

VERMONT ELECTRIC

CO-OP LIFE



CEO Update: After No Rate Increase For Six Years, Modest Rate Increase Expected in 2020

By Rebecca Towne

After six years without a rate increase, this month VEC requested from state regulators a 3.29 percent increase to take effect at the beginning of 2020. Despite our best effort to contain expenses, like any organization doing business today, VEC is experiencing significant cost pressures.

The first question many members will have may be “what will this do to my monthly bill?” For a residential customer with a bill of \$100/month this will mean an additional \$3.29 per month or \$39.48 per year. Looking back over the last 10 years VEC has had an average rate increase of less than one percent a year which is well under the cost of inflation. We are proud of that track record.

The cost pressures are numerous and varied. Here are a few of the main drivers:

- Power purchases. This is the most significant cost pressure. These costs include higher capacity

costs (cost of ensuring power supply is available when needed) and increased costs of power supply contracts.

- System maintenance and major storms. VEC is seeing increased system maintenance costs associated with keeping the grid resilient, safe, and reliable. This includes increasing our vegetation management and tree trimming efforts in order to reduce outages in the coming years. Storms restorations are also becoming more frequent and more costly, such as the recent major storm we experienced this Halloween.
- Increased costs of doing business. Although VEC has not increased staffing levels in many years, the continued increase in the cost of employee health insurance is a big cost driver, in addition to other costs of running a business such as property taxes and typical cost of living pay and benefit increases.

In addition to these cost pressures we have also experienced reduced revenue attributable to increased efficiency and distributed renewable gen-

eration (net-metering), and a declining Renewable Energy Certificate market.

We are proud of the work we have done to bring safe and reliable power to our member-owners. Our capable and flexible team is one of the reasons we’ve been able to operate for the last six years without a rate increase. They are focused on improving operations and finding efficiencies to best use our limited resources such as negotiating cost effective power supply contracts or introducing new technology to streamline processes. And as the world around us continues to change, we are committed to being proactive as well as responsive in ways that are most efficient and cost-effective.

In addition to improved efficiencies, our strong financial status is helping the co-op to save money. For the past three years, VEC has been rated A+ with a stable outlook by Standard and Poor’s. This bond rating is an indicator of prudent financial management and ensures that when we need to borrow money we

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New Battery System Comes Online

Partnership Provides Cost and Carbon Benefits for VEC

The electric grid – that vast, interconnected network of providers, conveyors, and consumers of electric power, designed to respond instantly to customers’ fluctuating demands – is growing more dynamic, diverse, and technologically sophisticated, seemingly by the day.

Battery storage is a big part of this newfound grid flexibility. This emerging technology’s allowing the system to become more capable of responding to price signals, environmental goals, and the need for more energy derived from cleaner, renewable sources. Modern lithium-ion batteries can now be designed large enough to store 20 megawatts (MW) of electricity, or even more (the U.S. Energy

Information Administration cites units in California and Alaska with 40MW capacity). But even at a smaller scale the technology remains expensive.

VEC is using this cutting edge technology to bring financial advantage to the co-op as a whole. How? By purchasing and storing power from the grid during periods when it’s less expensive, then using it to serve members’ energy needs at times of high demand when grid power costs more, the co-op can trim expenses.

In late 2016, the co-op’s power planners and leadership team began exploring ways to incorporate battery storage into the VEC system. But because of the expense of purchasing a battery outright, VEC took a different approach: rather than buying a battery installation for VEC’s sole use, they decided to seek out some other company that would own and operate the energy-storage unit while ensuring that VEC would have access to that power when it most needed it.

“We sent out requests for proposals to six developers that we’d identified as potential partners for the project,” says Craig Kieny, a member of VEC’s power-planning team. “Eventually we selected Viridity Energy Solutions, a company based in Philadelphia. Viridity offered the best price and they have experience running other storage facilities.

“This arrangement is unique,” Kieny says. “The more common structure would be for the utility to own the battery. But it’s a very specialized technol-

VEC's First Utility-Scale Battery Has Saved the Co-op \$90,000 Since Deployment in July

Earlier this fall, VEC celebrated the success of its first utility-scale battery system at the battery site in Hinesburg.

VEC, along with project partners WEG Electric Corp. and Viridity Energy Solutions, developed the battery system and installed it earlier this year, first deploying it this summer during peak events, when regional electricity demand was high. Over the past few months, the battery has helped save the co-op approximately \$90,000 by allowing VEC to use stored power when demand peaks and power and transmission costs are highest.

“Energy storage will be a significant component of the grid of the future, and we’re proud to be using this technology today,” said Rebecca Towne, VEC’s chief executive officer. “Importantly, this project will also allow us to learn about how to effectively manage storage capacity and plan for future battery installations.”

Towne likened the use of the battery to wise grocery shopping over time.

“Using this battery is a bit like stocking up your pantry with a little extra food every time there’s a sale at the supermarket – then, when

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VEC's Chief Executive Officer Rebecca Towne speaking during a celebration of the success of a new battery storage system in Hinesburg. Looking on are Mike Pavo of Viridity Energy Solutions (center) and Chris McKay of WEG Electric Corp.

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Community Fund Boosts Local Efforts



VEC Board member Carol Maroni represented VEC at the recent Albany Energy Fair at the Albany Town Hall. The VEC Community Fund supported the fair with a donation for event promotion, light refreshments, and weather stripping kits.

A dozen non-profit organizations were awarded grants from VEC’s member-supported Community Fund recently.

Grants supported literacy, public safety, and addiction treatment, among other needs.

The Community Fund is a program voluntarily funded by VEC members who round up their electric bills, from members’ donation to the fund of patronage capital dollars, as well as one-time donations. The fund makes grants to local organizations that support economic security, energy education, emergency and disaster relief, and community development.

“This round of grants underscores the great diversity of need in the community, and I’m really happy that our members are willing to support their neighbors this way,” said Charlie Van Winkle, VEC board member and chair of the Community Fund committee. “The fund is a simple and effective way VEC members can support many worthy efforts right here at home,” he said.

Here are the organizations the fund supported this quarter:

- Albany Energy Committee for the Albany Energy Fair.
- Cambridge Area Rotary to help market an event to support access to skiing and snowboarding for local students.
- American Foundation for Suicide Prevention to support the 8th Annual Out of the Darkness Walk.
- Lamoille Community House to promote an event to reduce homelessness.
- The Children’s Literacy Foundation to help hire a professional storyteller to get kids excited about reading and writing as well as the development of a library of children’s books.
- NEK Learning to help pay for the lighting system for an early childhood center.
- Hyberbaric Vermont to support the Patient Care Fund to help provide treatment to those who cannot afford it.
- Newport Ambulance to help with the costs of a roof for outbuildings that house oxygen equipment and ambulances.
- Catamount Film and Arts to support performances at the Dibden Theater for the Performing Arts at Northern Vermont University-Johnson
- Teen Challenge Vermont to assist with a residential drug and alcohol recovery center.
- Town of Alburgh Chew Choo to boost an effort to have vendors and craft makers set up to boost the local economy.
- Northern Vermont University to help support the 2020 Veteran’s Summit.

Applications for the Community Fund are on a rolling basis, and grants are issued quarterly. If you know an organization that could benefit from the support of the Community Fund, or you want to support the fund, you can learn more here: <https://www.vermontelectric.coop/community-resources/community-fund>.



Energy Bill Reduction

Lower your monthly energy bills with free products, appliances, and services for limited-income Vermonters.

Get a range of free and reduced-cost services, based on income, to help lower your energy bills. Renters and homeowners can access free water-saving devices, LEDs, appliances, and heating systems. Homeowners and landlords of eligible rental properties can also get free or reduced-cost energy audits, insulation, and air sealing through local weatherization agencies. And if you own a mobile home, you may qualify for free weatherization services from Vermont Gas Systems.

Free Products and Appliances

Depending on your household income you may qualify for a voucher to replace a single existing appliance in your home to help lower your bills. This may include refrigerators, freezers, clothes washers, dehumidifiers, or air conditioners. Contact Efficiency Vermont to confirm your eligibility while program availability lasts at (888) 921-5990.

Income Qualifications

Number of People in Household	Household Income Limit: Chittenden, Franklin & Grand Isle counties	Household Income Limit: All other Vermont counties
1	\$51,350	\$44,500
2	\$58,650	\$50,900
3	\$66,000	\$57,250
4	\$73,300	\$63,600
5	\$79,200	\$68,700
6	\$85,050	\$73,800
7	\$90,900	\$78,850
8	\$96,800	\$83,950

Highlights

- Free products and appliances, based on income and energy usage
- Free or reduced-cost weatherization for limited-income households, rental properties and mobile homes
- Low- and no-cost energy-saving tips

Energy Transformation Incentives Will Continue for 2020

Have you bought a cold climate heat pump this year? How about a pellet stove? Maybe even an electric or plug-in hybrid electric vehicle? If so, you should be able to claim a VEC bill credit, if you haven't already. VEC's incentives, which are part of the co-op's Energy Transformation Program, are designed to help members who want to shift their energy use from fossil fuels, like gasoline or heating oil, to electricity. The process is easy. Once you purchase the qualifying appliance or vehicle, you fill out a form (found on our website on the Energy Transformation page) and send it, along with proof of purchase, to VEC, 42 Wescom Road, Johnson VT 05656 or via email to support@vermontelectric.coop.

Here is a list of 2019 VEC incentives:

- Cold-climate heat pumps: \$300 bill credit.
- Heat pump water heaters: \$150 bill credit.
- Pellet stoves: \$150 bill credit
- Plug-in hybrid vehicle: purchase, \$250 bill credit; lease, \$50/year bill credit.
- Fully electric vehicle: purchase, \$500 bill credit; lease, \$100/year. (VEC members get an additional \$5,000 off a Nissan Leaf)

VEC is offering bill credit incentives for the installation of public Level 2 and Level 3 charging stations. Eligible applicants are businesses and public entities (schools, towns, etc) with stations that were operational after July 1, 2017 and provided the charging station is available to the public. VEC is offering a \$500 bill credit per connection (\$500 for a one-head charger, \$1,000 for a two-head charger) with a \$2,000 maximum per member.

If you are thinking about faster EV charging at home, VEC also offers an incentive of \$250 for Level II EV Charging equipment. (See sidebar below for details.)

In addition to the above incentives, VEC offers incentives for Zero Energy Modular Homes, electric forklifts, and electric lawnmowers, as well.

You can find all the incentive details at: www.vermontelectric.coop/energy-transformation.

Clean Air Program

VEC's Clean Air Program (CAP) offers customized opportunities to members with off-grid or underserved homes or businesses to replace fossil fuel usage with electricity. These opportunities may include service upgrades or line extensions, the costs of which will be shared between the utility and the member through customized agreements.

For example, someone in VEC's service territory who has a maple sugaring operation currently powered by a diesel or propane generator may be eligible to participate in the Clean Air Program and receive an incentive from VEC for the cost of a line extension to retire the generator.

For more information, visit: www.vermontelectric.coop/energy-transformation.

New VEC Incentive for Level II Electric Vehicle Chargers

VEC is now offering a \$250 bill credit to members who purchase a Level II electric vehicle charger. The incentive is available for chargers on a VEC-approved list.

As part of the credit, members are asked to refrain from charging their cars from 5pm-9pm on weekdays, when demand for electricity typically peaks and electricity is generated from dirtier and more expensive sources.

"We're excited to offer this new strategy to help members transition to electric vehicles in a way that benefits all co-op members. Off-peak electric use is less expensive and cleaner, so if we can encourage off-peak charging, the whole co-op

can save money and cut down on emissions," said VEC Energy Services Planner Lisa Morris.

The Level II chargers – which charge electric vehicles roughly four times as fast as standard 120-Volt wall outlet charging – range in price from about \$500 to \$900 before the VEC incentive.

The charger incentive is the latest addition to a long list of incentives available to VEC members through the co-op's Energy Transformation Program.

You can find more information here: www.vermontelectric.coop/energy-transformation. Scroll down to "NEW - Level II Charger Incentive"



VEC Sees Success with Renewable Thermal Energy Assessment Program



Are you interested in saving money on your energy bills at your farm or business?

VEC's Renewable Thermal Energy Assessment Program provides free, no-obligation renewable energy assessments to help farm or business owners navigate the best options for renewable energy technologies that can heat or cool facilities and save money. Renewable thermal energy – often heat pumps, biomass, or solar thermal, for examples - can be cost-effective options compared with other energy sources, but the first step is to get an analysis. Since we launched the program last spring, more than 20 VEC farms and other commercial enterprises have signed up for the assessments.

Working in partnership with EnSave, a Richmond-Vermont based energy organization, VEC is offering these renewable energy assessments to VEC commercial/industrial and agricultural members. To learn more, call EnSave at (800) 732-1399 or see more information here: www.vermontelectric.coop/energy-transformation.

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ogy and right now we don't have the expertise. The advantage for Viridity is that when we don't need it, which is most of the time, they can use it for other purposes."

VEC and Viridity completed negotiations for a ten-year power-supply contract last February. Under its terms the co-op has priority rights to the unit's stored power for up to 400 hours per year. Not only does this give Viridity an anchor customer in the energy market, but VEC also helped reduce the company's costs by providing a site for the installation. Construction was completed in April on the same small property in Hinesburg off of Pond Brook Road where VEC already had a substation.

The lithium battery system includes two units, which are about the size and shape of the storage containers used for international shipping; each is composed internally of hundreds of small batteries, and together they provide just under two MW of storage capacity. An inverter on the site converts the energy from DC to AC, and a transformer steps up the voltage from 550V to the 7,200V used in



Containers that house the battery systems shortly after they were installed in Hinesburg. Photo VEC.

transmission.

The system came on line in July.

For VEC, the Hinesburg facility provides a low-cost energy resource at times of high, and potentially "peak," energy usage, such as prolonged winter cold snaps when the temperature plunges to single digits or below, or summer heat waves when homes, stores, factories, and malls crank up the air conditioning. Those are times when VEC and other utilities typically need to supplement their contracted power with electricity provided by ISO-New England, the regional energy grid. As ISO taps its "standby" power sources to meet the elevated demand, wholesale-power costs rise because those generating facilities are more expensive to operate. VEC's analysts have estimated that turning to battery power instead could save the co-op between \$80,000 and \$100,000 a year, which, of course, is good for the membership as a whole.

Yet Rebecca Towne, VEC's chief executive officer, notes that the battery storage system also contributes to another of VEC's goals.

"It's what we call the carbon benefit," she says. "During peaks is when ISO calls upon the dirtier sources of power that are kept on standby to fire up quickly when they're needed."

In New England, those are power plants fueled by oil or natural gas. (Until recently coal was in the mix, too.) By contrast, WEG Electric Corp., the Brazilian firm with a local team in Barre, Vermont, which actually operates the system for Viridity, finds op-

portunities to recharge the Hinesburg batteries when demand is low and renewable resources – chiefly hydro, wind and solar – are major contributors to the power supply.

"In that way," Towne explains, "the battery system provides a benefit for the entire grid. All the utilities that draw power from the ISO indirectly tap into the relatively clean power we're helping make available. The long-term goal," Towne dares to say, "is that with further development of storage technology those peak resources, that are more polluting generation sources - can disappear."

The quest for "peak"

Battery storage provides many advantages to electric systems that host such units. An important one, says Chris McKay, director of sales for battery energy storage systems at WEG – a design team originally associated with Vermont energy pioneer Northern Power – is that it helps provide grid stability.

"Things happen on the grid," he explains, providing the example of a baseload energy generator suddenly encountering technical problems, "so grids need to have certain assets that can respond by going up or down in their energy output extremely quickly. Batteries are great at this. They can alter their energy output almost faster than the signal they receive from the ISO."

Still, VEC's primary goal is "peak shaving" – reducing the amount of power it must purchase from the grid at times of high usage. The sweet spot for the co-op will be to draw upon the batteries during 13 specific hours each year. Those are the 12 monthly peaks – the hours of greatest energy demand – within the state of Vermont, and the single New England-regional peak hour over a 12-month period (calculated from July to June). That's because operational costs that affect VEC all year long are derived from its reliance on grid energy during those 13 hours.

Regarding the regional peak, Tucker Williams, a VEC power planner, explains that "utilities pay what are called capacity charges that ISO allocates on the basis of how much electricity they used during that one hour. The New England grid needs to be able to provide energy for that highest-demand hour, so the capacity charge is calculated to meet the cost for generating plants to be built and available when we need them."

Similarly, Vermont's statewide transmission-system operator, the Vermont Electric Power Company (VELCO), bases its charges to the state's utilities on the basis of their share of the transmission load at each monthly peak hour. In both cases, the less power VEC uses at that critical time, the lower its operating costs will be.

The tricky part is that no one can know what that peak hour was until after it has happened and usage records from all the hours of the month (or the year, for the ISO capacity charge) have been compared. So the co-op utilizes a variety of weather-prediction services, studies its own energy-usage records and patterns, and tries to identify peak ahead of time. It helps knowing that New England is now a summer-peaking region, due to the increased usage of air conditioning, and that in both winter and summer usage tends to be highest in the early-evening hours after families have returned home from work and school and settled into their energy-usage rou-



Several representatives from VEC attended the Hinesburg battery celebration. From left are: Chief Executive Officer Rebecca Towne; Chief Financial Officer Mike Bursell; Manager of Power Planning Craig Kieny; Energy Services Planner Lisa Morris; Government Affairs and Member Relations Manager Andrea Cohen; Operations Supervisor Issac Gillen. Photo VEC/David Young.

tines (dialing up their heating or cooling systems, turning on their lights and TVs, running the dishwasher, etc.). During extended heat waves and/or cold snaps, power usage tends to increase as time passes and people become less patient and turn up the heat or air conditioning.

But there's no guarantee that VEC's analysts will hit the nail (peak) on the head. The co-op must notify WEG by 10 a.m. the day before it plans to draw on battery power, and identify a period of up to four hours for deployment.

"We can change it slightly as the time gets closer," says Williams, "but we're committed to the approximate prediction. That ensures that the batteries are prepared to provide us the predicted amount of energy during the specified time period."

The 400 hours that VEC is entitled to annually, under the contract, provide a cushion. So if there are bitter winter temps in early January, the co-op won't refrain from tapping into battery power just because another, possibly worse, cold-snap might arrive later in the month.

Looking ahead

VEC celebrated its new cost-saving, carbon-trimming power resource with a ribbon-cutting on October 24 (see sidebar, p.1). Along with wind projects, VEC's three community solar installations, and privately owned net-metering systems and significant hydro resources, the Hinesburg battery is now an important part of the co-op's energy mix. It has already proved effective at peak shaving, and therefore cost-saving as well.

But as CEO Rebecca Towne points out, we're still at an early stage of "the innovation curve."

"Battery technology has been evolving," she says, "to the point that cost-effectiveness is becoming a reality for the first time. And we're just starting to see what energy storage will be able to do. Perhaps we'll identify new ways to support batteries in our members' homes, and explore how we might aggregate home batteries into system-wide load management."

"This will be a tremendous learning experience for us," says Towne, "and we intend to take full advantage of it. Our talented staff works hard to identify opportunities to make VEC a reliable, innovative energy provider for our members. Our project in Hinesburg is now one of the many ways that we strive to do that."

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you need to – and when food isn't on sale anymore, you can tap into your supply," she said.

While the main purpose of the new battery is to help VEC reduce peak loads, thereby reducing costs for VEC members, the battery will also reduce regional carbon emissions because during peak times the New England grid uses more fossil-fuel powered generators. The system will also help control the voltage and frequency of the region's power grid, balancing electricity supply and consumption. VEC has deployed the battery several times since it was first connected to the grid on July 20. Since that time, VEC has been

able to reduce its load during the New England peak for the year and the Vermont peak in each of the months of August, September and October.

The battery project is a partnership among VEC, WEG and Viridity Energy Solutions. WEG has been responsible for technical design, permitting, construction, battery supply and installation and on-going management. Viridity owns and operates the system.

The project sits on less than an acre of land and is an assemblage of batteries housed in two structures resembling freight shipping containers. The system is located adjacent to VEC's substation at 1121 Pond Brook Road.

A Look at the Halloween Storm

After a drenching rain during the day and into the night on Halloween, strong winds began howl. They continued through the night and into the afternoon of Friday, November 1. Gusts topping the 50-60 mph, causing trees to break and strip down powerlines across the state. Across VEC territory, roads were rendered impassable by downed trees, floods and damaged culverts, impeding damage assessment and restoration progress.

Because the storm hit all of New England as well as New York and Quebec, crews available to assist were in limited supply. VEC crews began restorations early on November 1, and with the help of crews from other Vermont utilities as well as Corn Belt Energy of Bloomington Indiana and Clay Electric Cooperative of Flora, Illinois, the bulk of members were back on November 3. There were outages that lasted into Monday, November 4.

"We know how frustrating it can be to be without power, especially over several days," said Rebecca Towne, VEC's chief executive officer. "We are extremely grateful, however, for the support and kind words we received from many of our members as VEC crews – and other utility crews, including co-ops from out of state – set new poles, pulled new wire, and sawed their way through thick fallen brush to get the power back on."



Above: This line that came down on North Hill Road in Westfield was energized when it landed on the ground, burning the grass. Such lines may not make any noise even when they remain energized. Walking near fallen lines, if they are live, can cause injury and even death if the electricity travels up a person's leg, through their body, and back down the other leg.



Above: Washouts like this one made it hard to move equipment, slowing restoration progress during the storm. This damage was on Upper French Hill Road in Johnson.



Above: Trees across the road pinning down power lines was a common sight during the storm. This tree lay across East Echo Lake Road in Charleston.



Above: Along Route 243 in North Troy, trees took down lines and cleanup required considerable effort.



Downed trees hindered access to damage. Here contract tree crews tackle a thicket of fallen hemlocks in Johnson.



A VEC line worker high on a pole making repairs in Johnson.

Halloween Storm by the Numbers

18

broken poles

18,225

total members without power at peak

\$1,009,269

estimated cost of restoration

50 mph

speed of wind gusts

3-5 inches

amount of rain that fell

Are You Prepared for the Next Storm?



Be prepared for power outages. This pole in Starksboro was blown down during a windstorm in 2017 that took out power for several days.

Despite VEC's ongoing efforts to minimize outages, storms that knock out power are, unfortunately, a fact of life. It's often a good idea to check supplies just in case the power is out for an extended time, and refresh your memories as to how to safely weather a storm. Below are a few steps you can take before a storm hits to allow you and your family to weather possible outages more comfortably:

Build/restock an emergency kit. Items should include:

- **Battery powered flashlight(s) or headlamp(s)**
- **Battery powered portable radio**
- **Battery powered clock**
- **Cell phone charger (hand crank)**
- **Extra batteries**
- **Dry and warm clothing**
- **Sleeping bags and/or blankets**
- **Bottled water**
- **A three day supply of foods which can be consumed with little to no preparation. Items could include energy bars, peanut butter, dried fruits, nuts/trail mix, and canned goods. Include important toiletries including towelettes/wipes, diapers and prescription medications.**
- **Manual can opener**
- **First Aid kit**

Plan for medical needs/devices. If someone in your home is dependent on electric-powered medical equipment, make sure you have a battery backup or make alternative arrangements to ensure their needs are met.

Stock water. Before a storm arrives, fill a bathtub if

you have one, so you have water to flush the toilet. (Avoid unsupervised bathroom access to children). Fill large containers for drinking water or buy bottled water.

Charge devices, and fuel vehicles. Be sure cell phones, computers and tablets are charged and vehicles are full of fuel.

Watch the forecast. Keep updated with storm alerts and news from the National Weather Service.

During an Outage, Stay Safe

Stay informed. You can get updates on outages and estimated times of restoration on VEC's Outage Center as well as on VEC's Facebook and Twitter feeds. Radio and television stations may offer general outage information as well.

Keep your distance from downed power lines outside. Always assume every line is energized and dangerous. If you're in a vehicle and downed wires are on the car or across the road, stay in your car until emergency crews arrive. Don't touch anything that might be in contact with a downed line, like a tree limb.

Locate a shelter. If your home becomes unsafe or you need resources during a major storm or during longer term outages, you can dial 2-1-1 to find the closest shelter in your area.

Check on elderly neighbors and relatives.

Stay off roads. Eliminate unnecessary travel, especially by car. Traffic lights will be out, and roads may be congested. There is also the possibility of

If Your Power Goes Out, Take These Simple Steps

Check to see if your neighbors' lights are on. If they are, then the problem could be in your home.

- Walk outside and look around for any power lines that are down or damaged. If you see a downed line, assume that it is energized and stay away from it.
- Look at your meter to see if it indicates that it has power (a digital display will be present).
- Locate your fuse box or breaker panel to be sure that all fuses are intact or that the breakers are all in the on position. If they are all set, try turning on and off either the main power switch on the fuse box or the main breaker switch on a breaker box.
- If you still have no power, call VEC at 1-800-832-2667 to report the outage. Be ready to provide the name on the account, the location of the outage and the account number if you know it. You also may be asked how long you have been out of power and whether you saw or heard anything as the power went out.

downed lines and trees, depending on the severity of the storm.

Use generators and stoves safely. Never use a generator, grill, camp stove or other gasoline, propane, natural gas or charcoal-burning devices inside a home, garage, basement, crawlspace or any partially enclosed area.

Prepare for the surge when the power comes back on. Turn off or disconnect any appliances, equipment or electronics you were using when the power went out. When power comes back on, surges or spikes can damage equipment or even cause fires or other hazards. Leave one light turned on so you'll know when the power comes back on.

When the power comes back on, it doesn't necessarily mean all repairs in your area have been made. Remain vigilant for and stay away from any downed lines or trees in your area.

Take care of your food. For detailed instructions on keeping food safe during outages, visit: <https://www.foodsafety.gov/keep-food-safe/food-safety-in-disaster-or-emergency>.

Paperless Co-op Life Now Available

In an effort to accommodate the changing reading preferences of our membership, we are now offering members the opportunity to opt out of receiving a hard copy of Co-op Life mailed to their homes or businesses. Instead, we will send those members a simple email with a link to an on-line version of Co-op Life.

Co-op Life is our time-honored, flagship publication that for years we have mailed directly to all of our members. We remain committed to delivering it to our many members who want a hard-copy publication to hold in their hands.

At the same time, we want to accommodate members who prefer to get information digitally, so we are offering that option for those who would like it.

If you would like to cease receiving a hard copy of Co-op Life and instead receive an email as soon as a given issue is available online, please email support@vermontelectric.coop.

VEC's Co-op Community Solar? Works for Me

By Mike Bursell

As Chief Financial Officer of Vermont Electric Co-operative, my primary job is to manage the cooperative's financial well-being. As an electric cooperative our members are also our owners. We work for the interests of our members without the pressure from investors to be more profitable.

Several years ago the Co-op wanted to create a Co-op Community Solar program that provided benefits to all members. We took a hard look at the numbers. Would this be a good program for our members? Would this be a good deal for the Co-op as a whole? The answer, it turned out, was yes to both.

Since we launched our Co-op Community Solar program in 2016, more than 150 members have signed up to sponsor solar panels in one of our community solar arrays. In exchange for helping to put clean electricity onto the grid, these members receive guaranteed, fixed monthly bill credits. Better still, the whole membership benefits from this lower-cost renewable energy resource.

One of the members who signed up to participate in the new program was me.

Not only am I an employee, but my family and I are

also member-owners of the Co-op, too. We chose to sponsor 12 panels for 10 years (though members can choose many different levels of participation). We made an upfront payment of \$2,817, and, over the ten-year term, we will get nearly \$3,917 back in bill credits for a savings of nearly \$1,100. We love the guaranteed savings, and we also like that this program is zero hassle and very flexible. In addition to the financial benefits, the program required no installation on my property, so renters or those owners that do not have a suitable site on their property can participate. And if you ever leave VEC territory, you can get a portion of your initial investment back.

I have spent my professional life managing finances. For me personally, the math for the Co-op Community Solar program works, and it works for lots of other members, too. If you're a VEC member and have not checked out the program, I urge you to do so. You can find more at: <https://www.vermontelectric.coop/programs-services/co-op-community-solar> or call Member Services at 800-832-2667.

Mike Bursell is the chief financial officer at Vermont Electric Cooperative.



VEC's chief financial officer Mike Bursell is one of more than 150 members who have sponsored solar panels through Co-op Community Solar.

Through an Internship, an Up-Close Look at How Power Gets to Members

By Adriana Eldred

Communications and Member Engagement intern Communications and Member Engagement intern



Alec Jones of Johnson has worked both in the office and in field during his internship with VEC.

Alec Jones has been interning at VEC on and off since the summer of 2018. His position in the Vegetation Management department involves fieldwork, invoicing, and on-site work.

A large part of Jones' work involves entering invoices into a database and mapping the work that VEC tree contractors do. He has also had the opportunity to shadow the utility arborist, and map out trees and vegetation at risk of damaging the powerlines in rights-of-way.

VEC's Utility Arborist Jeremy Tinker spends a good deal of time in the field, inspecting rights-of-way, sometimes deep in the woods. He has been working with Jones closely during his time at VEC.

"Alec's work has been much appreciated, especially since he was approved to drive a company vehicle this year and was able to pick me up on the other side of long off-road stretches of line and then enter my field data while I hiked another off-road stretch," said Tinker. "Alec has demonstrated an overall positive attitude and is a pleasure to work with."

Working with VEC has been good education for Jones.

"Before I started, I knew nothing about power generation or how it gets to people," said Jones.

"Going out with Jeremy in the field really showed me how that worked."

Jones has been able to do a lot during his time at VEC, which is one of the reasons he loves his internship. "My favorite part is mostly the freedom of pursuing whatever you want to do," says Jones. "Yes, I can do the invoicing, but I can also go out with field engineers if I want to one day." This past summer, for instance, Jones worked on a project with Michael Cole, the manager of line operations, to inspect transformers throughout the state.

Jones' advice to those seeking internships is to be open to learning something new. "I don't think there's anything to prepare you for something like this – you kind of just have to take it on, and be open to learn," he says.

Jones was hired after being able to take industry-oriented classes on GIS, or geographic information systems, at Northern Vermont University – Johnson. He is a senior in the Environmental Sciences program, and will be graduating this December. He hopes that he can continue to work at VEC after he graduates.

Adriana Eldred was VEC's and Communications and Member Engagement intern during the summer of 2019.

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get it at the lowest possible interest rate. This translates into lower borrowing costs and saves the co-op money. Prudent management of our finances – which includes revenue increases when necessary – will preserve that advantage in the credit market.

In a perfect world, of course, we would prefer not to ask for a rate increase. But it's a responsible and reasonable step to take, for the benefit of all of our membership. Our mission is to provide our members access to safe, affordable, reliable power and this helps us achieve that.

Ultimately, as a member-owned, not-for-profit co-operative, our central focus is our members. In everything we do, including our financial management, our members come first. We proudly work for you and we welcome your ideas and feedback any time.



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The high winds that swept through Vermont on Halloween snapped this pole on along Route 243 in North Troy. Several other poles in VEC territory were broken during the storm. Here, crews prepare to lift then attach wires to the newly installed pole.



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