

# PUC Approves WEC Rate Redesign, With Conditions

*December 2019 filing requires three phase implementation, supports for low-use, low-income members*

**O**n December 19, 2019, Vermont's Public Utility Commission (PUC) issued an order approving WEC's proposal to change its rate structure, with some conditions.

"I'm very pleased with this order. The PUC and DPS [Department of Public Service] listened, and we felt the bulk of our proposal was honored," said General Manager Patty Richards.

The new structure does not increase rates, but instead reallocates how the Co-op recovers revenue it collects from the membership. The purpose of the rate redesign is twofold: first, to encourage beneficial electrification (moving energy use from fossil fuels to renewable sources), and second, to distribute grid costs more equitably among members.

By changing the rate structure, WEC addresses the risks climate change poses to its membership. As Co-op electricity becomes a less expensive energy option, "we're breaking ground among Vermont utilities by changing our rates to incentivize using our 100 percent

**WEC is making significant changes. We're the ones ringing the bell.**  
 — Patty Richards

renewable energy over fossil fuels for heating and transportation," said Richards. "This is an important policy direction. Other utilities are very likely to follow form, and the DPS has started a yearlong workshop on rate design on the heels of this proceeding. They highlight WEC is making significant changes. We're the ones ringing the bell." As members shift their load towards renewable electric energy, WEC will be able to soften the impact of future rate increases.

To accomplish this, WEC proposed raising the residential customer charge to \$25 per month and reduce kWh rates from \$0.1135 to \$0.08 in the low-use block, and from \$0.25341 to \$0.19961 in the tail block.

Months of member input and Board of Directors debate shaped this design. For instance, members strongly encouraged WEC to maintain a low-use block to support low-income members and members who prioritize energy conservation above all. While the Department of Public Service advocated for removing this block

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Will Lindner

*Sometimes the best option is to reconstruct rural and remote rights-of-way where they already are. It wasn't easy to reach these lines in Tunbridge, but the upgrade is easy to see: larger poles and a more resilient system than what had been in place. The old poles shown here still supported telephone lines, waiting to be moved by the telephone company to the new utility poles.*

## Siting Lines and Striking a Balance

*Line relocation plans weigh aesthetics, environmental impact, and reliability*

By Will Lindner

### History and paradox of line placement

**H**ere's an interesting way to look at it. Washington Electric Cooperative owns about 1,322 miles of power line on its electric distribution system, which is enough to stretch from Montpelier to Tuscaloosa, Alabama. The Co-op employs a staff of 14 line workers and 13 technical related staff to maintain, repair, and sometimes to upgrade this system of poles, transformers, substations, and other equipment. With so many miles to cover and so much that needs to be

done, some sections will inevitably fall behind.

That's even more true because most of WEC's power lines aren't on roads at all, but instead stretch across fields, into forests, over gullies, through or around wetlands, and across mountains. Off-road lines make the challenge of upkeep and repair much, much harder, especially during emergency outages.

Lines are located in these hard-to-reach areas because the shortest distance between one farm or rural home to the next lay across the landscape, rather than along a curving country road. The Rural

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**Washington Electric Cooperative**  
 East Montpelier, VT 05651


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**Run for a seat on WEC's board!** Deadlines are approaching. P. 8



*When WEC is able to move the Right of Way close to the roadside, as in this location near Cabot a few years ago, crews can perform maintenance and repairs in a fraction of the time. Read more in Will Lindner's "Siting Lines and Striking a Balance," this page.*

Will Lindner

**President's and General Manager's Message**

# 2020 Vision Means Rates That Encourage Using Clean Electricity Over Fossil Fuels

*Also: the difference between the rate redesign and rate increases, and keeping an eye on broadband*

**Rate Design**

**Patty:** Great news! The PUC [Public Utility Commission] approved our rate design. This is the proposal we filed with the regulators to change how we structure our rates.

I call that out here as we also have a case for a rate increase pending with the PUC as well.

For our rate design, the regulators added a couple of tweaks: they want us to phase it in over two years, but they agree with our overall approach, including keeping the low-use block. They also approved an increased monthly customer charge, but we are going to have to phase it in.

**Barry:** I know this is a significant change in how we charge for the electric service we get as Co-op members. I think it's really important for people to understand we've been so successful over 30 years, since 1990, to get our members' average kilowatt hour use — 489 kWh per month — as low as it is. We've excelled at conservation with the help of energy efficiency. That's a success story.

The reality is now we have to make sure we can collect all our costs for our poles and wires to guarantee our members have power, whether they're full-time users or net meterers. And we have to move toward lowering what we

charge per kilowatt hour to encourage people to switch to electric uses for their energy needs and away from fossil fuel.

**Patty:** That's the whole point of this rate redesign. We are making a switch, changing how we price our renewable energy. We still want people to be efficient, but we want people to think about electrifying all their energy use. Electric vehicles and cold climate heat pumps are on everyone's minds, but there are more advances to come. We want to lower the energy portion of our bill so that as people look at their energy use they will make choices to use electricity where it makes sense, rather than other fossil fuels.

As electric technologies become more and more available, our members are going to want to take advantage of them. In order to do that, it has to make economic sense. So we have to be proactive and offer lower rates to make our power an attractive choice for our members.

We're not just talking electric vehicles here, but also electric lawnmowers, leaf blowers, weed whackers too. Electric bikes are coming out, as well as stovetop induction stoves. This is our first step in advancing tangibly from our climate change position. We want people to think about going green. Go green, go electric, go WEC!

**Barry:** I just sat in on a Climate Caucus meeting at the legislature. The

clear message was we need to prepare ourselves, we need to be ready to address climate instability, and we need to do it in a way that helps those least able to respond to the weather changes that are going on.

I mean, all we need to do is turn on the news. Australia is a drastic example of a country finding itself totally flat-footed in the face of climate change. That's where we're all going to be concentrating, going forward.

Our new rate design is a beginning. We will tweak it as we move forward, but our goal is for everyone to have the lowest carbon footprint, reduce our greenhouse gases, and make our energy expenditures have the lowest possible impact on our wallets.

**Patty:** It's an important point you bring up Barry, that it's total energy dollars people spend on energy. Not just your electric bill, but gas, propane, oil, all of that. If you can electrify and reduce your energy costs, it's good for the pocketbook and environment.

**Barry:** We have a lot of members — I'm one — who spent the last couple decades doing everything possible to lower our carbon footprints. My kilowatt hour use is very low. So, I'm going to be paying more with our new rate design than I am presently. However, if I had not invested in lowering my kilowatt hours and total energy usage, my bills would be higher.

But over 30 years I've been reducing all my energy use. Over

## Co-op Currents

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

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*The Board of Directors' regularly scheduled meetings are on the last Wednesday of each month, in the evening. Members are welcome to attend. Members who wish to discuss a matter with the Board should contact the president through WEC's office. Meeting dates and times are subject to change. For information about times and/or agenda, or to receive a copy of the minutes of past meetings, contact Administrative Assistant Dawn Johnson, at 224-2332.*

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## Where's WEC?

**ROW crews are finishing up odds and ends in these areas:**

- Dunbar Hill in Moretown
- Mack Mountain Road in Danville/Peacham
- School House Road in Moretown
- Danger tree removal on two-phase line in Orange
- Airport Road in Fayston
- 46 KV line in Coventry



**Got something to say?**

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





the years I worked on conserving electricity in part because it wasn't green — this was back when WEC was partially powered by the Vermont Yankee nuclear plant. Now, our electricity portfolio is 100 percent renewable, and mostly generated in-state. Of all the options, it's by far the best.

I recently installed a heat pump hot water heater — and we offer incentives to buy them! I heat primarily with wood, I use LED lighting, and I consider electric replacements for any fossil fuel devices I still use.

**Patty:** It's called strategic electrification, or beneficial electrification — making electricity a cleaner and more affordable option than fossil fuel. I've rethought my own electricity use by buying electric lawn care equipment, and honestly, the tools are great. No more messing with hard to start engines. I simply plug in a high-tech battery, and away I go! Today's batteries are impressive, and I'm happy to stop using gas to take care of the lawn!

**Barry:** We have to give ourselves credit for the great job we've done. We provide not just electric service, but as a cooperative, a voice for our community. It's important to understand how valuable that is. As changes affect us all, it will become even more valuable.

But let's go back to the implementation of the new design. Patty, how are we going to accomplish phasing it in over the next two years in the billing process?

**Patty:** That's a great question, Barry. That brings us to the rate increase.



*This is our first step in advancing tangibly from our climate change position. We want people to think about going green. Go green, go electric, go WEC!*

— Patty Richards

### Rate Increase

**Patty:** We can't yet set up the rate design in our billing system until we get approval on the rate increase. We have two things going on here. We needed a general across-the-board rate increase this year, and that went into effect January 1 as a temporary charge.

Once the increase is finalized by the regulators, we'll work on the rate design and begin to phase that in.

So the rate design won't take effect for probably two or three months. The across-the-board rate increase will be finished first; after that, we'll begin to implement the new rate structure.

**Barry:** It's a temporary rate increase but it will appear on bills in January. That's conditional on what the final determination is by the PUC.

**Patty:** Yes. At this point, it's a temporary charge. I want to let the membership know it's being investigated by DPS [Department of Public Service]. They're taking a close look. This is the DPS fulfilling their regulatory responsibility. As far as I know, this is something they're doing for all utilities that file rate increases.

**Barry:** Whenever we have to ask for a rate increase, we try to keep it as tight as possible and still provide the reliability and good service our members expect.

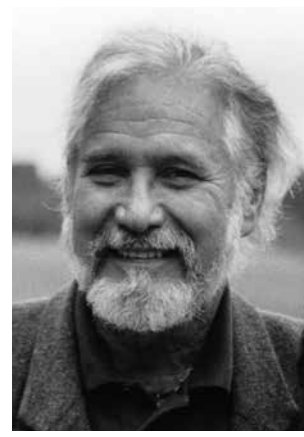
**Patty:** Yes. And I want to assure members it's a formal regulatory process. We're getting a fully investigated hearing, full scrutiny, we're going to go back and forth with testimony.

### Broadband

**Barry:** Many members have asked us about broadband and what role Washington Electric will play in helping get high-speed internet to their homes. The WEC Board and management are extremely engaged in this goal.

We're applying for a grant from the state. We've applied for two others: we didn't get the first one; the second source is encouraging. The funds would go to conducting a feasibility and business plan study so we can figure out what the economics are. We would look at the costs and benefits of fiber within our electric infrastructure to improve our resiliency and reliability. We'd also look to see how we could collaborate with the two community utility districts [CUDs] that represent towns in our territory. That's so we're not duplicating but expanding efforts in our areas to bring high-speed fiber to our members' homes.

**Patty:** What we're looking at is doing an analysis to see what's the feasibility of WEC participating in broadband, and whether that's as a full service offering, or behind the scenes infrastructure. We need to find



*The reality is now we have to make sure we can collect all our costs for our poles and wires to guarantee our members have power . . . And we have to move toward lowering what we charge per kilowatt hour to encourage people to switch to electric uses for their energy needs and away from fossil fuel.*

— Barry Bernstein

out what the costs and partnership opportunities are, so we can get an intelligent look at what the whole space looks like.

**Barry:** So we can make good choices for all of our consumer-members. WEC owns all our poles, but everything else is a gray area. We believe that our role, at a minimum, is to help our communities be economically viable. We do that by bringing electricity to members' homes and businesses, and we're open to other good opportunities that are feasible.

### 2020 Vision

**Patty:** The vision jokes are going strong. Everyone has 2020 vision now.

Here at WEC, as we look ahead, we're focused on many things: hardening the grid and grid resilience, first of all. We're also embarking on vision plan work with the

Board, looking out strategically and big picture. We'll roll out efforts on climate change and the future of the Co-op in a broader perspective. I'm excited about that.

**Barry:** We're all excited. With everyone waking up to the reality of climate instability, the future will challenge us both as individual members and as an electric cooperative trying to do the best we can. We're excited to be proactive, to engage our membership about opportunities.

**Patty:** Regarding climate change and opportunities, I'm hopeful we'll find opportunities to do some interesting, meaningful things for the membership. Yes, we want to promote our 100 percent renewable energy, and we want to reduce costs. We also want to be a value-added service for our members. Our challenges and goals will be more outward looking

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## ASK THE ENERGY COACH

The state has a new online resource to help Vermonters learn about heating and cooling more efficiently: [energysaver.vermont.gov](http://energysaver.vermont.gov).

Weatherization is good for our health, our wallets, our buildings, and our environment. Visit [energysaver.vermont.gov](http://energysaver.vermont.gov) to learn:

- Why cutting heat waste is the most cost-effective place to begin
- How water heaters, furnaces, and other mechanical systems work
- The different types of insulation materials available and when they are typically used
- Why heat pumps and other new technologies can help Vermonters reduce their use of fossil fuels
- How to tap into current rebates, incentives, and low interest loans for energy improvements

For more information, visit [energysaver.vermont.gov](http://energysaver.vermont.gov), or contact the Energy Coach at [energycoach@wec.coop](mailto:energycoach@wec.coop).



### Say What?

Beneficial electrification? What does that mean?

Beneficial electrification is using clean electricity to power a device for less money than it would cost to power a fossil fuel device to do the same thing.

WEC's new rate structure is designed to help members use clean electricity, instead of fossil fuels, for whatever power needs we have.

### Did You Know?

When your electricity comes from an electric cooperative, it comes from an industry that is boosting renewable energy growth while reducing emissions.

Co-ops have reduced carbon dioxide emissions 8 percent since 2005 — while increasing generation by 15 million megawatt hours.

Source: NRECA  
[www.electric.coop](http://www.electric.coop)



## Siting Lines

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Electrification Act stipulated that in order to qualify for funding, co-ops must build lines so electricity traveled the shortest distance between two points. WEC's infrastructure was built according to these rules.

But that was then, and this is now. Now, many of those old farm fields have reverted to forest, and roadside poles have many advantages over poles through the woods. These days, WEC members prize reliable service and quick repairs above nearly everything else. Yet, being Vermonters, they also value our state's beautiful landscape, and the features of the landscape that help preserve a safe and healthy environment, like clean water, healthy wetlands, and trees that provide habitat and capture carbon.

The Co-op must, and does, take all these things into consideration when crafting its construction work plans (CWPs). Every four years rural electric cooperatives submit carefully crafted plans to the federal Rural Utilities Service (RUS), a USDA program, for funding through low-interest loans. Washington Electric's plans identify the places on its distribution system most in need of upgrading. Upgrades "harden" the system against storm-related outages with stouter wire less subject to corrosion, and larger, stronger poles. This helps WEC's grid better withstand harsh weather and snow accumulation, keeping members' power reliable and, when outages do occur, easier to restore.

### Which lines move, which lines stay

Aesthetically and environmentally, moving power lines to the roadside can cut both ways.

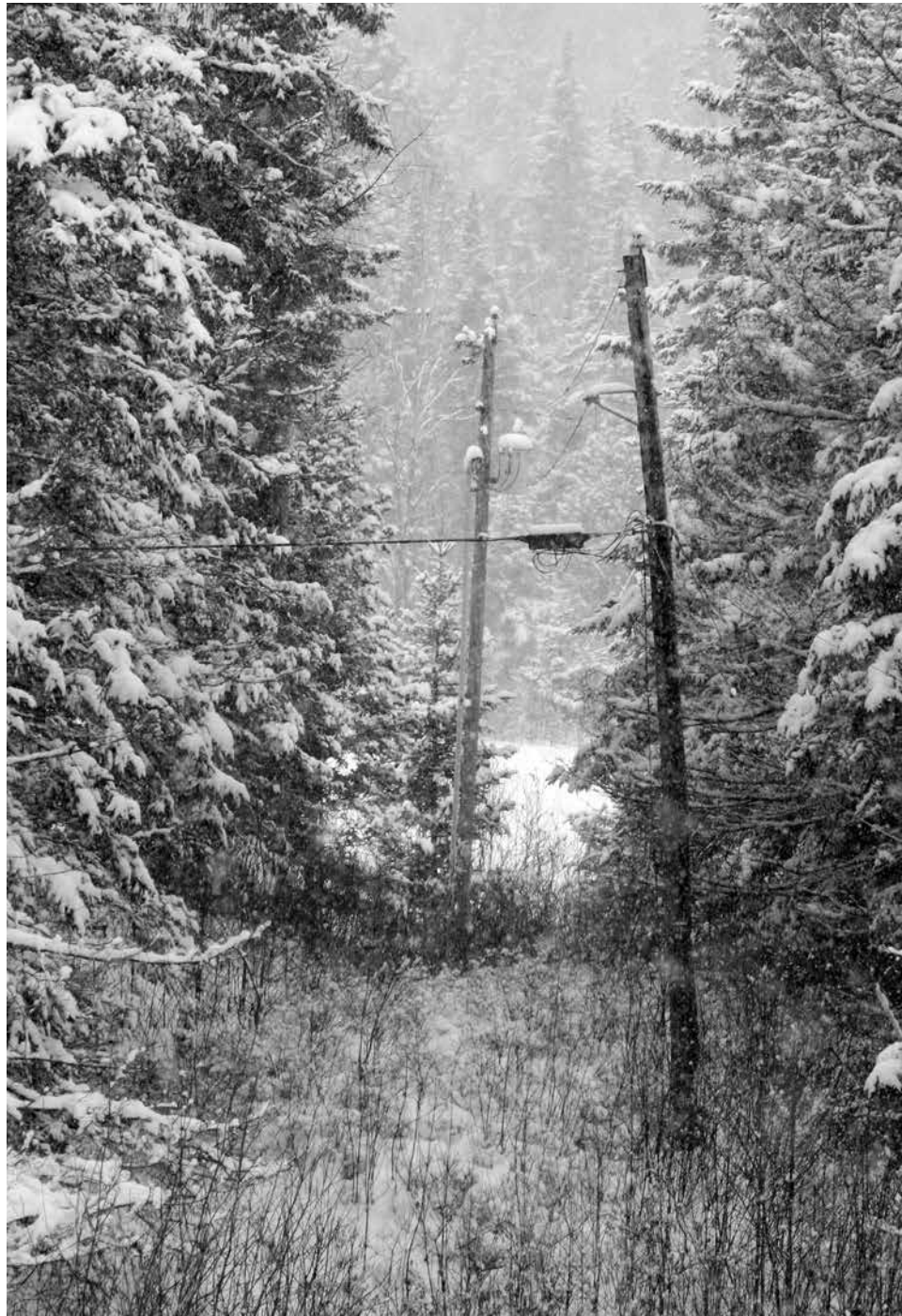
"The impact is minimized," points out Dan Weston, Director of Operations & Engineering, "because the road is already there." The Co-op's practice is to minimize the impact further, setting the poles behind a buffer of trees, with the lines crossing overhead when the road bends.

On the other hand, he concedes, "If you bring every line to the road you may have improved reliability but you've damaged something else. Most Vermonters are out driving every day. The roads are Vermont's view shed."

In fact, town governments in some places push back against proposed line relocations on aesthetic grounds, wanting their roads to remain free of any visual impact and objecting to tree removals that might be necessary.

"They say, 'That's where our people travel!' and they don't want any visual interference," says Weston. "But balance that with the resident who tells us 'I want reliable power because I work from home and I need the internet.'"

Sometimes, usually after a storm, members will wonder why WEC doesn't consider burying its lines. The answer to that is both financial and practical. Burying lines is pricey, and Vermont is made of rock. "It's at least ten times more expensive," said General Manager Patty Richards. "If we were in



In many of the most rural parts of WEC's distribution system, the poles and wires tunnel through forests that have grown up where farm fields used to be, as in this location in Walden. This makes it difficult to manage the vegetation and repair outages.

Florida, where the dirt is sand, that would be one thing. But we have ledge." And, she points out, and when repair is required – say, after a flood – costs become astronomical.

The 65 projects in WEC's CWP, mapped out on large pages in Weston's office, show places where long sections of power line stretch over fields or wooded terrain even though there's a roadway, perhaps not adjacent, but tantalizingly close. Large relocation projects like those trigger Act 250 review and other permitting. If approvals can be secured, the lines will move.

In other places, costs collide with practical considerations. Weston points to a section of power line depicted on the map, saying, "That's a more-than \$50,000 reconstruction, and they're experiencing repeated outages. But we have to weigh different considerations, and those considerations become very subjective. It's only serving fifteen people, but if you're one of those fifteen?" They pay the same rates as everyone else, he notes.

He also points to an isolated spot with particularly difficult terrain. Lots of outages, lots of difficulty reaching the lines. But it's far from the nearest road,

*There can't be just one way of doing things that applies everywhere. We look at aesthetics, environmental factors, and cost, and evaluate each project on its own. Because they're all different.*

— Dan Weston

and serves only four member households. That one's staying where it is. But the crews will bring in newer, stronger wire and get the track vehicle back there somehow to set new poles.

"There can't be just one way of doing things that applies everywhere," says Weston. "We look at aesthetics, environmental factors, and cost,

and evaluate each project on its own. Because they're all different."

### Federal money meets federal rules

WEC recently secured \$8.2 million in RUS loans for its 2019-2023 construction work plan. That included \$5.2 million specifically for upgrading deteriorated sections of line where members have been subjected to more frequent and longer-lasting outages. Another \$1.6 million is set aside for unexpected projects that might arise during the course of the CWP and present the opportunity, for example, to invest in an improvement that will head off problems in the future. Another \$1.4 million is for other technology upgrades.

When WEC's analysis shows line relocation is the best solution to improving a line that's especially

vulnerable to outages, it can mean actually creating a new Right of Way (ROW) corridor along or close to a road. It's an inherently complex and expensive proposition, requiring state and local approvals, and sometimes elusive agreements with landowners.

"The number-one thing," says Weston, "will be to relocate those deteriorated sections, where we can, along roadsides, where we can use a digger-derrick truck to replace a pole or make repairs, as opposed to driving an off-road track vehicle into the woods, and get the work done in a quarter of the time or less."

But Weston says that progress has been hindered, to a degree, by a higher level of environmental review by the RUS than previous work plans required. In states with comparatively lax environmental regulations, the federal review is beneficial. But in Weston's opinion, Vermont's stringent regulations, plus Washington Electric's even stronger commitment to environmental stewardship, make the RUS review largely redundant.

### The RUS factor

Before submitting its work plan to RUS for funding, WEC calculates and compares the costs and expected benefits of each project with the assistance of consulting engineer Anne Crocket, whose business is based in Essex Junction.

"Anne has worked with co-ops and other electric utilities for a long time, and is familiar with the RUS's standards and requirements," says Weston, "She does a technical review and a cost-benefit analysis of every aspect of our plan."

"My role has also been to do an analysis of the entire system, to make sure that, given the projected growth rate, their system would be hardy enough to continue to serve its customers reliably," says Crocket. "That's the foundation upon which the work plan is built."

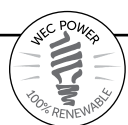
Since Congress passed the National Environmental Policy Act of 1970, the RUS has required an environmental impact analysis for federal loans. "For most of the previous work plans, they've given us what's called a 'categorical exclusion,'" Crocket explains, "meaning that what we were doing fell below the trigger point of warranting a full-fledged environmental impact statement. There was also the theory that Vermont has Act 250" – the state's land-use and development-control law – "so if a project rose to a level [contemplated by] the Environmental Policy Act it would fall under Act 250 anyway, so there was no need to do it twice."

Even a major line overhaul doesn't trigger RUS review if it remains in the same place. Nor do the projects that chiefly involve technical upgrades.

"Those mostly still have exclusions," Crocket says. "But the long line relocations are going to call for a review."

Those can be triggered by the size of the project (how much land is involved) and by consideration of wetlands and what Crocket describes

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# Today's Backup Systems for Today's Weather Related Outages

*New technologies in generators and battery backup available now*

After the 2019 Community Meeting in Cabot, Board Member Steve Farnham had a conversation with General Manager Patty Richards. "Until we can provide backup power for all our members," he said, "we need to let people know what they can do to have backup at home when there's an outage like we had in the Halloween storm."

"I agree completely," said Richards. "Backup power is going to be a big Co-op theme for 2020."

Consider the theme introduced. There are two main types of backup systems available for home use: generators and battery systems. For fully automatic, full-house loads, both are investments. There are also portable generator and battery options available. What's best for each member depends on several factors.

## Permanent propane generators

Jim Brochhausen, owner of Brook Field Service in Northfield, said, "The generator business has been more robust in the last three years than it has ever been." Permanently installed propane generators are becoming more prevalent in home construction, he said. He named several factors driving interest in backup systems, and in generators in particular.

The first is climate change, and the associated storms that damage the grid with increasing frequency and severity. The second is that Vermont's aging population requires

more residential medical equipment, including some devices that must work without interruption. The third is more Vermonters are telecommuting or managing home businesses and need to stay online during outages.

"In addition to that, our lives become more and more encumbered with the need to have power on a regular basis," he said, pointing to streaming video, charging phones, and working on laptops.

As more Vermonters choose electric vehicles, the ability to charge them is a growing factor, he said. "We've installed generators for several people who have electric cars, and for some clients, the only vehicle they have is an electric car. Especially in bad weather, the ability to charge the automobile is essential."

Finally, some customers have said that fear of cyber threats are motivating them to install generators. So, "if somebody hacked and shut down the grid remotely, they would have power to function," he explained.

A plus for the consumer is that generator pricing has remained stable for several years, Brochhausen said. "Most people are focused on their heating system, their water pumps,



*A Kohler generator installation is ready for any weather. Brook Field Systems owner Jim Brochhausen said the permanent, automatic, propane-fueled generators he sells perform flawlessly.*

and use propane fuel and air-cooled engines.

## Portable fuel generators

The old gasoline generator — the noisy, heavy one you have to go haul out of the shed — is in decline, though many members still use them in an emergency. Brook Field no longer sells them.

There are plenty of cons with a portable generator. For one thing, you have to be strong enough to move them. They must be operated outside, which is unpleasant in bad weather. The alternative is far worse, however — they emit deadly carbon monoxide and should never be used indoors.

Most portable generators run on gasoline. That's a dangerous substance to store in the best of situations, and if it's not mixed with stabilizers, it can damage the generator.

Finally, the generator must be wired to the circuit panel by way of a transfer switch.

refrigeration, and lights. Once you cover those key loads, covering the rest of the house is immaterial for the generator — it can cover that."

The vast majority of the market, he said, is made up of 10-20 kilowatt generators. All the ones Brook Field sells are permanent, automatic,

Using a portable generator without a transfer switch is a serious safety hazard. WEC lineworkers could be harmed while restoring power if they believe that the line is not energized.

Aside from that, standard portable generators are still popular because

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*At the 80th Annual Meeting in 2019, member Matthew Pedersen Lanctot inspected a Sonnen battery backup system. "I've got a UPS [uninterrupted power supply] at home, but nothing like this," he said, adding that he's generally interested in backup systems and is fascinated by recent technologies. Catamount Solar, a provider of battery backup systems, was a vendor at the event.*

## If you have or are installing any backup system, alert WEC. It's vital to lineworker safety.

Whatever you're considering for residential or business backup systems, start with Bill Powell, the Energy Coach: [energycoach@wec.coop](mailto:energycoach@wec.coop) / 802-223-5245

For those who want automatic options, a site review will help you determine what your needs are and what your costs will be. Both vendors interviewed in this story offer free site reviews.

For a site visit from Brook Field Service or to learn more about generator backup: [brookfieldservice.com](http://brookfieldservice.com) / 802-485-6567

For a site visit from Catamount Solar or to learn more about battery backup: [catamountsolar.com](http://catamountsolar.com) / 802-728-3600

There are some key questions to ask yourself about what kind of backup is best for you. The Energy Coach or a vendor representative can help you with them. Here are the main ones to get you started.

- What kind of backup do you want?

- Do you need to power your whole house, or just critical load?
- What is your budget?
- What is your typical energy use?
- How long do you need backup for?
- Do you net meter?

## For more information:

- WEC on backup and safety: [wec.coop/energy-services-safety](http://wec.coop/energy-services-safety)
- Energy Coach: [wec.coop/energy-coach-homepage](http://wec.coop/energy-coach-homepage)
- "Cybersecurity, WEC, and the Grid," *Co-op Currents*, October 2017
- Generator backup systems: [brookfieldservice.com](http://brookfieldservice.com)
- Battery backup systems: [catamountsolar.com](http://catamountsolar.com)
- "Five Things To Know about Portable Power Stations," [consumerreports.org](http://consumerreports.org)
- "Surviving a power outage: Generators, portable batteries, and caffeine," [slashgear.com](http://slashgear.com), October 2019



## Rate Redesign

continued from page 1

“to further strategic electrification goals,” WEC’s Board requested the two-block structure remain, per member feedback and the Board’s interest in protecting low-income users.

“The low cost of that low-use block is a benefit for all members,” Richards added. “Everybody gets their first 100 kWh at just eight cents, whether that’s all the electricity you use in a month or whether you use far more.”

The PUC approved the design, with some key conditions. In the order, the PUC stated that because changes will impact those low-income members who also are low energy users, the monthly customer charge must be phased in. Also: “In further recognition of these financial impacts on low-income members, we are also requiring that WEC collaborate with the Department on the development of a program to support low-income members.”

The increase to the monthly customer service charge will take effect in three phases over two years: increasing to \$17, \$21, and ultimately \$25.

The Department of Public Service (DPS) recommended WEC create supports for low-income members, and file time of use and electric vehicle rates. Time of use and EV rates, which may make less expensive power available at off-peak times, are one way WEC and its members might manage cost to members while still encouraging beneficial electrification, the report suggested. The order mandates WEC

*The low cost of that low-use block is a benefit for all members. Everybody gets their first 100 kWh at just eight cents, whether that’s all the electricity you use in a month or whether you use far more.*

– Patty Richards



General Manager Patty Richards talks about rate redesign at the 2018 Annual Meeting. WEC’s new rate design structure, which will take effect in a few months, has been in development for several years.

either file time of use and EV rates, or a report on its attempts to do so, within 12 months.

The order also stipulated that WEC must file a report within three years “on its plans for its next rate design filing as well as on the results of the implementation of the current proposed rate design in achieving the policy goals identified in this case.”

“As we move ahead into implementation, these changes will strengthen the Co-op and our efforts to help members reduce emissions in favor of our 100 percent renewable energy. We’ll also continue working to make our rates as equitable as possible for our members,” said Richards.

### Some key definitions:

- **Beneficial electrification:** Replacing fossil fuel devices with electric devices in order to simultaneously reduce emissions and energy costs. Also called “strategic electrification.”
- **PUC:** Public Utility Commission. An independent state commission that supervises Vermont’s public utilities. For more: [puc.vermont.gov](http://puc.vermont.gov)
- **DPS:** Department of Public Service. An executive branch office that represents the public interest in energy and other sectors. Also uses acronym PSD. For more: [publicservice.vermont.gov](http://publicservice.vermont.gov)
- **Low-use block:** The first block of kilowatt hours used in a billing cycle are charged at a lower rate. Every member pays the lower rate on the low-use block; the concept is to reward energy conservation and to support low-income members.
- **Tail block:** The energy used in a billing cycle after passing the low-use block threshold. The rate for kilowatt hours in the tail block is higher than in the low-use block.
- **Time of use rates:** A rate structure that rewards members with lower rates for electricity used in off-peak hours, and charges higher rates for electricity used during a peak. Can be used to shift peak costs and as a support for low-income members.
- **EV rates:** A lower rate that incentivizes electric vehicles by reducing the cost to charge them at off-peak hours.

For 30 years, WEC has advocated for energy conservation, and our rate structure incentivized low energy use.

Our new rate structure marks a pivot in our goals, to match the needs and opportunities of today.

Yes, we continue to value energy conservation, but we are also adapting to the new challenges presented by climate change and emerging technologies and innovations.

Because climate change is now a critical threat, it is time to transition off of fossil fuels.

WEC has the incredible resource of 100 percent renewable energy to offer our members. Our new rate structure is designed to make every kilowatt hour of our renewable electricity less expensive, to support members transitioning heat, appliances, and transportation away from fossil fuels to renewable electricity through beneficial electrification.

It’s a better choice than fossil fuel. That means it’s time to switch over to WEC electricity.

For power, heat, transportation, and all your energy needs:  
Go Green. Go Electric. Go WEC!



In listening groups in January 2018, members worked to come to consensus on electricity rates that were economically reasonable and supported member values, like conservation, combating climate change, and supporting home businesses. The strong member feedback to keep a low-use block resulted in WEC keeping a 100 kWh, eight cent per kWh low-use block in the new design.





## Backup Systems

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of their low price point. It's common to see — or hear — them running during outages in WEC territory, as many members run extension cords inside to power their fridges and freezers.

Slightly more expensive are inverter generators, which are quieter and more efficient. These generators may not be able to power all load requirements, but for emergencies, many rely on them.

## Battery powered systems, grid-tied and portable

For several years, WEC has recommended UPS, or Uninterruptible Power Supply, battery options. These are devices that bridge power fluctuations and, when power is truly lost, provide backup for critical loads. Originally, UPS systems powered electronics; many now are capable of

powering larger loads.

New advances happen quickly with batteries, but the history of battery backup is long. "Catamount Solar has been working with batteries for years. Prior to grid-tied battery backup being a thing, it was off-grid," said Andrew Wible, Director of Operations at Catamount Solar, based in Randolph, and one of its member-owners.

With today's user-friendly batteries, "grid-tied backup makes perfect sense. It allows the customer to be resilient and autonomous in a way that honors the grid at the same time," he said. It's easy to set up battery backup connected to net metering systems, and just as easy to install batteries without.

A week or more of backup is possible with brands like Tesla, Sonnen, and Blue Planet, said Wible. "What you need is a system that is smart and can monitor along with you. The Sonnen is smart enough to detect

storms coming. Tesla's in the same boat, allowing customers to prepare for future outages," he said. They're smart, he said, in the sense that a user can program the battery's related app with site-specific needs.

Batteries are getting smarter, and prices of batteries are going down, said Wible. When you have kids and no electricity, he said, "in the summer it's camping, but in the winter, it's survival. Battery backup makes a seamless transition."

Portable batteries, or portable power stations, are another option. More expensive than a portable generator, they are also smaller and far safer and easier to use. These typically come with a variety of ports and sockets that can charge up devices or keep medical equipment or chest freezers cold.

## Looking down the wire

So, what's best for a WEC member's

needs? It depends.


That's where Bill Powell comes in. Powell is WEC's Director of Products & Services, better known throughout Central Vermont as the Energy Coach. First, he says, he figures out each member's individual needs. For someone who wants months worth of backup power, he pointed out, "that would be a twofer, where you buy fuel and you also have a battery." The fuel, in that case, could power the battery.

In general, Powell said, under the state's new laws requiring utilities to reduce carbon emissions, fossil fuel systems are to be avoided. Plus, there is a benefit for installing carbon-free battery backup. On the other hand, he said, the more members rely completely on WEC power — and WEC is advocating for more use of its 100 percent renewable power in the face of rising emissions and climate change — the more vulnerable they are during outages.

"I don't think it's one size fits all, and I don't think there's a universal solution. We should triage," to reduce exposure to outages and limit what outages cost the Co-op and its member-owners, Powell said.

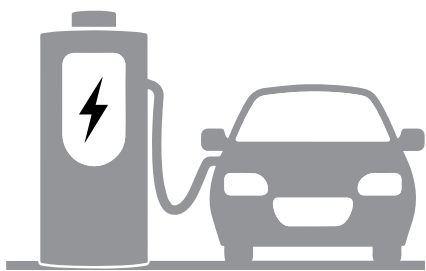
"Ultimately, what I want is a WEC storage option," he said. "It's absolutely something we need to get out in front of."

"And we're looking at utility-level storage," confirmed General Manager Richards. "The question is what we do, how, and in what combination. Is it substation backup? Is it leveraging equipment already in members' homes?" like the Efficiency Vermont SENSE pilot project WEC is participating in, which harnesses members' hot water tanks to offset peak use.

"As we move forward in this sphere, we'll keep all of our values in front of us. We'll look at reliability, affordability, safety, and equity," said Richards. 

# Button Up 2020 Incentives

## Incentives for Transportation



### WEC

- Up to \$1,900 in member incentives towards a new plug-in Electric Vehicle (EV)
- \$1,200 for an all-electric vehicle (AEV)
- \$950 for a plug-in hybrid electric vehicle (PHEV – gas & electric)
- An additional \$700 incentive is available for income qualifying members

### Efficiency Vermont

- EV incentive not available

### Agency of Transportation

- In 2020 AOT provides additional incentives for EVs here: <https://www.driveelectricvt.com/why-go-electric/purchase-incentives>

## Incentives for Weatherization



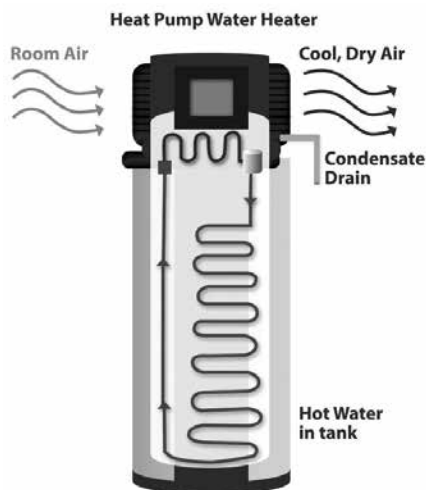
### WEC

- Weatherization improvements to building shell: \$600 for Home Performance with Energy Star contractor

### Efficiency Vermont

- Weatherization improvements to building shell: up to \$2,000 for Home Performance with Energy Star contractor; up to \$4,000/50% of project costs with an Efficiency Excellence Network contractor

## Incentives for Heat Pumps



### WEC

- Qualifying heat pump in "high performance" house
- \$250. (incentives for eligible heat pumps based on verified building shell meeting 2020 thermal performance standards; contact WEC Button Up for specifications)
- Heat pump hot water (HPWH) system
- \$250. (HPWH incentive available where a fossil-fueled (oil/kerosene/propane) hot water system is replaced)

### Efficiency Vermont

- HPWH incentive up to \$800
- Cold Climate Heat Pumps (HP):

Equipment Capacity (mini-split)	EVT incentive 2020
≤2 tons	\$400
>2 tons	Up to \$650

- Centrally ducted HP: up to \$4,500
- Air to water HP: up to \$500

## Incentives for Pellet Stoves, Furnaces, and Boilers



### WEC

- \$250 for either a qualifying pellet stove or a wood stove. Stoves must be installed by qualified installer.
- Pellet furnace: \$500
- Pellet boiler: \$1000

### Efficiency Vermont\*

- Pellet stove: \$750 when installed by qualified contractor
- Pellet furnace: up to \$6,000
- Pellet boiler: up to \$6,000

\* Offers subject to change. See EfficiencyVermont.com for current details.


## Siting Lines

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as historical ecological sites. "And there are a couple of projects," she adds, "where we're going to need to add additional wires, like a stretch between Greensboro and South Walden. The amount of [electrical] load there has grown to the point where it needs three-phase instead of single-phase power" — that is, three wires carrying the power from pole to pole rather than a single wire.

Weston is making his peace with it.

"We give sincere and significant consideration to aesthetic and environmental impacts when we rebuild our lines. The additional RUS review slows us down, but it's not going to stop us," he says.

And, of course, the Co-op is grateful for the federal money it relies on with each new Construction Work Plan. With those remote power line sections getting older and more weather-beaten by the day, WEC must constantly reexamine its infrastructure and make the changes necessary to provide reliable power to its members — no matter where on the lines they live. 

802.224.2329 • [energycoach@wec.coop](mailto:energycoach@wec.coop)





## 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](mailto:energycoach@wec.coop)
- For other useful tips, visit [wec.coop/energy-services-safety/what-to-do-if-the-power-goes-out](http://wec.coop/energy-services-safety/what-to-do-if-the-power-goes-out)



Tony Klein

This is what it looks like when WEC crews site a pole in a remote area. The pole site, off-road, required the track rig to haul it and a crew member to walk behind. "This just hits home the remoteness of the areas we serve," said General Manager Patty Richards. Many thanks to member Tony Klein of East Montpelier for sending in the picture.

## Temporary Pause on SENSE Program

On January 31, 2020, Efficiency Vermont is temporarily pausing its incentive program for SENSE home energy monitors. Customers waiting for installations will still receive support.

## Did You Know?

Did you recently install an efficient wood or pellet stove or boiler? You could be eligible for a \$300 retroactive federal tax credit. These credits expired in 2017, but the latest spending bill extended them back to 2018 and ahead to Dec. 31, 2020.


Other changes include a 30 percent credit for an EV charging station, and a 10 percent credit (up to \$2,500) for two- and three-wheeled EVs.

For more info, contact [energycoach@wec.coop](mailto:energycoach@wec.coop).

## President & GM Message

*continued from page 3*

than inward looking. We need to frame everything around climate change.

**Barry:** One thing in the forefront of my mind is because we're an electric co-op, it makes us a different type of electric utility. We're centered on our community, not on stockholders who turn on profit. Our return is given back to our members, whether in capital credits or coming up with new value-added ways of serving everybody. Patty and I and the WEC Board are excited about 2020. We'll keep everyone posted on what we've got coming. 

## Participate in Democracy!

*Run for a Seat on WEC's Board of Directors*

**A**re 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, or download a candidate's packet from [wec.coop](http://wec.coop). The deadline to submit all candidacy materials is Friday, February 7.

Every year elections are held for three of WEC's nine board seats. In 2020, incumbent Directors Don Douglas, Jean Hamilton, and Mary Just Skinner are expected to seek re-election.

As directors of a co-op, WEC's Board is working for members — not shareholders. The entire Co-op benefits from their interest, commitment, and vision. Democracy also works best when we all participate. If you've been thinking about getting involved, call for a packet and start collecting signatures.



From left to right, Board Directors Richard Rubin and Jean Hamilton, Vice President Roger Fox, General Manager Patty Richards, President Barry Bernstein, and Treasurer Don Douglas. As an electric cooperative, WEC is led by nine elected Directors, all members.

