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Members We Serve

BROWN-ATCHISON
ELECTRIC COOPERATIVE

NEWS



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FROM THE MANAGER

The Skinny on Serving up Savings

The holiday season is upon us — and so is the holiday weight gain. According to a recent survey by OnePoll, the average adult expects to gain eight pounds during the holidays. Unfortunately, all the extra cooking, baking and lights, (not to mention space and water heating) can also lead to holiday increases in utility bills. Keeping this in mind, I thought this would be a good time to share the “skinny” on saving energy during the holidays and winter season with the members of Brown-Atchison Electric Cooperative.

Big Bang Theory

Making minor, low-cost improvements, like weatherstripping exterior doors and caulking around old, drafty windows, will positively impact energy bills. According to an article in *Pro Tools Review* — these types of improvements typically yield energy savings that result in a 15% return on the investment. In other words, the biggest bang doesn't come from the expensive changes like a complete furnace

replacement or rooftop solar panels, but rather with doing the little things that seal the shell of the home. By the way — comfort is also improved far more by eliminating draftiness than by replacing systems.



Michael Volker

Be Festive Without Breaking the Bank

Each year, often as soon as we finish the Thanksgiving turkey, we start decorating for Christmas. With holiday lights adorning our home for well over a month, switching to LEDs saves energy.

LED holiday lights use 88% less energy than incandescent holiday lights. To put that into perspective, the Department of Energy estimates that with standard holiday decorations, LED lights typically increase energy bills by about \$5 to \$7. But with incandescent lights, energy bills will typically increase by \$33 or more. For homes that go above and beyond with incandescent holiday lighting (think

Continued on page 12B ▶

Offices Closed for Thanksgiving

Our offices will be closed Thursday, Nov. 23, and Friday, Nov. 24, in observance of the holiday. From our co-op family to yours, Happy Thanksgiving!



REACH NEW HEIGHTS

Brown-Atchison Electric has an opening for a journeyman lineman.

EDUCATION: High school diploma or equivalent.

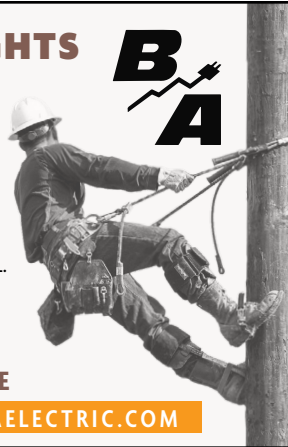
EXPERIENCE: Provide documentation of completing a four-year apprenticeship program. Must have CDL.

EXCELLENT STARTING PAY

ANNUAL RAISES

EXCELLENT BENEFITS PACKAGE

SEND RESUME TO JBARE@BAELECTRIC.COM



The Skinny on Serving up Savings

Continued from page 12A ►

Clark Griswold), energy bills could increase by as much as \$350. Beyond energy savings, LEDs provide additional benefits, such as being shock-resistant, shatter proof and cool to the touch, making them safer for our home. Adding a timer on our holiday lighting also adds a measure of safety for us since we like to visit our friends and family during the holidays.

Additional easy ways to save during the holiday season include turning off overhead lights and using your Christmas tree to illuminate your home. If you have a fireplace, remember to close the flue when you're not burning a fire to ensure heat doesn't escape through the chimney.

Cook Up Energy Savings in the Kitchen

If you plan to have family and friends over this holiday season, cook up energy savings by using small countertop appliances like microwaves, air fryers and slow-cookers when possible, as they use much less energy than the stovetop or oven.

When using the oven, bake multiple dishes at once for maximum efficiency. After all, it takes as much energy to cook one dish as it does to cook several. Turn the oven off a few minutes before the recipe's end time and allow the residual heat to finish baking the dish. Once the food is done, leave the stove door ajar to allow the residual heat to warm the room. When using the stove top, match the pan size to the burner to maximize the stove top's efficiency.

I hope a few of these tips will be helpful as we approach the holiday season.

On a separate subject — capital credits will again be retired in December. Please look for the credit on your bill! Returning capital credits to members and former members is part of the cooperative difference and separates Brown-Atchison Electric Cooperative from other utilities.

This Thanksgiving, we are especially thankful for the members that make this area the wonderful place we call home. We wish you a safe and happy Thanksgiving!

A LINEWORKER'S Restoring

"How long is it going to take?" Those are familiar words to all who work in the electric industry. It's a phrase I've been asked thousands of times in my career. I've been asked by phone, through car windows, from front porches, sidewalks, bicycles, gas pumps, diners. I'm pretty sure I've even been asked by children in car seats. It's the first thing people think when the lights go out. It doesn't take long sitting in the dark to realize how dependent we are on electricity. How much it makes our lives better and easier.

As a lineworker, it's always a good feeling to help people get those lights back on. I can remember times when I've been on storm or extended outages re-energizing neighborhoods and heard people in their homes cheering as their lights came on for the first time in days. No matter how tired I am or how long I've been working, that feeling will always make it worthwhile.

But what does it take to get those lights back on? Why does it sometimes take so long? Most people will never get to experience or witness the work that goes into ending outages. Hopefully after reading this, you will have a better understanding of the process and the work that Brown-Atchison Electric line crews are doing to restore your power.

The electricity you use travels a great distance and goes through several steps to get to your home. It starts with a power plant. Power plants use fuel to produce power. That fuel could be natural gas, diesel, coal, hydro, wind, solar or nuclear. A power plant typically produces voltages of less than 30,000 volts. That voltage needs to be "stepped up" so it can travel long distances. That process starts next door in the power plant's substation and switchyard. In the substation, a transformer will step the voltage up to 345,000 volts, or sometimes higher, and send it out on transmission lines to another substation.

At the next substation, electricity starts to get closer to its destination. Here we start stepping the voltage down. In this second substation, a transformer will step the voltage down to 69,000 volts and send it out to smaller local substations.

These local substations are the final substation before the electricity reaches your home. Here it

TIMELINE:

a Power Outage

BY JASON BARE, LINE SUPERINTENDENT

is stepped down, again with a transformer, to the 7,200 or 14,400 volts that can then be delivered to the poles outside your home. Once it arrives outside your home, it is stepped down a final time, yes, by another transformer. This final transformer will step the voltage down to 120/240 volts that operate all the devices that power your life.

What I just described is hundreds of miles of line and thousands of poles. That's a lot of exposure for something to happen and cause an outage. Just like your home, our system has breakers. Our breakers help us reduce the exposure of the line and allow us to split our system into sections. Doing so helps limit the size of the outages and allows us to keep as many people on as possible. Breakers also help to protect equipment on the line. Ever wonder why your lights blink a few times before going off? That's the breaker. They operate a few times trying to give the fault a chance to clear the line before they open for good.

We Work For You, Our Neighbors

We've become so dependent on electricity that every outage, whether it is a short outage or an extended one, can be stressful for those without power. The longer outages last, the more stressful and irritating it can become. I hope that I've provided a better understanding of the restoration process so you have an idea what's happening while you wait. Just know that your co-op line crews are doing their best to get the lights back on as quickly and safely as possible.

Brown-Atchison Electric and its employees are members of your community. We live in the same neighborhoods. We shop at the same stores. Our kids go to the same schools. If your lights are off, there is a good chance ours are off too. We will always be committed to serving our members and communities by providing safe and reliable electricity — 24 hours a day, 7 days a week, 365 days a year.



Jason Bare
Line Superintendent

OUTAGE TIMELINE



LINEMAN IS NOTIFIED
They ask questions to determine if it's an individual or section outage and its location.



CAUSE LOCATED — SAFETY FIRST
Once the cause is located, a safety briefing takes place, identifying hazards and locations of lineworkers and equipment. Lineworkers then isolate and ground the line to prevent backfeed.



REPAIRS COMPLETE
The lineworkers contact dispatch to get clearance to re-energize the line. Once dispatch confirms no one else is working on the line, the breaker is closed restoring power.



THE DRIVE
A crew is dispatched to the outage site. If after hours, lineworkers must travel from their homes, which often adds additional travel time.



WORK BEGINS
Lineworkers take special care and awareness to remove objects causing the outage. While crews work to clear the line, materials required for repairs are located and in transit.



POWER RESTORED — OUTAGE OVER
Restoration time varies by outage depending on the cause, location and materials needed for repair.



ARRIVAL AND INSPECTION
Crews visually inspect the line for open breakers and cause of outage. Evaluating the outage is time consuming but one of the most important steps of restoration.



MATERIALS ARRIVE
Materials and equipment arrive onsite to make the repair. Broken material is removed, inspections performed and repairs made.



CREWS RETURN SAFELY HOME
Our goal is to restore power safely and efficiently and ensure co-op employees go home safe after work is complete.

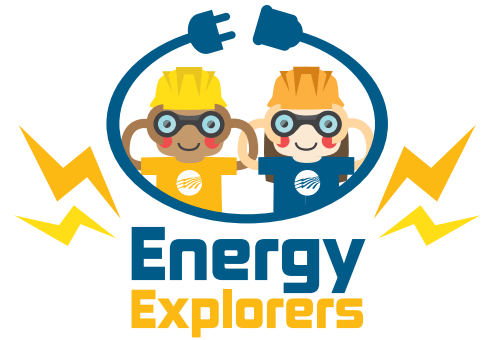


NOTE: OUTAGE AND RESTORATION TIMELINES VARY BY OUTAGE TYPE AND SEVERITY OF LINE DAMAGE.

THE STEPS TO RESTORING POWER

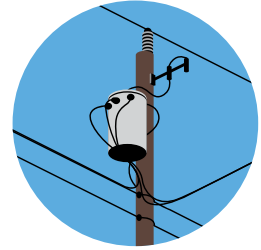
When the power goes out, line crews work hard to restore electricity as quickly and safely as possible. To ensure the process is done efficiently, line crews follow specific steps to restore power. Can you order the steps below to match how power is restored?

Hint: Check your work in the answer key.



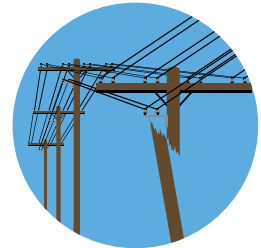
STEP #

Tap lines are inspected. These lines deliver power to transformers that are either mounted on utility poles or placed on pads for underground electric service.



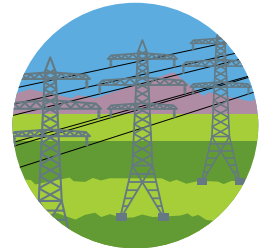
STEP #

Distribution power lines are inspected. These are the lines you typically see on the side of the road that deliver power to communities.



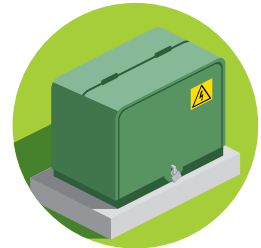
STEP #

Large, high-voltage transmission lines are inspected for damage. These power lines deliver large amounts of electricity over great distances.



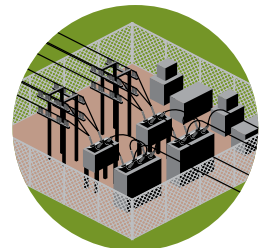
STEP #

Service lines are inspected. These are the power lines that run **between the transformer and your home**.



STEP #

Distribution substations are inspected. These facilities lower the voltage of power, then send power to distribution lines.



Answer Key: 4, 3, 1, 5, 2