



Vigilante Electric Cooperative

A Touchstone Energy® Cooperative 

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VIGILANTE ELECTRIC MAINTENANCE EFFORTS



Lineman Cody Tarter demonstrates a pole-testing drill. | **VIGILANTE FILE PHOTO**

PLANNING THE WORK, WORKING THE PLAN

OVER the years you have probably seen a reference to Vigilante Electric Cooperative's mission statement, which is to provide the most reliable service at the lowest possible cost. While we have written about our financial efforts toward fulfilling this mission, i.e., power supply contract and cost controls, there is also the operation side, where we have a strategic maintenance plan designed to identify and address system issues before they become problematic.

Pole inspections are a critical part of our maintenance program. The primary role of a power pole inspection is to accurately and consistently assess the condition of a wood power pole. Pole inspec-

tions identify decay and measure defects. We also check the condition of insulators, crossarms and conductors. This function reduces replacement costs, extends the life of the pole and increases the safety and reliability of the system. This is an ongoing process, and a task done by our linemen when workloads allow.

Line inspections are an everyday occurrence, and are a task shared by the entire operational staff. When on a job site, linemen and engineering staff look for defects or problems on our distribution system. For our transmission lines, linemen do an annual structure-by-structure inspection

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VIGILANTE ELECTRIC
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HYDROPOWER IN AN EV WORLD

By **KURT MILLER** | Executive Director,
Northwest River Partners

AS part of my career of more than 30 years in the energy industry, I led the effort to complete Oregon's portion of the West Coast's "Electric Highway." The idea was to ensure that fast-charging stations were available for electric vehicle (EV) owners along the entirety of the I-5 corridor, from Northern Washington to Southern California. In some ways, this was our version of the mantra in the movie "*Field of Dreams*": "If you build it, they will come." We completed the highway in 2013, in hopes that it would spur expanded EV usage.

While the growth of EVs hasn't been explosive, it has been steady. EVs have matured to the point that two western states, Washington and California, have passed laws requiring all new personal-use vehicles be electric powered by 2035. These laws are part of a larger push to cast aside fossil fuels by electrifying major components of our economy, including transportation, commercial buildings and homes, in an effort to fight climate change.

However, these steps only help fight climate change if the fuel sources for the growing demand for electricity are carbon-free. For instance, to the extent we must rely on coal generation for electricity, we'd just be swapping one fossil fuel for another. That's probably not what most people have in mind when they buy an EV.

Northwest residents are generally unaware of the huge increase in renewable energy that decarbonization laws will require. A recent study showed our region will have to build 160,000 megawatts of *additional* wind, solar power and large-scale batteries for storage, to achieve a zero-carbon grid by 2045. To put that into context, it's taken about 100 years to get to the 115,000 megawatts of generation we have today.

The challenge for wind and solar



power is intermittency, because they are completely dependent on near-term weather. That means there can be minutes, hours or even days at a time when the weather doesn't cooperate and those generating sources aren't available in large amounts.

Batteries are a natural solution to the problem, but they can only hold about four hours' worth of energy, so they aren't very helpful during multi-day weather events.


That is where hydropower comes in. Hydropower is the superpower of renewable energy because it comes with its own energy-storage solution. Dams can hold back water when it's not needed to generate electricity, release water to push hydroelectric turbines when power is needed, and repeat the process again and again to fill in the gaps for wind and solar power. Northwest hydroelectric dams have the capacity for days or even months' worth of energy storage.

This function is exceptionally important during extreme weather events, as experienced with last year's heat dome. After the event, the Bonneville Power Administration released a statement saying that the lower Snake River dams were critical for avoiding blackouts for hundreds of thousands of homes. Grid reliability during these kinds of events becomes a public safety issue as, without electricity, homes lose critical cooling or heating capability. During the heat dome, more than 500 people across the Pacific Northwest died from heat-related

causes — and that was with the electric grid operating as it should.

Right now, there are calls to pull down some of the region's productive hydroelectric dams. The truth is without these dams in place, the Northwest has no chance to meet its decarbonization deadlines without major technology advances. Such breakthroughs are important to work toward, but very difficult to predict and risky to depend on for something as important as protecting public safety and fighting climate change.

Grid reliability and affordability are two reasons the National Academies of Sciences, Engineering and Medicine called upon Congress to preserve existing hydropower resources across the nation.

We really do have a *Field of Dreams* possibility in the Pacific Northwest because our carbon-free hydropower provides about half of the region's electricity and represents nearly 90 percent of our renewable energy. For our region, that means the ability to have a carbon-free grid is much more of a reality than most areas of the country. But we need to preserve our hydropower system in order to achieve this important milestone, so we encourage you to make your voice heard by the region's policymakers on the importance of hydropower for our clean, affordable and reliable energy future. 

EDITOR'S NOTE: Article originally appeared in the Spokesman-Review.

SCHOLARSHIPS

MULTIPLE OPPORTUNITIES AVAILABLE

REGARDLESS of which post-secondary educational path a student takes, there will be substantial costs involved. The costs of continuing education are formidable, and increase yearly. At Vigilante Electric Cooperative (VEC), we have a long-standing commitment to providing educational opportunities to our members and their dependents.

Whether a student goes to a college or trade school, the most discouraging part of the cost of an education is debt. The average debt for recent graduates with a bachelor's degree is more than \$30,000 and, in some cases, student debt can accumulate to more than \$100,000. Trade school graduates have an average debt of \$10,000.

Some of this debt, however, is unnecessary. According to an article in *Forbes*, it is estimated that \$100 million in scholarship money goes unused each year because of a lack of applicants. So, opportunities exist if you know where to look and are willing to put in a little effort. Two such opportunities are available if you



receive your power from Vigilante Electric.

The Vigilante Electric Cooperative Leadership Award is a scholarship opportunity for students who not only excel in the classroom, but in their communities. This year, we will provide qualified applicants planning to attend a college or trade school with a \$500 scholarship.

To qualify, applicants must receive their power from Vigilante Electric, be a high school senior or college undergraduate, complete an application and submit a brief narrative on what they plan to study and why. Past recipients of the VEC Leadership Award are not eligible.

The second opportunity is available through our statewide association, the Montana Electric Cooperatives' Association (MECA). MECA's Memorial Scholarship is an opportunity to win one of four \$500 scholarships. This opportunity is available statewide, with one scholarship available for each of the four designated regions in the state. One application from Vigilante Electric's service territory will be selected for consideration for the MECA Memorial Scholarship.

Applicants must receive their power from Vigilante Electric and plan to continue their education at a university or trade school. The specific requirements are outlined in the application.

The guidelines for both scholarships are available at area high schools and online at vec.coop, under the Programs and Services section. Please note that all elements of the application must be completed for consideration.

The deadline for both applications is January 25, 2023. RM

MAINTENANCE

Continued from previous page

to look for issues. While most of the structures are accessible by vehicles and can be inspected with binoculars, we can use our drone in mountainous areas or when we need a clearer picture of a potential issue on top of a pole.

Not only is our drone equipped with a camera, it can take thermal images

which is invaluable in substation inspections. Substations require a predictive approach to maintenance because a failure in a substation can be a catastrophic event, leading to lengthy outages and costly repairs. Degradation of electrical equipment in a substation can show up as overheating or abnormally cool operating temperatures. The images captured by the thermal camera show us the operating temperatures of this equipment. Because substation equipment

is mission critical, we also have the substation transformer(s), regulators and breakers evaluated by certified contractors at regular intervals.

According to General Manager Rollie Miller, "We are immensely proud of the transmission and distribution systems we have at Vigilante Electric. While outages will occur, through ongoing maintenance and timely system upgrades, we are committed to keeping outages from our utility plant to a minimum." RM

DON'T FORGET TO CHECK YOUR HEATING SYSTEM DUCTWORK

SIMPLE REPAIRS COULD SAVE YOU HUNDREDS OF DOLLARS

YOUR air ducts are one of the most important systems in your home. If the ducts are poorly sealed or insulated, they are contributing to higher energy bills. In fact, ductwork that leaks conditioned air into unheated spaces can add hundreds of dollars a year to your heating and cooling bills, but you can reduce that loss by sealing and insulating your ducts.

Your home's duct system is a branching network of tubes in the walls, floors and ceilings. It carries the air from your home's furnace and central air conditioner to each room. Ductwork can be constructed of sheet metal, fiberglass or other materials.

Sealing your ducts to prevent leaks is important if the ducts are located in an unconditioned area, such as an attic or vented crawlspace. If the supply ducts are leaking, heated or cooled air can be forced out of

unsealed seams and joints, and is lost. In addition, unconditioned air can be drawn into return ducts through unsealed joints. Either way, your HVAC system is running longer and working harder to maintain comfort throughout the house.

To prevent this, start by checking your ducts for air leaks. First, look at the seams and joints of the ductwork. Seams run the length of a section of duct, while joints connect sections of duct. Look for any gaps or holes that could leak conditioned air.

For minor repairs, duct mastic is the preferred material for sealing ductwork seams and joints. It is more durable than any available tape, and easier for a do-it-yourself repair. Its only drawback is that it will not bridge gaps over ¼ inch. Such gaps must first be bridged with web-type drywall tape, or a decent quality heat

approved tape.

Ductwork in attics or ventilated crawlspaces should also be insulated. While this is a cost-effective upgrade, installation may best be left to a professional. Additionally, a professional may spot a structural or design flaw that may impede the distribution of conditioned air through your household.

Aside from sealing and insulating your ducts, the simplest and most effective means of maintaining your air distribution system is to ensure that furniture and other objects are not blocking the airflow through your registers, and to vacuum the registers to remove any dust buildup. Plus, forced air systems are designed to flow a specific amount of air. Closing off vents is not saving energy, but impeding the distribution of conditioned air throughout your home. RM



HAPPY
Thanksgiving

Vigilante Electric office will be closed
Thursday, Nov. 24 and Friday, Nov. 25.



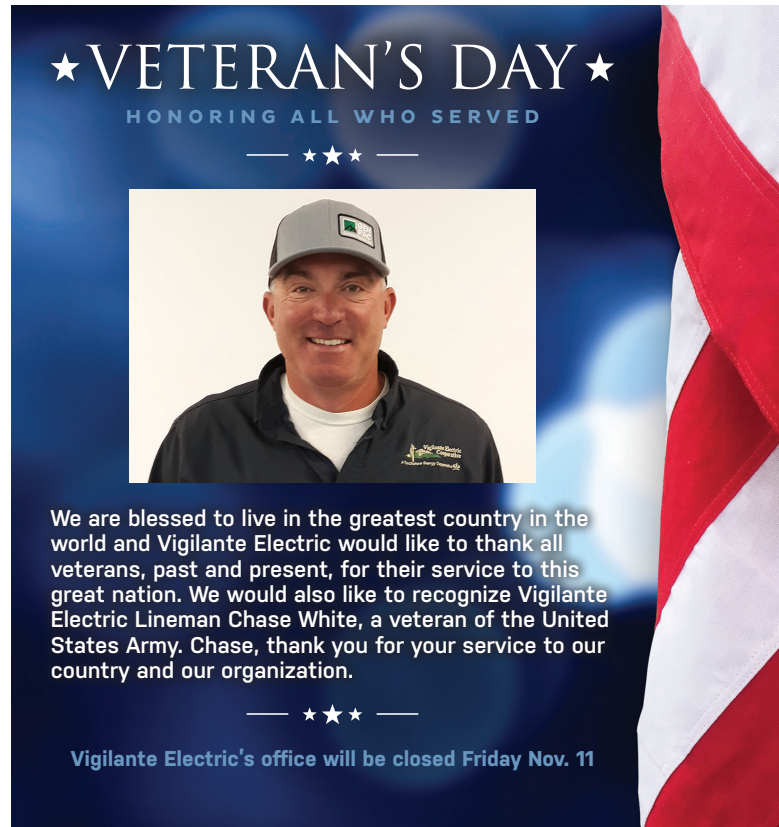
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HONORING ALL WHO SERVED

— ★ ★ ★ —



We are blessed to live in the greatest country in the world and Vigilante Electric would like to thank all veterans, past and present, for their service to this great nation. We would also like to recognize Vigilante Electric Lineman Chase White, a veteran of the United States Army. Chase, thank you for your service to our country and our organization.

— ★ ★ ★ —

Vigilante Electric's office will be closed Friday Nov. 11