



DAVID CHURCHWELL

NEW WAYS TO USE ELECTRICITY

BY DAVID CHURCHWELL, GENERAL MANAGER

K.C. ELECTRIC ASSOCIATION

JUNE 2023

K.C. ELECTRIC STAFF

David Churchwell
General Manager

dchurchwell@kcelectric.coop

Bo Randolph

Office Manager and CFO
brandolph@kcelectric.coop

Paul Norris

Operations Manager
pnorris@kcelectric.coop

George Ehlers

Member Services Specialist and
IT Manager
gehlers@kcelectric.coop



ph 719-743-2431

tf 800-700-3123

fax 719-743-2396

web kcelectric.coop

Our mission is to provide our members with safe, reliable service at the lowest cost, while maintaining an environmentally responsible, accountable and sustainable operation now and in the future.

If you listen carefully, you can hear a quiet transformation happening. Electric appliances and equipment are becoming more popular than ever among consumers. As I sit here looking through the latest Flagler Ace Hardware sales flyer, I'm amazed at the number of battery-powered tools and equipment they sell.

Advancements in technology and battery power coupled with decreasing costs are winning over consumers looking for comparable utility and versatility. A bonus is that use of electric equipment is quiet and produces less emissions.

Inside the home, consumers and homebuilders alike are turning to electric appliances to increase energy efficiency and savings. Whether a traditional electric stove or an induction stovetop, both are significantly more efficient than a gas oven. That's because conventional residential cooking tops typically use gas or resistance heating elements to transfer energy with efficiencies of approximately 32% and 75% respectively (according to Energy Star). Electric induction stoves, which cook food without any flame, will reduce indoor air pollution and can bring water to a boil about twice as fast as a gas stove.

More tools and equipment with small gas-powered motors are being replaced with electric ones that include plug-in batteries. In the past few years, technology in battery storage has advanced significantly. Hand-held tools with plug-in batteries can hold a charge longer and offer the user the same versatility and similar functionality as gas-powered tools. For DIYers, farmers, ranchers and those in the building trades, national brands such as Makita, Ryobi and Milwaukee offer electric versions of their most popular products including drills, impact drivers, saws, sanders and other

tools. In addition to standard offerings, consumers can now purchase a wider array of specialty tools that plug in, such as power inverters, air inflators and battery chargers.

Keith Dennis, an energy industry expert and president of the Beneficial Electrification League, notes that, "A few years back, the list of new electric product categories that were making their way to the market was limited — electric scooters, lawn mowers, leaf blowers and vehicles."

Today, the number of electric products available is exploding.

"There are electric bikes, school buses, pressure washers, utility terrain vehicles, backhoes — even airplanes and boats," Dennis says. "With the expansion of batteries and advancements in technology, we are seeing almost anything that burns gasoline or diesel as having an electric replacement available on the market."

A case in point is the increased use of electric-powered tools and equipment, with more national brands offering a wider selection including lawn mowers, leaf blowers, string trimmers and snow blowers. The quality of zero- or low-emissions lawn equipment is also improving.

Electric equipment also requires less maintenance than gas-powered equipment; often the biggest task is keeping them charged. In addition, electric equipment is quieter, so if you want to listen to music or your favorite podcast while performing outdoor work, you can — that's something that wouldn't be possible with gas-powered equipment.

Another benefit of using electric appliances or equipment is that, by virtue of being plugged into the grid, the environmental

NEW WAYS TO USE ELECTRICITY

CONTINUED FROM PAGE 7

performance of electric devices improves over time. Quite a hat trick: improving efficiency, quality of life and helping the environment.

Don't forget, K.C. Electric Association offers rebates for many electric appliances, and battery-operated tools and equipment. For more information on rebates, call our Hugo or Stratton office or access our website at kcelectric.coop.



Claim Your Savings

Each month, K.C. Electric Association members have a chance to claim a \$20 credit on their next electric bill. All you must do is find your account number, call the Hugo office at 719-743-2431 and ask for your credit. The account numbers are listed below. How simple is that?

You must claim your credit during the month in which your name appears in the magazine (check the date on the front cover).

- **Leigh Andersen, Arriba — 212400006**
- **Kendall Wills, Flagler — 500380005**
- **Allison Brown, Arapahoe — 424820008**
- **Pam Walter, Cheyenne Wells — 406850000**

In April, two members called to claim their savings: Dillon Tanner-Vona and Matthew Randel, Kit Carson.

STAY SAFE ON YOUR RANCH OR FARM

There are all types of precautions ranchers and farmers take to stay safe. Electrical hazards, however, can sometimes be overlooked since electricity is not seen or heard, and overhead power lines can become part of the landscape.

Implement these electrical safety tips on your farm or ranch:

- In general, look for exposed energized parts and unguarded electrical equipment that could become energized unexpectedly.
- Take care when operating watering tanks with electric pumps. In addition, sprays of water from irrigation systems should not be near overhead power lines.
- Inspect electrical fencing regularly to ensure that everything is tight and secure so that no parts are frayed. A sagging fence not only means that animals could escape, but it can also create electrical issues.
- Ensure that your electric fence is well supported. A lack of support can cause it to sag.
- Make sure electric fencing is visible by using electric fence tape, warning signs or other methods.
- Cap posts, especially metal T-posts, to prevent an animal (or human) from becoming impaled.
- Be aware of overhead power lines when moving bales of hay.
- Do not store bales of hay underneath power lines.
- Be aware that tarps that cover hay can come loose and blow in heavy winds, sometimes causing an outage if the tarp gets too close to or contacts a power line.
- When using a generator and double throw switch, make sure they are in good working order and up to code.
- Check electrical center pivot equipment before and after use to ensure that it is grounded, that the housing is protected, and that the wiring is sound (this protects livestock and people).
- Regularly inspect irrigation equipment. Follow the manufacturer's instructions for inspection and maintenance directions.

- Always turn off the power before working on an irrigation system.
- After a storm, make sure the system has not become ungrounded due to lightning.
- Position irrigation pipes at least 15 feet away from power lines; also, store unused pipes away from power lines.
- Always be aware of overhead power line locations and use a spotter when working close to lines or poles.
- Follow safe digging procedures. Call 811 to have underground utilities marked before breaking ground for any project, big or small.

To learn more about electrical safety on the ranch or farm or in general, visit SafeElectricity.org.

Summer Farm Safety



SHARE SAFETY TIPS: Teach anyone working or doing business on your farm about electrical hazards.



LOOK AROUND: Inspect your space and look for hazards before you start planting.



TRANSPORT SAFELY: Ensure equipment is compliant with agricultural road and travel safety rules.



ON THE FARM: Handle irrigation equipment with care

Many farmers water their crops with a central pivot or other type of irrigation system that can run on electricity.

K.C. Electric Association wants to remind anyone in the agricultural industry that moving irrigation pipes around power lines can be extremely dangerous. The watering pipes can be made of aluminum, a great conductor of electricity.

K.C. Electric and Safe Electricity offer these irrigation safety tips:

- Be extremely careful when assembling or moving long sections of irrigation pipes.
- Always consider your location and the length of the pipe you are holding.
- Make sure the pipe's long reach will not come near or into contact with power lines.
- If the pipe touches or comes too close to a power line, you could be electrocuted.
- Do not store, handle or assemble irrigation pipes under or near overhead power lines.
- Do not store or park anything under power lines.

Installation and Maintenance

Although farmers are usually great at fixing anything and everything, it's a good idea to have a qualified electrician install and maintain your irrigation's electrical wiring and controls, which must meet National Electrical Code. Hire an electrician who is experienced and well-versed in irrigation systems.

Keep in mind the following safety points:

- If your electrically-driven center pivot system is not working correctly, it could be deadly or hazardous.
- If electrical equipment or wiring is faulty, you could get shocked or electrocuted.
- Irrigation systems run by an electric motor must be properly grounded with copper piping.
- A system's electricals should have a fuse or some other means of disconnection.
- If lightning strikes your irrigation equipment, it could mean that the system is no longer grounded.
- Always shut off and lock the master control switch before servicing the machine.

- Inspect the pump and wiring before the start of each irrigation season and consult your electrician with any concerns.
- Talk to everyone in your family, including kids and teens, about the dangers of moving pipes. Teach irrigation safety to all staff and seasonal workers. Family members or workers might try to rearrange pipes for coverage or move them to free an animal, not realizing how close they are to an overhead power line. In addition, they may try to use an electrical system that is damaged or not properly grounded.

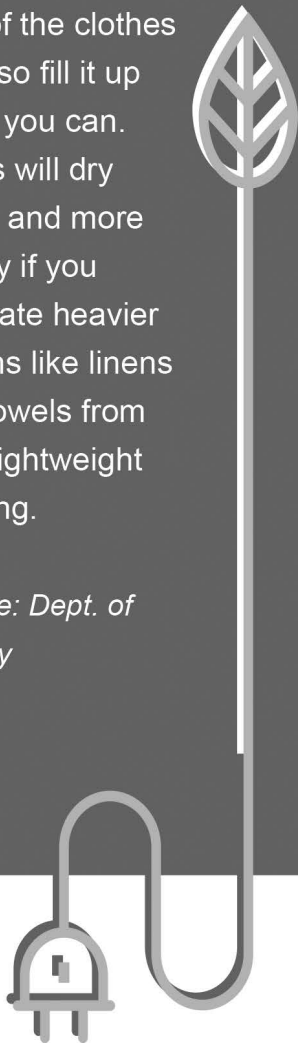
We care about your safety. Please contact us with any concerns about electrical issues, power lines, irrigation equipment or any other safety concerns related to electricity.

For more information about electrical safety, visit SafeElectricity.org.

Energy Efficiency Tip of the Month

Looking for additional ways to save energy this summer? Your laundry room is a great place to start. Wash clothes with cold water, which can cut one load's energy use by more than half. Your washing machine will use the same amount of energy no matter the size of the clothes load, so fill it up when you can. Loads will dry faster and more evenly if you separate heavier cottons like linens and towels from your lightweight clothing.

Source: Dept. of Energy



What to do when a storm brews?

Sometimes a storm pops up or changes direction without any warning, while other times it is forecast days in advance and follows its predicted course. In either case, knowing what to do right before, during and after a storm can help to keep you safe.

WHEN A STORM HITS

When stormy winds blow, follow these weather-related reminders from the Federal Emergency Management Agency and the Red Cross:

- Never seek shelter under an isolated tree, tower or utility pole, since lightning tends to strike tall objects.
- Immediately vacate elevated areas, such as hills and mountain ridges and peaks.
- Get away from ponds, lakes and other bodies of water.
- Stay away from objects that conduct electricity, including wires, fences and golf clubs. (Approximately 5% of annual lightning deaths and injuries in the United States happen on golf courses, according to the National Oceanic and Atmospheric Administration.)
- Never lie flat on the ground.
- Pick a safe place in your home, away from windows and doors, for family members to gather during a thunderstorm.
- Know the difference between a watch and a warning for extreme weather, such as a tornado or severe thunderstorm. A watch means that the weather is possible in and near the area. A warning means that severe weather has been reported by spotters or indicated by radar. A warning is more serious than a watch and means that there is imminent danger to life and property.

AFTER THE STORM

Once the storm is over, follow these safety tips:

- Never step into a flooded basement or other standing water. The water could be covering electrical outlets, appliances or cords. Never touch or use electrical appliances, cords, wires or switches while you are wet or standing in water.
- After a storm, a downed power line could be covered by standing water or debris. Never go near a downed line and warn others to stay away. If you see a downed line, call 911 and a crew will be dispatched to de-energize the power and address the problem safely.
- The same safety know-how applies to a downed power line you might encounter while driving or after an auto accident. In either case, do not get out. Instead, if you're driving, pull over and then call 911 to report the downed line. If you must exit your vehicle after an accident because of a fire or smoke, make a solid, clean jump out, landing with both feet together. Then make solid hops with your feet together, hopping as far away as you can.
- If your home is damaged by a flood, turn off the power to your house if it is safe to do so. Do not turn power off at the breaker box while standing in water or in damp conditions.
- If the wiring, electrical system or appliances are damaged by water, have your home inspected by an electrician; also, have appliances serviced by a qualified technician before using them.

For more information about electrical safety, visit SafeElectricity.org.