



TWIN VALLEY ELECTRIC COOPERATIVE

NEWS

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FROM THE MANAGER

Twin Valley Now Uses the Cooperative Response Center (CRC)

In June, Twin Valley changed the way we handle outage calls after-hours, on weekends and on holidays. In the past, Twin Valley has used an after-hours call service that could handle only one call at a time.

The person answering the phone also needed to get our crews dispatched to restore the outages, which further complicated answering outage calls in a timely manner.

After a lot of study, we have switched our after-hours call service to the Cooperative Response Center, Inc. (CRC), a service cooperative based in Austin, MN, that serves over 230 electric cooperatives coast-to-coast.

Similar to the corporate structure of an electric cooperative, CRC is owned by its member electric cooperatives like

Twin Valley.

A critical link between Twin Valley and CRC is a proprietary software program called CRCLink® eCommunication Software. CRCLink® allows CRC to view pertinent information about each and every member of Twin Valley to provide comprehensive customer care. It also allows CRC to use our system data to sort individual outages into proper groups.

During an outage, the operations staff in Altamont can view the same system to monitor the outage or take control of dispatch command if the size of the outage necessitates.

We believe this service will be invaluable to our members. During storms



Ron Holsteen



During storms and other outage situations, Twin Valley relies on the support of the CRC.

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FROM THE MANAGER

Cooperative Response Center

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or other outages, your power will be restored sooner because of data collected at CRC using CRCLink®.

There will be times when the number of members calling to report outages exceeds the number of live customer service representatives (CSR) available. CRC has additional staff on call, who can be brought in quickly to handle the high call volume. CRC also has an Interactive Voice Response (IVR) solution allowing members to report their outage using touch-tones in response to the IVR prompts. Although there is not a CSR to talk with in this instance, this outage information is still very important to your cooperative, and this data helps CRC and the crews quickly identify the source of the outage.

The efficiency of CRC or any outage reporting system relies on complete and accurate data in our phone number database, including our members' cell phone numbers. This data allows CRC to immediately recognize an incoming call (based on caller-ID) to a service address or location number. This capability allows them to quickly determine if the call is part of an outage already reported, or a brand new outage, possibly requiring an additional crew.

Even before the call is answered, this feature begins working, and ultimately speeds up the time it takes to identify and restore outages. Because of this comprehensive and seamless call-handling that CRC provides, they become the back-up to Twin Valley Electric Cooperative should there ever be a disaster or other event that leaves us unable to process calls from the office.

NOTES FROM OPERATIONS

Lightning Strikes

As I write this article, we are in the midst of another Kansas thunderstorm. Several dedicated Twin Valley linemen sacrificed time with their family over the 4th of July holiday restoring power to our valued members; lightning strikes were the fireworks they enjoyed as our country celebrated its 234th birthday.

Lightning is a frighteningly beautiful anomaly of nature that we battle every time a storm rolls in. Theories of lightning tell us that clouds contain separate areas of negative and positive charges. The charge along the base of a cloud induces an opposite charge on the earth. The cloud and earth become plates of a giant capacitor (an electrical component, used to store a charge temporarily) and a potential gradient exists between the capacitor plates.

Eventually the charge in the cloud increases until the gradient exceeds the failure point of air. When this happens, lightning leaders circulate from the cloud and spread to earth. A leader strikes the earth, and a return stroke, following the same path of the leader, flashes from earth to the cloud.

Lightning can strike your Twin Valley distribution line causing a surge in voltage or lightning can strike near the line and induce a charge on the line. Either of the occurrences neutralizes the cloud, but the distribution line needs a way to get rid of the charge on the line.

Direct or induced strikes on the system cannot be prevented, but we utilize lightning arrestors to help prevent damage to critical pieces of line equipment.

Lightning arrestors are protective devices that help drain off the excess voltage that can accumulate after a lightning strike. Your Twin Valley system operates on 7,620 primary volts, or 7.6 kV. We install 9 kV arrestors to help protect our equipment.

The arrestor will direct the excess voltage to ground, basically causing a short. This can operate an oil circuit re-closer (OCR). If the voltage excess drains quickly enough, your lights will blink and then come back on. In the occurrence of larger strikes, a transformer or line fuse may blow, or the OCR may be forced open. In either of the latter two events, a

Twin Valley line crew will need to be dispatched to restore power.

Our trained crew will patrol the line to make sure no piece of equipment received a direct strike resulting in a catastrophic failure or a potential hazardous situation. Once our linemen have made any needed repairs, and are satisfied with the condition of the line, they will restore power.

Secondary arrestors, or surge protectors, are a way you can protect your home from lightning. They should be available at your local hardware or home improvement warehouse. Make sure to read the fine print on any protection device that guarantees 100 percent protection. The 100 percent guarantee may lead you with a false sense of security that you will not lose anything in your home. A common misconception is that lightning comes in only through the power line. In the following list of components, think of how many are entering or leaving your home: electric, telephone, water (rural supply or well), satellite dish, TV antenna, sewer (public or personal septic), power supply from your house to outbuildings or barns, trees next to the structure, or the structure itself. All of these listed can provide lightning with a path of destruction.

Twin Valley is dedicated to the protection of the distribution system, it is up to you to protect your home and the valuable contents found within.



William Worthy



Photo taken by June Brooks, wife of Twin Valley Journeyman Lineman Joe Brooks, July 12, 2010, looking southeast of Altamont.

Journot Attends Youth Tour to Washington, D.C.

CALEB JOURNOT toured the nation's capitol with 31 other students from across Kansas for the 50th Annual "Government in Action" Youth Tour June 10-17.

Journot was selected from a group of high school students by Twin Valley Electric Cooperative. To win this trip, students were asked to answer a questionnaire and were later interviewed by a panel of judges.

"Twin Valley is proud to support the Youth Tour program and send our youth to experience government in action," Ron Holsteen, general manager, said. "Our hope is that local students will gain some awareness of how our political system works and how important it is for the youth to be involved in our community."

Kansas is one of the 45 states to send a youth delegation to the annual electric cooperative youth tour. The youth delegates who will attend the trip were selected through a competition by their local electric cooperatives. To be selected, the students either wrote an essay or were interviewed by a panel of judges. The all-expense-paid-trips for the student winners are spon-

sored by the Kansas electric cooperatives. Since 1960, Kansas' electric cooperatives have sponsored the trips of thousands of high school juniors and seniors to visit U.S. congressional members, energy and grassroots government education sessions and sightseeing in Washington, D.C.

"The 'Government in Action' Youth Tour is my favorite trip I have ever taken," Journot said. "The many friendships I have created will definitely last a lifetime. If I ever get another opportunity similar to this, I will be sure to take advantage of it."



Journot stands in front of the Capitol.

Electrical Safety in the Neighborhood

When thinking about your home or neighborhood, chances are you don't picture power lines. They're easy to overlook, stringing high above your roof, along property lines and roadways, or near trees. But the old adage, "out of sight, out of mind," may be dangerous—power lines pose serious electrical hazards if forgotten.

Trees can be a power line's worst enemy. Strong winds, storms, and heavy ice can topple trees or shatter branches that pull down power lines and cause outages. Sometimes, even if heavily damaged, lines remain energized with the potential to electrify trees and nearby objects.

Arcing and flashovers between power lines and trees are also dangerous. In winter, extra weight from snow and ice can bend or break tree branches, bringing them close to power lines. During warm weather or when power lines are carrying heavy electrical loads, they can heat up and sag as much as 3 feet or more, dropping them toward nearby vegeta-

tion. Electric current caused by arcing or flashovers between power lines and trees in either situation can easily injure or even kill an individual nearby.

Follow these safety tips and be sure to pay attention to power lines:

- ▶ **Make sure to always look** for nearby power lines before you cut down any tree or trim branches. If a tree falls into a power line, contact Twin Valley Electric Cooperative.
- ▶ **Treat all power lines as energized.** Never climb or attempt to handle a tree that has a limb caught in a power line. You may not see any visible evidence that the tree is "electrified" or dangerous.
- ▶ **Make sure to maintain required clearances** between equipment and power lines.
- ▶ **If a fire starts from a fallen power line**, notify the fire department and Twin Valley. Stay away from the site of the electrical hazard. Make sure others stay clear of the line and treat it as energized.
- ▶ **Do not use water** on or near a fallen power line.
- ▶ **Along with taking necessary steps to respond** to an electrical emergency, you can help stop potential power line problems before they start by practicing these safety measures:
- ▶ **If you notice anything such as trees** or branches that might interfere with power lines or pose a serious threat, notify Twin Valley Electric Cooperative.
- ▶ **If you are planning to plant trees on your property**, make sure not to plant them directly under or within at least 25 feet of power lines for short trees, and at least 40 feet away for medium-sized trees.
- ▶ **Shrubs, hedges, and other plants** should be kept clear of electric towers and poles.

Planting Savings

BY MEGAN MCKOY-NOE

You've upgraded your appliances, insulation and lighting to help lower your monthly electric bill. What else can you do? Plenty, if you have a yard with landscaping options. The right combination of plants and trees can unearth hidden energy savings.

The U.S. Department of Energy claims landscaping with energy efficiency in mind, on average, could save enough energy to recoup your investment in less than eight years. There are several ways to think about planting for energy savings: climate, shading and windbreaks.

Climate Clarity

Climate determines the direction your landscaping planning should take. The United States is divided into four different types of regions: temperate, hot-arid, hot-humid, and cool.

Folks living in the temperate band across the Northwest, Midwest, and Northeast parts of the nation should maximize the warmth of winter sun. Likewise, summer shade should be prized. Winter winds should be deflected from buildings, while summer breezes need to be brought toward a home.

Simple Shading

You might be protected from the hot summer sun in your home, but your electric bill isn't. Solar heat absorbed through windows and your roof causes your air conditioner to work harder.

Shading a home with trees could drop the surrounding air temperature by as much as nine degrees Fahrenheit. It gets better closer to the ground—since cool air sinks down, the air

under trees may be up to 25 degrees cooler than the air over the driveway.

Different trees serve unique purposes. To block summer solar heat but let the winter sun through, use deciduous trees. Evergreens trees and shrubs are ideal to provide continuous shade and block heavy winds.

Don't forget about shrubs and ground cover plants. These short but study shade-givers reduce heat radiation, cooling air before it reaches your home's walls and windows. If you have an air conditioner, shading the unit can increase its efficiency by as much as 10 percent.

Shading takes time. For example, a six-foot to eight-foot deciduous tree planted near a home will begin shading windows in a year. Depending on the species and the home, the tree will shade the roof in five to 10 years.

Windbreaks

Shrubs and trees create windbreaks—essentially walls to keep the wind chill away from a home. Why is that

important? Wind speed lowers outside air temperatures. A windbreak reduces wind speed nearby, saving your home from higher heating costs.

It's best to block wind with a combination of trees and shrubs with low crowns—foliage which grows close to the ground. Evergreens are ideal, and when combined with a wall or fence these windbreaks can deflect or even lift wind over a home.

For the best protection, leave between two to five times the mature height of the trees or shrubs between the windbreak and the protected home.

Ready, Set, GROW!

Remember, your landscaping plan depends on your climate and how your home is situated. Find out more about your climate, microclimates, shading dos and don'ts, and windbreaks at www.energysavers.gov. Visit www.TogetherweSave.com to learn more ways to save energy around your home.

