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CO-OP CURRENTS

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Co-op Transformation

A Co-op Month meditation on the relationship between our historic cooperative values and providing electricity today

By Louis Porter, General Manager

My family loves to recount the time when, at a young age and having grown up on a farm, I casually stepped outside and went to the bathroom off the front steps of the Adamant Co-op. A stone's throw away—for want of a better measurement—there is now a sign commemorating the life of local resident Clarence W. Fitch, a Co-op pioneer and leader, including at Washington Electric Co-op.

It's a sign I drive past nearly every day as I go to work at WEC, and lately it has made me ponder whether an electrical cooperative remains relevant in an age in which the sophistication and cost of the system of electricity production and delivery is growing so rapidly, and members' needs are changing nearly as fast.

Recently, WEC's Board of Directors, at my request, has authorized a change in how the Co-op deals with transformer upgrades. In the past, unlike most of the utilities in Vermont, WEC members who increased how much electricity they used had to pay a substantial share of the cost of upgrading the transformers that serve them.

This presented several challenges. It placed WEC out of sync with most utilities in Vermont, who quite reasonably view a transformer upgrade as an investment that allows greater usage of electricity ultimately providing economies of scale for all ratepayers through increased sales. Second, it put us at odds with some state policymakers who believe that charging for those transformer upgrades slows the adoption of electric vehicles and heat pumps. And, most important, it caused consternation among Co-op members who were increasing their power usage and, understandably, did not want to have that expense on top of their monthly power bill. It also made it difficult to assign the cost of those transformers when, as is often the case on WEC lines, one transformer served several households.

Ultimately, I think that encouraging the usage of electricity to replace fossil fuels is of great importance given the changing climate, and I think that policymakers are probably correct that increased usage will benefit all Co-op members.

I recommended, and the Board agreed, that starting in January of 2025, those members who increase their electricity usage will not pay the cost of transformer upgrades to a maximum of 37.5 kVa. For context, the "base" transformer for many years for WEC was 5 kVA, as it is more efficient than a larger transformer and was recommended at the time by the state's Department of Public Service. More recently, base transformer size changed to 15 kVA, in recognition of the increased electrical demands of our members.

Another driving factor was receiving word recently from the Rural Utilities Service, whose advantageous borrowing rates greatly benefit WEC and other cooperatives, that compliance with their rules requires a change in our approach.

But it was with very mixed feelings that I made that recommendation. Ultimately, I think that encouraging the usage of electricity to replace fossil fuels is of great importance given the changing climate, and I think that policymakers are probably correct that increased usage will benefit all Co-op members.

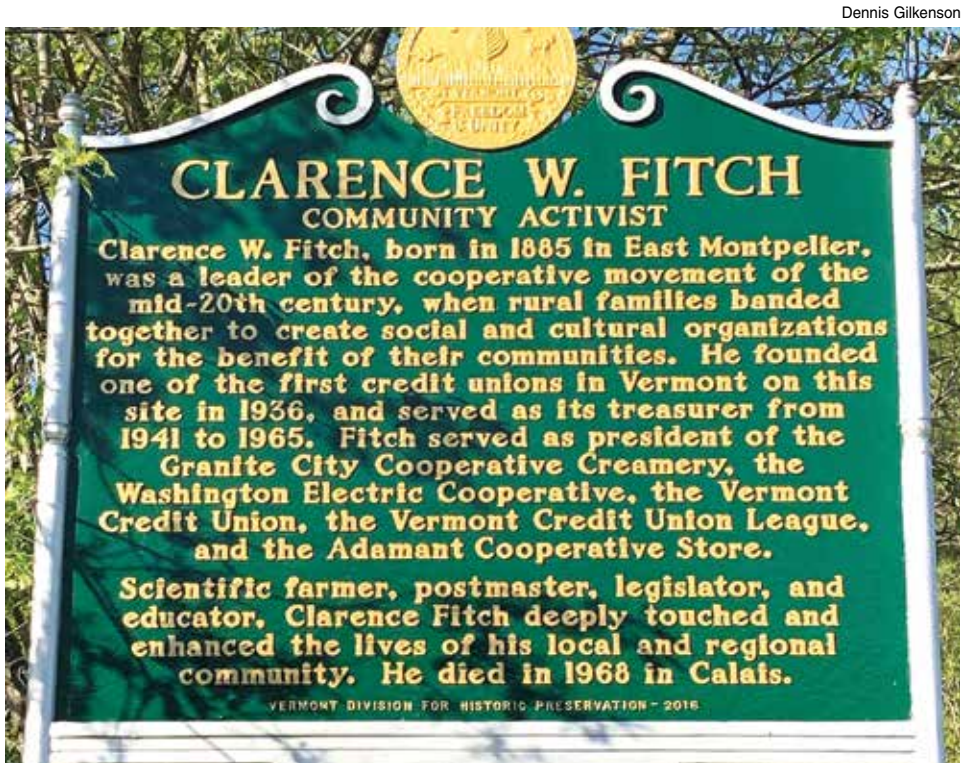
However, I can't help but feel that this change runs counter to long-standing goals of WEC, including that those who cause the need for investment should participate in paying those costs, and that one of WEC's primary goals is to encourage efficient and careful use of energy, including electricity.

It is just one example of where there seems to be an uneasy fit between long-standing cooperative ideals and the realities of running a 21st century utility. Reasonable people can argue over the benefits of net metering from an environmental standpoint, but it is hard to square a policy under which some members pay the cost of providing service to other members with the ideal of treating all members as equally as is practical.

So too with democratic control by volunteers of an organization as complex and technical as a modern electrical utility, even a small one like WEC.

Ultimately, I work for WEC because I believe that the principles like local ownership, transparent and democratic control, and a focus on community values and objectives is at least as important as the fiscal goals we need to meet. And I believe that even with the massive changes occurring in the industry, those cooperative principles still offer tremendous value to our members. It is just sometimes hard to see exactly how to make them fit together.

Dennis Gilkenson



The historical marker located near the Adamant Co-op that recognizes Clarence W. Fitch, Central Vermont champion of cooperatives.

Washington Electric Cooperative
East Montpelier, VT 05651

Inside

Winter storms are coming. Prepare for outages with WEC's annually published handy checklist: p. 6.

President's and General Manager's Message

Co-op Considers Selling Wrightsville Hydro Plant

Louis: Washington Electric is considering whether to sell the Wrightsville hydro project. The dam to which the hydro project is attached is operated by the State of Vermont, but the hydroelectric renewable power generating station and the penstock and turbines are owned by the Co-op. Wrightsville produces between 1-3% of the Co-op's power portfolio. The reason we're contemplating selling it is because it's expensive power. Even though we own the plant, it costs between 9 to 30 cents per kWh to produce power from it because of the restrictions on when it can run.

Hydro permits are moving from what they call ponding facilities—where water builds up and is then drawn down—to run-of-river facilities. A ponding hydro project is basically the perfect battery. It's free potential power coming in, filling up the pond, then you draw that down and create electricity from it whenever you need that electricity; for example, during peak power times. But it's problematic from an ecological standpoint. Run-of-river basically means the water runs at the same rate of flow as the water coming in at the head of the pond. That's better ecologically, for both the pond upstream and the river downstream, but it's less advantageous in the economics of power production than a ponding facility.

In our Wrightsville case, the permit is as close to run-of-river as the technology allows. That means the power is less financially beneficial for the Co-op, while the costs to run it have stayed the same. It's nine hundred kW, so just under a megawatt, but it rarely runs anywhere close to that.

Steve: Many Board members are of two minds about this decision, including myself. Everything Louis says informs that: it's problematic because we can have wet years when it produces a lot of power, and drier years, or downtime due to repairs, that cause its power to be very expensive, since the operating costs are fixed, or largely independent of the amount of electricity it produces. At the same time, it's a renewable power resource that WEC owns. We need to consider closely if we're willing to give up a source of renewable energy at this time when loads in our rural territory may be increasing. The Board is going to reach its decision with a lot of thought and with an eye to what the plant is worth.

Louis: There are a lot of good reasons to be conflicted. We're considering getting rid of an asset that's largely depreciated, paid off, and produces something of value. Whether it's a utility decision or a personal decision, you've got to think long and hard about cases like that. The question is: Is it worth it to our members to pay more for our own power than market cost, and some years substantially more? Is the benefit of having 3% of our power controlled by ourselves worth it?

Regulation

Steve: Hydro from sources like reservoirs are some of the more highly regulated sources of power you can find. Going forward, one has to assess the regulatory burden on this power source. As Louis alluded to, it's highly regulated when we can run the power house at the dam, and it doesn't, perhaps rarely, correlate to when WEC actually needs the power to meet load requirements—particularly when the sun goes down and solar goes offline, or the wind drops. A dam like Wrightsville is going to produce most during the spring runoff, and that's not typically a time we need its power.

Louis: Our peak power usage is in the summers and winters, and Wrightsville produces power mostly in the spring, and less so in the fall. The North Branch is also very flashy, which means the water flow goes up and down rapidly. Combined with the absence of being able to pond the water and release it when advantageous for us to make electricity, those factors mean it's less productive than it would otherwise be.

Steve: The way we're required to run it is not a good match for the dynamic load conditions and the availability of other power sources.

Benefits of Selling

Louis: WEC can sell the property and plant to someone who would put in a bid and offer to buy it. The FERC license—the federal and state licenses to operate—go with the plant. The separate operating agreement with the State would go with the plant as well

The short-term benefit to Washington Electric members would be that the purchasing funds would belong to members and be invested into the Washington Electric system without having to borrow that money. The longer-term benefit would be replacing the power that costs between nine and 30 cents per kWh with cheaper renewable power bought on the market.

As an intangible benefit, Washington Electric is a small organization, with 39 employees. Our utility does a lot of things and asks its people to do a lot of different jobs, and they're great at doing that. But it comes at a cost of efficiency. One of the folks who runs Wrightsville is also our meter and radio technician, so when there's an outage or something else to do, that's something else he has to handle.

It's fairly unusual for a utility of oursize to produce 70% of its own power, as we do through Coventry and Wrightsville. Being able to focus on other key aspects of WEC's work, like Coventry and the distribution system, would allow us to concentrate on those areas. We do a lot of different things for a small utility. Removing one of those jobs allows more capacity to focus on others.

Steve: Louis raises a good point. We don't have an in-house department for managing hydro systems. This is an

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

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

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offshoot and not our core strength even though it does produce renewable electricity. WEC's mission is delivering power reliably to all members. We get more than two thirds of our power from our landfill gas to electricity plant in Coventry, but we hire a contractor to manage the facility for us. That allows us to focus on how best to serve the members and expand in ways that serve our mission: for example, in more advanced metering systems to help WEC deliver power more reliably.

Benefits of Keeping

Louis: There are two reasonable arguments for keeping Wrightsville. First, regulations could change in the future to allow ponding hydro projects in Vermont. If we could operate Wrightsville as a battery, it would be much more valuable than it is as a run-of-river facility.

The second reason is the value of having our own generation source, even if it's more expensive. You could argue that paying extra for the certainty of ownership and control is worth it. But weighing against that are the high costs per kWh and the potential for major maintenance or catastrophic failure at some point.

Regarding the possibility of a future regulation change: here at Washington Electric, we balance our environmental mission with the costs to our members.

The Board is going to reach its decision with a lot of thought and with an eye to what the plant is worth.

– Stephen Knowlton

Having worked with scientists on dam changes, I'm convinced that run-of-river is better ecologically than ponding facilities.There's no serious argument that they're environmentally equivalent. If the regulations on ponding versus run-of-river were to change, it would be worth a conversation about the environmental and economic tradeoff. Even a small amount of ponding would significantly increase the facility's value to WEC. But for now, this is largely moot; we have a long-term FERC license, so we're locked into the current setup for 20 years or so.

Steve: While strictly following the federal and state regulations for run-of-river requirements Louis described, WEC made a comparable decision on its own regarding the application of powerful herbicides in our rights-of-way. We stopped using them about 20 years ago as part of our mission, believing most of our members, not just sportsmen, preferred to have fish in their streams and ponds where some of the herbicides might have otherwise ended up.

Louis: And nuclear power. We don't contract for nuclear energy.

Steve: Right. Anyway, it's unclear whether state agencies tasked with regulating the aquatic health of our waters would even consider changes to the ponding rule. It's the law to ensure clean and healthy water.

Nonetheless, the future cannot be predicted with confidence. As we decide whether to sell or not, we face various uncertainties. Maybe the price of renewable electricity will sharply rise as the national demand for electricity ramps up due to EV's, heat pumps, data centers, and new manufacturing. Not all of this increased usage will necessarily occur in our neck of the woods, but it may drive up the cost of renewable electricity to make keeping our Wrightsville resource more attractive. As climate change progresses, the balance between preserving any renewable electricity resource and maintaining existing environmental regulations could shift. Priorities and political directives may look different 10 years from now than they do today.

The question is: Is it worth it to our members to pay more for our own power than market cost, and some years substantially more?

– Louis Porter

Weather and Water Effects

Louis: As we all know too well, water is powerful, and we're seeing more frequent flooding events. It's reasonable to wonder if this impacts our consideration, and the answer is, not really. Any hydro facility carries some risk from flooding. It's the nature of these projects—they're built at the bottom of a system that has tremendous water power. Their advantage is also their vulnerability; they're at the receiving end of a significant hydrologic power.

However, I believe the risk at Wrightsville is very low due to the size and structural integrity of the dam. The chance of the dam being damaged is minimal. There was some confusion last year about rising water behind the dam. From what I've known, there was never a risk of the dam failing. Water was within a few inches of going into the emergency sluiceway, which is designed to prevent failure. Adding water downstream during a flood is not good, but there was no danger of the dam breaking. A couple of inches over the sluiceway is very different from a dam failure. By the way, the sluiceway comes in below or at the same level as our penstock and powerhouse. So overall, the risk to this hydro project is quite low.

Steve: Louis is correct—the possibility of wetter summers being the new normal hasn't really factored into our thinking about the dam's viability or liability. The key issue is whether the operating procedures and regulations WEC follows will account for what may be long-term shifts in our local weather patterns. But as a safety issue alone, there's no concern about the dam from WEC's perspective.

Louis: On the surface, wetter summers and more precipitation might suggest increased production. But the reality is, the water comes in large flooding events, which actually limits production. Once the Wrightsville reservoir exceeds a certain depth, we can't operate because there's too much head, or pressure, on the turbines. Similarly, we are not allowed to operate if the water level is too low. So, these weather patterns of either too little or too much precipitation do present challenges for us.

Steve: It would be a bit like trying to generate electricity from lightning bolts—there's a lot of energy there, but it comes all at once, making it hard to use effectively. Benjamin Franklin was very lucky when he flew his kite in a thunderstorm!

Categories of Potential Buyers

Louis: There are two broad categories of potential buyers. One is a group net metering project, though that would have to be outside WEC territory, because we wouldn't want our members paying the high cost of hydro net metering. It could be attractive to others since hydro net metering earns roughly 18 cents per kWh, which is generous.

Steve: I want to clarify for readers that if it's group net metered, it would be connected directly to the grid. This kind of net metering will be eventually phased out under Vermont's new Renewable Energy Standard rules. Under this type of net metering enforced by Vermont regulators, a commercial owner could sell the same power from Wrightsville as WEC does, but at well above market prices, passing the additional cost on to the utility's ratepayers. Any contract for the sale of Wrightsville would thus preclude net metering within our territory because of the cost to members.

Louis: The other category of buyers includes companies that already operate hydro dams and have the expertise to run small hydro projects more efficiently than WEC can.

Steve: And possibly because they need more power for their renewable portfolio than WEC currently does.

Value and Financial Factors

Louis: It's hard to put an exact dollar figure on Wrightsville. Washington Electric lists it at $1.2 million on its books. However, restrictions under the FERC license and potential maintenance needs

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Mini Message: Advanced Meter Update

A brief President's and General Manager's Message

Louis: Readers know Washington Electric is in the process of changing its metering system from a powerline carrier system that communicates thru power lines to a system that communicates separately from power lines, probably through a RF mesh radio frequency system. We expect to get between $2.25 and $4.5 million in state and federal grant money for that project, though those grants are not yet final yet. We are closing in on selecting a vendor to provide that system.

We spent the summer doing our due diligence, looking closely at proposals, and investing a lot of time by staff and Board members, by whom I mean Steve here. We're narrowing down proposals and are close to selecting a vendor. Our plan is to build out the system over the next couple of years. We anticipate a lot of benefits: better outage management; more information coming in, especially during outages; the ability to do time of use rates and other rates; and keeping up with advances in technology. Our current system is over 10 years old, and there's a lot of communication between members' premises and Washington Electric that it can't support.

Steve: Louis asked me to participate in the evaluation and selection process. Because the ultimate recommendation of the staff will come before the Board for approval, I have tried to participate as an observing Co-op member. I am pleased to find that we have an experienced consulting group that's helping us make an informed decision, and there's been spirited and informed discussion among staff members involved in the evaluation of each vendor's proposals. Regardless of the outcome, I believe staff and consultants are capably looking at the key and minor aspects of the various proposals and evaluating their merits in a constructive way.

Richard Rubin's Progressive Impact on the WEC Board

Richard Rubin was ready to retire from the WEC Board of Directors last year. But the 78-year-old trial lawyer from Plainfield decided to run for re-election one last time after he met Board newcomer Pat Barnes, liked Barnes's energy and ideas, and thought it would be fun to work with him.

So when Rubin slipped off the Board by one vote, he shrugged and summed it up simply: "I liked being on the Board a lot. It was fun." He also describes his 50-year career as a public defender as fun, or at least enjoyable. Others might say "rewarding" or "fulfilling" about a lifetime pushing for progressive system change and justice. But Rubin is all about fun.

In his many years serving WEC—Rubin isn't counting how many, but more than 20—he focused on what he could contribute to the Board ("my lawyerly skills, raising questions, bringing analytical process"), and what the Co-op could do to deliver power—he doesn't mean electricity—to the people.

Early Years and Legal Career

To know Rubin is to understand that he really loves being a lawyer: the work, the process, the skills, the impact he's been able to have. "I decided to use my legal career to help poor people and rural people in Vermont and indigent criminal defendants, and raise my kids here. It's been great!" he said.

Rubin enrolled at Harvard as a "Massachusetts Democrat," but the Vietnam War sharpened his politics, and in Cambridge he could observe the roots of privilege and insularity in power systems. "I'd see these Harvard guys in the Kennedy administration wrapped up in the Vietnam war and not hesitating to destroy hundreds of thousands of people," he said. "That was really evil. So I just kind of gave up: I'm not interested in playing that game."

After law school at the University of Pennsylvania and working on welfare rights cases and landlord-tenant disputes in Boston, he found his way to Vershire in 1972. Soon after he moved to Plainfield, where friends worked at Goddard, communes were forming, and anti-imperialist politics were strong. Rubin recalled walking into the courthouse in Chelsea and saying to himself, "I want to practice law in these courthouses." He explained, "Trying cases in rural Vermont counties is what I wanted to do. You know the clerks, you probably know the jurors, you get to know the judges."

He represented the individuals who started the Plainfield Co-op, which Rubin is pleased to see thriving today in its new location in the Plainfield Hardware building, and did other local work before joining the public defender's office in Washington County in 1977. "A lot of public defenders do the work for a few years and then they leave," Rubin observed. "Our office has provided it to Washington County for 40 to 50 years." In 1980, he helped organize the law firm Rubin Kidney Myer and Vincent, which has the contract in Washington County to provide public defense to people who can't afford private services. "One of the things we've prided in our law firm is to provide the best criminal defense to indigent people statewide," Rubin said.

His practice also encompasses private criminal defense and plaintiff personal injury law. Rubin is well respected among lawyers: he holds the highest possible ethics rating and was awarded a national honor for public service from the American Association for Justice for a case that eventually reached the US Supreme Court, in which Rubin helped hold accountable a pharmaceutical company whose defective drug injured a Vermonter.

Rubin's History with WEC

Rubin eventually crossed paths with Barry Bernstein, who served as WEC's President for years. Bernstein is credited by Rubin and other former and current Board members as the primary leader in the effort to flip WEC's Board to progressive leadership and harness public power as a mechanism for environmental and structural system change.

As member-owners, Bernstein and Rubin saw a problem with the Co-op being run by, according to Rubin, "good ol' boys who are using it for their own benefit, and giving themselves contracts." So they organized a slate of candidates to run for the Board. The Co-op leaders at that time wouldn't share the membership lists so Rubin and Bernstein's candidates could campaign. "So we sued them," Rubin said, "and the court ordered them to turn over the membership lists."

Richard Rubin at the 2023 Annual Meeting. "I liked being on the Board a lot. It was fun," said Rubin. His main interest over decades of Board service, he said, was using the member-owned electric cooperative as "an instrument of progressive change."

What it was about for me was seeing the Co-op as an instrument of progressive change.
– Richard Rubin

Unhappy with the court order, some of the "good ol' boys" tried lobbing hate-filled insults. But don't start with Rubin unless you know how to dance. "I was referred to by one as a 'New York Jew commie,'" Rubin said wryly. "I had to point out: I wasn't from New York."

The Co-op's members eventually elected a progressive majority to the Board, which then made a series of historically important decisions, including getting out of a contract with the Seabrook nuclear power plant, and investing in the Coventry landfill gas to electricity plant. More recently WEC's Board got involved in the sale of Central Vermont Public Service (CVPS) to Green Mountain Power (GMP), in order to increase public utility representation on the board of VELCO and create VLITE.

VELCO and VLITE

Rubin's interest in the Co-op was never about poles or wires, he said. "What it was about for me was seeing the Co-op as an instrument of progressive change." It was always about political control—wresting political power and utility ownership from a few, and returning it to the public.

The sale of CVPS to GMP in 2012 prompted a political struggle. "GMP wanted to buy CVPS and go on their merry way, and it didn't happen the way they wanted it," remembered Rubin, who credits Bernstein with leading the opposition. The state's utilities required reorganizing in order for the sale to go through. In the negotiation, and directly due to WEC leadership, GMP no longer maintained a majority on the board of directors of VELCO, the state's distribution utility-owned transmission utility. VLITE—the Vermont Low Income Trust for Electricity—was created in the process, and elects three members to VELCO's board. "As part of that deal, VLITE got 37% of the stock in VELCO," Rubin explained. "The transmission industry in the state of Vermont has been taken out of private hands and collectivized, and VLITE gets about $1.2 million a year in dividends."

It's $1.2 million annually that did

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New in 2025: State Infrastructure Fee for EV/PHEV

Starting January 1, Vermont will begin collecting an infrastructure fee for Vermont registered electric and plug-in hybrid vehicles. Drivers of gas-powered vehicles pay a total of $0.20 per gallon in state and federal taxes allocated for infrastructure improvements. The infrastructure fee for all-electric vehicles is $89 for a one-year registration and $178 for a two-year registration; for plug-in hybrid vehicles, the fee is $44.50 for a one-year registration and $89 for a two-year registration. Infrastructure fees are collected in addition to registration fees.

According to Bill Powell, WEC's Energy Coach, the state has been working for a few years to develop a fair mechanism to collect infrastructure fees from electric and plug-in hybrid vehicle drivers. "The flat rate being charged to EV drivers will have a higher impact on low mileage EV drivers," Powell calculated. "Former internal combustion engine drivers with EV mileage of more than 17,000 miles per year will pay a relatively lower overall tax."

Richard Rubin

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not previously exist, and that flows to people who don't typically have access to grants or venture capital. Rubin, who served until recently on VLITE's board, enjoyed the variety and the ability to fund innovative ideas. He describes the trust's mission as supporting nonprofits that further the state's energy plan, with an emphasis on grants and programs that benefit low-income populations. "We put pellet stoves in the Northeast Kingdom and insulate houses and take asbestos out of their ceilings," he offered. "The VLITE board is basically committed to using the money efficiently and productively with as little overhead as possible."

The Community Fund

If the story of VLITE sounds at all similar to Washington Electric Co-op's Community Fund, there's a connection. Rubin had advocated from time to time for WEC to give money away. A lot of corporations do, and it's part of being a responsible member of the community, he reasoned. But WEC is a member-owned not-for-profit, and Rubin admitted that Treasurer Don Douglas told him repeatedly that the Co-op can not just give away its members' money.

Eventually WEC leadership decided to start returning equity to its members in the form of capital credits, which Rubin supported. A certain percentage of equity is required by WEC's lenders; more goes toward capital improvements and to reduce rate increases. But the equity itself, Rubin pointed out, belongs to members.

So as the capital credits program began, Rubin saw an opportunity to both return equity to members and to create a simple mechanism to support local nonprofits. He and other Board members suggested asking members to donate their capital credits and to create a Community Fund with those donations. "We set up a way to say 'just keep it' every year, and it worked. It's easy, and it's been great. I just wish we could give away more," he said.

About 14% of WEC members say "Just keep it," and every year, the Community Fund gives tens of thousands of dollars to nonprofits active in WEC's service area.

The Future of the Fire

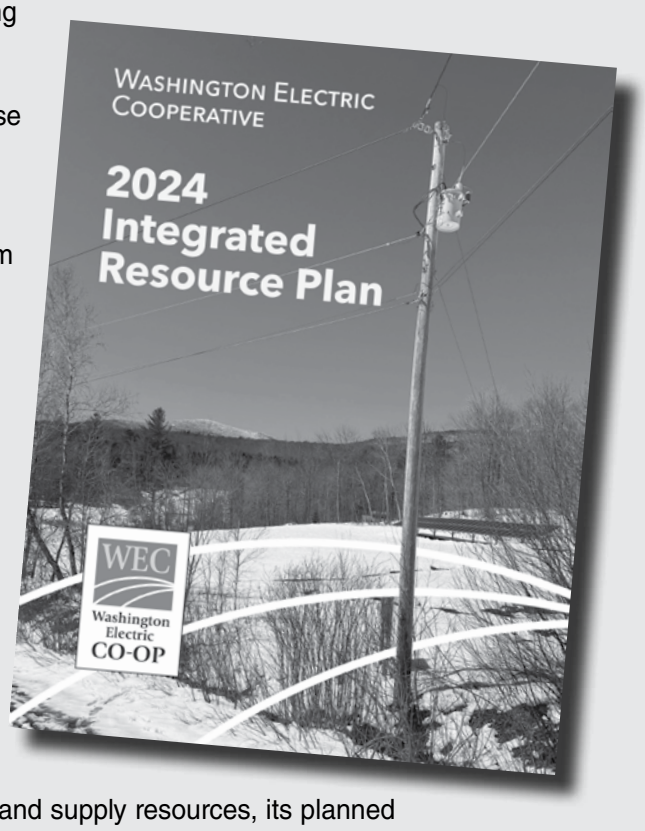
To some extent, Rubin sees the Co-op's political fire tempering over time. It makes sense, he reasoned. Leadership's first job is to focus on reliability. It's hard to run a small cooperative when the effects of climate change are worsening storms and outages, and it's hard managing the needs and expectations of a new generation of members.

But the kind of opportunities for progressive system change that drew Rubin to Co-op governance are still present, he thinks, even without good ol' boys to organize against. Senator Bernie Sanders' consistent message about economic inequality has remained popular with Vermonters for years, he pointed out. "There's an opportunity for the Co-op to embody that message as well, in its own way. We've seen it in making power more socialized."

Vast collective power ownership exists—in systems like the Tennessee Valley Authority, the country's largest public utility. Socializing systems is doable, he points out: it takes some money, and it takes the right leadership at the right time. "The wealth and corporate structures are highly concentrated," he acknowledged, and capitalist pressure on systems and political parties is too massive and entrenched to dismantle directly. "That's pessimistic," he said, "but what you can do is make changes locally. You can create models of economic progressivity within Vermont. One is the way the utilities are organized."

Integrated Resource Plan (IRP) Update

WEC's Integrated Resource Plan (IRP) was filed with the Public Utility Service (PUC) in April. Since then, the Department of Public Service (DPS) has requested answers to several questions raised during its discovery process, and WEC has worked to refer or answer those questions to the DPS' satisfaction. At this point, we are working toward a memorandum of understanding with the PUC. WEC is hopeful the case will close shortly after this issue goes to press.



The IRP represents WEC's plan for meeting the public's need for energy services safely, reliably, and at the lowest cost possible. The plan includes an analysis of WEC's energy needs and supply resources, its planned distribution system improvements, vegetation management, and potential environmental impacts. WEC's IRP can be accessed through its website: www.washingtonelectric.coop or through the PUC's electronic filing system ("ePUC") at http://epuc.vermont.gov/. Search by Case Number 24-1106-PET.

Co-op Principles

OCTOBER IS CO-OP MONTH

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.

Members Write

Members Write: WEC is Great!

I want to thank the tireless WEC crews who travel their huge territory, full of rugged terrain, restoring power to us in every kind of weather. I also appreciate their frequent updates on their progress that they post on their website—informative and reassuring. Our power was restored just at dusk today—thanks WEC, you're the best!

Meliss Bunce, Calais

Be Prepared for Winter Storms

Being prepared is taking responsibility for the safety and comfort of yourself and those around you. That means staying informed, having the supplies you need, and making wise choices. As winter storm season approaches, the Co-op asks all members to please prepare for the possibility of outages. During major storms, outages can last several days. This annual checklist is published in *Co-op Currents* to help you get ready. You may not have or need every item on this list, but scan it before big storms to make sure you do have what you need to ride out a multi-day outage.

WEC is also getting prepared. With the help of significant state and federal grant funding, WEC is pursuing a new metering system (the insider term is AMI, for Advanced Metering Infrastructure). This technology is intended to help the Co-op respond more quickly and efficiently to outages. "We are investing as wisely as we can in the resources that will make us more resilient to outages and to deal with them faster when they occur," said General Manager Louis Porter.

Members may now check for outage restoration estimates from the Co-op through the outage map on wec.coop. These are estimates—not guarantees—and members should be prepared to be out of power longer than the estimated time of restoration. However, overall feedback from the membership is that the restoration estimates are helpful and appreciated.

Members familiar with living in central Vermont need few reminders that weather is powerful here, and often disruptive. The 1,600 miles of lines managed by WEC are susceptible, in the winter, to trees bending and breaking under heavy snow. "We all choose to live in a rural area susceptible to high wind and wet snow," said Porter. "That causes outages, and as a Co-op and a membership, we all bear some responsibility to be ready for them."

Check Your Supplies:

Food and dining

- 3-5 days of nonperishable food for each family member, including pets
- Hand-crank can opener,
- Large cooler or ice chest, Frozen ice packs
- Disposable plates, cups, and eating utensils

Water

- Fill containers with water for drinking and buckets or bathtubs for household use. If you're on a well, you won't have water when the power goes out.
- Flush toilets sparingly with a bucket of water
- Have a way to boil or otherwise purify water

Health and comfort

- Extra medication, oxygen, or other health essentials
- First Aid kit
- Sleeping bags or blankets
- Warm, dry clothing
- Personal hygiene supplies
- Extra baby supplies, if relevant
- Flashlights and headlamps
- Spare batteries
- Candles and matches

Devices, safety, and entertainment

- Charged phones, laptops, and tablets
- Charged EV or full tank in gas car
- Shovels and/or tuned up snowblower
- A fire extinguisher
- Wind up or battery alarm clock
- Portable radio
- Books and games

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?
- Have you updated WEC if someone in your household has, or no longer has, medical needs that require wellness checks during an extended outage?

In Case of Longer Outages:

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

- Turn off and unplug electrical equipment. Leave on one light 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 external doors, windows, curtains, and 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, don't eat it.
- Know how to override your electric garage door opener.
- Conserve tap water. Water will keep hot in your water heater's tank for up to three days.
- Keep warm in layers of clothing and blankets.
- 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 and will require special care.
- If you have a landline, it will probably work—the telephone company uses a separate, low voltage power supply. Use it to keep in touch and stay informed.

Annual Winter Storm Checklist

Be Aware:

- Pay attention to local weather reports
- Sign up for school closings, road alerts, and weather alerts on electronic devices
- Follow travel precautions
- Contact 511 for road closures
- Contact 211 for local assistance, like emergency food and shelter
- 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

David Young

WEC crews prepare for a shift during Winter Storm Elliot in December 2022. Lineworkers work around the clock until all members' power is restored.

Energy Coach Recommended Reading

The Energy Coach recommends two articles from the September 4 *Montpelier Bridge* about what it's like to drive an EV.

"Cross-Country in a Tesla: Fuel-Free Fun, If You're Flexible" by WEC member John Lazenby

"Driving an EV daily brings with it a shift in mindset: You start out thinking gas stations are so plentiful that gas really is an easier alternative. But when you think about the refineries, the tankers, the trucks, the pumps, and all the infrastructure gasoline requires, you begin to realize something you might have forgotten about electricity: Though it has its own infrastructure issues and environmental impacts, it is even more ubiquitous than gas stations. Virtually every residence and business has it."

Full article: montpelierbridge.org/2024/09/cross-country-in-a-tesla-fuel-free-fun-if-youre-flexible

"Spotty EV Charging Network Slows This Driver Down" by *Bridge* editor Cassandra Hemenway

"To call what is available to other EVs a "network" is a stretch; it appears to be random and relies on the kindness of fellow EV drivers and many apps.

Tesla will soon open its network to non-Tesla cars, and has already begun for some manufacturers; its website says the network is open to Ford and Rivian vehicles and will soon open to Nissan, General Motors, Volvo, Polestar, and Mercedes-Benz. That doesn't do much for my plebeian Hyundai."

Full article: montpelierbridge.org/2024/09/spotty-ev-charging-network-slows-this-driver-down

Puzzle by Betsy Allen

Things We Plug In

Z	E	A	W	K	N	A	N	U	Y	H	J	T	P	P	V	C	T	B	B
H	M	R	Z	B	G	I	P	Q	B	B	Z	V	S	W	N	K	S	J	L
L	W	Y	U	B	T	R	H	G	A	Q	Z	R	D	F	C	Y	X	H	S
I	V	H	J	X	Q	C	O	I	T	O	C	O	M	P	U	T	E	R	T
G	J	M	G	P	N	O	N	A	T	J	J	R	L	F	Q	G	W	K	S
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A	N	J	F	R	E	E	Z	E	R	H	I	M	D	L	P	E	A	P	O
O	T	O	A	S	T	E	R	E	W	A	V	B	Y	S	D	F	W	Y	R

battery charger	washing machine	air conditioner	fans
food processor	computer	well pump	car
refrigerator	microwave	toaster	TV
heat pump	freezer	lights	
stove	mixer	phone	
dryer	table saw		

Ask The Energy Coach

EV Winter Surprises?

Dear Energy Coach: I'm getting my first EV next month, just in time for… winter! I had hoped to get used to driving it during warm weather, and I know the manufacturer's published range wasn't calculated in Vermont in January. What should I anticipate for actual range, cost to charge, and other winter surprises?

Ah, winter surprises. The Energy Coach only wishes he could predict them all.

But regarding your EV, any surprises should be pretty minimal. Cost-wise, even winter charging will cost you less than filling up a combustion vehicle. I'll break that part down:

Assume your internal combustion vehicle gets 30 MPG, and gas costs about $3.50 per gallon. The cost per mile is $0.116 per mile. Now: Assume you pay $0.24 per kWh. Winter driving is about three miles per kWh. That's $0.08 per mile. And as you know, your mileage improves in the summer. The major difference between summer and winter MPkWh—or if that doesn't catch on, miles per kWh—is heating the car cabin in winter. Different EVs use different heat methods: Chevy, Tesla, Ioniq, Ford, and others use heat pumps, other companies use conventional resistant electric heat.

And yes: while the battery stops charging after it's full, if the car is cold, it is going to need more charge. That draws kWh. But what it adds to your electric bill is still very unlikely to be more than what you pay now in gas. Unless, of course, you are switching from a small combustion engine sedan to a Hummer EV.

Now, let's work on surprise prevention. Remember when I said winter driving is about three miles per kWh? Hold on to that number 3. Now you're going to want to learn what your battery capacity is in kilowatt hours. It's likely to be between 50-100 kWh, unless you've purchased a vehicle with a really big battery. For the purposes of this column, let's split the difference and say 75 kWh. Now, let's knock off a couple extra kWh just to be safe: there are a lot of country miles out here, and I don't want you stuck on any of them. So we'll take 70, multiply by 3 (kWh for winter driving), and you can expect 210 miles before you need to charge.

One last thing. If you're significantly increasing your electrical usage, including installing a Level 2 charger, give your friendly neighborhood electric cooperative a call. We need to make sure your transformer can handle it—and avoid a costly after-hours repair if it can't.

Ask your energy questions and get energy answers: energycoach@wec.coop

Emergency Resources

Financial and energy coaching

Contact your local Community Action Agency: Capstone at capstonevt.org or Northeast Kingdom Community Action at nekcavt.org.

Fuel

Running out of fuel? No matter where in Vermont you live, if you are in danger of running out of fuel this winter, call the toll-free Emergency Fuel Assistance number: 1-800-479-6151

Mental health: call 988

If you are in distress or crisis, call 988.
If you prefer to text, text VT to 741741 to reach a crisis counselor quickly.
For peer support, call/text 833-888-2557
More resources are at mentalhealth.vermont.gov

Food

Vermont Foodbank: 800-585-2265.
Capstone Community Action: capstonevt.org
Northeast Kingdom Community Action: nekcavt.org
3SquaresVT: 855-855-6181, vermontfoodhelp.com

211

Call 211 to find any emergency resource you need: food, mental health, fuel, shelter, and anything else.

Safety Minute: Generator Safety and Winter Prep Tips

As winter storm season approaches, it's time to prioritize preparing for outages, and keeping safe during outages. This Safety Minute, we'll build out a sequence of safety activities you can do quickly along with your regular chores.

David Young, Safety and Environmental Compliance Specialist

Generators are useful for providing power during outages, and for some households, they are lifesavers. But they need to be installed and operated safely. The combustion engine in generators poses health and safety risks, and generators can backfeed power to lines and hurt lineworkers. If you have a permanent standby generator, those should have safeguards to prevent most of these issues. But if you have the kind of generator you haul out of the garage or barn when a storm is coming, keep safety top of mind.

Make sure you have plenty of gas for your generator, and replace it before the winter storm season. Non-ethanol gas is worth the premium price, if you can locate it. Ensure the nozzles on your gas cans fit tightly, and replace them if necessary.

Standby generators exercise themselves every week or so. You can keep your portable generator in similar good shape by running it for five to ten minutes every other week. At the same time, go check the batteries in your carbon monoxide detectors and smoke alarms, and sweep out vents in your dryer, pellet stove, and other vented devices in your household.

If you buy water in plastic jugs, check the expiration date. Plastic breaks down over time and leaches an unpleasant flavor into the water. Store water in glass or ceramic jugs, or replace your plastic water jugs. You can always use the old water as backup for flushing your toilet.

A nifty tip is to find a flashlight that's compatible with your rechargeable tool batteries. These lights are powerful, and much better for the environment than those that use disposable batteries. While you're doing your safety chores, check your tool batteries and recharge any that are low. These will be valuable for your flashlight in a long outage.

So here's your checklist:

- Check your gas and replace gas and tank nozzles if leaky
- Run your generator for 5-10 minutes
- Check CO and smoke alarm batteries
- Sweep vents
- Check or replace water
- Rotate or recharge tool batteries

In less than ten minutes, you've done an important safety service for your household.

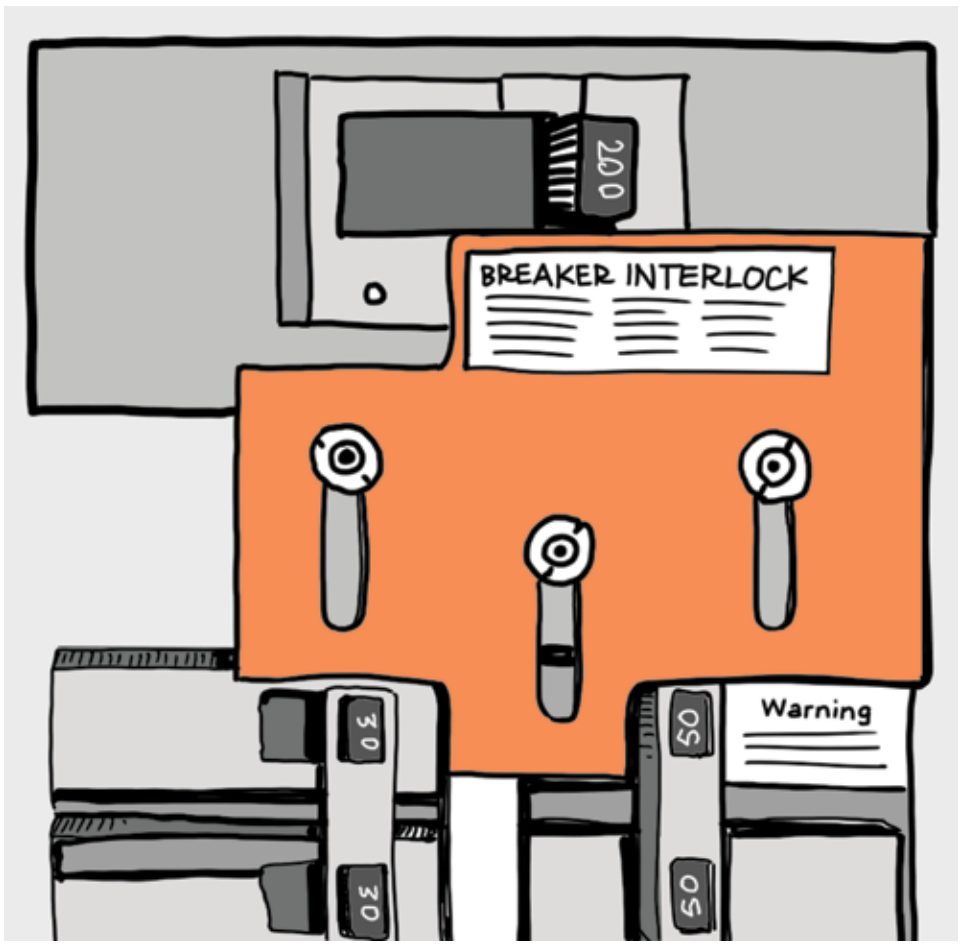
During an outage

Even with carbon monoxide alarms, the CDC says 400 Americans still die from unintentional CO poisoning each year. Never run a generator inside a building, including garages: make sure it's a minimum of 20 feet away, and point the exhaust away from any structure.

Monitor your generator's gas consumption. A hot generator can ignite gas vapors. If you need to refill it, shut it off early in the day, wait for it to cool, and refill it while you still have daylight.

Backfeed prevention

Many people will use extension cords to plug one or two essential devices, like a freezer, directly into the generator. If you're using a generator to power your whole house, the right way to do it is to isolate your house from the grid. If your home is connected to the grid and you're powering it with a generator, that electricity can flow onto the line: it's called backfeeding. The national electrical code requires that you have a system to prevent backfeeding. The reason is because when lineworkers are repairing the line, any electricity on the lines can be very dangerous.



This illustration shows a manual interlock option I like: it goes in your service entrance box, or breaker box, over your main breaker. Instead of a thousand dollar transfer switch, you can buy an interlock for about $60, plus the cost of a licensed electrician to install a new breaker for your generator and the plug-in spot to your service entrance. The interlock will only allow the generator breaker to be switched on if your main breaker is off, and will only allow the main breaker to turn on if the generator breaker is off. So it allows you to toggle safely to generator power and back to utility power without risk of backfeeding the lines. Look for a generator breaker interlock kit that will work with your system.

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

President & General Manager's Message

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affect that value. On the other hand, someone might find value in net metering the power from the project at a high rate. We know the project will require about $100,000 in new operating software to keep it running. It's nearly a 40-year-old facility, so it's reasonable to expect maintenance costs.

Steve: Where there's a financial risk, even not-for-profits like WEC have to pay attention to it. There's only so much risk WEC wants to take on in owning generation. Wrightsville provides only 1-3% of our power annually, and we own other larger generation like Coventry, which makes it a bigger priority. As a relatively minor power source, the Wrightsville power plant requires attention from the WEC employees that takes them away from innovative improvements and maintenance we are working on for our members. It's fair to say Wrightsville at present is a bit of a drain for a small organization. The staff has asked the Board to consider this carefully, and both are doing their due diligence before making any formal decisions.

Process and Timeline

Louis: Before staff invested time in this, we brought it to the Board. They're considering the possibility, but no final sale has been made. However, there are reasons to make a prompt decision. Group net metering projects must file for a Certificate of Public Good by the end of the year. So, that category of buyers would need to act by then. Just as important, we need to figure out our plan—whether to divest from Wrightsville or invest in a new digital control system. We also need to pursue any avenues that could make it a more efficient and effective asset for WEC.

Steve: It's an asset with both pros and cons, and we should always be assessing whether to keep it. Since I've been on the Board—less than 10 years—the subject and value of Wrightsville have come up regularly, even before Louis became GM. Credit to him for bringing this issue up front and center.

Louis: We want members to know about this so they can share their opinions. If they have strong feelings about it, they should reach out to board members, myself, or through Currents. We've tried to present the considerations, pros, and cons of this decision here. Some people may have strong opinions, while others, like Steve and me, may be conflicted about the best course of action.