive when it comes to staying warm. The answer is different for each case:

- **Not sure what's causing bill spikes?** Diagnose the problem. Member Services Representatives and the Energy Coach can look at your SmartHub readings and send you a digital kWh meter to identify which devices are using the most power.
- **Can you afford to get ahead of the problem?** Get a thermal audit. The Energy Coach recommends a comprehensive approach: thermal audit, and weatherize accordingly. "You're paying for it now or later. Might as well do it right," he said.
- **Is your bill reasonable in summer, but hard to pay in the winter?** Call to set up a budget. Member Services can create an annual budget for you by averaging your use over the previous 12 months. "You have winter and summer use both in there, so it makes it more consistent," said Golden, with the advantage of no surprises.
- **Need help paying for fuel?** Call 211. "211 is designed to help people through all kinds of situations. They can let people know what kinds of options are available," said Golden.

Taking good care

Patty: Snow and ice aside, I love the holiday season. This is the time of year it's important to remember others around you. Not everybody has family – this can be stressful. It's important to remember we are part of a community. Our neighbors need us, too. So whether that means taking some time this season for volunteering, working at soup kitchens, while we celebrate with our families it's important to think about our neighbors, too.

This is core to WEC's mission as a cooperative. In the "A Co-op Family Welcome" sidebar on p. 4, Don

[Douglas] says the reason it's so great Groton hosted this year's Community Meeting is because that community prides itself on feeling like a family – just the same way we feel here at the Co-op. We take care of each other.

We have boxes here at the office and warehouse collecting new toys for Toys for Tots. Stuff-A-Truck is a food collection for Thanksgiving and Christmas, and that's funded by the Community Fund. The Adopt-A-Family is one the employees really get behind – it's a military family in need. This effort is funded by employees, board,

and vendors. There's more on these programs on p. 8. It's so important we make the extra effort to take good care of each other this time of year.

Barry: Talking about the holidays makes me so appreciative of my road. There are a few people on my road who have had health issues, including myself. Everyone on my road went out of their way to check in on folks when they needed it. It's not limited to a particular time of year, but right now I'm very aware of it and very thankful for my neighbors.

Important Annual Notice Regarding Herbicide Use in the Maintenance of Electric Utility Rights-of-Way

The Vermont Public Utility Commission has set forth rules under PUC 3.600 pertaining to the use of herbicides in the maintenance of electric utility rights-of-way. Each spring, herbicide applications may begin on or after April 1st. These rules afford you important rights and duties. Vermont electric 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. Methods of herbicide applications may include stump, stem injection, basal, soil, and foliar. Only electric utility rights-of-way that have tall-growing tree species with the potential of threatening the electric utility system are treated.

If you reside on or own property in Vermont within 1000 feet of an electric utility right-of-way:

1. Sign up to receive written notification from your local electric utility of plans to apply herbicide on any ROW within 1000 feet of your property or the property where you reside. Check nearby poles for tags identifying the utility and/or pole number, complete the form below and submit it to your local electric utility by mail before February 15th, 2019 to be added to the notification list. If determined to be qualified, you will receive notification from the utility at least 30 days prior to scheduled herbicide application.
2. You are responsible to make your local electric utility aware of the location of any potentially affected water supply, and of any other environmentally sensitive area where herbicide application ought to be avoided.
3. Watch and listen for public service announcements in newspapers and radio ads noting upcoming herbicide applications.
4. Check with your local electric utility regarding the vegetation management cycle near your particular line.
5. You have the right to request, in writing, that the utility refrain from applying herbicides in the process of clearing the right-of-way, and the utility may offer alternatives such as herbicide stump treatment or herbicide stem injections.
6. You have the right to refuse, in writing, the use of herbicides whatsoever at no cost to you if the type of lines in the right-of-way are distribution lines, bringing electric service directly to individual customers.
7. You have the right to refuse, in writing, the use of herbicides whatsoever by paying a \$30 administration fee if the type of lines in the right-of-way are transmission lines or sub-transmission lines, bringing electricity to or between substations.

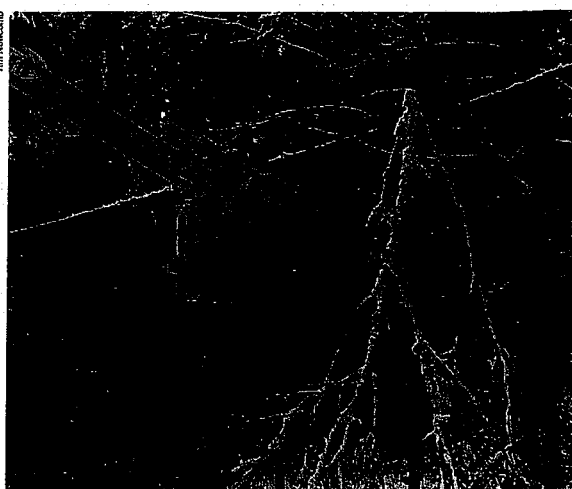
WEC is required to post this notice per the Public Utilities Commission. However, WEC does not use herbicides in Rights of Way. Please contact WEC with questions: 802-223-5245 or 800-932-5245.

ENERGY COACH

Tip: Check Out a Digital Meter from the Energy Coach's Library

WEC has digital kWh meters it loans out to members. If you're using more energy than usual and want to know which device is using that power, call or email the Energy Coach and he'll send you one. Digital meters measure 120 volt devices only. 802-224-2329 / energycoach@wec.coop





The power – and danger – of heavy snow. In Worcester, Tim Newcomb captured a snowy tree limb dangling over a power line – in the very area Right of Way crews trimmed after the October 2017 windstorm. Sometimes heavy snow bends a tree outside the ROW so far over it becomes an unexpected hazard to the lines. At right, crews at work repairing an outage caused by a broken limb on Minister Brook Road in Worcester.

Snowstorms

continued from page 1

Massachusetts sent seven; and Adams Co-op in Pennsylvania sent six later in the week.

"Even though we're gaining ground, we've been losing ground. The last

time we brought on this many mutual aid crews was Winter Storm Damon in 2014," said Bernstein, WEC's Board President.

By Thursday morning, WEC crews were still chasing down 189 different outages. WEC's rural terrain means crews are out walking lines in

snowshoes in dense, deep, unpacked snow. "Brent [Lilley, Operations & Construction Services Manager] said the guys are really tired. They not only have to go out in snowshoes to find the outage, they then have to climb the pole," said Bernstein.

At peak, WEC saw about 5,500

members lose power in this storm. Elsewhere in the state, Green Mountain Power said a total of 90-100,000 or more of their customers lost power, with about 35,000 out at one time.

Expect to read more in the January issue of *Co-op Currents*.

80 Years of WEC: Moments in Cooperative Electricity History

2019 marks WEC's 80th anniversary!

To celebrate, all year we'll spotlight important events and people throughout WEC's history.

Got a story? Remember when? Let us know!

Send a message to currents@wec.coop, drop by the office, or send to Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651. Attn: Co-op Currents.



NOTICE TO WASHINGTON ELECTRIC CO-OP MEMBERS

Notice of Proposed Tariff Changes

On November 15, 2018, Washington Electric Cooperative, Inc. filed a request with the Vermont Public Utility Commission (PUC) for an increase in retail rates of 5.49%. The main driver of this increase in rates are declining revenues from renewable energy credits.

This change will take effect with power sold on and after January 1, 2019, and will be reflected on bills received in January. If the PUC opens a formal investigation of this matter, this increase will be shown as a separate surcharge on bills until the PUC finishes its investigation.

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	Proposed Rates
		July 1, 2018	
Customer Charge		\$13.45	\$14.19
First 200 kWh	200 x \$.10759	\$21.52	\$22.70
Usage over 200 kWh	300 x \$.24022	\$72.07	\$76.02
		\$107.04	\$112.91

Any interested person may examine the rate increase filing via ePUC at <https://epuc.vermont.gov/?q=node/87>. The filing is also available at the Vermont Public Utility Commission and the Washington Electric Cooperative office during normal business hours. Comments regarding the rate filing may be submitted to the Public Utility Commission by December 17, 2018 via mail at 112 State Street, Montpelier, VT 05620-2701, via email at puc.clerk@vermont.gov, or through the e-PUC at <https://epuc.vermont.gov/?q=node/32>.

	Present Rates	Proposed Rates
RESIDENTIAL		
Customer Charge	\$13.45	\$14.19
0-200 kWh/month	0.10759	0.11350
Over 200 kWh/month	0.24022	0.25341
SMALL COMMERCIAL		
Customer Charge	\$13.40	\$14.14
Per kWh/month	0.19667	0.20747
LARGE POWER		
Customer Charge	\$22.87	\$24.13
Per kWh/month	0.10441	0.11014
Per kW/month	14.79	15.60
TIME OF DAY		
Customer Charge	\$13.45	\$14.19
0-60 kWh/month - Peak	0.10759	0.11350
Over 60 kWh/month - Peak	0.26591	0.28051
0-140 kWh/month - Off Peak	0.10759	0.11350
Over 140 kWh/month - Off Peak	0.22613	0.23854
SECURITY LIGHT		
Per 100 Watt Light/month	\$20.93	\$22.08
Per 400 Watt Light/month	41.85	44.15
Per 50-60 Watt - LED	20.91	22.06
Per 91 Watt - LED	20.08	21.18
Per 87 Watt - LED	19.72	20.80



WEC Brings Comfort and Joy to Central Vermont Neighbors Through Holiday Programs

Members invited to support toy drive in 2018

Every person who wants to celebrate the holidays deserves a Thanksgiving dinner, and a Christmas morning of cheer and magic," said General Manager Patty Richards. "So WEC is here to help. The holidays can be really stressful for people and it's important for those of us who can to care for our neighbors. That's the purpose of holidays, and it's the purpose of a cooperative."

WEC staff and board participate in several holiday programs annually. For eight years, the electric cooperative has sponsored the Christmas list of a veteran family in need through Adopt-A-Family. This year, individual staff, board, and vendors will again contribute to help bring the spirit of the season to a Central Vermont veteran family.

On November 15, WEC participated in the Stuff-A-Truck food drive to benefit the Central Vermont Salvation Army Emergency Food Shelf. The WEC Community Fund donates 1,000 dollars to purchase food for the drive; WEC employees donate their time to shop for and deliver the goods. This year, Richards, Member Services Representative Elaine Gonier, and Plant Accountant Sy Daubenspeck were joined by Board Treasurer Don Douglas on a trip to fill shopping carts and bring purchased items to fill the Stuff-A-Truck tractor trailer in Berlin.

Every year, WEC's shoppers compete to see whose cart comes

It's important for those of us who can to care for our neighbors. That's the purpose of holidays, and it's the purpose of a cooperative.

— Patty Richards

closest to the 250 dollar mark in the checkout line. The exercise is lighthearted, but also serious. "It reminds you how hard it is to shop on a budget," observed Richards.

Douglas, WEC's treasurer, cheerfully acknowledged he must have been feeling generous, as the value

of items in his cart was close to 300 dollars. Gonier won the bet with 214.86 dollars worth of goods in her cart.

WEC's Community Fund's coffers are filled by members who donate their capital credit refunds. In 2017, the fund awarded more than 38,500 dollars to Central Vermont causes. To learn how to donate capital credits, visit wec.coop or call 802-223-5245 or 800-932-5245.

Join WEC in Toys for Tots toy drive

Though Adopt-A-Family is employee-driven, and Stuff-A-Truck is a recipient of the Community Fund, members are invited to participate in the Co-op's toy drive. WEC is excited to participate in Toys for Tots again this year.

Toys for Tots works to make sure children in need receive toys for the holidays. The campaign accepts new, unwrapped toys for children from birth to age 15 years. It's coordinated by Daniel Duffy from the Marine Corps Reserve.

For the past four years, WEC's



Elaine Gonier and Don Douglas share a laugh filling their shopping carts during the Stuff-A-Truck food drive. Every year, WEC's Community Fund donates 1,000 dollars worth of food to the drive, and WEC teams compete to see whose cart is closest to 250 dollars. Gonier won the 2018 cart contest.

friends generously filled boxes located at WEC's office, 40 Church St, and at WEC's Operations Center, 230 Fassett Road, East Montpelier, VT. Please stop by either location before December 15 to participate. Thank you!

"One of our purposes is to be of value to the community beyond just being an electric cooperative," said Richards. "There are many ways

we can bring comfort and joy to our neighbors, as part of a cooperative and part of a community. My sincerest thanks to the members who contribute to our Community Fund and support our community year round, and to our employees, board, vendors, members, and friends who contribute to our various holiday causes."

Annual Meeting Call for Photos and Contest

To celebrate WEC's 80th anniversary, your Co-op is putting out a call for photos to display at this year's Annual Meeting. The contest will have two categories: Historic WEC and WEC Today.

Historic WEC photos can include anything that had to do with life on WEC's lines between 1919 and the present day.

To submit to the Historic WEC category, please send high quality scans to currents@wec.coop or mail hard copies to the WEC office: Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651, Attn: Co-op Currents / Historic WEC. Please include the photographer's name, a description, and your contact information. If you would like your photos returned, please include a self-addressed envelope.

The WEC Today category is for digital images taken within WEC's service area over the past few years. Any current member is eligible to enter.

To submit to the WEC Today category, please send high resolution digital images to currents@wec.coop. Please include your name and contact information, a description, and identify the picture's location. If you are submitting on behalf of another WEC member, please indicate you have permission to do so. Maximum three photos per photographer, and no previously published photos, please.

Winning photos will be displayed at the Annual Meeting and in Co-op Currents. Judges and prizes to be announced!

Support WARMTH to Help Neighbors Heat their Homes

Every year, many Vermonters struggle to pay for home heating fuel. And as we see in the cautionary tale on p. 2, when people can't afford to buy fuel, they sometimes rely on space heaters and other sources that are costlier in the long run.

WEC wants to help members and neighbors stay warm this winter without causing additional stress on already stretched pocketbooks. WARMTH can help. It's Vermont's home heating assistance program, funded by contributions from electric utility customers throughout the state, and operated locally by the Central Vermont Community Action Council.

There are a couple of ways WEC members can support WARMTH:

- Operation Round-Up is a monthly program that rounds your electric bill up to the next dollar.
- You can also authorize WEC to send slightly more – an extra dollar or five a month. This is a way to contribute a little bit at a time.
- You can contribute a one-time donation.
- Or you can do both: contribute a little bit each month and make a larger gift now.

To sign up, look for the Operation Round-Up box on your electric bill and initial it. If you'd like to add more, you can indicate that on the form. And you can always call Member Service Representatives at 802-223-5245 or 800-932-5245.

Thank you! It takes all of us to keep each other warm and our community strong.



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm.; toll-free for reporting outages & emergencies, 1-800-WEC-5245.

Triple Storms Cause Late Season Outages; WEC Doubles Down On Resiliency

Co-op increases funding for right of way clearing as storms increase in intensity and frequency

Annie and Dick Dolan are researching generators. From their home on a hill between Topsham and Corinth, they've seen plenty of storms – but recently, they've noticed, the storms are getting worse. "I've lived on this hill for 40 years, and there have never been as many power outages as there have been in the past 12 months. It used to be a couple hours or two; now it's days," observed Annie Dolan. "This last one with the heavy snow – it was scary. Trees were bent right over." The couple went out with an excavator to shake snow off arching birch trees.

Dolan knows the frequent outages aren't due to negligence from her electric cooperative. It's because in recent years storms have increased in frequency and intensity. High winds, heavy snow and ice, and trees falling from outside WEC's rights of way all cause outages. These outage-causing storms are now frighteningly commonplace – especially in Vermont.

According to data from the US Energy Information Administration (EIA), Vermont was one of the top five states hardest hit by outages in

According to the US Energy Information Administration, Vermont was one of the top five states hardest hit by outages. Winter storms are mainly to blame.

2017. A recent EIA report showed that nationally, average outage durations doubled between 2016 and 2017, due primarily to major weather events – and the EIA didn't even include in its data months-long outages in Puerto Rico following Hurricane Maria.

In its analysis of the EIA's report, the website UtilityDive.com noted,

"The states hardest-hit with outages last year were: Maine, Florida, New Hampshire, Georgia and Vermont," and confirmed that for Vermont and our northern New England neighbors, winter storms are to blame for most of the damage.

It's no longer about the Big One

Storms may grow more frequent, yet each is unique. While the first two storms of October and November 2018 ripped through with high winds, the third, Winter Storm Bruce, sat over Vermont dumping wet snow. "That's a record for us," said Operations & Engineering Director Dan Weston about the triple major weather events – October 15-17, November 9-14, and November

continued on page 4



Right of way management coordinator Larry Gilbert captured these tree branches, weighed down by heavy snow after Winter Storm Bruce, making contact with power lines. The storm caused 295 separate outages on WEC lines, at least half of which were due to tree contact.

Whose Woods These Are

By Will Lindner

When biologists, climatologists, and conservationists sound the warning about humanity's detrimental impact on the natural environment, and the species that dwell therein, Washington Electric Cooperative's staff and leadership – and certainly its members – pay attention.

WEC is a rural utility, owned by and serving members who live intimately within the landscape and share it with wildlife of all forms. The Co-op therefore works to minimize the impact of its electric infrastructure, for example by rejecting herbicides to control growth in its rights of way, wrapping utility poles in protective material if they must be set within wetlands, building and rebuilding its system with aesthetics in mind.

And fortunately, we live in a state with high standards (and demanding regulations) for environmental protection and stewardship. Our tourist and recreational industries, and our sense of ourselves as Vermonters, depend on such measures, and they have indeed helped keep our state beautiful – almost pristine in its appearance.

But Susan Morse, founder and science director of the educational and advocacy nonprofit Keeping Track, warns that looks can be deceiving.

"Many people in Vermont have a superficial understanding," she says. "You can drive along our roads and look out the window at the mountains and see a lot of woods, and unless you know better, think 'This is great! There's lots of room for wildlife!'"

continued on page 6

Washington Electric Cooperative
East Montpelier, VT 05651

Inside

WEC met Vermont's Renewable Energy Standard goals. p. 2

What were the effects of those late-season storms? See the Fourth Quarter 2018 Storm Index. p. 6

Which Vermont species most need conserving? See the p. 7 sidebar to Will Lindner's story "Whose Woods These Are."

Heat pump hot water heater: Switching to one could save you cash and carbon. The Energy Coach explains. p. 7

The Cooperative Difference: In WEC's 80th year, President Barry Bernstein considers what makes the Co-op so special. P. 8.



A fallen tree, resting on WEC's wires and blocking the road, collects snow during Winter Storm Bruce. See p. 2 for "Where's WEC," a roundup of areas ROW crews are working to keep clear of "danger trees" like this one and improve members' reliability during storms.

Co-op Meets State Renewable Energy Standard Goals

WEC surpassed state goals providing renewable energy and reducing its members' fossil fuel use for the year 2017. The announcement from the Public Utility Commission (PUC), which came out in late 2018, came after the commission completed a review of state electric utilities' filings to show compliance with Vermont's Renewable Energy Standard (RES). WEC and all of Vermont's electric distribution utilities met RES goals.

The RES is mandated through Act 56, which was passed by the Vermont legislature in 2015. Act 56 formalizes Vermont's goal to use 90 percent renewable power, in all forms of energy use, by 2050. The RES creates incentives and markers to guide electric utilities toward this goal. Electric utilities must increase the amount of their power that

comes from renewable sources – not a problem for the Co-op, since its power mix already comes from 100 percent renewable sources. They must also help electric consumers reduce carbon use from non-electric energy sources, like gasoline and fuel oil, in their households or businesses. The requirements for each tier increase annually until 2032. It is important WEC meets the annual requirements, as the order carries penalties for utilities that fail to meet the levels set out by lawmakers.

Utilities are required to invest in "energy transformation projects," supporting their consumers in switching from fossil fuel use in transportation and home heating in favor of renewable options. WEC accomplished this through innovative partnerships to install electric vehicle

How WEC cuts fossil fuel use:

- 100 percent renewable power supply
- Met the state's Renewable Energy Standard goals
- Started the Button Up program to help all members improve efficiency and reduce carbon use
- For more info: 802-223-5245 or 800-932-5245

charging stations throughout its service area. It also launched the Button Up incentive program, giving members cash for home weatherization projects or to purchase qualifying energy-efficient home appliances and, new this past year, electric vehicles.

"I'm proud WEC is already 100 percent renewable, and I'm proud we met the RES goals for 2017," said General Manager Patty Richards. "As a

democratic cooperative, we've had the freedom to listen to what our members want and to innovate. Our members know best what they need, so we help them along by providing funds to help people become more efficient in the way that's best for them."

Because the state fines utilities that don't meet annual requirements, Richards says it's important for members to continue using the Button Up program as a source of capital for home efficiency improvements. "We'd rather give cash to our members than pay funds to the state in penalties and fines. For every member who wants to reduce their carbon footprint but could use some help to make it happen, call us. That's what Button Up is for." That number is 802-223-5245 or 800-932-5245.

Where's WEC?

Roundup of where Right of Way crews are currently working to keep your power reliable:

- East Roxbury, Northfield, and Williamsstown
- Moretown substation into Worcester
- Tunbridge, Potash Rd.
- Transmission line to Walden substation



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., 40 Church Street, P.O. Box 8, East Montpelier, Vermont 05651. The cost of this publication is \$4.77, 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.

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Editorial Committee

Patty Richards Donald Douglas Jean Hamilton Anne Reed Katie Titterton

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 Dawn Johnson, at 224-2332.

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WEC In the News

Vermont Public Radio's John Dillon covered the reasons behind WEC's 5.49 percent rate increase: a rise in renewables, and a crash in the Renewable Energy Credit (REC) market.

Find his story "Vagaries Of The Energy Market: A Boom In Renewables Leads To Higher Rates For Co-op" on vpr.net.

For more information: "WEC Announces Rate Increase in 2019 at Community Meeting," *Co-op Currents*, December 2018

Participate in Democracy: Run for a Seat on WEC's Board of Directors

Are you looking for a meaningful way to serve your community?

Are you interested in Vermont's energy landscape?

What do you envision for the future of your Co-op?

Consider running for a seat on WEC's Board of Directors. All Co-op members are eligible to run. Contact WEC Administrative Assistant Dawn Johnson at 802-224-2332 to request a candidate's packet. The deadline to submit all candidacy materials is February 9.

Every year elections are held for three of WEC's nine board seats. In 2019, incumbent directors Barry Bernstein, Roy Folsom, and Anne Reed seek re-election.

WEC benefits tremendously from its directors' service, commitment, and vision. The Co-op also knows democracy works best when we all participate. If you've been thinking about getting involved, call for a packet and start collecting signatures.

Got something to say?

Letter to the editor, comment, or a story tip? Drop us a line at currents@wec.coop or Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651, Attn: Co-op Currents.



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President's Message

Capital Credit Refunds Mitigate Rate Increases; FEMA Grant and Increased ROW Funding to Improve Reliability

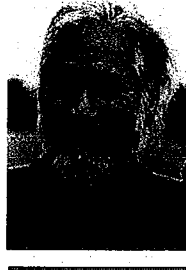
by Barry Bernstein

As we enter 2019, I want to share with you some thoughts about this past year and this new year. 2019 marks the 80th anniversary of our electric Co-op, and a history we should all be proud of. Thanks to the vision and efforts of WEC's founders and early adopters, we have electricity at our homes, farms, towns, schools, and small businesses.

I recently received emails from a couple of our consumer-members concerned about our rate increases effective July 1, 2018 (3.72 percent), and January 1, 2019 (5.49 percent), both approved by the Vermont Public Utility Commission (PUC). Your Board of Directors - elected by members, and members ourselves - do not take raising rates lightly. Our fiduciary responsibility, as a member-owned electric co-op, is to recover enough money in our rates to make sure that we are able to provide you with safe, reliable energy service. As part of that responsibility we must also collect enough revenue to pay our mortgage obligations.

Any excess is returned to our members in the form of capital credits on our November bills each year. If you look at our rate increases since 1998, you can see that WEC rate increases have on average stayed close to the cost of inflation, or approximately 2.4 percent per year over 21 years.

If you take into account our cooperative practice of distributing capital credit refunds back to our members, the picture changes a little. The cooperative difference is that excess margins, or revenue, are returned to each member over time,



If you look at our rate increases since 1998, you can see that WEC rate increases have on average stayed close to the cost of inflation, or approximately 2.4 percent per year over 21 years. WEC has distributed 6,793,408 dollars in capital credit refunds to our consumer-members over the same 21-year period. These refunds effectively reduce your annual electric bill, which helps to offset rate increases. In an investor-owned electric utility, that money goes to stockholders - not consumer ratepayers.

- Barry Bernstein

and even those who leave the Co-op still receive refund checks from their time on our lines. Everyone's refunds are different. Refunds are distributed to members who were on the Co-op lines during years the credits were allocated, and are tied to how much electricity each member purchased.

WEC has distributed 6,793,408 dollars in capital credit refunds to our consumer-members over the same 21-year period. These refunds effectively reduce your annual electric bill, which helps to offset rate increases. In an investor-owned electric utility, that money goes to stockholders - not consumer ratepayers.

2019

Your WEC Board of Directors just approved our 2019 budget, which would not require any additional rate increase for the year. Our Coventry generating plant has finished additional improvements, along with engine rebuilds on three of our five engines, and we project our best and cleanest kWh output in the plant's

15-year history. We expect that recent improvements on some generation facilities in the northern part of the state will also somewhat lessen pressure on regional transmission costs.

We have added additional funds for increased right of way (ROW) clearing this year, which we're directing to areas that have experienced the longest frequency and duration of outages. We received approval for a 187,000 dollar Hazard Mitigation grant from FEMA (Federal Emergency Management Agency) to make our Moretown-Fayston feeder line more resilient to outages, by reducing the span between poles from 600 feet to less than 300 feet. We will receive 75 percent of the approved amount. We also just finished aggressive ROW cutting in the Loop Road area of the Northfield feeder and along the Moretown-Fayston feeder, and have just started cutting on the Middlesex line.

Proposed Rate Design

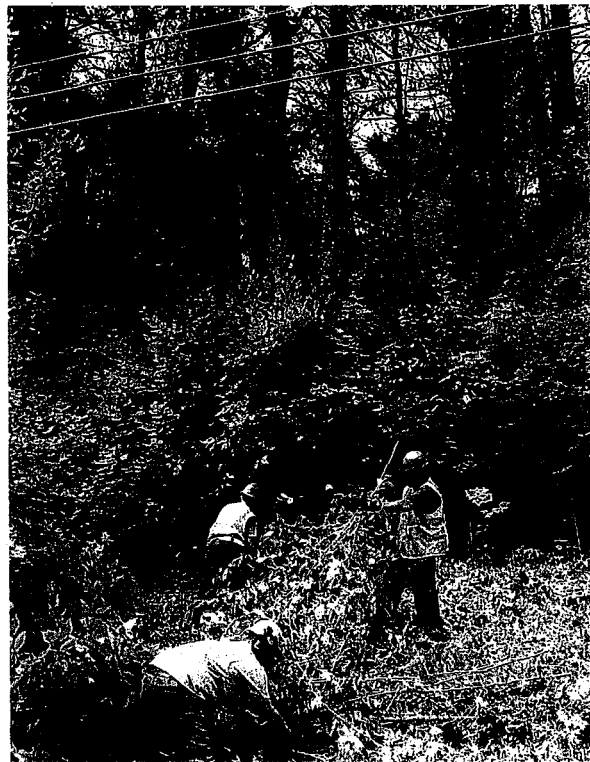
We will be filing our new rate design application in the next few months. Approval of any new design won't come until later in the year, after the PUC and Department of Public Service (DPS) have opened an investigation and had a public hearing. As I have said previously, this process has not been easy - significant change never is. Our members have been providing input over the past two years. We have been listening to your concerns and have kept a lower priced 100 kWh initial block.

The success of our efforts over the last 30 years to promote conservation and efficiency, along with a significant increase in net metering installations in our territory, has led to flat and decreasing kWh sales. This makes it necessary to collect more of our fixed costs in our base monthly service charge.

The other factors necessitating a change to our rate design are Vermont's

commitment to reduce our state's dependency on fossil fuels by 2050, and the state mandate that electric co-ops, municipalities, and Enervig-GMP take a leadership role by meeting increasing carbon reduction milestones. WEC strongly supports these efforts to address climate change. At WEC, we expect to face increasing costs from more extreme storms and winds, along with the costly removal of ash trees at risk from the emerald ash borer. Between the ash borer and the threat of danger trees to lines, we estimate that we will have to increase our ROW budget by several hundred thousand dollars over the next few years if we are going to maintain and improve reliability and combat climate change.

I share this not to alarm our members, but to let you know we are paying close attention to the issues that face our Co-op and our membership. We hear you and are here for you.



Tree crews working on roadside lines clear away brush and undergrowth. As WEC braces for stronger, more frequent storms and the emerald ash borer, it's increased funding for ROW clearing. Currently, crews are clearing around lines that saw multiple outages during the major storms of October, November, and December of 2018. All the work is done by hand: WEC uses no herbicides on its rights of way.

Did You Know?

Over the past 21 years, WEC's rates have increased an average of 2.4 percent each year. That's about even with the national inflation rate over the same period of time.



Triple Storms

continued from page 1

26-December 5.

Even so, Weston cautioned away from thinking of each new major storm as the Big One, because storm records are quick to be re-broken. "Our membership made it clear to me they want improved service reliability," he said. He recalled a conversation with a member who told Weston that everyone knows climate change is making weather more severe, and what he wanted to know was, what's the Co-op doing to prepare for it?

"We've been more than aware for four years that storms are getting tougher," said Weston. "The answer is simple. We need to clean up our rights of way," — the areas around power lines the Co-op is responsible for keeping clear.

WEC's Board of Directors agreed with Weston's conclusion. In 2019, WEC is allocating an additional 100,000 dollars to right of way work. "We're going from 850,000 to 950,000 dollars. We're increasing the budget significantly," said Richards.

How right of way work prevents outages

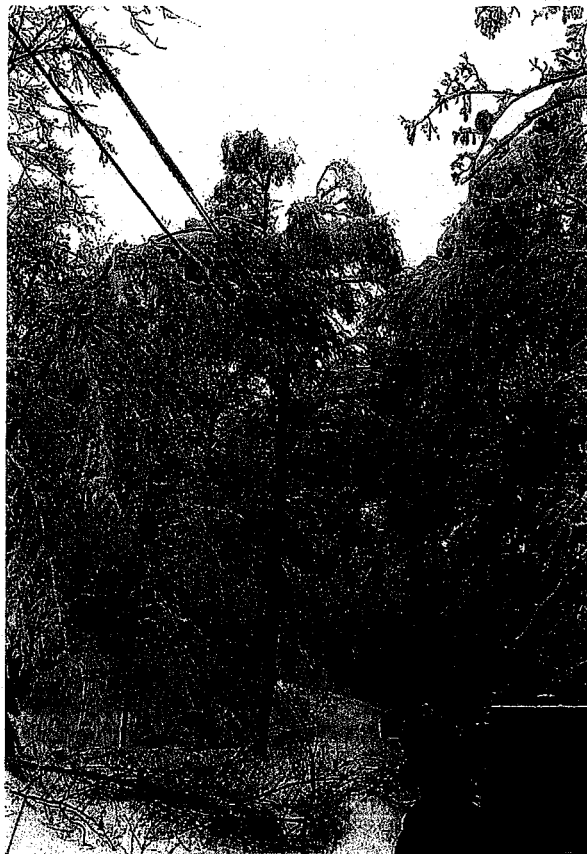
Winter Storm Bruce caused 295 separate outages on WEC lines. The good and bad news is: more than half of those outages did not involve a broken wire. That's good because they were relatively quick, easy, and inexpensive to repair. But repair still takes a long time, and those outages were preventable.

An outage with no broken line is often caused by a tree making contact with the lines. As heavy snow weighs down branches, some bend into the right of way. When a falling tree or branch brushes a line, equipment called an oil circuit recloser, installed on each of WEC's lines, causes the line to power off as contact is made. In most cases, the tree or branch continues falling without actually breaking the line, and the recloser allows the line to turn back on. When your lights flicker off and on, that's usually what's happened.

But if the tree or branch keeps contact with the line, the recloser will attempt to restore power three times and then locks out. This safety measure keeps the wire from burning through. The system reports a fault on the line to WEC's operations team, and a line crew goes out to clear away the branch and restore power.

This can happen at any point on a line. Weston said that a line that starts at a substation on high ground can travel several miles through open fields, evergreen forests, and other terrain before it reaches the smaller distribution lines that connect to members' homes. A member at lower elevation might be baffled by flickering lights, he explained, but it often happens that their power is affected by its route through snow-covered trees in an uphill microclimate many miles away.

Weston said that storm analysis showed 10 to 15 lines where oil circuit



WEC crews assess heavy snow bending trees over power lines. Winter Storm Bruce caused heavy snow loads on trees throughout WEC's rights of way, causing 295 separate outages, affecting about 28 percent of WEC's service area over the course of the storm.

reclosers locked out power during each weather event. "We're going after those lines first, because they're common to all three storms, indicating we have a tree contact problem. That's where we've already started, and that's where we'll push in the first and second quarter of 2019," he said. By mid-December the line and tree crews had already critiqued the patterns and were in the field cutting back trees in those lines' rights of way.

This is the work additional right of way funding allows WEC to do: figure out which lines are most vulnerable to outages, and address them. In

windstorms, it's often large pines outside the right of way that fall through and break wires. In heavy snow, it's bending branches. Addressing both tree issues is essential to preventing outages — along with the regular flat-cutting and trimming tree crews do throughout the year on WEC's rights of way. And all this is done by hand, as WEC does not use herbicides on its rights of way and is the only utility in the state with this policy.

Hardening the system

Including the three late season storms, 2018 brought Vermont six

storms that the state Public Utilities Commission (PUC) said qualified as major weather events. These events affect electric utilities statewide, so for each utility's reliability ratings, the PUC allows exemptions from outages that occur under these events. The idea is, catastrophic weather is different from day to day reliability.

But catastrophic weather, while not quite day to day, still happens far more often than it used to. "The key thing is, there were few months without a major weather event occurring," pointed out Weston, who said storms January 3-5, April 4-8, and May 4-8 also qualified as major storms. In fact, the April storm and Winter Storm Bruce were damaging enough to trigger FEMA funding (WEC receives reimbursement from the federal government for some large and severe storms). WEC also incurred damage from a June 18 windstorm that was too localized to qualify as a major weather event.

"I want people to know: the weather is changing and it's really impacting utilities. It's not just WEC, it's all utilities. WEC, GMP, the national grid," said Richards. When a major weather event occurs in the state, she said, it's important for WEC members to know they aren't the only ones enduring long outages. WEC works just as hard to restore power as GMP, the largest electric utility in the state, she pointed out, "and we're usually back online first. Before their last customer is restored, our last member is restored," despite the Co-op's rural lines and difficult terrain.

For staff, restoring power and assisting members is hard work, but part of the job. Fatigue occurs, but Richards says staff are trained for this work. She allowed that after each major event, it takes about a week to recover physically — let alone mentally, and let alone the task list that keeps accumulating while repair is underway.

But in the intensity of storm work, a great team can shine. "We rise to the occasion," she said. Staff grow closer over long days repairing faults and assisting members, she said, and somehow manage to have fun, too. So Richards supports her tired, hungry, hardworking staff as much as she can, but she doesn't worry about them. What she does worry about, she said frankly, is "our members' perception. I want them to be confident that WEC is ready: we understand this, we're hardening the system as much as we can."

"Hardening the system" is a utility term for preventing and protecting against outages. Richards and Weston say that with the board's additional investment in right of way clearing, along with years of work to improve outage response time and address tree and brush clearing, WEC is doing its best to keep its power reliable even in the face of major weather events.

But there's only so much the Co-op can do. And that's why Richards said, whether we're talking utilities or households, Vermont or beyond, "This affects everyone. We all have to be prepared."

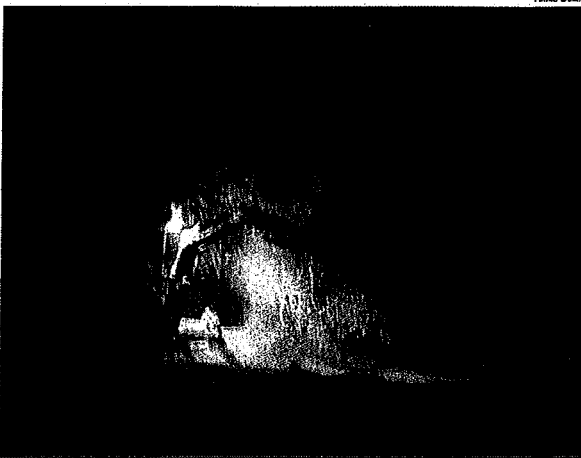
Be Prepared

It's essential to be ready if there's a power outage. Here's what you need to know:

- Call the Co-op to report the outage: 802-223-5245 or 800-932-5245.
- Keep an emergency kit on hand with basic needs: flashlight, warm clothes, etc.
- Store a few jugs of water and cans of nonperishable food.
- To find emergency shelter or other needs during an outage, call 211, the state's emergency resource line.
- If you rely on power, consider a backup source. For help determining which backup generation is best for your situation, contact WEC's Energy Coach at energycoach@wec.coop
- For other useful tips, visit <http://www.washingtonelectric.coop/energy-services-safety/what-to-do-if-the-power-goes-out/>



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm; toll-free for reporting outages & emergencies, 1-800-WEC-5245.



On Annie and Dick Dolan's property on the Topsham/Corinth line, heavy snow from Winter Storm Bruce caused birches to bend in half. Above, the Dolans use an excavator to shake snow off their trees. In WEC's rights of way, heavy snow loads caused tree branches to bend over and touch the wires, causing outages. To improve reliability, the Co-op is cutting back trees in the rights of way of lines with tree contact related outages during the three storms that hit in late 2018.

"We all need to be prepared"

That's why the Dolans are doing generator research. They have wood heat, and backup kerosene lamps, but they need power for their well. "It doesn't matter what time of year. You have to have water!" said Annie Dolan.

80 Years of WEC: Moments in Cooperative Electricity History

2019 marks WEC's 80th anniversary!

To celebrate, all year we'll spotlight important events and people throughout WEC's history.

Got a story? Remember when? Let us know!

Send a message to currents@wec.coop, drop by the office, or send to Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651. Attn: Co-op Currents



Fourth Quarter 2018 Storm Index

October 15-17:

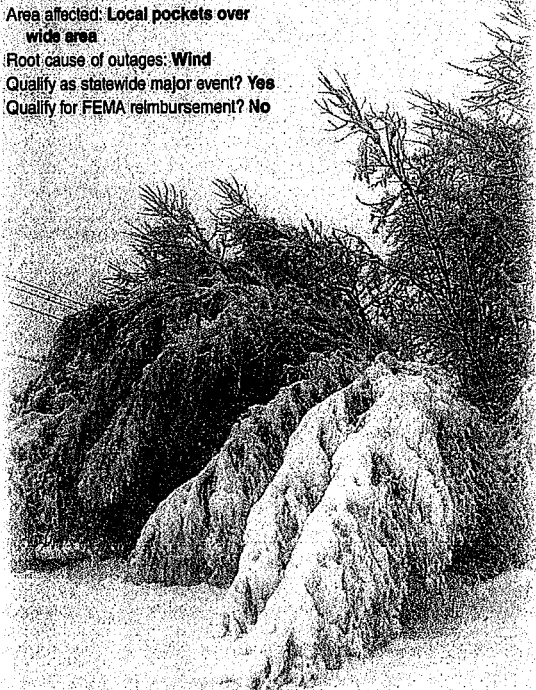
Members affected: 2,492
Lines affected: 72 percent
Separate repair sites: 70
Broken poles: 2
Broken lines: 24
Area affected: **Localized**
Root cause of outages: **Wind**
Qualify as statewide major event? **Yes**
Qualify for FEMA reimbursement? **No**

November 9-14:

Members affected: 5,255
Lines affected: 18.6 percent
Separate repair sites: 179
Broken poles: 4
Broken lines: 67
Area affected: **Local pockets over wide area**
Root cause of outages: **Wind**
Qualify as statewide major event? **Yes**
Qualify for FEMA reimbursement? **No**

November 26 – December 5:

Members affected: 14,624
(some members experienced multiple outages)
Lines affected: 28 percent
Separate repair sites: 295
Broken poles: 6
Broken lines: 43
Area affected: **Widespread**
(Winter Storm Bruce)
Root cause of outages: **Wet snow**
Qualify as statewide major event? **Yes**
Qualify for FEMA reimbursement? **Yes**



trouble or hardship, you absolutely need to have a backup plan in case of an extended outage," she said. "Whether that's a generator or a place you can go, I can't stress it enough.

Have a plan. The Co-op is doing all we can to prevent outages. But we can't stop the weather. We all need to be prepared." 

Public Utility Commission Approves 5.49 Percent Rate Increase

On December 17, the PUC issued an order approving WEC's proposed 5.49 percent rate increase, effective January 1 of this year. The increase was driven almost entirely by one issue: falling revenues from the sale of renewable energy credits (RECs).

General Manager Patty Richards said she shares frustrations with members concerned about rising rates. "No one likes rate increases, but this was unavoidable. The collapse in the REC market is beyond our control," she said. "Our best strategy is to use a portfolio approach to mitigate the decline in revenue and this has helped minimize the impact to WEC members."

The PUC stated that in WEC's next filing, the Co-op should explain how it plans to keep the falling REC market from leading to future rate increases. "We are happy to explain what we are doing and how the portfolio approach prevented a steeper increase, and hopefully the REC market will recover," Richards said. "We plan to continue with portfolio management, as it's proven to cushion the impact of falling REC prices."

In the meantime, she said, WEC will continue to run a lean and efficient operation, working to keep costs and expenses as low as possible. Leadership will continue to look for ways to stabilize revenues and expenses, mindful of all possible impacts to members.



Whose Woods

continued from page 1

"But the fact is we're losing land at an alarming rate, acre by acre. We can no longer rest assured that because we see woods and bobcats and deer, things are fine. Over the next couple decades, at the rate we're losing land, things will not be fine in Vermont."

Not fine, she means, for great portions of the state's wildlife. Many species are already in trouble. And because of the interconnectivity between a healthy and diverse wildlife population and our own wellbeing, the loss of species and the habitat that supports them presages a decline for the human residents of this state, as well.

This should be especially concerning for rural Vermonters, and in central Vermont that's apt to be members of Washington Electric Cooperative. It is they who, mostly by choice, live amid the mammals, the birds, the reptiles and amphibians, and the estimated 30,000 species of invertebrates that populate our state. Therefore, it's these rural Vermonters whose fields and woodlands will become emptier as wildlife declines – or better, who proactively amend their land-use practices to conserve them.

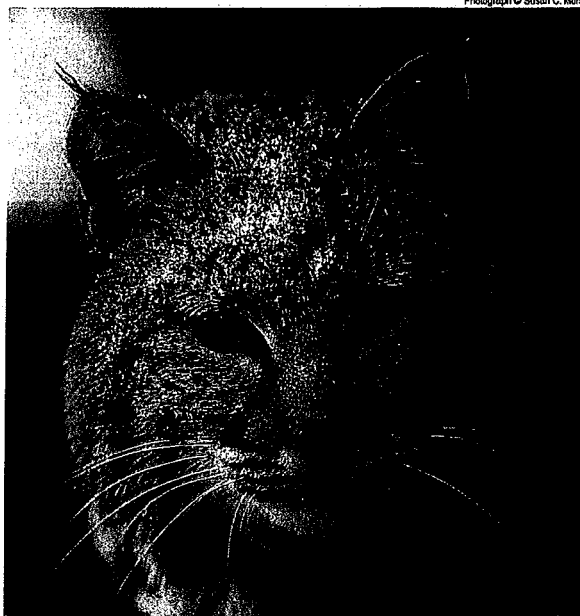
The state's response

Vermont's wildlife and the diverse habitats that support our fellow creatures have received a lot of attention over the past 15 years or so. This is partly because threats have become increasingly clear, like habitat fragmentation and parasites. We've seen some invasive species encroach, some native species dwindle. And climate change poses threats both known and unknown.

Vermont's Department of Fish & Wildlife and other branches of government, along with nonprofits like Keeping Track and The Nature Conservancy, have vigorously engaged with these issues. Fish & Wildlife coordinated an exhaustive, multi-agency and multi-organization study that in 2005 produced a Wildlife Action Plan (WAP) documenting habitat conditions and creating lists of more than 300 "species of greatest conservation need" (SGCN). It defined actions that agencies, organizations, and individuals could take to support recovery of the SGCNs.

The WAP also, for encouragement, celebrated Vermont's past successes in reintroducing historical species that had vanished, like white-tailed deer, wild turkey, moose, and osprey. The Departments of Fish & Wildlife and Forest, Parks & Recreation also collaborated in an extraordinarily successful campaign to bolster Vermont's dwindling fisher population, importing and resettling the aggressive carnivores from Maine and other states. The 2005 WAP was updated in 2015.

A similar accomplishment, also headed up by Fish & Wildlife, with support from the Vermont Land Trust, The Nature Conservancy, and other groups, was the "Vermont Conservation Design (Maintaining and Enhancing an



This snowy faced bobcat was photographed by Keeping Track founder and science director Sue Morse. As wild areas become more fragmented, some wild creatures are spotted more frequently near homes and developments.

Ecologically Functioning Landscape)," published in December 2015.

"Much of Vermont is dominated by natural systems and we have a lot of opportunity to conserve biodiversity and facilitate climate change adaptation," the VCD stated. It mapped and documented existing supportive natural features like interior forest blocks, forest connectivity blocks, surface waters, riparian corridors, and "landscape diversity blocks." Putting these assets to their best use constituted a "design," the study contended, for salvaging and reinforcing the state's natural communities, and for preparing our diverse landscape and its equally diverse inhabitants for the climate changes to come.

Yet the VCD dutifully noted an additional feature of Vermont's landscape that constantly presents

challenges: "a lot of roads and development."

Eric Sorenson, an ecologist with the Department of Fish & Wildlife (and a WEC member), was a principal contributor to the project. "The Vermont Conservation Design," he says, "was one of the most rewarding things I've done in my career with Fish & Wildlife. It gets us to this vision of what an ecologically functioning landscape will be, and comes up with a plan I have a lot of confidence in."

But if his tone is more optimistic than the concerns overtly voiced by Sue Morse of Keeping Track, Sorenson is far from complacent – for the VCD, though a well-considered prescription for recovery and resilience, is not a state mandate.

"The huge question is, how do we make it happen?" he says. "Do we want a place where wildlife moves freely,

and rivers flow cleanly, where we can recreate in the woods, and where we can [harvest forestry products] sustainably? Or do we want it to pass along the way that is the obvious direction we see as a pattern if we look south to (places like) eastern Massachusetts and southern New Hampshire?"

"Without a conscious choice that we want to keep this functional landscape," Sorenson says, "we won't."

The shape of our landscape

When Morse talks about "losing land," it's not suburban sprawl she's describing, like Taft Corners in Williston and the Route 7 corridor in Rutland. It's "the house in the woods, or a new cluster of houses off the road. These things seem benign on a one-by-one basis," she says. "But the cumulative effects are deadly."

Such fragmentation may be almost unnoticeable to us, but for many wild species, it interrupts contiguous supportive habitat. It undoubtedly contributed to the long list of "species of greatest conservation need" in the Wildlife Action Plan.

However, fragmentation is just part of the story. Jim Shallow, director of strategic conservation initiatives for the Vermont chapter of The Nature Conservancy, explains that Vermont's forests have lost the complexity necessary for habitat and for resiliency as climate change advances.

"It's an artifact of past management," he says, pointing to Vermont's well-known history of clear-cuts long ago, which were largely for grazing purposes (sheep), and for the small hillside farms whose outlines are traced by old stone walls barely discernible in what now are woods. Parcelization – comparatively small forest blocks owned and managed individually by a multitude of landowners – only adds to the problem, as they diminish the availability of deep, dense forests controlled only by the whims of nature.

It's true that one of the real strengths of our landscape, cited in both the Wildlife Action Plan and the Vermont Conservation Design, is that trees have regrown on those once bare hills, to the extent that the state is 78 percent forested.

"But it's a largely even-aged forest," says Shallow, "by-and-large a middle-aged forest that is structurally simplified. There are a bunch of species, like marten, that need older spruce forests that are structurally complex, where you have big standing trees and big dead trees on the ground."

Birds in New England, he adds, do best in forests with multiple layers, which he describes as "a good understory, a thick mid-story, and a canopy that's not completely closed. What we need," Shallow concludes, "is messiness – a messy, complex forest."

And like Eric Sorenson of Fish & Wildlife, he says that because Vermont's landscape is 80 percent privately owned, it will ultimately be up to Vermonters to bring this about.

"We should be encouraging people

How WEC Works to Protect Wild Spaces

Electric utilities aren't usually known for keeping ecologically small footprints. But WEC, our electric cooperative, has an environmental mission. WEC works every day to protect our priceless landscape, through climate advocacy and on the ground.

- 100 percent of WEC power comes from renewable sources.
- WEC's policy, unique in Vermont, is to use no herbicides on its rights of way.
- While poles are treated with the non-migrating pesticide pentachlorophenol, WEC takes extra steps to place poles away from wetlands, and wraps them when it is unavoidable.
- Whenever possible, WEC re-sites poles to be closer to the road and out of forested areas.
- WEC helps members reduce their fossil fuel use, giving cash to help pay for energy efficient electric appliances and electric vehicles.
- WEC helps members use all forms of energy more efficiently, giving cash to help pay for home weatherization.
- WEC is the first utility in Vermont to make a climate change policy statement.



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Whose Woods

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to think about the whole landscape, first, and where their property sits in that landscape, and what's going on in that landscape," Shallow explains.

The state's response to the VCD includes helping landowners learn about and prioritize habitat in the management of their property. In 2010, the Department of Forests, Parks, and Recreation modified the Use Value Appraisal program, better known as Current Use, by adding ecologically significant treatment areas (ESTAs) to the approved management practices available to forestland owners. Thousands of Vermonters are enrolled in the program, which provides property tax relief in return for professionally guided forest-management practices that have strengthened and supported Vermont's valuable forest-products industry.

With ESTAs, Sorenson says, people can employ practices that protect significant natural communities, rare species, vernal pools, and habitat. "You don't have to manage for silviculture alone," he says. "People can manage for wildlife. And there can be a lot of overlap in those purposes."

Not all species are suffering, or impaired by interruptions of their corridors across the landscape. Vermonters know there is no shortage of deer, and that black bears show up even in settled neighborhoods. Sue

Morse says bobcats are appearing more abundantly in places like Shelburne, where large suburban yards blend into surrounding meadows, wetlands, and the brushy edge of woodlands. The same is true of the eastern cottontail.

"Their range is expanding," she says. "I can't say exactly why. But sometimes these animals figure out that they're

safer closer to people than in the wild, because there are fewer predators."

On the whole, however, Morse is convinced that humans' effects upon the landscape have been profoundly detrimental to wildlife.

"Without a conscious choice that we want to keep this functional landscape, we won't."

— Eric Sorenson

Before we sleep

This inevitably presents questions about what to do about it. Interestingly, and certainly unintentionally, Robert Frost's famous poem, "Stopping by Woods on a Snowy Evening," presents an option that, nearly a century later, advocates of sustainable land-use practices call "Smart Growth."

"Whose woods these are I think I know.

His house is in the village, though..."

More radically, in 2016, the noted naturalist, biologist, and author E.O. Wilson published a book titled *Half Earth: Our Planet's Fight for Life*, which called for "a grand retreat" by the human race from 50 percent of the planet, allowing biodiversity to thrive and re-establish itself. Though Wilson is perfectly serious, the solution he proposes would, for most people, be more aspirational than literal — a call to

be more conscious, and conscientious, about our land-use practices, to leave more places undisturbed, and to act more in concert with our neighbors making choices about how and whether to inhabit the landscape.

"These are hard questions," Morse says. "At some point we have to draw the line in the sand. Where do we agree to stay out of?" Clearly, as we strive to solve these problems, we have miles to go before we sleep. 

ENERGY COACH

Does A Heat Pump Hot Water Heater Make Sense For You?



- Do you currently use propane to heat your hot water?
- Is your household two people or fewer?

If yes: switching to a heat pump hot water heater could save you money and reduce your carbon footprint.

Efficiency Vermont offers 300-500 dollar incentives on heat pump hot water heaters. There are dozens of qualifying options to choose from. And if you're replacing a fossil fuel-burning water heater, WEC's Button Up program will add another 250 dollar incentive.

Combined, these incentives could save you between 30 to 70 percent off the cost of the device.

To learn more, contact the Energy Coach: 802-224-2329 / energyccoach@wec.coop

Which Species Are in Greatest Need of Conservation?

The Wildlife Action Plan (WAP) coordinated by Vermont Fish & Wildlife identified many Vermont species under threat. More than a third of Vermont fish species require conservation help. The list includes:

- **Birds** — 57 out of 268 Vermont bird species, including the American bittern, purple martin, Bicknell's thrush, spruce grouse, and whippoorwill
- **Fish** — 33 of 94 species, including the lake sturgeon, arctic char, American eel, and channel darter
- **Mammals** — 33 of 58 Vermont species, including several bats, shrews, and voles, the American marten, and the lynx
- **Amphibians and reptiles** — 11 out of 40 known species, including the Jefferson salamander, Fowler's toad, both the spotted turtle and wood turtle, the eastern ratsnake, and the timber rattlesnake
- **Invertebrates** — Scientists believe there are thousands of invertebrate species in Vermont that have not yet been identified or catalogued. Working, therefore, from an estimate of 30,000 total species in the state, these are some that are included on the SGCN list: 9 species of bumble bee (including the rusty-patched bumble bee, the yellow bumble bee, and the "confusing" bumble bee); 7 tiger beetles (including the Boulder-beach tiger beetle and the hairy-necked tiger beetle), and 14 butterflies (among them the monarch and tawny emperor) categorized in three habitat groups: grasslands, hardwood forests, and wetlands. Freshwater snails, mussels, and crustaceans are also listed.
- **Pond- and stream-dwelling odonates** (carnivorous insects, including dragonflies), various freshwater snails and mussels, and crustaceans — crayfish and amphipods — are also listed.

Get to Know Your WEC

Have you ever wondered who that is fixing the line up your road, or who you spoke to when you called in about an outage or a bill? Co-op Currents profiles Co-op staff in this feature.

Jason Smith, Construction Foreman

What he does

Jason Smith is not new to WEC. In fact, he's been working on WEC lines for 13 years. Earlier in 2018, Jason was promoted from First Class Lineman to Construction Foreman. In this new role, he said, he's now "overseeing the jobs, planning them out, doing the paperwork."

Jason got started as a lineworker just because he wanted to try something new. He'd been working at the wood furnace makers Sam Daniels Co. in Montpelier, when "one of the old foremen that used to work here told me there was an opening." He got the job and has been at WEC ever since.

A central Vermont native, Jason grew up in Hardwick. He lives in Woodbury now with his wife and three kids: his oldest son is nine, and the twins, a boy and a girl, are seven. The family also has two labs, Decoy and Tonka.

When he's not at work, Jason is probably with his family, and they're probably outside. "I do outdoor stuff all the time with them," he said. He loves to fish, go four-wheeling, and spend time at their camp on East Long Pond.



The Cooperative Difference

WEC's board president reflects on the Co-op's 80-year history, why he got involved in cooperative electricity 46 years ago, and why he's still working for WEC's membership

By Barry Bernstein

2019 marks 80 years Washington Electric Co-op has been providing electricity to Central Vermonters. We're also celebrating a very rich history of individual and cooperative leadership, bravery, and integrity. 80 years ago, Vermonters joined together to initially secure an essential necessity — electricity — on behalf of our rural farms, homes, and businesses, when they were denied service by investor-owned electric utilities. Today, we continue that cooperative vision and speak out, when warranted, on behalf of our members, and all Vermont ratepayers and citizens.

Over this next year we plan to highlight some of these people, events, and issues. We're talking about what I call the "Cooperative Difference," where decisions are made based on people's needs and environmental responsibility, not based on shareholder profits. At the core of the Cooperative Difference is our integrity.

When I got involved

Ever since I moved to Vermont in 1971, I've received electricity from WEC. I'd had a couple years' exposure to cooperatives when I worked in England, but really first became

involved through the food co-op movement in Vermont.

Right after the oil embargo of 1973, and a year after the Vermont Yankee nuclear power plant came online, I read a notice about some WEC members who were concerned about these events and were meeting to discuss them. I thought I would go listen. That was the beginning of my active involvement in our Co-op.

They were asking the Co-op's leadership at the time for financial information; they wanted to discuss looking at alternative energy as a resource, and were concerned about nuclear power. I thought the group's requests were reasonable, and signed on. WEC had oil and nuclear in its portfolio. Vermont Yankee was running below 50 percent capacity because it had issues with faulty fuel rods. And we were all wondering what happens when the oil taps shut off.

Unfortunately, the Co-op board and management reacted defensively to members asking questions. I found that though not everyone was vocal about it, members were paying attention, and more and more of us opposed the Co-op's reliance on unsustainable fuel sources and its leadership's lack of transparency. A cooperative is a democratic organization, so since we didn't like what was happening, we decided to work to change it.

In 1976, three new members were elected to the Co-op board. We made some progress, but we met a lot of resistance, and our candidates were defeated after their first three-year term. However, slowly, over the next several years, the makeup of the board started to change.

In 1985, that original group of concerned members reconvened. This time, the issues were cost overruns at the Wrightsville dam site, and moving the whole direction of the Co-op away from nuclear power and toward energy efficiency. At that point, the Co-op had purchased interest in the Seabrook nuclear power plant, which was also experiencing significant cost overruns and delays in coming online.

We'd learned from the 1970s and reached out to more members to build a stronger coalition. It was an intense period for the Co-op. In 1985, when the coop had about 8,000 members, the Co-op had its highest election turnout, with almost 2,500 members voting at Annual Meeting. Our slate of opposition candidates lost by less than one percent of the vote.

Then we started to gain seats each year. By 1990, opposition members gained a majority, with five seats on the board. We replaced the manager and made a strong commitment to energy efficiency and transparency. We avoided bankruptcy by getting out of the Seabrook contract [1989], got out from Vermont Yankee [2001], built the Coventry landfill gas plant [2005], and contracted for power with Sheffield Wind [2011]. This enabled us to bring our members 100 percent renewable power, generated close to home, at a reasonable price.

I'm proud to say many of the people who opposed us, and who were fearful of the changes we might make, came to respect the hard work we did and the vision and growth of the Co-op.

Past and future

When I came to Vermont, the only thing I knew about electricity was if you flip a switch, the lights go on. As I became more involved and started going back through WEC's history, I learned about how its founders struggled, what hard work it was for the first 150 people the Co-op served. Those people were so determined and brave. At different times, the investor owned utilities were really slanderous with people in rural areas who only wanted to get electric to their homes. These were hardworking farmers and store owners in Vermont's most rural reaches that were left

behind by the initial wave of electric grid development. They were harassed and called socialists because they wanted to form a cooperative to get their electricity.

We can't forget this history. When we wanted to change things in the 1970s, we were called communists. Rather than labeling and dividing each other, I want us all working respectfully and collaboratively to solve Vermont's energy problems. We're at a turning point again. Our climate is rocked by our global dependence on fossil fuel, and resulting weather and other factors are changing our landscape and affecting our reliability. But there are exciting opportunities available to change how we power our lives, to once again set an example to our state and beyond.

Change is hard. It's hard when you're comfortable with the status quo and fear change, and it's hard when you see change that needs to happen but it takes such long, incremental work to accomplish it. Participatory democracy takes work. It can often be unsettling, but it can be so positive. WEC is a democratically controlled institution at a time when there's a tendency to think bigger is better. "Bigger is better" syndrome has disassociated us more and more from things we need to be involved in.

Over the last several decades, some of the best work we've done is evident in our commitment to efficiency, renewable energy, and treating each member equally and equitably. But it's also in the transparency of our operations. There's nothing hidden, and that's why WEC is a valuable jewel. Our decision making is open and transparent, as hard as it is sometimes. Having members elected to the board who are affected by the decisions they make has provided very sincere and committed leadership for dealing with a fast-changing energy environment. I'm proud to serve on a board that's representative of our members and ready to tackle today's most important issues, from reliability to climate change.

I strongly believe that WEC is a positive yardstick for this industry. We've set an example for other electric utilities. We've spoken up when we're uncomfortable with energy issues. After 80 years, it's as important as ever for the Co-op to remain strong, independent, member-controlled, and driven by the integrity and openness that sets us apart. That's right — the Cooperative Difference.

Annual Meeting Call for Photos and Contest

Submit your photos for WEC's 80th Annual Meeting photo contest! Categories are: **Historic WEC** and **WEC Today**.

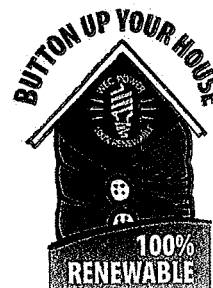
Historic WEC photos can include anything that had to do with life on WEC's lines between 1919 and the present day.

To submit to the **Historic WEC** category, please send high quality scans to currents@wec.coop or mail hard copies to the WEC office: Washington Electric Cooperative, Inc., P.O. Box 8, East Montpelier, VT 05651, Attn: Co-op Currents/Historic WEC. Please include the photographer's name, a description, and your contact information. If you would like your photos returned, please include a self-addressed envelope.

The **WEC Today** category is for digital images taken within WEC's service area over the past few years. Any current member is eligible to enter.

To submit to the **WEC Today** category, please send high resolution digital images to currents@wec.coop. Please include your name and contact information, a description, and identify the picture's location. If you are submitting on behalf of another WEC member, please indicate you have permission to do so. Maximum three photos per photographer, and no previously published photos, please.

Winning photos will be displayed at the Annual Meeting and in Co-op Currents. Judges and prizes to be announced!



To call the Co-op, dial 802-223-5245 Mon - Thur 7:30 am - 5 pm and Fri 7:30 am - 4 pm; toll-free for reporting outages & emergencies, 1-800-WEC-5245.