SUMMER STORMS TEST GRID RESLIENCY

Clark Electric Cooperative
Your Touchstone Energy® Partner

Tim Stewart, CEO/Manager

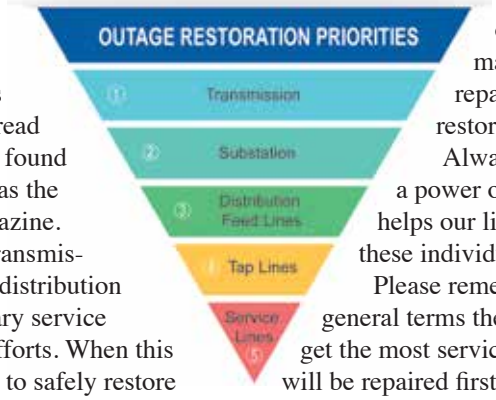
In my July article, I wrote about electric grid resiliency and how the cooperative goes about restoring electric service after a storm. In the dictionary, resilience is defined as "the ability to bounce back, recover quickly and to go back into shape or position after being stretched."

Well, almost as if on cue, on July 19–July 21 two significant storms came through our six-county service area and tested our resilience. The first call came in around 7:30 p.m. on July 21 and affected the northern half of our service area. A second storm came through and affected the southern half of the system. During the course of the storms we had a total of over 8,000 services without power. Almost all services were restored by 11:30 p.m. on July 21. Mike Ruff, director of operations for the cooperative, indicated that this was one of the worst storms we have experienced in his 28-plus years with the cooperative. When you stop and think about it, that's pretty remarkable. In a span of approximately 52 hours, the system suffered severe stress and "bounced back" relative to the amount of widespread damage over the service area. In this time span the storm caused approximately $125,000 – $150,000 in expense to the cooperative. Broken poles, downed lines, transformers, and downed trees all had to be reconstructed and/or replaced and fixed.

The number one cause for the outages are trees falling due to high winds. The cooperative does have a vegetation management program. However, many members don't want their trees trimmed or even "touched." This is but one illustration of why maintaining the right-of-way is so important.

Outage Restoration Priority

I would like to review how power is restored after a widespread storm. This can also be found on our website as well as the July edition of the magazine. Damage can occur to transmission lines, substations, distribution lines, and your secondary service lines despite our best efforts. When this happens, our priority is to safely restore power to as many members as possible in the shortest amount of time. Transmission lines are handled first. These lines transmit power to distribution substations. If the substation can come back on, power can be restored to thousands at one time.



Next, crews inspect substations to determine if the problem starts there, or if there could be an issue down the line. If the source of the problem is at the substation, power can be restored to hundreds of members.

Next, crews check the distribution feeder lines that deliver power to homes and businesses. There are three-phase lines that deliver power to various line sections. Once these are repaired, power is then restored to even more people. If you continue to experience an outage, there may be damage to a line section or tap line. This is a line that comes off the three-phase feeder line that energizes your transformer.

If you still don't have power, the service line between a transformer and your home or business may need to be repaired. These are restored last.

Always call to report a power outage, which helps our line crews isolate these individuals.

Please remember that in general terms the lines that will get the most services energized will be repaired first.

Operating Your Generator Safely

Clark Electric Cooperative cannot guarantee 100 percent power 100 percent of the time. So, when the electricity goes out, generators can help you get through until power is restored. However, before ever starting a generator, be sure you know how to use one safely.

There are two types of generators: standby and portable. Standby generators are installed directly to the house and are typically powered by natural gas or propane. These generators start automatically when the power goes out.

A portable generator is usually gas powered and is movable. You can power appliances by plugging them into it.

Make sure there is nothing plugged into the generator when turning it on.

When you refuel a generator, make sure the engine is cool to prevent a fire, should the tank overflow. Keep children and pets away from the generator, which could burn them.

Generators pose electrical risks, especially when operated in wet conditions. Use a generator only when necessary in moist conditions. Protect the generator by operating it under an open, canopy-like structure and on a dry surface.

Carbon monoxide fumes emitted by the gasoline engine on the generator can be deadly. Always operate your portable generator outdoors at least 10 feet from your home.

If you are not careful, you can put the lives of others in danger away from your home because of backfeed—when a generator is feeding electricity back through your electrical system and meter into the power lines. To prevent backfeed, have a transfer safety switch installed on your generator by a professional. Portable generators should never be plugged directly into a home outlet or electrical system; use an extension cord to plug appliances into an outlet on the generator for power.

It is recommended that a generator be operated once a month for 10 minutes to ensure it is running properly. Store a generator in an easily accessible, weatherproof area. Have enough fuel for at least 24 hours in case of a power outage.

Myths of Downed Power Lines

Have you ever wondered why a bird can sit on a live wire, or what you should do if a power line is on the ground? Here are some Q-and-As to clear up some common misconceptions concerning power lines:

What do I do if I see a downed power line? Vacate the area. Call 9-1-1 to report. Do not return to the area until you are given the go-ahead by authorities.

Can I tell from looking (or listening) if a downed power line is still live? Absolutely not. A live wire may not spark or arc and it may not make any noise at all (although it could).

Where might downed power lines be? A downed power line might be in the street or ditch or field after a bad storm or car accident. It could also be lurking in flood waters or under debris, trees, or other objects after a severe storm.

If a line is on the ground, is it dead? Once a line is on the ground, it is not automatically dead, even if the power is off in your area. There's a good chance the line is still energized, which not only means you should not touch it, it also means the surrounding ground and any metal objects nearby could be energized and extremely dangerous, even deadly.

Why might a power line be down or damaged? A car accident may cause a line to be hanging down or on the ground; severe weather could damage a pole or line; or in some cases the cause could be a storm-damaged tree or a hungry squirrel.

Why can a bird sit on a power line and not be hurt? Doesn't that mean the line is insulated? No. Lines are sometimes coated for protection against the elements but still deadly upon contact. A bird or other critter can sit on a power line all day happy as a lark because there is no path to ground. If the animal were to come in contact with the utility pole or other grounded source, it would be electrocuted, just as a person would be under the same circumstances.

Do different kinds of utility lines look different? Perhaps, but for the most part, the non-utility professional cannot know what kind of line it is and what it carries (electricity, phone service, cable TV, and so on) just by looking. You also can't tell how much voltage it is carrying by its appearance.

What if my car comes in contact with a downed power line? Do not get out. Do not try to drive over it. Call 9-1-1 and wait for utility personnel to de-energize the line. If you smell gas or if there is a fire, exit your car with a solid jump landing on both feet (but don't touch the car at the same time) and DO NOT WALK, but hop away.

Can I help someone who has been in an accident involving a downed power line? No. Do not go near the scene and warn others not to do so. A person running near an energized area could get electrocuted.

Energy Efficiency Tip of the Month

Cookware tip: Copper-bottomed pans heat faster on the stove. In the oven, ceramic and glass dishes are better than metal. With ceramic and glass dishes, you can turn the oven down about 25 degrees, and your meal will cook just as quickly.—*Source: energy.gov*

MEMBER APPRECIATION DAY
& Kick-off to Cooperative Month

A FREE Pancake, Egg & Sausage Breakfast

Activities for kids of all ages

Saturday, September 21

7 a.m. to 11 a.m. at the
Clark Electric headquarters,
just west of Greenwood on CTH G

Clark Electric Cooperative
1209 W. Dall-Berg Rd. P.O. Box 190, Greenwood, WI 54437
715-267-6188 • 800-272-6188
Your Touchstone Energy® Partner

Heartland COOPERATIVES
P.O.Box 260
Dorchester, WI 54425
1-800-521-2021

"Take Back" Initiative 7–11 a.m.

Bring your unused, controlled, non-controlled, and over-the counter medications in their original containers to be dropped off—free, with no questions asked.
Questions? Contact the Greenwood Police Department at 715-267-6215.

Food Drive for Local Food Pantries

Help us demonstrate the 7th Cooperative Principle, Commitment to Community, by bringing a non-perishable, non-expired food item to be donated to your local food pantry.

Pumpkins • Crafts for Kids Giant Inflatables

Greenwood Fire & EMS

will provide free blood pressure testing.

Memorial Medical Center

will be here to provide community health information. — free of charge.

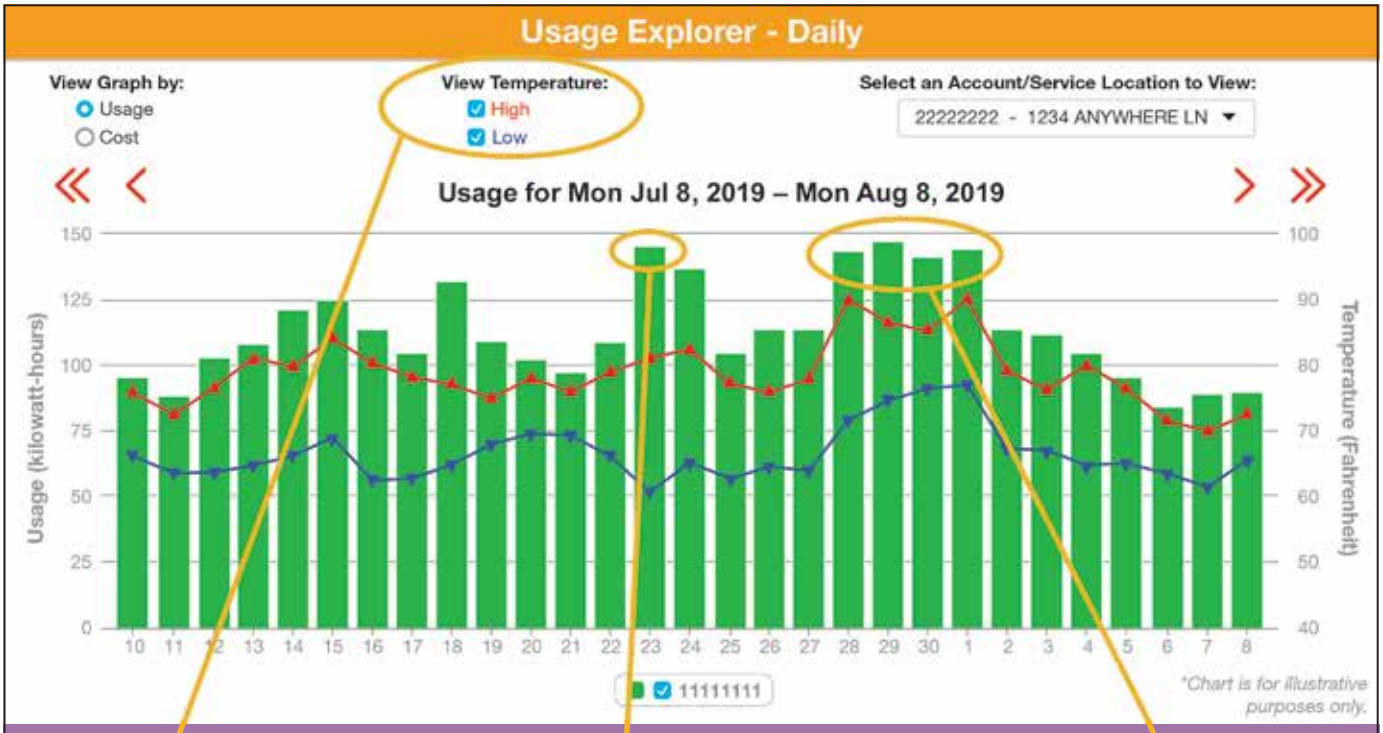
SMARTHUB: An easy way to manage your energy bill

SmartHub means you have options when it comes to managing your energy bill at Clark Electric Cooperative. Have you ever wondered when your highest electric usage takes place? Have you wondered why your energy bill is what it is? SmartHub helps you determine those answers. If you have not signed up, you're missing out on a lot of smart benefits including:

- Pay your energy bill online
- Set up your energy bill for automatic payments
- View your billing history
- View and manage your electric usage
- Identify ways to lower your energy bill
- And, even report an outage

After logging into your account, you'll find the Usage Explorer under the My Usage tab. If you turn on the View Temperature option, you'll see what the weather was like, by your zip code, for any billing period. It's one of the best ways to see the effect the summer weather has had on your electric usage. This is especially helpful considering nearly 50 percent of a typical home's energy bill is due to heating and cooling costs.

It's easy to sign up for SmartHub. Just go to www.cecoop.com and click on the link. All you need is your electric account number, your last name, and an email address. Or, you can download the CEC version of the SmartHub app to your smart-phone or tablet from the Apple App Store or the Google Play Store.



Tip: Analyze your usage by selecting the View Temperature feature. It shows the daily highs (red) and lows (blue) along with your daily energy usage. This allows you to see the correlation between high temps and higher usage.

It's only natural for usage to go up when it's really hot or really cold outside. The greater the difference between the outside temperature and your thermostat setting, the longer and harder your AC or heating system will work to make up the difference—and the more it will cost. For example, if it's 102 outside and your thermostat is set to 78 degrees, that's a 24-degree difference. If you lower the setting to 72 degrees, the difference is increased by another 6 degrees. Tip: For every degree you raise your thermostat in the summer or lower it in the winter, you can save about 4 to 6 percent on your cooling and heating costs.

The number of hours that temperatures are high outside, and the number of consecutive days they stay high, affect energy consumption—it will take your AC longer to cool down your home after baking in the sun all day. When evenings remain warm, it takes even longer. Plus, your family may be using more electricity as they spend more time inside watching TV and playing video games.

Tim Stewart, CEO/Manager
1209 West Dall-Berg Road, P.O. Box 190, Greenwood, WI 54437
email us at info@cecoop.com or tnelson01@cecoop.com
www.cecoop.com

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