

WEC Plans to Upgrade Members' Meters

New system will improve outage restoration, allow time-of-use rates

Washington Electric Co-op has preliminary approval for a state grant to pay for half of the upfront cost of replacing its outdated metering system, and is requesting bids from vendors. The new technology is called Advanced Metering Infrastructure, or AMI. It's an important component of grid responsiveness and resilience: meters are designed to give accurate out-

These additional capabilities will assist us in outage restoration and in giving accurate restoration estimates, help our crews know what's going on when there's an issue on our system, enable us to do time-of-use rates and other types of rates, and better work with members who have solar and heat pumps.

– Louis Porter

whether the meter is on or off," said Porter. "It tells us very little about where actual problems are on our lines, because once we lose connection through the power line, we lose connection to all meters on the lines beyond the issue." The current system can identify how many kilowatt hours you use – as you can tell from your bill – but doesn't provide much information about when and how you use electricity. Advanced meters will also work better with devices and

technology that have become more prevalent in the Co-op's territory, accurately reading data where net metering installations, heat pumps, and variable-speed well pumps are in place.

Members expect WEC to respond to outages with speed and accuracy, explained Porter. Advanced metering provides what's called "last gasp" data, sending a final signal when the power goes out. "That will greatly help us pinpoint issues on the power

continued on page 5



Paul Lambert

Roger Fox, outgoing Board Vice President, honored in October by the Northeast Association of Electric Cooperatives with its annual George D. Aiken Award. Standing, L-R: President Stephen Knowlton, former President Barry Bernstein, Director Susan Alexander, General Manager Louis Porter, Secretary Mary Just Skinner, Roger Fox, Linda Fox, Director Betsy Allen. Seated: Director Steven Farnham, Elizabeth Mathai, Charo Douglas, Treasurer Don Douglas.

Roger Fox Flips the Switch

Retiring after 32 years, Board Vice President wins Aiken Award

Longtime Washington Electric Co-op Vice President Roger Fox, of Walden, will step down from the Board of Directors this fall. For his service, Fox has been

awarded the George D. Aiken Award, presented annually by the Northeast Association of Electric Cooperatives.

Fox has served on the Board for 32 years, but his involvement with WEC goes back to the early 1970s, when the Co-op strung a line out to Apocalypse Farms, which was the nickname of the Walden commune where Fox lived in the 1970s. Former WEC President Barry Bernstein, also an Aiken Award recipient, said that Fox deserves the honor for his active participation and dedication

I liked the idea of consumers collaborating in the commercial space.

– Roger Fox

to governing the Co-op, and also as "one of the original group of Co-op members who got together in the early 70s to raise questions about the openness and direction of our owner-member Co-op."

For his part, Fox appreciates many years working with "committed supporters of cooperatives to promote the public interest, and the specific interests of WEC members and other rural Vermonters."

Going up the country

Fox was raised on Long Island in a family that shared interests in technology and gadgetry. He went to study engineering at MIT,

continued on page 4

Washington Electric Cooperative

East Montpelier, VT 05651

Inside

"A Swiss army knife:" Looking ahead to advanced meters. President's and General Manager's message, p. 2

Ben Franklin started a co-op: And other facts worth knowing in our Co-op Month feature. P.6

Winter storm prep: Our annual checklist, ready to clip and put on the fridge. P.7

EV incentives: A change in the Inflation Reduction Act makes the tax credit better. Energy Coach, p. 7.



David Young

A grain truck auger accident caused an outage for more than 1,000 members in September. Vehicle accidents happen: learn how to minimize the damage in the Safety Minute on p. 8.

President's and General Manager's Message

With Focus on Greatest Good, WEC Will Invest in Advanced Metering System

Also: recognizing Roger Fox, trucks cause sunny-day outages, winter storm preparation

Co-op Month

Louis: I grew up in Adamant, which was kind of a center of the early cooperative movement generally, so co-ops were just a normal part of life for me. The Adamant store, which is the oldest continually operating food co-op in the country, is what a store was. The Adamant Co-op has a particular relevance to me now that I work at a co-op that's down the road and serves it. It's still the center of the village I grew up in and live in today.

Vermont has a long history of cooperatives formed by residents, particularly farmers, in the 1800s and 1900s to provide services they couldn't rely on other entities to provide. These include milk co-ops, food co-ops, electric co-ops. It's an

important aspect of the development of Vermont in that period. Washington Electric, founded in 1939 and still operating today, is part of that history and legacy.

Two important components of cooperatives are first, banding together to provide a service that otherwise would not be available, and second, having democratic financial and governance structures and each member paying into that. Here, Washington Electric's Board is elected by members, and through capital credits, each member is returned their payments that exceeded our operating costs in any particular year. Though to be fair, it sometimes takes several decades to do that.

Steve: Co-ops are formed by a group of people who have gotten together to work toward a common goal. The ethic of a cooperative is that each member fairly and as equitably receives services according to the stake each member puts in. That's quite different from an investor-owned utility that reports to its stockholders. When investments in improvements are made by investor-owned utilities, their resources and appetite for risk are different. Co-ops try to be fair, and we may not always find it possible to take the same risks with our members' stake. Each change has to be made by first asking, "how will it benefit as many members as possible?"

WEC to offer services in the near future that we may not precisely envision now. It is technology with multiple uses, like a Swiss army knife. That's not just in utility operations, like managing load and making outage detection more efficient, but in allowing more agency to each and every member if they choose to make use of it, like targeted rates for EV users who are willing to charge at prioritized times, or for members who might want to manage their power to reduce their costs. Clearly, advanced meters can't do this all by themselves, but being able to directly measure the power usage anywhere on our system at any instant is key to any future programs we introduce for our members.

Louis: There's a twofold challenge facing Washington Electric and electric co-ops around the country. One is the growing power of people to manage their own electrical use and generation, whether net metering or batteries or generators. All of that is positive in many ways, but it also means the cooperative concept hangs together less, just like in any situation where people taking more power over their private affairs impacts collective participation.

The other is the rate of technological and infrastructure changes in the electric business. To Steve's point, co-ops are generally cautious, as they should be, and while that's good when you're responsible for other people's money and an essential service, it's not the fastest structure for adopting tech changes and innovation.

Louis: You're exactly right, Steve. If we are to restore outages at the speed that our members expect, and if we are going to offer the financial and power management that people expect, and if we're going to be viable in the next century, we'll need to advance many systems, but this is the first one.

Recognizing Roger Fox

Steve: Roger Fox, our Vice President, is retiring from the Board this Fall. He just received the George Aiken Award from the Northeast Association of Electric Cooperatives for his many contributions to WEC. I should also point out that former Board President Barry Bernstein received this award some years ago for his distinguished service.

I've been on the Board since 2015, and I've come to appreciate Roger's deep knowledge of this Cooperative and all of our energy stakeholders. He's been exceptionally diligent in ensuring that we operate according to our principles and our policies. That function, whether it comes from Roger or the Board as a whole, is essential to a policy-driven organization. I appreciate his deep commitment to the cooperative, and he backs it up with his deep knowledge of what a cooperative does and what WEC's culture is.

Louis: In my time at the Co-op, every process Roger has been part of has been better, and the outcomes are better, because of his engagement in it.

continued on page 3

Co-op Currents

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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 Rosie Casciero, at 224-2322, or visit wec.coop/board.

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Truck accidents causes outages

Louis: Accidents happen. We've had two recent incidents of trucks hitting WEC's power lines. Given the momentum of a big truck, not surprisingly they've done quite a bit of damage to lines and poles, and caused outages. Most recently was an accident on September 12 in East Montpelier, which caused 1,500 members to lose power for several hours. The reason so many members lost power was that the truck damaged a subtransmission line that brings power from the substation to the Maple Corner area. It was frustrating for some members, because it was a beautiful sunny day with no wind. Members questioned why there was an outage with no weather to cause it. The answer is, accidents happen.

I'm very grateful to our line crews. I went out to take a look, and thought it was going to take a day or two to get it done. Thanks to the hard work and dedication of the crews, it took under four hours to restore power.

Steve: WEC is a competent utility with good repair crews and they know what they're doing. When we have an outage, whether due to weather or accident, I'm confident it will be taken care of as quickly and safely as possible.

Louis: They do amazing work. This time in great weather, but mostly in lousy weather.

Winter weather preparation tips

Louis: In general, Washington Electric members are very aware that they live in a rural territory, and that means there's a different level of service than a suburban or urban area would have. We have an obligation to provide the highest level of service we can while maintaining reasonable rates. Most of our members recognize the level of service you get in a rural area, including law enforcement, fire, et cetera, is different. We have a responsibility to prepare and to take responsibility for our neighbors as well.



WEC is taking steps toward implementing an advanced metering system... It is technology with multiple uses, like a Swiss army knife.
— Stephen Knowlton

In last year's Christmas storm we saw many cases where members helped out neighbors who needed it. That is a less tangible part of our annual preparation checklist, but it's important to know your neighbors and who might need extra assistance.

Steve: WEC keeps a list of members with medical needs, don't we?

Louis: I'm glad you bring that up, Steve, because we do maintain a list of people with severe medical needs. It's important people know that's less about

prioritizing where we turn the power back on first, and more that we know where folks in those situations are, so we can check on them or assist town and state officials in checking on them.

It doesn't mean we can restore power to them more rapidly. Every piece of line between the substation and their house needs to be energized before their house can get power again. So it's important we know where they are so we can make sure someone is tending to their needs.

I encourage everyone with a current or previous medical situation to reach out to us to update their status on our list. Let us know about a new situation, and also let us know if you or a family member no longer has a medical need, because that outreach slows down our response.

I also have a few requests for reporting outages. We've seen a growing trend of people misreporting outages:



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— Louis Porter

reporting blinks as outages, and reporting a tree on the line where there isn't one. These are well-intentioned misunderstandings. Some people think they might get a response faster, and we depend on members reporting accurately to us what they see and hear. But inaccurate reports are an impediment to our response.

If you see a tree on the telephone wire and think it is an electric wire, it's a well-intentioned mistake, and that's totally understandable. We just ask people to provide as accurate and detailed information as they have. Don't ever put yourself in danger in order to do that. If it's a blink, report it as a blink. If it's a tree on the line, report it. You can always send a picture, though it's not necessary.

Steve: It may sound obvious, but here is my simple plan for preparing for winter storms: If you have a gasoline generator, take it outside and test it soon. And make sure it has fresh gas.

People who have propane backup generators can also make sure they have sufficient propane at the beginning of winter, since I'm told that getting propane delivered in the middle of an outage can be difficult and/or expensive.

Louis: And this is up to each member, but a backup source of heat that's not dependent on electricity is always a good idea when you live in a rural area in particular.

Flood Recovery Rebates

Receive financial assistance to replace flood-damaged equipment with energy efficient technologies.

Qualifying low- and moderate-income Vermont homeowners and renters are eligible to receive a combined total of up to \$10,000 back on qualifying energy efficient equipment, and up to \$9,500 back on weatherization projects. Funding is available on a first-come, first-served basis, and incentive amounts are subject to change. To confirm the most up-to-date rebate amounts, visit efficiencyvermont.com/floodrebate.

| | | | Low Income | Moderate Income | Financing |
|--|---|---|--|--|---|
| Large Appliances | ENERGY STAR® Certified Refrigerator | Must replace flood damaged unit | Up to \$1,000 (Maximum 1 per appliance type) | Up to \$750 (Maximum 1 per appliance type) | |
| | ENERGY STAR Certified Freezer | | | | |
| | ENERGY STAR Certified Clothes Washer | | | | |
| | ENERGY STAR Certified Clothes Dryer | | | | |
| Small Appliances | ENERGY STAR Certified Window Air Conditioner | Can be new, or replacing flood damaged unit | Up to \$400 (Maximum 2 per appliance type) | Up to \$300 (Maximum 2 per appliance type) | |
| | ENERGY STAR Certified Dehumidifier | | | | |
| | ENERGY STAR Certified Air Purifier | | | | |
| Water Heating (Tank & Tankless) | ENERGY STAR Certified Fossil Fuel Fired Water Heater | Must replace flood damaged unit | Up to \$3,000 | Up to \$2,250 | Eligible for No-Interest (0% APR) Financing, up to \$30,000 |
| | Traditional Electric Water Heater | | | | |
| | Heat Pump Water Heater (does not count towards incentive cap) | | | | |
| Heating | Central Wood Pellet Boiler or Furnace | Can be new, or replacing flood damaged unit | Up to \$10,000 | Up to \$7,500 | |
| | Wood/Pellet Stove | | | | |
| | Ductless Heat Pump | | | | |
| | Ducted Heat Pump | | | | |
| | Energy Efficient Boilers and Furnaces | Must replace flood damaged unit | | | |
| TOTAL COMBINED MAX INCENTIVE | | | Up to \$10,000 | | |
| Your final incentive will be based on your total qualifying expenses, less your FEMA payment, any insurance payment, and any other donations or grants, up to a total incentive amount of \$10,000 | | | | | |

| | | Low- and Moderate-Income | Higher-Income | Financing |
|----------------|---------------------------------|--------------------------------------|--------------------------------------|---|
| Weatherization | Home Performance w/ ENERGY STAR | 75% off project costs, up to \$9,500 | 75% off project costs, up to \$4,000 | Eligible for No-Interest (0% APR) Financing, up to \$30,000 |
| | MAX INCENTIVE | \$9,500 | \$4,000 | |

| | | Low- and Moderate-Income | Higher-Income | Financing |
|---------------|-------------------------|---------------------------------------|--------------------------------------|---|
| Water Heating | Heat Pump Water Heaters | 100% off project costs, up to \$5,000 | 90% off project costs, up to \$4,500 | Eligible for No-Interest (0% APR) Financing, up to \$30,000 |
| | MAX INCENTIVE | \$5,000 | \$4,500 | |

At left, see flood recovery rebates from Efficiency Vermont. FEMA recipients must apply for the FEMA process before submitting applications for flood recovery rebates from Efficiency Vermont. Submitting rebate applications to Efficiency Vermont before applying for FEMA assistance could disqualify you from receiving FEMA payments.



Roger Fox

continued from page 1

which, he said, felt like an escape from the consumerist suburbs. “I had the chance to spend time with a lot of other nerds and assorted misfits,” he said. The Vietnam War, and the prospect of the draft, made a grim context for education and career decisions. Like a lot of his friends at graduation, Fox said, he tried to avoid enlisting in the armed services and found a deferrable job working on the Apollo project in the space program in Florida.

But before long, he was back in Boston, living with a former dorm-mate from MIT. Between the war and the mass protests that brought the war home, “it seemed like society was falling apart,” he said. So when his friend’s former girlfriend, a Goddard student, connected them with a piece of land for sale in Walden, they pooled their money and moved to the Northeast Kingdom.

“We had what we called a work commune, because that was popular terminology in those days, of six people,” Fox said, “friends of friends who were looking for adventure.” Apocalypse Farms was formed. How long it lasted, Fox said, depends on how you look at it. The winter of 1970-1971 was the snowiest on record in Vermont, and caused more than a few back-to-the-landers to change their minds. Fox recalled, “By the time the snow melted in Walden it was the middle of May.”

CoFEC

Fox’s only previous experience with cooperatives was with the famous Harvard Coop bookstore in Cambridge. But when he discovered Apocalypse Farms’ electric service would be provided by a cooperatively-owned utility, he was intrigued. “I liked the idea of consumers collaborating in the commercial space,” he remembered. The Public Service Board (as the Public Utility Commission was then known) had recently tightened regulations on line extensions to discourage overdevelopment. WEC told him they would extend a line out to the property if the commune built enough of a house to show they intended to finish it. So, Fox tells it, the group poured their own concrete foundation and built a deck over it with a gasoline generator and radial arm saw, and that was enough to warrant the extension. And the next year, in 1972, he attended his first Annual Meeting of WEC members.

“I was by far the youngest person there. I remember a sea of white hair,” he said. “It was a big social event, which it still is. You could get a free meal and hang out with your friends.” But, he said, there wasn’t yet much involvement from the back-to-the-land generation; the identity of the Co-op was traditional. Fox explained this as a natural lull: after WEC was formed in 1939 and lines were strung, “people were excited about having access to electricity for a while, but things settled down and they were having trouble



finding people to serve on the Board. So it ended up being an insiders group,” he said. “The people who were on the Board had been on the Board for a long time.” While he credits them for keeping the Co-op operating, he said, he also didn’t see the cooperative structure being used to benefit its members.

He knew enough about illumination to recognize a problem with WEC’s then-unstable voltage and the light bulbs provided by the Co-op: basically, WEC leaders didn’t let members know they were not getting their money’s

worth from their light bulbs. Other friends were newly attentive to energy issues because of the oil embargo of 1973, and that sparked interest in Co-op policies. “There were a number of people who attended the 1973 members’ meeting who started giving Co-op management a hard time,” he said. “It seems to me there’s always been that tension between creatives or innovators who are thinking, ‘how do we solve long standing problems,’ as opposed to the sticks in the mud who think there are a limited number of approaches to dealing with a problem

that would be considered acceptable.”

The innovators formed CoFEC: The Committee for an Effective Co-op. When they found Co-op Currents’ coverage insufficient, they printed their own rebuttal newsletter, the Transformer, and mailed it to all Co-op members. CoFEC ran a proxy campaign – back then, Fox explained, bylaws allowed for proxy voting at the Annual Meeting – and elected their slate of candidates to the Board: Tunbridge sheep farmer and philosopher Robert O’Brien, artist and helper Bob Fisher of Middlesex, and Barre politician and activist Margaret Lucenti. But in 1974, the Legislature – influenced, Fox said, by the “old guard” on the Board – authorized the Co-op to allow voting by mail. CoFEC was unable to seat another candidate until the late 1980s.

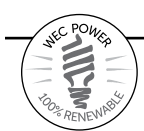
Fox said he maintained a background role for the next several years and focused on his screen printing business: Apocalypse Graphics. With no engineering job prospects in the Northeast Kingdom, he turned to a skill he’d developed in the basement of his MIT dorm and became a printing entrepreneur. Early successes included a sold-out run of t-shirts for the 1973 Sugarbush Folk Festival and a contract for thousands of suggestive bumper stickers promoting milk. He’s also printed stickers for Vermont political candidates, garments for Vermont businesses and organizations, and his own line of farm-themed animal and vegetable t-shirts.

In the meantime, WEC was involved in the notoriously mismanaged construction of the Seabrook nuclear power plant in New Hampshire, whose cost overruns brought the Co-op and other utilities close to bankruptcy. “That was an issue that got people like me and Barry [Bernstein] and Don Douglas, who were still interested in

continued on page 5



“Young radical” printers circa 1974. (courtesy Roger Fox)



Roger Fox

continued from page 4

reforming the Co-op, engaged,” said Fox. CoFEC-sympathetic Directors were a minority on the Board when he agreed to join a slate of candidates in 1991. All three won. With a new Board majority, WEC entered an era of environmentally progressive leadership that continues today.

Legacy

“We were early adopters of the value of environmental responsibility by electric utilities,” reflected Fox. Those achievements include getting WEC out of its contract with the now-defunct nuclear plant Vermont Yankee and replacing that power supply with landfill gas and wind, as well as advocating for adding public directors to VELCO’s leadership, to support accountability to ratepayers by the utility-owned statewide transmission utility.

Fox’s fellow Directors say his legacy also includes his attention to whistle-clean internal governance processes. He served as the “parliamentarian of the Board,” they co-wrote in his Aiken award nomination, ensuring compliance with Vermont laws and regulations, the Cooperative Principles, and WEC’s own bylaws and policies.

Collaboration and cooperation is the key to living in northern Vermont, he said. It bears on the Co-op because, he said, “we can’t be assured of the Co-op’s continued economic viability.” His analogy is that small towns facing economic stress, but not wishing to merge, could look for leverage points among their expenses – for example,

work with the neighboring town to share the big machinery. WEC, he thinks, would be well served in a political and regulatory environment that allowed similar creative solutions.

But protecting local norms is the other half of that dime. Now at the end of his Board service, Fox senses friction in a future where transplant Vermonters, spurred here from denser locations by climate change and the prospect of working from home, expect too much. “I’m concerned that too many of our members aren’t aware of our Co-op’s history or the benefits it provides or is able to provide to our communities. It’s taken for granted. People have unreasonable expectations for what we’re able to do,” he said.

He continued, “I’m concerned about the impact high speed broadband is likely to produce in our area.” The ability to work from home stresses a housing market that’s already unaffordable for people who live here, he pointed out, and small communities are sensitive ecosystems. “It’s important to maintain some balance between the people who have some tenure here and the people who don’t have any tenure here but just showed up and want to influence local culture,” he said. “Seems more likely than not to impact Washington Electric Co-op.”

The timing of Fox’s departure means the Board may appoint a Director of their choice before the Annual Meeting in May 2024, when his term technically ends. By the 2024 election, the Director appointed to fill his seat will effectively be an incumbent. During past Board vacancies, Fox explained, the Board found that qualified members who

Interested in Serving on WEC’s Board of Directors?

Contact President Stephen Knowlton with interest, c/o Rosie Casciero: rosie.casciero@wec.coop

WEC aims to appoint one Director in 2023 to the seat vacated by Roger Fox. In the December-January issue, WEC will issue a general call for candidates to run for the 2024 Board election.

were unwilling, at first, to run for election were willing to serve by appointment.

He plans to dedicate more time to his family and to many other projects. Fox still identifies as irrepressibly

youthful and energetic, a carrier of the ideals that brought him to Vermont in the first place. The self-described young radical, at 76, has plenty still to accomplish. “I should make it clear I haven’t grown up,” he said.

Where’s WEC?

Crews are still busy working to keep rights-of-way clear. Right-of-way maintenance is necessary to keep your power safe and reliable. Pole inspections are also underway. This is to maintain reliable electric service and to test the integrity of the poles.

Where are tree crews working to keep rights-of-way clear?

Peacham:

- County
- Mack Mountain

Topsham:

- Welch

Where are pole inspections happening?

- Barre
- Berlin
- Brookfield
- Danville
- Roxbury
- Moretown
- Northfield
- Walden
- Williamstown



Visit wec.coop/right-of-way for the most recent notices.

Meter Upgrade

continued from page 1

line,” he said. They also send frequent data including the time and voltage of electric use. “These additional capabilities will assist us in outage restoration and in giving accurate restoration estimates, help our crews know what’s going on when there’s an issue on our system, enable us to do time-of-use rates and other types of rates, and better work with members who have solar and heat pumps,” Porter said.

The state grant WEC anticipates is for \$2.25 million. Porter explained that the Co-op is requesting information from vendors about the specific features of an advanced metering system, what it would cost, and how it would be implemented in WEC territory. More than ten years ago, WEC leaders opted to install a metering system that communicates through power lines in part because of concerns that a system that operates on radio frequencies wouldn’t work as well in mountainous, rural central Vermont. “That technology has improved a lot. We’re confident we can reach the vast majority of our members’ locations through the new meters,” said Porter. Advanced

metering systems communicate through radio frequencies, wifi, or both. The type of system WEC installs depends on the options vendors present.

It will be a few years before the project is complete, Porter acknowledged, owing in part to a supply chain that is still slow-moving from pandemic delays and national demand for equipment that supports beneficial electrification. The full benefits of the new system, including the ability to identify voltage issues requiring intervention and accommodate solar and heat pumps, are available only to those who have the updated meters installed. Per state regulations, members who elect to opt out of installing new meters may do so without incurring extra fees. Porter is not yet sure how the Co-op will communicate with those members’ meters – he’s asked vendors to explore this in their bids – but the cost of running a background power line system, or sending a truck to read meters, would be absorbed by the membership.

While technology changes rapidly, the basic communication methods used by advanced meters – radio frequency and wifi – are unlikely to be supplanted by new tech anytime soon,

and are already able to interface with other options like fiber and cellular service, according to Porter. And data collected by meters are safe: “We will use the same backend management of data we do now. The provider of our software package will protect future

data just as we protect current data,” he pledged.

As WEC proceeds with the bidding and vendor selection process, continue to look for more information about advanced metering upgrades in *Co-op Currents* and on wec.coop.

What are the Benefits of Advanced Metering Infrastructure?

- In 2016 the US Department of Energy issued a report showing Advanced Metering Infrastructure provided benefits to electricity users and utilities. The report published these major findings:
- Reduced costs for metering and billing from fewer truck rolls, labor savings, more accurate and timely billing, fewer customer disputes, and improvements in operational efficiencies.
 - More customer control over electricity consumption, costs, and bills from greater use of new customer tools (e.g., web portals and smart thermostats) and techniques (e.g., shifting demand to off-peak periods).
 - Lower utility capital expenditures and customer bill savings resulting from reduced peak demand and improvements in asset utilization and maintenance.
 - Lower outage costs and fewer inconveniences for customers from faster outage restoration and more precise dispatching of repair crews to the locations where they are needed.

Advanced Metering Infrastructure and Customer Systems: Results from the Smart Grid Investment Grant Program, September, 2016: https://www.energy.gov/sites/prod/files/2016/12/f34/AMI%20Summary%20Report_09-26-16.pdf

Co-op Month

Cooperatives Are All Around

Avram Patt grew up with the cooperative model. The former general manager of WEC, current member, and state representative spent his youth in the Bronx, in a home surrounded by the Amalgamated Housing Cooperative: a nearly hundred year old housing co-op funded by a union, the Amalgamated Clothing Workers of America, to be affordable housing for workers. Patt's father, a doctor, served the neighborhood, and his parents moved into a co-op apartment after their children left home.

There are many different kinds of cooperatives: some are ancient; new ones are incorporating all the time. To honor Co-op Month, suggested Patt, it's worth recognizing that cooperatives are all around us.

The origin of cooperatives is usually traced to England during the Industrial Revolution, where cooperative arrangements offered security and stability in a hard working climate. The Rochdale Society of Equitable Pioneers, organized in 1844, is credited as the first successful co-op. Founded on a set of principles – predecessors to today's Seven Cooperative Principles – it's often recognized as a consumer cooperative business model.

But much earlier, in 1752, Benjamin Franklin is recognized as starting the first cooperative business in America: a mutual fire insurance company, the Philadelphia Contributionship, which still operates.

What not everyone recognizes, said Patt, is “the breadth of the cooperative business model. Most people know

there are electricity co-ops, food co-ops, credit unions, and agricultural co-ops.” But many other businesses can be co-ops, he said. “I used to like to surprise people telling them that Ace and True Value hardware stores are cooperatives.”

Types of Co-ops

Hardware stores are examples of purchasing or retail cooperatives: member stores participate to benefit from purchasing economies of scale. Ace Hardware is the largest retail co-op in the country. Some farm supply stores are retail cooperatives too.

Producer cooperatives are designed for member producers to increase their market access. In some cases, the producer cooperative adds value to the core product, which further expands reach and income. WEC neighbor Cabot Creamery Cooperative adds value to milk from member producers – dairy farms – by bringing milk-based products to market. Organic Valley declares on its website “Our farmers own the company. Not the other way around,” highlighting the social and environmental benefits of being governed by its producer members.

Worker cooperatives are companies owned and governed by the people who work there. Many of these describe themselves as employee-owned. They can have a few employee-owners, or hundreds. Examples in or near WEC's service area include Catamount Solar in Randolph, Rabble Rouser in Montpelier, and Timber Homes in Vershire.

Fun facts about cooperatives:

- The first known cooperative in America was founded by Benjamin Franklin.
- The number of worker cooperatives in the US grew more than 30% between 2019 and 2021.
- There are more than 50,000 member-owners of food store co-ops in Vermont.
- American rural electric cooperatives serve more than 42 million people.
- 48 out of 50 US states have at least one rural electric co-op.
- In corporations, the pay ratio between CEOs and a typical worker is 350:1. In worker co-ops, the pay ratio between highest and lowest wage earners is typically not more than 2:1.

Learn more:

Karen Kahn, “Latest Worker Co-op Survey shows More Coops but Fewer Workers” Fifty By Fifty; February 2022. fiftybyfifty.org/2022/02/latest-worker-co-op-survey-shows-more-co-ops-but-fewer-workers/

Lynn Pitman, “History of Cooperatives in the United States: An Overview.” UW Center for Cooperatives, revised Dec 2018 resources.uwcc.wisc.edu/history_of_cooperatives.pdf

And more:

[Electric.coop/electric-cooperative-fact-sheet](https://electric.coop/electric-cooperative-fact-sheet)
BecomingEmployeeOwned.org
CooperativeFund.org
nfca.coop/VT
veoc.org/coops

The kind of co-op that usually springs to mind is the consumer cooperative model, in which members own the cooperative and benefit from the goods and/or services it provides. There is a lot of diversity among consumer cooperatives. WEC is one; so are credit unions, food co-ops, childcare co-ops, and many others.

For some, like WEC, member-owners are determined by service area. You're a WEC member because WEC supplies power to the place you live or

work. Many other consumer cooperatives don't require only members to participate in the consumer piece: most, but not all, food co-ops allow non-members to shop; Mad River Glen sells lift tickets to non-shareholders.

There are also hybrid or multi-stakeholder cooperatives, in which different groups of people may participate in membership and governance is representative of these different groups. Some housing cooperatives, for example, invite membership from community investors, residents, and staff.

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.

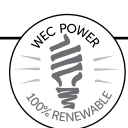
Co-ops Today

But how are co-ops doing? After all, many consumer cooperatives were formed to bring services to people who couldn't otherwise access what they needed – and now we live in an era of online shopping.

Anecdotally, interest in consumer cooperatives is growing. Micha Josephy, the executive director of the Cooperative Fund of the Northeast, recently reached out to Avram Patt to talk about recruiting investors to the fund. Investors provide the capital that co-ops borrow to start up or expand. Patt, who has maintained an account with the fund for many years, explained that the fund is facing increasing demand for financing.

Worker cooperatives are certainly growing. According to a 2022 analysis from Fifty by Fifty, the number of worker co-ops grew more than 30% since 2019, “an astonishing figure when you consider the obstacles to new businesses during the pandemic,” wrote author Karen Kahn.


The same report showed that co-ops are closer to representative parity in employment than many other business



models. Among surveyed co-ops, 52% of co-op workers identified as female, 4% nonbinary, and 44% male; 47% identified as people of color. Pay parity is also a factor in what attracts co-op employees: where corporate CEOs may earn 350 times the wage of a typical worker, the highest earner in a worker co-op usually earns no more than twice the wage of the lowest earner.

Using food co-ops as a model, consumer interest still appears

high. The Neighboring Food Co-op Association – whose members include most but not all Vermont food co-ops – claim to “generate over \$147 million in annual revenue, and sell more than \$51 million in local products.”

Co-operatives are all around – serving our needs, employing our workers, and providing a more equitable and healthy vision of business than profit-driven models. 

ASK THE ENERGY COACH

When should I buy an EV?

Dear Energy Coach: My current car is a gasser, but my next will be electric. My question is, should I buy now or later for the best incentives?



You're in good company. Anecdotally, I know of many WEC members and Vermonters who have decided their current combustion engine vehicle will be their last.

There's more to take into account than just incentives, but let's start there: Incentives are not going away. In fact, changes through the federal Inflation Reduction Act (IRA) are making those incentives more accessible. Previously, the \$7,500 credit for a new EV was an incentive you claimed on your taxes, usually well after your purchase, and had value if your tax liability was high enough for it to matter, but not so high you were ineligible for it. So, it was most useful to higher-but-not-highest-income individuals.

The change that takes effect January 1, 2024 switches things around on the back end so that for buyers who are income-eligible — that's if you make under \$150,000 singly or \$300,000 filing jointly — you get that \$7,500 at point of sale.

So that's a big carrot. When you're ready to buy, I urge you to check in with me and with our friends at DriveElectricVT.org to see if you are eligible for other incentives.

Now for the other piece of the pie: Don't go installing any Level 2 EV chargers until you know your transformer can handle it. The good news is, if your average miles per day is 50 or less, Level 1 can work – and a Level 1 can easily recharge a plug-in hybrid. But most all-electric drivers will eventually want a Level 2. Take a look at my checklist below and follow the steps. Complete that load sheet to be eligible for a Level 2 charger provided by WEC at no cost to you (to be installed by your contractor).

For more information about the EV tax credit change: [electrek.co/2023/10/06/ev-tax-credit-changes-mean-low-income-buyers-can-now-get-full-7500](https://www.washingtonelectric.coop/2023/10/06/ev-tax-credit-changes-mean-low-income-buyers-can-now-get-full-7500)

Have an energy question? Ask the Energy Coach: energycoach@wec.coop

Adding New Electric Devices? Follow the Energy Coach's Checklist

Buying an EV? Installing a new heat pump water heater? Before you plug in, follow these steps.

1. Look at your circuit breaker box. Is it a 100 or 200 amp box? How many remaining slots are there? Take a photo.
2. Call the Energy Coach to inquire about adding an EV to your peak load. What's your historic peak load? If you email, attach the photo. You will need to complete a LoadSheet (look for it on the Energy Coach section at wec.coop) to be eligible for a no cost Level 2 charger from WEC (to be installed by your contractor).
3. WEC's teams will assess your service. You'll learn what, if any, work needs to be done to prepare your home electrically for EV load, about how long it will take, and how much it will cost. Service upgrades typically involve separately hiring a qualified contractor, and coordinating with WEC to make electrical improvements to increase capacity of the member's equipment. WEC will begin performing elective service upgrades again as supply chain issues are resolved.

Have Your Finances Taken a Hit?

Don't let your WEC bill go past due, or grow beyond what you can manage. **Help is available:** A Member Services Representative will help you put together a budget that works for you. Plus, there are state programs that may help pay down your bill.

Call us today, and we'll help you put together a plan: 802-223-5245 or toll free at 1-800-WEC-5245.



Winter Storm Checklist: Be Prepared

In 2022, WEC's annual winter storm checklist mailed to members in the December-January issue of *Co-op Currents* – and arrived in the middle of what was, for some, a week-long, storm-related outage. That was a little too late for anyone to put it to use. Thanks to member feedback, we'll publish it in the October-November issue going forward. You can also find this list anytime on wec.coop. Here's what you need to know:

Be aware:

- Pay attention to local weather reports
- Sign up for school closings, road alerts, and weather alerts on electronic devices
- Follow travel precautions
- Charge phones, tablets, computers, and other devices
- Address potential storm hazards on your property, like a chimney that needs cleaning or a dead tree limb hanging over the driveway

Check your supplies:

- 3-5 days of nonperishable food for each family member, including pets
- Extra medication, oxygen, or other health essentials
- Buckets or containers of water for drinking and household use
- Portable radio
- Flashlights
- Spare batteries
- Candles
- Matches or lighter
- Wind up or battery alarm clock
- Safety pins
- Zip-top plastic bags
- Moist towelettes or baby wipes
- Frozen ice packs
- Large cooler or ice chest
- Sleeping bags or blankets
- Warm, dry clothing
- Duct tape
- First Aid kit
- Personal hygiene supplies
- Diapers and other baby supplies
- Hand-crank can opener
- Disposable plates, cups, and eating utensils
- A fire extinguisher
- Charged phone and car charger
- Charged EV or full tank in gas car
- Shovels and/or tuned up snow-blower
- Masks or face coverings and hand sanitizer
- Whatever else you may need! Wood supply, camp stove, etc.

Water

If you know a storm with the potential to cause outages is

coming, fill containers with water, including bathtubs. Separate water for drinking from that for other uses. Flush toilets sparingly with a bucket of water. Have the means to purify water without electricity.

Have a plan

- Do you have backup heat that does not rely on electricity?
- If you have special health needs, do you have ice packs to keep medication cold, backup oxygen, or a generator?
- Do you have someone you can call if you need assistance?
- Do you have neighbors who may need special assistance? If you can assume responsibility to check on them, do their family members have your contact info?
- Does your town have an emergency action plan?
- Do you have a place you can go if you need to leave town for a few days?

In case of longer outages:

If your power is going to be off for hours or even days, here are some additional precautions you and your family can take:

- Turn off and unplug electrical equipment. Leave one light on inside so you can tell when power is turned back on.
- Turn on an outside light that is visible from the road so that Co-op crews can see that your power has been restored.
- Close all doors, windows, and curtains, even doors between rooms. This will help your home retain heat in cold weather.
- Keep the refrigerator and freezer closed tightly. If you're not sure food is safe to eat, use the old rule of thumb: "When in doubt, throw it out."
- Know how to override your electric garage door opener.
- Conserve water. Water will keep hot in your water heater's tank for up to 3 days.
- Keep warm in layers of clothing and blankets. Wool is especially warm.
- Keep active.
- Use the fireplace wisely and safely. Do not leave the damper open when not in use.
- Pets like tropical fish and birds are very sensitive to temperature changes. They will require special care.
- Your phone will probably work – the telephone company uses a separate, low voltage power supply. Use it to keep in touch and stay informed.

Safety Minute: Vehicle Accidents

Electrical safety tips from Safety and Environmental Compliance Specialist David Young

Mistakes can happen to anyone. On September 12, just after noon, a vehicle accident created a widespread outage. A longtime grain delivery driver, making a regular delivery to a farm and who had done this routine countless times, became distracted. He moved the grain delivery truck without lowering the auger.

A utility pole may carry telephone cables, fiber optic cables, and at the top of the pole, electric transmission and/or distribution lines. The auger



David Young, Safety and Environmental Compliance Specialist

first caught a telephone cable. The cable has a steel cable in it, which pushed up the auger. The pole held two different electric circuits: transmission and distribution. The auger shorted out a total of seven wires and the pole broke.


The driver heard a pop and stopped the truck. At first he thought he hit a tree, so he climbed out of the truck before he realized the electric wires were down. Luckily, our protective equipment shut off the lines. If one of the circuits had stayed energized, the vehicle might have

become energized. If he had touched the vehicle and the ground at the same time, he might have been electrocuted.

This kind of accident happens with excavators, dump trucks, passenger vehicles running into poles, or when individuals cut trees that fall on the line. Here's what to do if you are in a vehicle and there is damage to electric wires:

1. Do not leave the vehicle. Call for help.
2. If you are a witness, do not approach the vehicle. Stay more than 50 feet away. Encourage anyone inside to stay in the vehicle. Call emergency services.
3. If the vehicle becomes engulfed in flames, jump – do not step – clear of the vehicle. When you are in the

vehicle, you are like a bird on a wire. If the vehicle is energized and you touch the vehicle and the ground at the same time, your body will become a circuit for electricity.

4. If you must jump clear of the vehicle, shuffle until you are more than 50 feet away. The ground may also be energized. Breaking and reintroducing contact with the ground by stepping will make your body a circuit. 

Members can request safety presentations from David Young for their school, organization, or community group. Contact him at 802-224-2340 or david.young@wec.coop.

A Tour of Coventry: Landfill Processes and Gas-to-Electricity Generation

Every September, WEC and Casella host an open house at Coventry Landfill, welcoming Co-op members and the public to learn about how the landfill operates and how landfill gas is captured to power WEC members' homes.

A few weeks before the September 16 open house, WEC Board member Betsy Allen toured the landfill and gas-to-electricity plant and took pictures. Here she describes what she learned for Co-op Currents.

By Betsy Allen

On Saturday August 19, Louis Porter joined the Vermont House Energy and Environment Committee, along with two new WEC Board members, Susan



Members of Vermont's House Committee on Energy and Environment who have constituents in WEC's service area joined WEC leaders for a tour of the landfill and gas-to-electricity plant in Coventry.


Alexander and myself, for an informative tour of the Coventry Landfill and the WEC landfill-gas-to-electricity plant.

Louis explained how our plant is a vital renewable resource for WEC members and the environment. Representatives on the Legislative Committee whose constituents include WEC members came to Coventry to tour and learn about the Casella landfill located there, and took the opportunity to learn about WEC's plant at the same time.

John Casella, owner, and several engineers, explained how the landfill is constructed with primary and secondary layers for every component, how the leachate is processed, how the methane is captured and sent to the WEC electricity generating plant, and the numerous data collection systems to monitor the landfill. If WEC was not utilizing this renewable resource, the gases from the landfill would just be flared and wasted. Although burning methane in a plant to produce electricity releases some carbon dioxide into the atmosphere, the plant is a source of renewable electricity and considered a low carbon source of power because the methane would

be emitted into the atmosphere if we weren't using it to generate electricity.

Then we hopped on a school bus to tour the sites. We were able to get out and see how a new section for landfill is being built. The process is engineered with great precision for environmental safety. At the WEC plant, we donned ear protection to walk through the system of the gas piped to the five large generators, then to the substation that sends the electricity, as much as eight megawatts of power, onto the grid. Except for breakdowns or scheduled shut-downs for maintenance, the generators are running 24/7 and supply about 70% of WEC members' electrical needs.

It is actually exciting to learn and see how this mutually benefitting system between the landfill and WEC works! 



At WEC's gas-to-electricity generation plant, L-R: General Manager Louis Porter, Rep. Larry Satcowitz, former GM Avram Patt, plant operator Pete Urie, Director Betsy Allen, Rep. Dara Torre, Engineering and Operations Director Dave Kresock, Director Susan Alexander.

**Go Green.
Go Electric.
Go WEC!**

