

The ash die-off dilemma: Claverack not out of the woods yet

By Jeff Fetzer

DESPITE significantly ramping up its ash-tree removal efforts, Claverack officials acknowledge the co-op is fighting an uphill battle to limit power interruptions in the face of widespread ash die-off across much of its service territory.

“The reality is that no matter how much we budget to address the ash issue, it’s never going to be enough,” Claverack President & CEO Steve Allabaugh says. “The magnitude of the mass die-off of ash trees in our region is overwhelming.”

Ash trees are dying en masse across the state as a result of an invasive forest pest called the emerald ash borer.

With an abundance of standing dead ash trees lining long stretches of the co-op’s electric lines, the ash die-off has contributed to a significant increase in tree-related power outages over the past five years and was especially problematic throughout 2021.

To illustrate the scope of the ash problem, Allabaugh references aerial line inspections performed across three Claverack substation areas last summer. A contracted drone operator surveilled more than 310 miles of line served by the co-op’s Litchfield, West Warren and Middletown substations and identified, photographed and mapped the GPS locations of 2,663 “danger trees,” those with a potential to fall and strike the electric lines.

That’s about 8.5 danger trees per mile of line. If that number remained true across Claverack’s 2,700 miles of line, it would translate to roughly 23,000 danger trees systemwide.

The vast majority of those trees are dead ash trees located along, but outside of, the co-op’s rights of way, according to Nick Berger, Claverack’s director of engineering and operations.

“The majority of our rights of way are pretty good,” Berger says. “It’s those dead trees located outside of our



DANGER DOWN: The fallen remains of ash danger trees litter the sides of a Claverack right of way in Bradford County after a contract tree crew cut them down last year to prevent them from falling onto co-op lines.

rights of way that are causing so many problems for us.”

Those problems: power outages. And Claverack was plagued by them in 2021, a year that began with a January ice storm and was followed by frequent wind storms throughout the year. The combination of high winds and brittle, decaying ash trees resulted in an unprecedented number of tree-related outages last year.

“We recorded 700 ash tree outages during the year, and almost all of them were caused by trees outside of our right of way,” Allabaugh says. “The ash trees are just so vulnerable now. Any 25-mile-per-hour wind causes multiple outages.”

Trees were cited as the cause of 75% of the power outages Claverack experienced in 2021, tripling the number of tree-related outage minutes experienced by members the previous year.

That was despite the cooperative’s record investment in right-of-way maintenance in 2021. To combat the ash problem, Claverack increased its right-of-way maintenance budget by

nearly \$700,000, from \$2.26 million in 2020 to \$2.94 million, last year.

The additional funds covered the expense of contracting tree crews dedicated exclusively to cutting down off-right-of-way danger trees for the entire year. For a portion of the year, as many as four, two-man crews were working solely to remove ash danger trees along co-op rights of way in the West Warren and Litchfield substation areas.

Because of the danger involved in felling brittle ash snags, the trees are cut from the top down, which typically requires the use of an off-road bucket truck. It’s a much slower process than simply felling trees by sawing them at the base of the trunk, notes Joshua Baublitz, Claverack’s right-of-way program manager.

“A two-person crew averages five to 10 trees a day,” Baublitz says, “so extrapolate that out over 50 weeks and you can get an idea of the challenge we face systemwide.”

For the current year, Claverack has budgeted an additional \$616,000 for

its right-of-way management program, bringing the total to \$3.56 million. That will cover the co-op's routine right-of-way maintenance program, herbicide spray program, and contracting two, two-man crews assigned to drop danger trees.

"We will have over 30 tree trimmers working on our system year round cutting trees," Berger says. "And that doesn't include our herbicide program, which will bring that number up to about 50 people for about a month."

The cooperative has incorporated a strategic approach in its attempt to



BIRD'S EYE VIEW: Aerial photographs taken from a drone last summer show numerous dead ash trees lining co-op right-of-way corridors in Bradford County. The majority of 2021's unprecedented number of tree-related outages were caused by standing dead ash trees like these. Although located outside the co-op's standard 40-foot rights of way, the brittle trees are tall enough to topple onto co-op lines during high winds.

manage the ash tree problem while also continuing its regular right-of-way maintenance schedule.

The cooperative's approach to vegetation management entails using contracted tree service crews to maintain rights of way along preplanned circuits, typically within two to four substation service areas of the co-op's territory each year. The co-op budgets to trim and clear 375 to 390 miles of rights of way annually, which enables it to cover the entire electric system on a continuous seven-year cycle. The co-op is in the third year of its seven-year cycle, a practice established after Claverack brought Baublitz, a professional utility forester, on board in 2018.

"With normal maintenance, all we're typically doing is trimming and making sure vegetation isn't coming up in the right of way and that the right of way is accessible," Baublitz explains.

Before the arrival of the emerald ash borer, routine maintenance would typically entail removing one or two off-right-of-way hazard trees per mile of line, according to Baublitz. Since the ash die-off, there are some areas in which tree crews have cut down more than 100 mature ash hazard trees over a mile-long stretch of power line.

Routine right-of-way maintenance will take place in the Evergreen, Plank Road and Brooklyn substation areas this year and will include removal of danger trees on member-owned property outside the co-op's standard 40-foot rights of way.

In addition, a dedicated ash tree crew will be working to eliminate danger trees identified in last summer's drone survey of the Litchfield, West Warren and Middletown substation areas. The co-op will deploy a two-man "hot spot" crew to concentrate on areas experiencing or with strong potential to experience tree-

related reliability issues.

"Our approach is to be very targeted, trying to be as highly efficient as possible," Baublitz says.

Allabaugh asks for members' patience as the co-op tries to work its way through the ongoing ash die-off.

"We are taking a strategic approach to prioritize the overall safety of the operation of our electric system in the most cost-effective way possible," he says. "Unfortunately, we may not be able to quickly respond to every

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Notorious EAB leaves trail of ash destruction across Northeast

The emerald ash borer (EAB), a small metallic green beetle native to Asia, was



first discovered in Michigan in 2002. It has slowly migrated east, decimating ash tree populations along the way.

The beetle entered western Pennsylvania in 2007, and, a few years later, tell-tale signs of its arrival in northeastern Pennsylvania could be found on local ash trees: thinning crowns, browning leaves, a "blonding" of the bark, and prodigious production of seed, a signal of tree stress.

EAB targets only ash trees, laying its eggs on their rough bark. The ash borer larvae bore into the tree, tunneling and feeding just under the bark in the cambium layer, the part of the tree through which water and nutrients are transported. After several years of infestation, the larvae tunnels effectively girdle the trunk of the tree, killing it.

Claverack began encountering problems stemming from the ash borer infestation around 2016. Since then, the region's once abundant ash tree population has been ravaged, leaving thousands of brittle, standing dead ash trees to dot the landscape.

Although isolated pockets of healthy ash trees remain in the northeastern portion of the co-op's service territory in Susquehanna County, they, too, are expected to succumb to the cross-country march of the notorious EAB in coming years.

All About Eve

Sharing our first-hand EV education

By Brian Zeidner
 Director of Member Services

AS WE WRAPPED UP 2021, I had some time to reflect on the overall experience of electric vehicle ownership. We've had Eve, the nickname given to our Tesla electric car, for about 18 months now. Overall, the experience has been very positive, although members often want to know why we purchased an EV in the first place.

To answer that question, I thought back to some of my original duties when I came to the cooperative in 2005 as a member service technical representative. It was my job to help members investigate high bills, recommend solutions to improve the efficiency of their energy consumption and help them save money.

I found one of the most impactful upgrades a member could make was to purchase a heat pump. Often the operating costs were considerably lower to heat a home with a heat pump when compared to fossil fuel options. Heat pumps are more efficient — two to five times more efficient — than using baseboard electric or plug-in electric space heaters.

I was proud to propose to cooperative management and the board of directors a member-focused heat pump rebate program. We implemented the program in 2008 and have given members more than \$254,000 in rebates since then.

Members who installed heat pumps typically realized significant energy savings and often gained cooling options, as well, since heat pumps can both heat and cool a home.

In fact, I installed an air-source heat pump in my home in 2014 and sub-metered it to share the operational costs with you. I know I spend between \$400 and \$500 per year to heat and cool my home. Compared to

buying home heating oil, my current heating costs are remarkably low.

Back to Eve: As electric vehicles became more available and the industry analysts began predicting widespread adoption by 2030, we felt we should become educated about EVs. I thought I knew about children ... until I had them. I thought I knew about politics ... until I was elected to the school board. So, I thought the best way to learn about electric vehicles was to own one.

I have to say that here at Claverack we are not interested in promoting electric vehicles. We are not focused on growing load with EV chargers installed in members' homes. What we are interested in is being your trusted energy resource regarding electricity. This is true of heat pumps, water heaters, electric appliances and EVs.

Based on our ownership experience, we can say that the operational and maintenance costs of Eve have been considerably less than those of a gasoline-powered car of similar size. That's good information we wanted to share with you!

As we look to the future, we will continue to evaluate EVs and will study not only how they might benefit members, but also how they might impact our distribution system. Much like our heat pump program, we may consider implementing programs like an off-peak EV charging rate or a rebate for installing a home charging receptacle.

Because our goals are to provide safe, reliable and affordable electricity to our members, we felt that educating ourselves on electric vehicles and being your trusted energy resource was exactly the type of service that you've come to expect from your cooperative. ❁

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member who calls us with a request to have an ash tree cut down if we don't have a tree crew working in their area. Because of the sheer volume of danger trees across our service area, we have to be strategic in our approach."

Co-op officials expect the ash danger tree problem will persist for the next five years or so, as the region's ash trees either fall naturally or are felled by co-op tree crews.

"We are going to have a couple more years of reliability issues caused by ash trees outside of our rights of way before it starts to taper off," Berger says. "At this point, we are doing everything we can to minimize the problem, but it's not going away anytime soon. Unfortunately, it's not an easy fix."

"Once we get through the next few years, life is grand," Baublitz adds. "By the time the ash are all down, we will have completed our seven-year maintenance cycle, and we're going to be in really good shape. In the meantime, we ask for members' continued patience and understanding." ❁

Guest Column

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and customer service partner to ensure our employees have the tools and training necessary to provide the best member experience.

We plan to begin physical construction of our broadband system later this year with the installation of 300 miles of fiber optic cable and construction of a state-of-the-art data center by the end of 2022. In addition to our network build, we plan to use the dark fiber network Bradford County is currently developing, exhibiting the importance public-private partnerships will have in reducing the rural digital divide.

We are still in the early planning stages of the project, so please stay tuned for announcements. Things are progressing quickly, and we will continue to share information as we go! ❁