

VERMONT

ELECTRIC



For All of Our Members, a Proven Commitment to Clean, Cost-Effective Electricity

By Rebecca Towne

VEC is committed to a clean energy future. As of Jan. 1, VEC's annual power supply is 100 percent carbon free. And by

2030, we have pledged to be 100 percent renewable. VEC joins other Vermont utilities to make Vermont's electricity supply one of the cleanest in the country. In 2018, only two percent of Vermont's total carbon emissions came from electricity and as we move to a 100 percent carbon-free annual power supply that percentage is expected to drop each year. As you think about your own personal strategies for carbon reduction, you can be confident that VEC's electricity flowing to your home, business, electric vehicle - even into the battery that powers your electric chainsaw or weed whacker - is carbon-free.

Cost Effective Power Supply

Our members also care very much about affordability and they consistently choose "low cost energy" as the top priority in VEC member surveys. We know that in order to achieve a reliable clean grid in the long term we will need to develop more local and regional carbon-free sources and that these new renewables will need to be cost effective. VEC's expert

team continues to be focused on ensuring we acquire least-cost clean power supply resources and will continue to advocate for state policies that facilitate our ability to procure competitively priced power so we can keep costs down.

VEC has long been concerned about being required to pay above market rates for larger scale net metered solar. Paying more than we need to increases the financial energy burden on other VEC members and diverts financial resources away from other programs that could reduce carbon emissions.

- In 2021, existing net metered systems cost VEC approximately \$2.6 million over market value.
- A new 500-kW project would get a rate that is 25 percent more expensive than other, larger, competitively-bid solar projects.

While we support members who have made decisions to implement small scale net-metering, we believe the state policy that requires above market payments for larger net metering needs to be updated. At one time, above market incentives were useful to jumpstart the renewable industry. Those generous incentives are no longer needed and many states, such as California, are moving towards more market-based compensation for net metering.

VEC currently has five active competitively priced community scale solar projects operating in our service territory. We welcome, and pursue our own, cost effective, well-sited, and appropriately sized local renewable energy resources. At the same time, we will continue to advocate for the elimination of above-market incentives.

Regional power = reliability

A cost-effective, reliable, carbon-free grid makes the most of our region's benefits. This grid includes resources not available in Vermont such as planned large offshore wind sources and large hydro. On a snowy winter day, our local renewable resources are dramatically insufficient. And in spring and fall, sometimes we have more renewable energy than we can use locally. Grid reliability works best by combining a diverse set of resources, using the strengths of the

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VEC has requested an 8.19 percent increase in its rates. The Public Utility Commission will hold a public hearing on February 9. Please turn to page 4 for further details about the rate increase and the public hearing.

Westford School Robotics Teams and VEC Staff Work on Solutions to Energy Challenges

The Westford School Robotics teams were poised. The subject was energy. The task? Find a problem in the energy sphere, then innovate, innovate, innovate – until they find a solution.

These middle school teams participate in FIRST Lego League, a hands-on robotics program that designs, builds, and codes robots in addition to learning the invention process. This year's theme challenged students to identify problems related to their local electricity system. First problem: wild animals can cause shorts in electrical equipment, resulting in power outages (and yes, critter deaths). Were there ways to deter animals from getting near sensitive gear in the first place? Vibrations? Ultrasonic sound?

The second problem, different but also key to an efficient electricity system, related to trying to lower customer energy usage through the presentation of data from VEC's online portal SmartHub. To help VEC members, could this information be less "techy?" Could it motivate people, inspire efficiency, and even environmental responsibility? Could SmartHub notifications spit out dollar figures or carbon emission related to members' energy use, instead of just kWh information?

"Innovating is partly about sharing – presenting ideas or prototypes to others, testing those ideas, and getting that feedback which in turn continues the innovation cycle," said Mark Drapa, the team's volunteer leader, or coach. So, the teams did their research then surveyed their community for feedback. And, then called in VEC staff itself.

VEC's Peter Rossi (Chief Operating Officer) and David Lahar (Key Accounts Manager) headed over the Westford one afternoon in November to hear what these innovators were up to. Teams shared their research and solutions. One im-

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Westford Robotics team "Pickle Pandas," from left to right: Dylan Henry, Aiden Menut, Drew Ainsworth, Anna Minor, Amelia Moreland, Grace Raymond, Brooke Danaher. At far left is VEC Chief Operating Officer Peter Rossi and at far right is VEC Key Accounts Manager Dave Lahar.

VEC Offering New Incentives

VEC has recently added two new incentives to make it more affordable for members to move to electric-powered devices for their energy needs in their homes and businesses.

A new program for no-cost Level II electric vehicle chargers was launched January 1, and last year the co-op added induction cooktops to the list of incentives that qualify for a bill credit.

VEC's incentive program, known as the Energy Transformation Program, is designed to benefit the entire co-op membership over time - not just those who take advantage of the program - because VEC calibrates the incentives to pay for themselves through additional electric sales for the co-op.

The free Level II charger must be installed by the participant and enrolled in VEC's communications platform so that VEC can request that it not charge when the co-op is anticipating peak electric demand. That helps shift usage to times when electricity is cleaner and less expensive.

The induction cooktop incentive is a \$100 bill credit. (Portable induction cooktops do not qualify.)

Almost 4,200 VEC members have taken advantage of incentives since the co-op began offering them in 2017.

In each of the past five years, VEC has exceeded its goals for the Energy Transformation Program and helped eliminate the consumption of over 10.5 million gallons of fossil fuel. That's the equivalent of taking over 18,000 cars off the road for a year.

In addition to the EV charger and cooktop incentives, VEC offers credits on members' electric bills for the purchase of:

- **Electric vehicles:** For plug-in electric vehicles, \$250 for purchases (new or used) and \$50/year for leases; for all-electric vehicles, \$500 for purchases (new or used) and \$100/year for leases.
- **Public/workplace/multi-family charging stations:** \$500 per connection.
- **Heat pumps:** For ductless, ducted, air-to-water, and ground source heat pumps as well as heat pump water heaters, a joint incentive is available through Efficiency Vermont; a \$150 per unit thermal efficiency credit is available if the system was installed in a building that meets thermal efficiency criteria.
- **Pellet stoves:** \$150, plus another \$150 if the unit is installed in a building that meets thermal efficiency criteria.
- **Other machinery:** Residential lawn mowers, \$50; commercial-scale mowers



VEC members can now receive an electric vehicle charger similar to this one, at no cost.

and electric forklifts, \$1,000.

- **Heat pump pool heaters:** \$600 for units that meet efficiency criteria

VEC also offers custom incentive opportunities for members who want to replace fossil fuel equipment and reduce carbon emissions, through electric service upgrades or line-extensions. These projects often serve commercial facilities like sawmills or sugaring operations, for instance.

Some of the VEC's incentives are in addition to other incentives and rebates, including state of Vermont incentives, the new Replace Your Ride program, and the MilageSmart program, as well as potential tax incentives.

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

Robotics: Continued from page 1

mediate result was this: the St Louis-based company that provides the software for SmartHub, the National Information Solutions Cooperative (NISC) wants to talk to these kids. And VEC's open to piloting a more developed animal deterrence device, too.

"These young people had identified real-life challenges we face as a distribution utility and crafted solutions. They were problem solvers, they were creative, they were pushing," said VEC's Peter Rossi.

For his part, Mark Drapa - who is an electrical engineer by day and volunteers his time to coach the teams - ticks off the benefits of the robotics learning environment - it's collaborative, it's technical, it's hands-on, it's iterative learning that inspires kids to keep asking things like "How can we make it better?"

He says robotics is about learning that failure is a critical part of the formula for success.

"When something doesn't work, it's tempting to crumple up the paper, throw it in the trash, and think 'I'm no good at that,' but this is different. We teach an engineering mindset, continuous improvement, and good communications can overcome any challenge," he said.

Having VEC come in to connect with the team to discuss these concepts "was a wonderful part of the process," Drapa said. "The students were thrilled to see that their inventions had impact and quickly incorporated VEC's feedback into their prototypes."

Drapa believes that opportunities like FIRST robotics are building the next generation of Vermont's scientists, engineers, and tech workforce. "There's no reason why we couldn't have this kind of opportunity for every student in Vermont. It has been transformative for the kids."

He encouraged anyone who may be interested in learning more or starting a team to visit firstinvt.org.



Westford Robotics team "Muddy Pandas," from left to right: Jackson Frederick, Maisy Drapa, Harrison, Dominic Delisie, Andrew Stockwell.

NOTICE OF RATE CHANGE

The Energy Efficiency Charge (EEC) that funds Efficiency Vermont's statewide energy efficiency program is going down 0.5% for residential members, 4.9% for commercial members, and 3.8% for industrial members.

To learn more visit www.encyvermont.com/2023-ee-c-rates

Seeking Candidates for Board of Directors



The VEC is accepting petitions from eligible candidates for three board of directors' seats that are up for election in May.

"VEC board members have a broad range of perspectives and backgrounds, care deeply about the community, and enjoy learning about and influencing energy issues," said Rebecca Towne, VEC's chief executive officer. "If this describes you – and you have a passion for safe, reliable and affordable electricity, then consider running for the VEC board this year."

In order to run for the board, a candidate must be a VEC member and may not be employed by the cooperative. Candidates must have a principal residence within VEC service territory and in the district they are running to represent. Directors are elected to serve four-year terms. The board generally meets in the afternoon on the

last Tuesday of each month, either at VEC's main office in Johnson or virtually via teleconference.

Directors receive a stipend and mileage reimbursement for attending meetings and have training opportunities to learn more about energy issues and the cooperative model.

Below is a list of the seats that are up for election in 2023 and the towns they represent:

District 1 Towns:

Averill, Averys Gore, Barton, Bloomfield, Brighton, Brownington, Brunswick, Canaan, Charleston, Ferdinand, Guildhall, Holland, Lemington, Lewis, Lyndon, Maidstone, Morgan, Newark, Norton, Sheffield, Sutton, Warners Grant, Warren Gore, Westmore, Wheelock

District 6 Towns:

Berkshire, Enosburg, Franklin, Georgia, Highgate, Montgomery, Richford, Sheldon, St. Albans Town, Swanton

West Zone At-large Towns:

Alburgh, Bakersfield, Belvidere, Berkshire, Bolton, Cambridge, Eden, Enosburg, Essex, Fairfax, Fairfield, Fletcher, Franklin, Georgia, Grand Isle, Highgate, Hinesburg, Huntington, Hyde Park, Isle LaMotte, Jericho, Johnson, Milton, Montgomery, Morristown, North Hero, Richford, Richmond, Sheldon, Shelburne, South Hero, Starksboro, Stowe, St. Albans Town, St. George, Swanton, Underhill, Waterville, Westford, Williston.

To learn more or request application materials (available now through March 3, 2023) visit vermontelectric.coop/board-candidate-information or email support@vermontelectric.coop.

VEC's Board of Directors: An Overview

VEC is governed by a 12-member Board of Directors that represent the membership. The board has fiduciary responsibility for setting broad policy in accordance with statute and the co-op bylaws in determining the overall operation and direction of the co-op.

Among other things, the board reviews and approves the co-op's financial management, and related retirement of member capital, when it's financially feasible. The board reviews and approves the annual operational plan and conducts longer term, high level, multiyear planning. The board is also responsible for the hiring and oversight of VEC's chief executive officer and for reporting the past year's progress at VEC's Annual Meeting of the Membership.

Board members also bring questions and concerns from VEC members to the full board and staff when necessary.

Rewards, Demands, and Satisfaction: Reflections from VEC's Board President

Rich Goggin of South Hero was elected to the Board of Directors in 2015 in District 7. He was elected president of the board in 2019. Below are some of his thoughts about serving on the board.

What made you want to serve on the VEC Board of Directors?

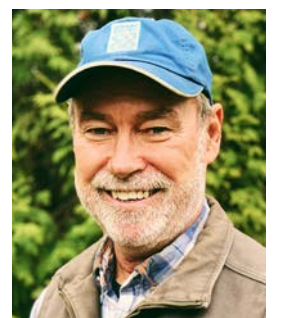
It was pretty simple. I saw an ad in the Islander (newspaper). I looked into it, it sounded very interesting, so I ran – I sent out emails, printed up campaign post cards, and even stood in front of the local post office on a few Saturday mornings to greet and chat with VEC members and ended up winning the board seat.

What's been rewarding about being on the board?

I have learned a lot about how our electric system works. In many ways, the electric system is the unsung hero of our way of life, and getting more so all the time, especially when we add its critical role in addressing climate change. It's a very exciting time in the electric utility sector. Being a VEC board member gets me out talking to people in the community about the co-op, how it differs from 'for profit' companies and how VEC is offering incentives for battery storage, heat pumps, induction cooking devices, EV battery chargers and more. These sorts of interactions help both me and our members get smarter about this fast-evolving sector. Learning is rewarding.

What are the challenges?

It can be time consuming. For me it can be challenging at times to balance my work with the co-op and the other demands in my life. You need to spend time reviewing materials, especially if you are new to the electric sector. A director should take advantage of the many courses (both in-person & online) through the National Rural Electric Cooperative Association, or NRECA to learn more about the electric system and what co-ops are all about. Prior to each board meeting, each director receives an information packet on topics to be discussed or voted on in the upcoming meeting. Reviewing the packet contents and being knowledgeable with the topics is important for you to meaningfully participate in the board meeting. For new board members in particular, there is a learning curve.



Rich Goggin

What would you advise to anyone considering running?

I would suggest talking to one or more of the current board members to get a full understanding of what the job entails. Be sure you are willing to commit the time, so that it's a meaningful experience for you and for the co-op. As a non-profit in a dynamic industry – an industry that's in the middle of a major transformation, VEC has a great opportunity to lead. From my perspective at least, it's really rewarding to be a part of that.



Mary Sylvester, left, receives recognition for her service from VEC Chief Executive Officer Rebecca Towne.

Mary Sylvester retired from VEC this year after 50 years of service to the Co-op. The VEC Board of Directors recognized her dedicated service with this resolution:

Be it resolved: That the Vermont Electric Cooperative Board of Directors hereby extends its gratitude to Mary Sylvester for fifty years of dedicated service to VEC. During her tenure at VEC, Mary served in a number of roles in both the Member Services and Finance Departments. Most recently she has served as Accounts Payable and Receivable Accountant and before that she served for many years as VEC's Work Order Accountant. In each role, Mary was motivated by her dedication and sense of responsibility to provide excellent service to VEC members.

Mary's strong work ethic and concern for VEC members helped make VEC the successful cooperative that we are today. We thank Mary for all she has done for VEC for the past fifty years and wish her many more years of health and happiness.

Notice Of Rate Change

On November 15, 2022, Vermont Electric Cooperative, Inc. (VEC) filed with the Vermont Public Utility Commission (PUC) a request for a revenue increase of \$6,490,731 to be effective on January 1, 2023. This represents an 8.19% increase over existing rates. VEC proposes that the increase be equally applied to all members through a flat increase across all rate classes.

For the past ten years, VEC has been able to minimize the rate increases required from our customers. We saw increased rates in 2020 (3.29%) and 2022 (1.96%), and before that we had held rates flat for six years. Our ten-year average including this year's recommended 8.19% increase indicates an average increase of 1.64% per year.

The key driver of this request is power supply costs, which will increase by \$4.1 million in 2023, representing over 60% of the requested revenue increase. The worldwide shortage of natural gas, which is outside of the direct control of electric distribution utilities, is putting considerable upward cost pressure on the wholesale power market.

A chart is attached showing the present and proposed rates for each rate schedule.

Any interested person may examine the rate increase filing via ePUC at: <https://epuc.vermont.gov>. The Case No. is 22-4868-TF. The filing is also available at the Vermont Public Utility Commission and at the Vermont Electric Cooperative office during normal business hours. Comments regarding the rate filing may be submitted to the Public Utility Commission by via mail at 112 State Street, Montpelier, VT 05620-2701, via email at puc.clerk@vermont.gov, or via ePUC at <https://epuc.vermont.gov> filed into Case No. 22-4868-TF.

In addition, the PUC will hold a public hearing on February 9, 2023 via Go To Meeting videoconference. The Public Hearing will commence at 7:00 P.M., or immediately following a presentation at 6:45 P.M. hosted by the Vermont Department of Public Service where Vermont Electric Cooperative Inc. will describe the tariff and be available to answer questions.

Participants and members of the public may access the information session and public hearing online at <https://meet.goto.com/955787125> or call in by telephone using the following information: phone number: +1 (571) 317-3116; access code: 955-787-125. Participants may wish to download the GoToMeeting software application in advance of the hearing at <https://meet.goto.com/> install. Guidance on how to join the meeting and system requirements may be found at <https://www.gotomeeting.com/meeting/online-meeting-support>.

VEC welcomes your input as well. Please send your questions or comments on the proposed rates to Rebecca Towne, Chief Executive Officer, or Caroline Mashia, Chief Financial Officer, Vermont Electric Cooperative, Inc., 42 Wescom Road, Johnson, Vermont 05656 or at rtowne@vermont-electric.coop or cmashia@vermont-electric.coop.

Classification	Type of Charge	Units	Current Rates	Proposed Rates	Total
Residential Service Classification #1	Customer Charge	35,280	18.14	19.63	\$ 8,308,860.96
	1st 100 KWH	37,405,777	0.09193	0.09946	\$ 3,720,405.92
	Over 100 KWH	193,692,619	0.18556	0.20076	\$ 38,885,870.16
	2nd meter charge	740	5.91	6.39	\$ 56,779.93
	All add'l meter kWh	2,437,262	0.18556	0.20076	\$ 489,306.48
Residential Service Classification #1.1	Customer Charge	-	18.14	19.63	\$ -
	On Peak KWH	-	0.20841	0.22548	\$ -
	Off Peak KWH	-	0.15031	0.16262	\$ -
Residential TOU Pilot Service Classification #1.2	Customer Charge	25	18.14	19.63	\$ 5,887.80
	On Peak KWH	37,390	0.33716	0.36478	\$ 13,639.11
	Mid Peak KWH	85,150	0.17947	0.19417	\$ 16,533.73
	Off Peak KWH	204,022	0.12426	0.13444	\$ 27,428.54
Small General Service Classification #2	Customer Charge	4,476	19.23	20.81	\$ 1,117,493.47
	All KWH	62,744,756	0.16682	0.18049	\$ 11,324,523.52
	All KW	-	21.99	23.79	\$ -
	Farm Residence Credit	204	(7.48)	(8.09)	\$ (19,811.05)
Large General Service Classification #2	Customer Charge	130	32.06	34.69	\$ 54,110.62
	All KWH	37,808,462	0.09548	0.10330	\$ 3,905,672.36
	All KW	137,177	21.99	23.79	\$ 3,263,630.00
	Farm Residence Credit	7	(7.48)	(8.09)	\$ (679.79)
Small General TOU Service Classification #2.1	Customer Charge	41	24.77	26.80	\$ 13,185.16
	On Peak KWH	1,152,773	0.18466	0.19979	\$ 230,309.06
	Off Peak KWH	1,294,055	0.12654	0.13691	\$ 177,163.79
	Demand billing all KWH	-	0.09548	0.10330	\$ -
	On Peak KW	-	25.63	27.73	\$ -
	Off Peak KW	-	18.50	20.02	\$ -
Small General TOU Pilot Service Classification #2.2	Customer Charge	4	19.23	20.81	\$ 998.65
	On Peak KWH	22,788	0.31207	0.33763	\$ 7,694.01
	Mid Peak KWH	100,236	0.17389	0.18813	\$ 18,857.87
	Off Peak KWH	45,356	0.12558	0.13587	\$ 6,162.40
Large General TOU Pilot Non-demand Service Classification #2.3	Customer Charge	5	32.06	34.69	\$ 2,081.18
	On Peak KWH	69,062	0.31207	0.33763	\$ 23,317.69
	Mid Peak KWH	1,087,704	0.17389	0.18813	\$ 204,634.91
	Off Peak KWH	348,775	0.12558	0.13587	\$ 47,387.11
Industrial Service Distribution Firm Classification #3	Customer Charge	6	244.87	264.93	\$ 19,074.91
	All KWH	19,604,463	0.09473	0.10249	\$ 2,009,263.40
	All KW - Firm	55,148	20.94	22.66	\$ 1,249,398.07
	5% Transfmr Discount	-	-	-	\$ (74,579.04)
Industrial Service Distribution Interruptible Classification #3	Customer Charge	-	244.87	264.93	\$ -
	All KWH	-	0.09473	0.10249	\$ -
	All KW - Firm	-	17.19	18.60	\$ -
	5% Transfmr Discount	-	-	-	\$ -
Subtransmission Firm Service Classification #3	Cust Charge - Firm	3	244.87	264.93	\$ 9,537.45
	All KWH - Firm	13,688,111	0.09453	0.10227	\$ 1,399,934.00
	KW - Firm	40,146	12.68	13.72	\$ 550,753.71
	5% Transfmr Discount	-	-	-	\$ (30,837.00)
Subtransmission Interruptible Service Classification #3	Cust Chrg- Interrupt	3	244.87	264.93	\$ 9,537.45
	All KWH - Interrupt	60,962,370	0.08836	0.09560	\$ 5,827,897.92
	KW - Interrupt	113,631	8.93	9.66	\$ 1,097,849.85
	5% Transfmr Discount	-	-	-	\$ (324,754.67)
Lighting Service Classification #4	1,000 Lumens	2	8.17	8.84	\$ 212.14
	4,000 Lumens	1	18.61	20.13	\$ 241.61
	8,000 Lumens MV	43	18.70	20.23	\$ 10,439.64
	20,000 Lumens MV	5	32.39	35.04	\$ 2,102.60
	8,000 Lumens HPS	950	14.99	16.22	\$ 184,884.66
	24,000 Lumens HPS	327	31.80	34.40	\$ 135,005.20
	20 LED	1,348	12.93	13.99	\$ 226,289.32
	40 LED	534	23.42	25.34	\$ 162,369.25
	<u>Owned STL</u>	-	-	-	\$ -
	8,000 Lumens HPS	-	11.99	12.97	\$ -
	24,000 Lumens HPS	5	25.44	27.52	\$ 1,651.44
	44,000 Lumens HPS	-	38.89	42.08	\$ -
	20 LED	-	7.19	7.78	\$ -
	40 LED	11	15.52	16.79	\$ 2,216.46
Specific Use Dynamic Pricing Service Classification #5	Customer Charge	6	244.87	264.93	\$ 19,074.91
	Renewable Energy	5,385,530	0.01500	0.01623	\$ 87,400.54
	Variable T&D	Changes each month, based on actual charges			\$ 150,796.79
	Fixed T&D	Rates set each year, effective July 1-June 30			\$ 486,557.64
	Energy	Charges are based on actual LMPs per SC#5			\$ 584,133.90
Capacity, Regulation	Changes each month, based on actual charges			\$ 27,261.36	
Total					\$ 85,725,157.10

Winter Storm Elliott

On December 23, a severe weather system swept through the northeast, bringing very high winds, some snow and freezing temperatures. People throughout Vermont were without power for multiple days, as crews worked through windy and icy conditions to safely restore power. The photos below tell a big part of the story.



Winter Storm Elliott and its effect on VEC, by the numbers:

Broken poles:
48

Number of days it took from the first outage to the last member back on:
5 1/2

Highest number of members out at any one time:
13,790

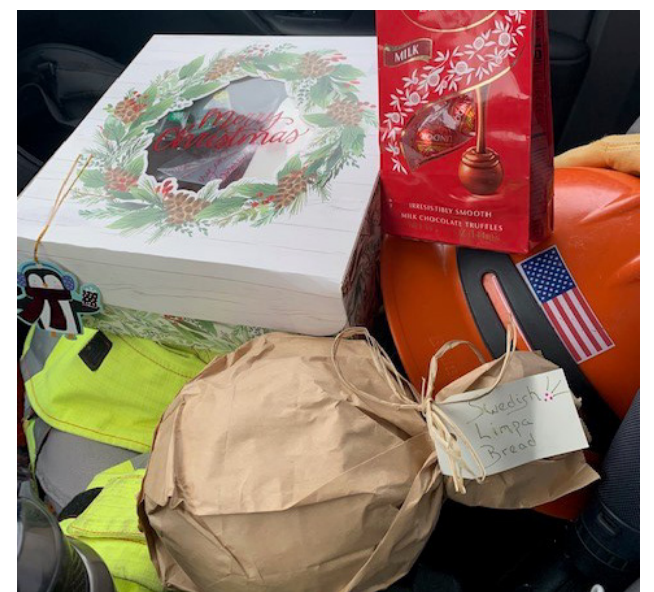
Maximum number of incoming phone calls
495

(per hour between 8 and 9 am on 12/23)



Winter storm Elliott caused significant damage across VEC territory. Clockwise from upper left: a tree rests on a wires on Route 102 in Canaan; destruction dwarfs a road sign on Belvidere Mountain Road in Bakersfield; some gifts left for VEC field crews by a grateful member; in last two photos, elk watch line workers repair a broken pole in front of the Cow Palace Restaurant in Derby.

Why doesn't VEC put more wires underground?
See story on next page.



Efficiency
Vermont

FREE Energy Saving Kit!

Save money and energy in every room of your home with this FREE Energy Saving Kit!

Efficiency Vermont is offering Vermonters a free kit of general purpose LEDs and water-saving devices. Get your FREE kit today and start saving money on energy bills. This offer is only available for a limited time. (Limit one (1) Energy Saving Kit per household for Vermont residential utility customers.)

Energy Efficiency Kit

Reduce your home's carbon footprint with products that help lower your energy consumption and reduce unnecessary water waste, all while saving you money!

This kit contains one (1) 60w Tuneable Wifi LED A19, five (5) 60w LED A19, three (3) 40w LED A19, two (2) 75w LED A19, one (1) 1.5 GPM fixed showerhead, one (1) kitchen aerator, and one (1) bathroom aerator.

To order your free kit, go to <https://efficiencyvermontfreekit.com/>



Overhead, or Underground: the Ongoing Balancing Act

By Peter Rossi, VEC Chief Operating Officer



Peter Rossi

"Why don't you bury utility lines more often than you already do?" That's a question we often get from VEC members, particularly after an outage event like the recent storm over Christmas.

The answer is not as straightforward as it might seem. VEC does have an ongoing priority of strategically undergrounding or relocating line away from more forested areas where it makes sense and is practical. While undergrounding lines is not always possible due to ledge rock or other obstacles and other factors, it is explored during the design phase of many projects.

While the vast majority of our system is above ground, and it would be impractical to bury it all, we continually monitor the relative costs – both up-front and on-going – of burying lines in strategic locations versus putting them overhead. Underground lines are generally three times cheaper on a lifetime cost basis but the upfront costs are often higher, depending on the situation (e.g., number of customers served, ledge, watercourses, contractor availability, amount of vegetation and other factors). Overall, VEC has increased the amount of new or upgraded lines we are undergrounding. It's worth noting, and is sometimes overlooked, that when underground lines do require repair or are damaged, outage time and costs can be double, triple, or more relative similar repairs to their overhead counterparts. Sometimes, simply moving a line from forested rights-of-way to the roadside significantly reduces outage impact as it makes the lines more readily accessible for improvements and repairs.

It's important to remember that most of VEC's lines were put into place when

Vermont's mountains and other areas were deforested. It was most economical to simply run a line from point A to point B. As trees have grown back, they have created an issue for the lines that were built that are now in the middle of forests or away from established roadways.

Cooperatives, especially, are extremely cost-conscious due to the not-for-profit nature of our business model and as we continue to enhance the reliability of our evolving electric system, we carefully consider the relative costs and practicality of various options.

Additionally, VEC seeks funding from federal government programs, such as the Infrastructure Jobs and Investment Act, to enhance the resilience of VEC's system, and that includes undergrounding where it makes sense.

In recent years, VEC has been able to effectively utilize the federal FEMA Mitigation program, which makes federal funds available after severe storms. Several times since 2017, we have been able to obtain FEMA funds after a storm to "harden" our system. In one such project, we installed a protection device to sectionalize a line, in another section we reconducted the bare wire to coated/tree wire, and with a third section created a 2-pole tap to tie into another circuit to provide back-up power. Over the last five years, that particular area of line has suffered from approximately two thirds fewer outages annually and commensurate outage time reduction. That is a great success story and we have been able to do this with many other projects.

We do hope the storm that took place over this past Christmas will be declared a FEMA-level event so we can apply for additional funding to continue to harden our system.

Meanwhile, as we plan for the future, we continue to monitor the always-shifting costs of enhancing our system, all with the goal of bringing safe, reliable electrical service to our members in as cost-effective a manner as possible.

CEO update: Continued from page 1

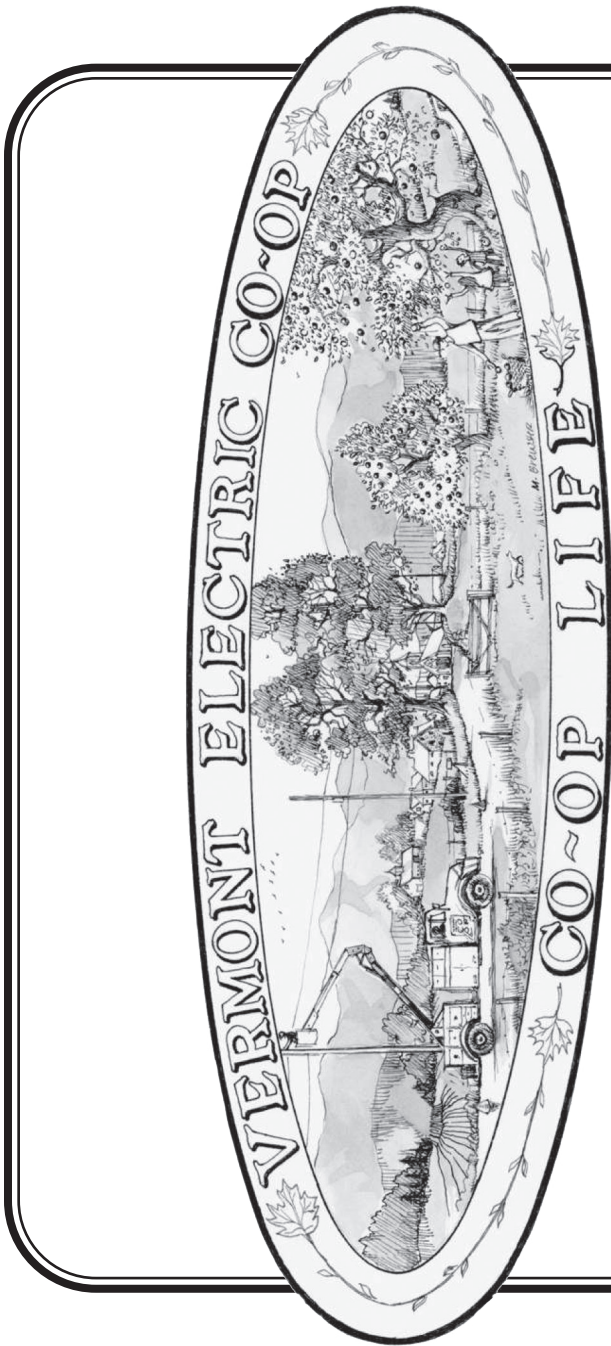
region, and managing load at peak use times. While we sometimes hear of Vermont's "energy independence" as a desired goal, the reality is our electricity grid is regional.

VEC is concerned about, and continues to challenge, requirements to procure certain types of resources from particular geographic locations if it could negatively impact affordability or reliability. It is not technically feasible to power our system with intermittent renewables unless they are well balanced and complementary. Proposals that limit hydro resources (which, for example, produce energy on a cold winter night), or that require significantly more in-state resources could be detrimental to system reliability.

Reliable, Affordable, Clean – Our Commitment to You

Our members, whether they are residential members, small businesses, or large regional employers, count on VEC to ensure the lights stay on safely and afford-

ably. Proposals that would result in us having to pay more than necessary for renewable energy or that require us to buy, or not buy, renewable energy from particular sources – as is the case with potential legislative changes to the state's Renewable Energy Standard – do cause us concern. Why? Because such requirements may add financial burden to our members without demonstrable carbon reduction benefits, and may hamper our ability to innovate and continue our overall progress toward a cleaner system. Moving our energy system, including heating our buildings and powering our vehicles, away from fossil fuels toward electricity is key to meeting our climate goals. Raising the costs of electricity only restricts that effort. VEC supports cost-effective programs and policies that advance carbon emissions reductions and support rural and lower income Vermonters. We are on the job for you, delivering reliable power that is now 100 percent carbon free. We have been serving members since 1938 and will continue to be a trusted and reliable partner. We promise to keep your best interests in mind.




Winter 2023

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Fred Jewett (left, toward bottom of pole) and Ryan Nieckarz replace a broken pole in Berkshire after winter storm Elliott.



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