

Hey Patty, How Does This Affect My Bill?

Member Mike Merchand asks GM Patty Richards everything you want to know about the January 2020 rate increase, the rate redesign recently approved by the state, and how net metering affects rates.

Around the new year, member Mike Merchand of Bradford contacted WEC with questions about the new rate design to be implemented in 2020, the rate increase that took effect January 1, and the effects of net metering on rates for all Co-op members. He hoped, he explained, to be “starting a conversation.”

General Manager Patty Richards invited Mike to bring that conversation to *Co-op Currents*. Here’s what they talked about:

Patty: Mike, you asked about the impact on your bill and what you’re paying for electricity, starting a conversation about “hey should I put up a solar panel, why are WEC’s rates high compared to Green Mountain Power’s.” I looked at it like you had a little bit of a frustration with your bill.

Mike: Yeah, exactly. You know what my biggest questions are? Why is it that rate costs jump up after the 200 kilowatt hour mark? And then

I love when our members ask questions. They say, “Patty, your rates are high!” I say, “Yes! I agree with you!” Changing that means a change in policy. Now, we’re trying to get rates as low as we can.
— Patty Richards

I was reading *Co-op Currents* when I noticed that the service charge is going up and the rate charge is going up in the near future.

Patty: What’s going on is the way we structure our rates. We price our product to prevent people from using a lot of electricity — I’d even say, what most would call normal amounts of electricity. It was intentionally done that way to encourage

people to be electrically efficient. So that 200 kilowatt hour block is priced lower to incentivize people to use as little electricity as possible. If you can stay in the 200 kilowatt hour block, your bill is really inexpensive.

So, what that policy has done is to drive people to use fossil fuels to do things that electricity could do. A space all electric utilities are interested in, and anyone addressing climate change is interested in, is the electric vehicle. Our rates are not set up to encourage people to drive EVs. Or to use electricity for heat, or for

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Annie Reed, WEC’s Board Secretary, with the pole that holds her transformer. Some years ago, line crews needed to reset the pole and were careful to set it in a new location that gave her enough room to drive a lawnmower between the pole and the bedrock that lines her garden. “I came out and said ‘Oh, you really get me! This is perfect!’” she said. “They are so kind, so great.”

An Ample Quarter Acre

Annie Reed’s home in Marshfield entwines beauty, efficiency, community, and land

Since 1978, WEC Board Secretary Annie Reed has lived on Hollister Hill in Marshfield. She’d been in town for two years and was working at Goddard College as a cook when she moved to a cabin on the hill. It was off the road — you could get there only by walking — and had no water or electricity. She loved it.

Electricity only became a necessity when, at a turning point in her life, she decided to get her masters degree and needed to do coursework at night on her laptop. “I asked myself, if you could do anything, what would it be? I said, walk in the woods. So, I got a degree

in environmental science,” she said.

She lives farther up the hill, now, on a plot of rich land before a limestone hillside covered with hardwood. At dawn, “the sun lights up this hillside. It hits the top of the trees and it lights up so the whole hill is glowing. It’s really beautiful,” she said.

She bought the quarter acre with an old structure that, over the years, she’s transformed into a neat, efficient home. Built in 1949, her home started out as a small barn, then became a small garage. In 2001, Reed invited friends over for her birthday and they gutted the

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Washington Electric Cooperative
East Montpelier, VT 05651

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Packetized Energy

Important Annual Notice Regarding Herbicide Use in the Maintenance of Electric Utility Rights-of-Way

The Vermont Public Utility Commission has set forth rules under PUC 3.600 pertaining to the use of herbicides in the maintenance of electric utility rights-of-way. Each spring, herbicide applications may begin on or after April 1st. These rules afford you important rights and duties. Vermont electric utilities maintain electric line rights-of-way with several methods, including the selective use of herbicides on trees and brush. They also encourage low-growing shrubs and trees which will crowd tall-growing species and, thus, minimize the use of herbicides. Methods of herbicide applications may include stump, stem injection, basal, soil, and foliar. Only electric utility rights-of-way that have tall-growing tree species with the potential of threatening the electric utility system are treated.

If you reside on or own property in Vermont within 1000' of an electric utility right-of-way:

1. Sign up to receive written notification from your local electric utility of plans to apply herbicide on any ROW within 1000' of your property or the property where you reside. Check nearby poles for tags identifying the utility and/or pole number, complete the form below and submit it to your local electric utility by mail before February 15th, 2020 to be added to the notification list. If determined to be qualified, you will receive notification from the utility at least 30 days prior to scheduled herbicide application.

2. You are responsible to make your local electric utility aware of the location of any potentially affected water supply, and of any other environmentally sensitive area where herbicide application ought to be avoided.
3. Watch and listen for public service announcements in newspapers and radio ads noting upcoming herbicide applications.
4. Check with your local electric utility regarding the vegetation management cycle near your particular line.
5. You have the right to request, in writing, that the utility refrain from applying herbicides in the process of clearing the right-of-way, and the utility may offer alternatives such as herbicide stump treatment or herbicide stem injections.
6. You have the right to refuse, in writing, the use of herbicides whatsoever at no cost to you if the type of lines in the right-of-way are distribution lines, bringing electric service directly to individual customers.

7. You have the right to refuse, in writing, the use of herbicides whatsoever by paying a \$30 administration fee if the type of lines in the right-of-way are transmission lines or sub-transmission lines, bringing electricity to or between substations.

For more details, or to ask additional questions, please contact your local electric utility, or one of the following:

Agency of Agriculture
Public Health & Ag. Resource Mgmt
116 State Street
Montpelier, VT 05602
1-802-828-2431

Department of Public Service
Consumer Affairs & Public Information
112 State Street
Montpelier, VT 05620
1-800-622-4496

WEC is required to print this form and does not use any herbicides on its rights of way.

Co-op Currents

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

Board of Directors

President	BARRY BERNSTEIN (May 2022)	1237 Bliss Road, Marshfield, VT 05658 Bbearvt@myfairpoint.net	456-8843
Vice President	ROGER FOX (May 2021)	2067 Bayley-Hazen Rd., East Hardwick, VT 05836-9873 rfox@pivot.net	563-2321
Treasurer	DONALD DOUGLAS (May 2020)	21 Douglas Rd., East Orange, VT 05086 dondougl@gmail.com	439-5364
Secretary	ANNE REED (May 2022)	3941 Hollister Hill Rd., Marshfield, VT 05658 annereed48@gmail.com	454-1324
	STEVEN FARNHAM (May 2022)	125 Farnham Road, Plainfield, VT 05667-9660 steven4wec@gmail.com	917-2581
	JEAN HAMILTON (May 2020)	3499 East Hill Road, Plainfield, VT 05667 Jean.myung.hamilton@gmail.com	777-6546
	STEPHEN KNOWLTON (May 2021)	160 White Rock Drive, #2, Montpelier, VT 05602 knowlsf@auburn.edu	223-2230
	RICHARD RUBIN (May 2021)	3496 East Hill Rd., Plainfield, VT 05667 richardirubin@gmail.com	454-8542
	MARY JUST SKINNER (May 2020)	P.O. Box 412, Montpelier, VT 05601 maryjustskinner@gmail.com	223-7123

PATTY RICHARDS
General Manager
patty.richards@wec.coop

KATIE TITTERTON
Editor
katie@clearspotvt.com

TIM NEWCOMB
Layout

Editorial Committee

Patty Richards Donald Douglas Jean Hamilton Anne Reed Katie Titterton

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

This institution is an equal opportunity provider and employer. If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at http://www.ascr.usda.gov/complaint_filing_cust.html, or at any USDA office, or call (866) 632-9992 to request the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.

Did You Know?

WEC's environmental policy dictates that no herbicides are used on the Co-op's rights of way. All tree trimming and clearing is done by hand.

Where's WEC?

ROW crews are working to keep your power reliable by removing trees that threaten the lines in these areas:

- Willey Hill in Topsham
- Bliss Road in East Montpelier



WEC in the News

"Regulators consider requiring discounts for low-income electric ratepayers"
— vtdigger.org, Feb. 10

Got something to say?

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



President's and General Manager's Message

Let's Talk About It

Members invited to come to 81st Annual Meeting with questions about rates and WEC's new rate structure, and ideas for community connection. Plus: optional cash-saving rates ahead?

Patty: Barry, I'm excited about our upcoming annual meeting and hearing from members. I had a chance to talk with member Mike Merchand from Bradford about some questions he had. He reached out to me with some questions I hear often. For example, he asked, why are our rates so high?

So, we had a conversation, and it starts on the front page of this issue of *Co-op Currents*. We talk about all the factors that affect our rates: conservation, net metering, our new rate design, and the most recent rate increase.

I hope members read it because it may answer questions a lot of people share.

Barry: That's great. There's a lot that goes into our rates, and as a result of our rate redesign, rates will be changing significantly over 2020. It helps when our members understand what goes into this process.

81st Annual Meeting is May 7

Patty: Just want to give a shout out that we have our 81st Annual Meeting coming up! It's going to be at our operations center on 230 Fassett Road in East Montpelier. This will be the fourth year at the warehouse in the past decade. I encourage everyone to come out and spend a great evening with us. Have a great meal and bring your questions. We'll talk about all the big exciting changes happening at WEC, and as always, we'll open it up to members for a Q&A.

Barry: This is another example of what I like to call the Cooperative difference. Our members are our owners, and you are entitled to learn about what's happening and ask us questions. We had a really good discussion last year. We always have good speakers. If you have a question about rate design or anything else, and if you haven't had a chance to talk to Patty or staff or a Board member about it, there will be time to ask about it there. I encourage you to join us.

Patty: Members have an opportunity to have a voice. At the Annual Meeting, you can bring up any subject you like and discuss it on the floor with folks in attendance. It's a great way to engage with your electric cooperative. We want



At the Annual Meeting, you can bring up any subject you like and discuss it on the floor with folks in attendance. It's a great way to engage with your electric cooperative. We want to hear what's on your minds.

– Patty Richards

to hear what's on your minds.

Barry: The only limitation is you can't talk about how gray some of us are getting! What's the date, Patty?

Patty: May 7th. That's a Thursday. It starts at 5. And the food, from Bon Temps, is great.

Consider running in 2021

Patty: The Co-op is governed by a nine member Board of Directors that's democratically voted in. Every year three seats open and Directors are voted in for a three year term. If you want to get involved with the Co-op in a deeper way, run for the Board of Directors and help us set policy and strategy for where we are headed. This is not

something every electric utility does. It's a really nice way to be involved and is related to so many important threads of how we live — the electric space, how we use energy in our daily lives, how we combat climate change, how we serve our community.

Barry: The period to announce candidacy is over for this year, but because democracy is at the core of our process, we're trying to get our members to think about it. Every year, one third of the Board comes up for election. Many of us on the Board did not come from an electric utility background, so it's a learning curve we all go through. It's really a good process and very supportive. So again, if you're just starting to think about this, I encourage you to step up to run next year, or the year after. There's an opportunity for you every year to become part of our future direction.

Patty: We have so many great things to talk about with where we're headed. We have a 100 percent renewable power supply mix, nearly all of which is generated here in Vermont. We're charging ahead in a very proactive, environmentally sound way, and we want a Board of Directors that's thinking of new ideas and new strategies to move ahead and combat climate change.

This is a fantastic board to be on. I want to plant that seed for people thinking

about committing time or doing good work in their community. This is a great place to invest your time and give us your thoughts and wisdom.

Barry: One thing we've been talking about on the Board is how we reach out to our community, both members we serve and the towns that make up the members we serve. We're open to ideas. Talk to me, to any other Directors, or Patty if you have any thoughts about what it could mean to connect with community around our territory. We could have a coffee meeting with members in different towns, we can come to farmers markets. We really appreciate hearing from you. If you come to the Annual Meeting, you'll have a chance to talk to us there, too.

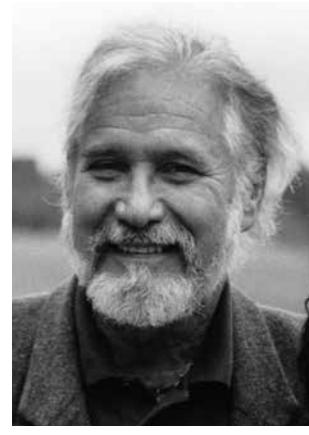
Optional rates ahead?

Barry: Patty, let's talk about some optional rates we might be able to offer our members, that would help save us and them money.

Patty: When the PUC [Public Utilities Commission] approved our new rate design, they liked what we put forward for the new rate structure, but they were concerned about low income members who also use very little electricity, because the new rate structure does increase the bill for people who fall in that category.

The rate design actually lowers bills for low income users who use 500 kilowatt hours per month or more. If you're an average user and you don't make a lot of money, the new rate design lowers your bill. That's a good thing. But the PUC wants us to look at a low income program, so we will. They're also opening a joint utility workshop on the subject, so we'll talk with other utilities, and maybe we'll come up with something that could work statewide.

Barry: Patty, I know you and our board have discussed possibly coming up with an EV off-peak rate, which would either be in the evening or certain times of day. I know there aren't that many people who might use it yet, but as more and more members choose EVs, that's one thing the PUC wanted us to look into.



We've been talking about how we reach out to our community, both members we serve and the towns that make up the members we serve. We really appreciate hearing from you.

– Barry Bernstein

Patty: They want us to look at EV rates and to also consider a time of use rate. The EV rate would be just a rate structure for those who use EVs.


My concern is as we electrify the grid for people moving off fossil fuels, whether it's EVs or lawnmowers or cold climate heat pumps or anything else, it's going to be difficult having end-use metering for all these devices sprinkled around the house. So, maybe instead of a specific use rate, like an EV rate, we offer some flexibility. Maybe for members who have electrified all their energy use, who use a lot of electricity, we have a different rate structure for that. So if you have a cold climate heat pump, an induction cooktop, an EV,

and you've electrified your whole house, basically we look for a rate structure that rewards you. It's beneficial electrification. We want to move people off fossil fuels, we're working to address climate change, that's the underlying thing.

Barry: As we're looking at all this, I really hope members got a chance to read the last issue of *Co-op Currents*. It had a lot of good info, including an article on backup options for dealing with outages. Even with this milder winter, if we get a heavy wet snow, as we did not too long ago, we're going to have members in certain areas who experience longer outages.

I know members are looking at this, and as their homes get more electric, they're also thinking about backup. We're going to try to stay above the curve with our members so we can help you make those decisions in the wisest way. And when we have outages, we do the best we can to get our members back online as quickly as we can. For those with backup generation, it gives them more leeway during difficult times.

Patty: We'll have lots of great new things to offer and new programs as we move ahead. WEC is constantly looking at new ways to be a better service provider and offer environmentally sound choices to our membership.

Barry: From Patty and me, hope all of you have a safe and pleasant rest of the winter, and mark your calendars for May 7 to join us at the Annual Meeting! 



Three Directors Run for Re-election


*Vote by mail or at the 81st Annual Meeting:
Thursday, May 7 at WEC's Operations Center in East Montpelier*

Every year, WEC's membership elects three fellow members to serve on the Co-op's nine-seat Board of Directors. The members who serve in these critical roles oversee management and staff and make policy and leadership decisions for the member-owned electric utility. This year, three incumbents are running for re-election: Don Douglas of Orange, Board Treasurer; Jean Hamilton of Plainfield; and Mary Just Skinner of Middlesex. No other members have submitted candidacy materials.

Each candidate has submitted a brief biographical sketch, printed below. The April issue will feature their responses to questions about issues related to board service, providing readers a broader sense of their interests, viewpoints,

and experience.

WEC members may write in names of unofficial candidates on ballots if they wish. All board candidates run at-large, since WEC is not divided into districts. Your ballot will arrive in the mail: check to make sure when the deadline is to post your votes by mail. You may also vote in person at the Annual Meeting.

The 2020 Annual Meeting will be Thursday, May 7 at WEC's Operations Center on 230 Fasset Road in East Montpelier. All members are invited to attend the meeting. Reservations are required for dinner, which is provided at no cost to the membership. Please see the reservation form below. More details will follow in the April issue of *Co-op Currents*. 

Don Douglas

My name is Don Douglas. I have been a Co-op member for 40 years. I have lived in East Orange in the same house for the past 40 years. Members can contact me by phone 802-439-5364 or email dondougla@gmail.com. I am always delighted to talk to people about the Cooperative.



Don Douglas

I have served as Treasurer for WEC for the past 20 years. I retired after 36 years from delivering the mail and have the time to devote to serving on the Board of Directors. I graduated from Washington University in 1971 with a BA in History. I then moved to Austin, Texas and earned an MA in Latin American Studies at UT. After graduating I moved to South America for 16 months before finally coming to live in Vermont where my wife and I raised 3 children.

I would like to continue serving on the Board because my perspective as the Treasurer is a little different from, but not in conflict with my fellow board members. I am concerned about the cost of electricity to our members. We cannot hope to persuade our members to transition to the renewable energy we sell when the cost is over twenty cents per kilowatt hour. I am concerned about the changing climate, but even if I wasn't worried about the level of CO₂, the state of Vermont and our regulators are requiring WEC to reduce fossil fuel use and encourage beneficial electrification among our members. We have the green energy, but our price point doesn't make for an easy transition for the majority of our members.

I am also interested in our Coventry Gas to Energy facility. We make about two thirds of the energy used by our members up in Coventry. Because of constraints on the transmission lines, we are simply flaring gas that could increase our production of electricity by 50 percent. We are looking for creative solutions for this excess gas.

Another issue that concerns me is fiber optic to every home. Currently many of our members do not have a modern connection to the internet. Many cooperatives around the country have been able to offer their members high speed internet at below market prices. I hope that we can partner or lead the way to solve this problem. Many businesses could and would relocate to our service territory if they had access to reliable high speed internet.

Jean Hamilton

I live in Plainfield and have been a WEC member since 2014. In 2017, I joined the WEC Board of Directors and have enjoyed all of the learning opportunities during my first term. I am proud to bring my experience in community development, rural economies, and business management to help WEC better serve our community.



Jean Hamilton

Since moving to Vermont in 2000, I have worked in sustainable agriculture and the local food system. I graduated from Middlebury College in 2004 with a degree in Environmental Studies and Religion.

In 2012 I earned a masters degree in Business Management from SDA Bocconi. From 2006-2011 I worked for the Northeast Organic Farming Association of Vermont managing market development programs to enhance market opportunities for farmers in wholesale and direct to consumer channels.

More recently, I have worked as a freelance business consultant helping small and mid-sized ag and food businesses achieve viability. I specialize in financial coaching, grant writing, and data management.

I enjoy living in a rural community and appreciate central Vermont's shared values of land stewardship, resiliency, and neighborliness.

Members are welcome to contact me by phone 802-777-6546 or by email jean.myung.hamilton@gmail.com.

Mary Just Skinner

I have lived in Middlesex since 1977. I have been a WEC member for 43 years, and before that I was a Vermont Electric Co-op member for seven years. I have two sons and two grandchildren. I can be reached at 223-7123, and by e-mail at maryjustskinner@gmail.com.



Mary Just Skinner

I graduated from Barnard College and earned my law degree from Columbia University. I have been a practicing lawyer in Montpelier since 1972. I worked for Vermont Legal Aid for four years and then opened my own law practice in 1976. My practice primarily involves family law, real estate, and probate, but earlier in my career I was involved in a number of utility cases. I represented a group of low-income Vermonters in what was known as the "purchased power" case in 1974 which went to the Vermont Supreme Court.

I have been a member of the WEC Board for eight years. I serve on three committees: Finance, Community Fund, and am Chair of Power and Operations. I have been a Middlesex Select Board member for 25 years, the last thirteen years as vice chair. I also served seven terms in the Vermont State Senate, including a period as chair of the Senate Finance Committee, which handles utility legislation. I am a member of the Vermont Human Services Board which hears appeals from administrative decisions.

DINNER RESERVATION (BUFFET DINNER)

WEC'S 81st Annual Meeting • Thursday, May 7, 2020

230 Fasset Road, East Montpelier, VT • 4:30 pm registration 5:00 pm buffet dinner

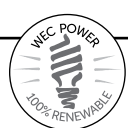
Cost: Dinner is free by RESERVATION ONLY. Walk-ins on 5/7 will be charged \$20 per meal if meals available. Confirmation postcards will not be sent, but confirmation emails will be.

Bon Temps Gourmet buffet will accommodate vegetarian and gluten free options. For other special dietary requests please contact Dawn Johnson at 802-224-2332 or Dawn.Johnson@wec.coop

**RSVP with form below by Wednesday, April 23, 2020 to: WEC, PO Box 8, E. Montpelier, VT 05651
Email RSVP to Dawn.Johnson@wec.coop**

	Member	Guest	Child/Age
Name: _____ <i>(Please print clearly)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name: _____ <i>(Please print clearly)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name: _____ <i>(Please print clearly)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name: _____ <i>(Please print clearly)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Account # _____ Telephone _____ Email _____			

Please be sure NOT to put reservation RSVP in ballot envelopes



Hey Patty

continued from page 1

other uses. So we're embarking on this change to fundamentally, 180 degrees, switch that policy. Climate change is happening, and this is one way we're addressing it — by helping members switch from fossil fuel power to our 100 percent renewable electricity.

Mike: Okay.

Patty: So, we just got approval to change our rate design. We're increasing the monthly customer charge from about \$14 and eventually it will get up to \$25. By doing that we'll be able to lower the per kilowatt hour rate. Right now everything we do at the Co-op depends on kilowatt hour sales. Right now, by discouraging electric use, we have a high kilowatt hour charge.

We're going to switch that and drive that number down. It will take time to do that because the regulators said, "You know, we agree with you, you need a higher monthly charge, but we're going to phase it in over two years."

Mike: What will that look like?

Patty: Well to complicate it, we just had an across the board rate increase, and that's in front of regulators. It applies to the existing rate structure. Not the new design.

Mike: Well, from what I read in the last *Currents*, it seemed like it was going up one cent per kilowatt hour. Is that wrong?

Patty: We just began charging a 5.95 percent increase in our rates. That'll drive the energy portion up about a penny, you're right. Once we

get through this rate increase with the current rate structure, a couple months after that's in place, we'll begin phasing in the changed rate design. That's a separate thing.

I don't want to get too complicated, but essentially that means the energy rate will drop from 26 cents down to 20 cents over the next few years.

Mike: That does make sense, to adjust the rate design to accommodate energy usage.

Patty: We're trying to describe two things at the same time. It's hard to keep them separate. At the end of the year, we have to keep WEC running as a healthy business, which means we need to meet our lender ratios. The 5.95 rate increase is to shore up WEC's finances so we have enough money to cover our costs and operations. That's what went into effect January 1. Regulators are still reviewing it, so it's been implemented as a temporary charge. Assuming that gets approved, then we'll start implementing the rate design right after. That will take three steps over time. The monthly service charge will go up, but we'll lower the kilowatt hour charge. Anyone who uses 500 kilowatt hours per month or more, you'll save money with this rate design.

Mike: Honestly, that makes lot of sense to me. Especially with Washington Electric being a renewable energy source, and people trying to cut down on their fossil fuel use.

Patty: That's exactly the thinking we have here. We have a great product to sell, and it's 100 percent renewable. For anyone's energy needs we want people to think "Hey, can my electric utility provide that?" We want people to think about electrifying everything.

Mike: For example, I think heat pumps are a great source of using electricity to keep your house warm in winter and cool in the summer.

Patty: Exactly! We're moving toward electrifying everything. To have it make sense, affordability-wise, we have to lower the kilowatt hour charge to have people make those choices.

Mike: Well geez! I understand a little bit more now that you told me all that. That makes sense now.

Patty: I love when our members ask questions. They say, "Patty, your rates are high!" I say, "Yes! I agree with you!" Changing that means a change in policy. Now, we're trying to get rates as low as we can.

The Board of Directors and I need to see what we can do to push that energy charge lower and lower. It would be nice if we can get lower than Green Mountain Power. The converse is the monthly customer service charge climbs, but it incentivizes EVs and other electric technologies.

Mike: The other thing is the net metering issue, which is another can of worms. But it would be good to

have that conversation with state reps, about why we have to buy back solar from people who are generating it and putting it into the grid at a higher rate than what we pay for fossil fuels or for what we're generating up at Coventry Landfill.

Patty: Right. We agree with you! We are telling lawmakers that the rates we pay for net metered power is too expensive. We already know we can go out and build a renewable project to serve all our members' electric use for far less than it would cost the same number of people to put solar panels on their house. That said, I want to support what people are doing — we support net metering. But what we're talking about is linked to rates of compensation. That's simply too high. Developers get it too. The solar subsidies are designed to get a new industry off the ground...

Mike: Yeah, and that's happened.

Patty: Right, it worked. Now, the subsidies need to start being rolled back. It's okay to have them, but they're now too high, in my opinion, as they contribute to driving rate

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Join Project PowerShift! Limited Time Program Seeks to Cut WEC's Peak Costs

What is a PowerShift event?

During a PowerShift event, WEC will enable your water heater to act like a battery to store energy for when it is needed most. Be part of a 21st century electric grid, working with your member-owned co-op to lower costs for all members and push down our peak demands together by sharing the "storage" capacity available in eligible EHW tanks!

How does it work?

When a PowerShift event is forecasted, a signal is sent to the controls on the water heater to pre-heat water, shifting the energy used to an earlier time period, when energy is less expensive. Because the water in the tank is already pre-heated, the demand for more energy during the event should be much lower.

Does it cost anything to install the device?

The controller and the installation are free to participating co-op members. In some cases, your water heater might already have controls built in, and in other cases, a professionally trained technician will install an advanced control system to your water heater. Members will also have access to a smart phone app that can be used to monitor the performance of their water heaters.

Is this safe for my water heater?

Yes. The advanced controls being used in this demonstration project are commercially available devices, and the use of these advanced controls do not void the warranties of your existing water heater.

Is the bill credit one-time or is it monthly?

The bill credit is \$5 per month and will be paid throughout the duration of the demonstration as long as the member continues to participate.

Do energy peaks occur daily or does it only happen once in a while?

Energy peaks occur daily, but the costly ones are monthly and annually. Because forecasting these peaks is difficult, WEC will likely call for peak events a few times per month in order to make sure we hit the target.

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

ENERGY COACH

Energy Coach Says: Join PowerShift!

Here's an innovative idea: Co-op members can use their water heaters as batteries to reduce WEC's peak and associated costs. \$5 bill credit a month to participate. Limited time to sign up! For more information: efficiencyvermont.com/powershift, or email energycoach@wec.coop



2019 Operations Index

In 2019, WEC met every one of its reliability metrics. That, said Operations & Engineering Director Dan Weston, is not enough: major storms still caused outages, mainly for members at the ends of the lines. “Widespread major outage events are exempted from the reliability metrics because they exceed the design criteria of the system. If we’re transparent about this, what we need to do is look at the design of the system, and change it,” he said. “A combo of trimming the right of way and shortening the conductor spans with heavier wire and better hardware will dramatically improve reliability.”

Hardening the system

For years, WEC has been “hardening the system” — upgrading wire, shortening spans between poles, and making other improvements in response to increasing storm severity. When a big storm takes out an upstream transmission line that serves a WEC substation, however — as has happened in each of the last three years — WEC members still lose power.

20 years ago, at the suggestion of the Department of Public Service, WEC installed protective devices on equipment. That means when a tree falls on the line, it knocks down power downstream — not upstream. Most outages now occur after the last protective device on the line: the farthest downstream, or the ends of the lines.

589

number of separate outages on WEC’s grid in 2019

787

number of separate outages on WEC’s grid in 2018

2000

year WEC first began designing the electrical distribution system for changing conditions related to global warming

4

number of 2019 weather events classified as major storms

3

years in a row power supplier transmission lines to WEC substations have gone down in major storms

2,072

number of members out of power in November 2019 as a result of lost transmission to the Jackson Corners substation

Vegetation management

All the data from those protective devices have been catalogued and reviewed. Weston and colleagues ran the data from the last few big storms to see where repeat outages were occurring — and their hunch was accurate: “Every one of them was on a line that serves less than 30 people,” said Weston. The reason? Trees and branches coming down on the lines; not enough vegetation management in those heavily wooded rights of way. Acknowledging the problem for members at the ends of these spurs, the Board recently increased WEC’s Right of Way trimming budget. Weston said tree crews are now aggressively going after “danger trees” that threaten lines. “On a single phase line, we’re cutting 30 feet wide, and we don’t use herbicide” per Co-op policy, said Weston. Those lines are now on a roughly eight-year trim cycle.

7,116

number of “danger trees” removed from WEC’s rights of way in 2019

516

number of ash (vulnerable to the Emerald Ash Borer) among the total trees removed

851

number of aged poles to be replaced through WEC’s Construction Work Plan

75%

percentage of 2019 outages that occurred at the “end of the line”

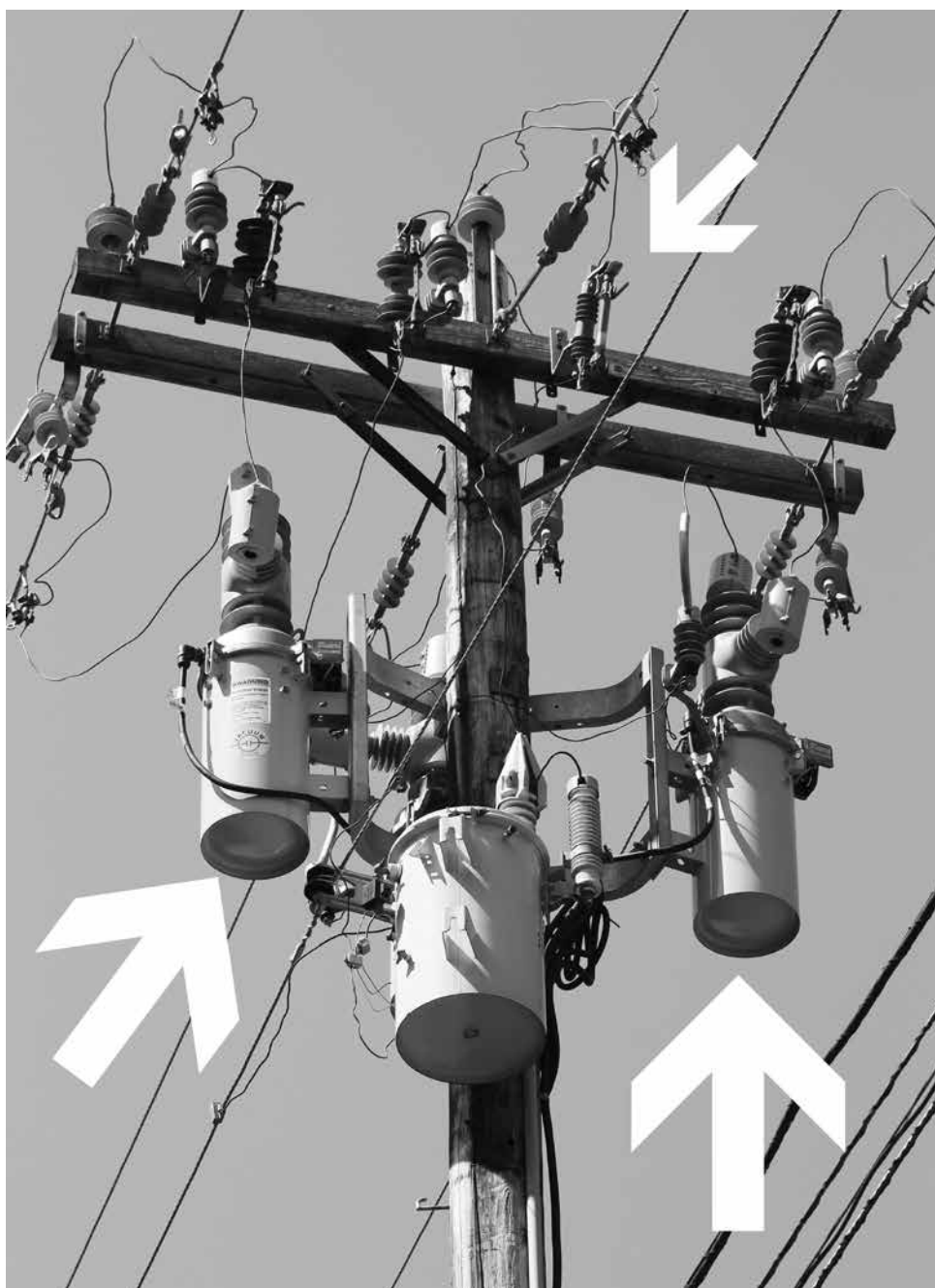
66%

percent of reconstruction budget dedicated to repairing lines with the most outages

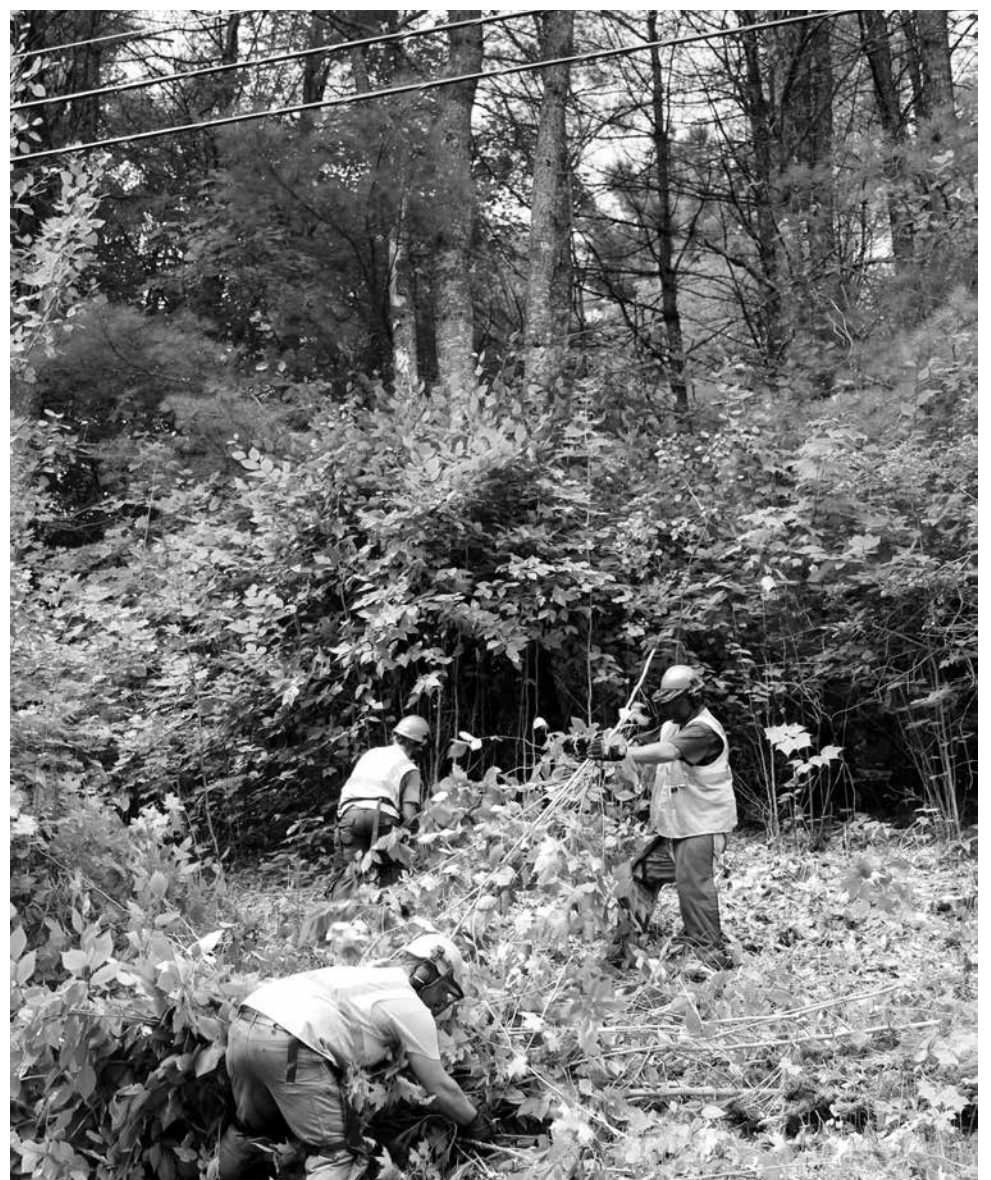
128

additional miles of line cleared as a result of increased funding to the right of way clearing budget

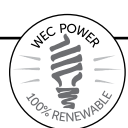
For updates about where tree crews are currently working to clear rights of way, check “Where’s WEC” in every issue of *Co-op Currents*.



A portrait of protective devices: In this picture, the large arrows at bottom point to oil circuit reclosers; the small arrow at top points to a fused disconnect. These devices protect the line when a fault — the utility term for problem with the line — occurs. Oil circuit reclosers reduce the duration of outages by giving faults a chance to clear before shutting down the line. This way, a falling branch that brushes the line doesn’t cause an outage. Fused disconnects “blow” when a fault occurs, shutting down the line before the upstream system is affected.



Tree crews clear a Groton roadside right of way. Increased funding for right of way clearing is helping tree crews address overgrowth at the ends of some lines where outages are more frequent. As new growth grows quickly and densely in rights of way, WEC has usually less than a decade to cut it back before it threatens the wires. All clearing is done by hand; WEC does not use herbicides on its rights of way.



Hey Patty

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increases. But once you have those incentives, it's hard to cut them back.

But you nailed it on the head, Mike. Now it makes sense to look at a different model for net metering. Regulators have already told us that the compensation structure for net metering is not a contract. Rates are set by a regulatory construct, which is different from a contract. It's not like me going out and buying a fleet of trucks from my local auto dealer. There's no fixed price on the net metering rate structure, the way it's set up.

Mike: You're basically at the mercy of the regulatory body. What they decide on is what you'll have to buy it for.

Patty: I hope people who install

solar understand that. The rates we are charged go up, sometimes they go down — I like to have them go down — but whatever we are charged gets passed on to the consumer-member. I don't hear people who net meter complain when the rates we reimburse them go up. No one complains about the value-add. It's only when the rates of reimbursement are decreased that I hear complaints. But we don't set those rates; they are set by the state.

Mike: I think if you invest in a grid tied solar system you have to understand it is grid tied and you're still a part of the Co-op and equally involved in it. Whatever savings you may have, there is a negative side effect to it for the rest of the members.

Patty: That's spot on. If I'm not collecting those funds from those members who are net metering, other members

have to pick up that portion of costs.

Mike: Honestly, I don't want people to think negatively about grid tied solar systems. I would love to install one at my own house. I'm just seeing the aftereffects, the rate increases that come after for the rest of us, and I think we have to modernize how we all deal with it.

Patty: Exactly. In a world of declining kilowatt hour sales, we can no longer rely on recovering most of our dollars on the energy portion of our rates to maintain infrastructure. We're in a declining kilowatt hour situation and that changes how we price our product. Net meterers need our grid as well. When the power goes out, it goes out for them; when it's dark, they're using Co-op electricity and the grid to power their homes. Net metering members also need to help support infra-

structure and the grid as well.

Mike: I have a question about how the future of the grid tied system is going to work. I used to work for a company that serviced all GMP's products. One product we provided them was the Tesla battery pack system. I wondered if the future would encapsulate that here, as far as being able to have grid tied systems for everybody, with these solar battery backup systems that could be drawn from during peak demand to offset power consumption.

Patty: I can tell you Washington Electric wants to look at the home battery space. We're looking at models and economies of scale to see what we could offer. I'm not sure the Tesla Powerwall is exactly the right fit right now, but we are exploring options.

Mike: Maybe not that system, but in the future, something that everybody would have, so when there were spikes in demand, somebody at the control station could say, "Okay, we'll draw from this house and this house, and everything will be good." That's the Jetsons idea now.

Patty: We're thinking about the future of electric vehicles doing exactly what you described. Somebody drives home and hooks their EV into their integrated system. If the power goes out the house uses the battery; if the utility needs the battery, we can tap into the battery. It's a conversation between each house and the utility to maximize load and turn things on and off. To me, that's the future of what we'll see in the next 10-25 years.

Mike: That would be interesting.

Patty: It is a little like the Jetsons, though! We'll all be driving around in our EVs.


Mike: It'll be floating EVs, though.

Patty: That'd be fantastic. In the space of electricity, nothing is static anymore. Nothing: not in reliability, in peak load management, or in how batteries fit into the overall system. It's exciting stuff.

Mike: Yeah, definitely! I'm glad you got in touch with me to go over things. I understand the rate design a little bit more now, and I think the people who will read this piece will have a little more understanding. That'll be good for everyone.

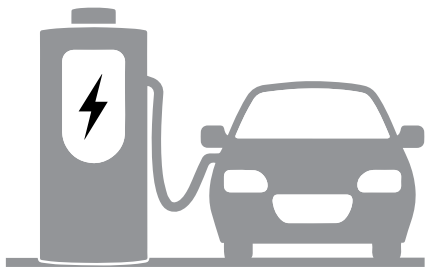
Patty: I appreciate it. You know if you have that question, there are 100 members next to you who have the same question.

Mike: I like the idea that Washington Electric is a co-op and we're all "stakeholders" in it. I appreciate everything you guys are doing. Thanks for getting in touch with me.

Patty: Mike, thanks so much for reaching out! 

Button Up 2020 Incentives

Incentives for Transportation



WEC

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

Efficiency Vermont

- EV incentive not available
- Agency of Transportation**
- In 2020 AOT provides additional incentives for EVs here: <https://www.driveelectricvt.com/why-go-electric/purchase-incentives>

Incentives for Weatherization



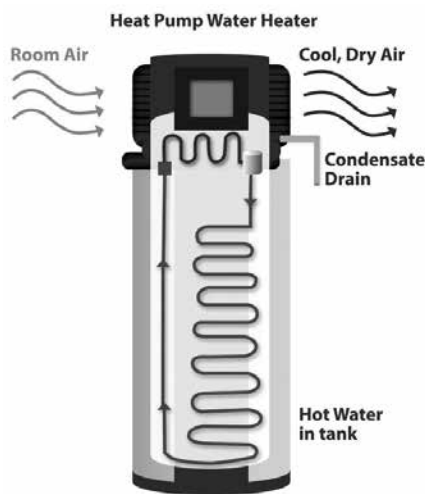
WEC

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

Efficiency Vermont

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

Incentives for Heat Pumps



WEC

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

Efficiency Vermont

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

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

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

Incentives for Pellet Stoves, Furnaces, and Boilers



WEC

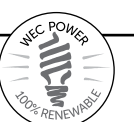
- \$250 for either a qualifying pellet stove or a wood stove. Stoves must be installed by qualified installer.
- Pellet furnace: \$500
- Pellet boiler: \$1000

Efficiency Vermont*

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

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

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Ample Quarter Acre

continued from page 1

structure. “I’ve been working away at it since, tweaking it,” she said. She trenched in pinkboard around a rubble and concrete foundation, foam insulated the walls, carefully caulked new triple-glazed windows. “It’s a pretty tight house,” she acknowledged.

Reed wrings whatever use is possible out of whatever material is available. Much of the house’s interior and almost her entire greenhouse are made of salvaged wood, for example. Yet her home brims with a sense of abundance. Clues to Reed’s aesthetic interests are everywhere, incorporating French landscape design, rock collections, Buddhist meditation, flower gardens dedicated to a single color. Her aim is to create environments that delight, or captivate, or comfort.

A little boat

Though Reed says the grounds are her favorite part of her property, the tour begins inside. “My house is like a little boat. Everything has its place. I can’t have too much stuff,” she explained. That statement is more about efficiency than minimalism, though. She replaced her gas stove with an electric induction cooktop — a slim panel with no oven underneath. A daybed in a windowsill flips out to become a double bed. Even interior wall space is in use — a little Rheem on-demand hot water heater in a wall heats all the water in the house. But there are plenty of focal areas to feed the eyes and mind: displays of interesting china and plants, decorative furniture, many Buddhas. Everywhere are dishes of small stones, organized by type and color.

The greenhouse

The greenhouse complements many of Reed’s needs. Built off the side of her house, it supplements a small propane stove — her only fossil fuel appliance — as a heat source. In her weather journal, she said, “every day I note if I can open my door and heat my house with greenhouse heat,” even, she said, on sunny January days.

She stores potatoes, beets, and carrots in a greenhouse drawer she calls her root cellar, and extends the planting season with a deep potting bed. “I usually plant around town meeting and I have fresh salad greens by the end of March,” she said.

Permaculture and the Folie

“I use permaculture techniques,” explained Reed, demonstrating her gravity fed watering system: rainwater from her shed roof is captured in a gooseneck off the gutter that pours into a rain barrel. A hose attached to the base of the barrel is trenched in the yard downhill to her large vegetable garden. She began gardening her first year on the property. “My mom was a big gardener,” she said, when Reed was growing up outside



No matter the season, something’s happening in Annie Reed’s greenhouse. Potatoes, carrots, and beets are stored in the “root cellar” drawer under her planting bed, and on a sunny day in January, the greenhouse generates enough heat to warm her home.

Cleveland. Gardening is something she learned through experience, through playing fearlessly with the earth. “I got the spirit of experimentation from my parents. My dad was an engineer; that’s what they do,” she said.

On the other side of the house is a grove of ash and poplar trees — more than a dozen of which have fallen in recent storms — and the Folie. “French for folly,” she said affectionately. No mere patio, it’s an outdoor living space with a fire pit, bracketed by heavy

beams. “I use it for potato roasts and socializing,” she said.

Beyond the Folie is Reed’s permaculture garden. “I wanted it to be an architectural feature,” she said, pointing to neat rows of apple trees that form the canopy of a vertical, permanent garden. Like the Folie, a little extra design work and elbow grease make the garden a little more formal and beautiful than an ordinary orchard. “This is an allee, French for aisle. Because it’s pretty!” she said.



Seeds planted around Town Meeting Day in Reed’s greenhouse planting bed provide the season’s first salad greens.

She traded a friend gardening support for tractor leveling, and never tilled the soil. Instead, “I laid the whole thing with cardboard and put every organic I could find on it,” she said. The little plot of land boasts eight apple trees, 15 blueberries, an elderberry grove, plums, pears, raspberries, and feverfew.

Around the bedrocks of her property, Reed built flower beds. Each has a monochromatic color theme. But though Reed is interested in some degree of formality in her gardening, she’s quick to dispense with rules if they get in the way. Her favorite flower, daffodils, are sown in every bed, she happily related, and where there aren’t designed gardens, there are big flanks of easy-going daylilies. Gesturing to a sleeping bed on a section of property hard to see from the house, “I always plant flowers here so when my neighbors look up, they see flowers,” she said.

Cooperative chickens

Planting flowers for the neighbors to see is an important element of how Reed lives. She is deeply connected to her neighbors — in some ways, essentially connected. The house across the road is an example.

Reed and her neighbors co-own a flock of chickens that live in a coop and run on her neighbors’ property. Touring the chicken run, Reed spied a glossy black hen. After a predator got through the fence late one night, Reed nursed Blackbird back to health in her greenhouse. Since then, they’ve talked to each other. When Reed called, “Hey, Birrrrd! Right, Birrrrd?” over the fence, Blackbird croaked back.

“My little plot is integrally connected to this house. My water comes from their well,” Reed said. In addition to the birds, she helped her neighbors build a shed to house their co-owned mower within. The notion of private property starts to seem a little petty when Reed describes how she and her neighbors share resources.

She has close relationships with many of her neighbors — gardening together, cooking, bartering, helping each other with chores.

This community is tight-knit, and high on the hill, Reed and her neighbors can rely on each other. But communities are larger these days, and Reed’s perspective expands outward.

Several years ago, she began volunteering with Cabot Ambulance and the Plainfield Fast Squad as an EMT. “I got a taste of the lifestyles of people in Vermont who don’t live like me and my friends,” she said. “It broadened my perspective on what is ‘right living,’ in a way.” Her interest in volunteering grew, and she joined the Marshfield Conservation Commission and the boards of Jaquith Public Library and WEC. “This is my community and I want to be part of it and contribute to it. I feel the same way about the earth. It feeds me and I hope I feed it,” she said. 🌱

