K.C. ELECTRIC ASSOCIATION

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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.

WHAT THE **HAIL?**

BY DAVID CHURCHWELL
GENERAL MANAGER

DAVID CHURCHWELL

I often wonder what type of severe weather has the most significant impact on our electrical system. Should we be more concerned about winter storms that produce snow, ice and high winds, or should we be more concerned about summer storms that bring rain, hail, lightning and wind? Historically, spring storms that bring heavy ice and high winds have caused the most damage to our electrical system.

Since system reliability is one of our top priorities, our goal is to design and build an electrical system that can handle everything that Mother Nature throws our way. Unfortunately, some of these storms become so severe that outages still occur.

If you remember back a few months, on March 13, 2019, we experienced a historic storm in Colorado. This bomb cyclone broke several intensity records in the area, and the extreme winds created a classic blizzard for most of eastern Colorado. Although we didn't receive a large amount of snow, the damaging winds could not be ignored. This storm was predicted days in advance, which gave K.C. Electric Association employees time to prepare equipment and material for the expected outages and system damage. Although we did experience a few outages, our system held up extremely well, and after the storm subsided power restoration to affected members went quickly.

Normally, after winter and spring come and go, we breathe a sigh of relief because we know the worst weather is behind us for a few months.

In the summer, it's not unusual to have occasional lightning storms that damage transformers and system equipment, or to have a wind storm that blows over a few poles. But the summer of 2019 was a different animal. We experienced several extreme storms in Kit Carson and Cheyenne counties that caused significant damage to our electrical system. We experienced some of the most extreme wind, hail, rain and lightning in recent history. On August 13, monster hail began to fall and a record hailstone found north of Bethune was confirmed

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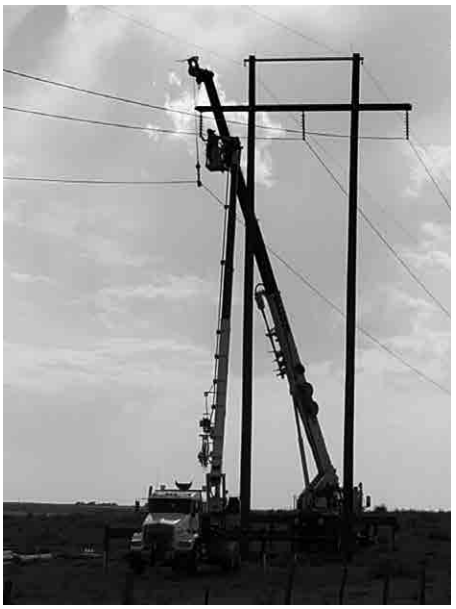
A K.C. employee hand digs a replacement pole hole.

An irrigation sprinkler wraps around a K.C. transmission structure.

This pole and cross-arm damage was caused by a wind storm.



A crew replaces a transmission structure.

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by the National Weather Service at 4.83 inches in diameter — that is almost the size of a softball.

On June 21, we lost 34 distribution poles, on July 29 we lost 29 distribution poles and one transmission structure and on August 7 and August 14 we suffered additional storm-related damage. Overall, in the past few months we lost over 80 poles and numerous transformers and related equipment as the result of these random summer storms.

These storms also caused a great deal of damage to our members' property. Hail damage was significant to crops, homes and businesses; wind toppled sprinklers, blew roofs off buildings and even rolled 1,500-pound bales of hay like they were pop cans. Although no tornadic activity has been confirmed by the National Weather Service, some damage suggests otherwise.

To those affected by the outages caused by these storms, I appreciate your patience. I want to thank those farmers who used their tractors to pull our trucks through the mud during restoration efforts.

As you can imagine, restoration after these storms takes a tremendous amount of time and effort. I'm proud of the efforts of all K.C. employees as they worked long hours in hazardous conditions and sacrificed time with their families to restore power. I'm also proud to say that all of this restoration was completed without experiencing a lost-time accident.

Many of you reading this article were affected by the storms that occurred this year, so I will let you be the judge of whether winter or summer storms are the most destructive. Throughout all of this, whether winter, spring, summer or fall, be assured that the employees at K.C. Electric will do whatever it takes to keep your lights on.

Is Your Home Assistant Draining Your Energy Bill?

BY MARIA KANEVSKY

Have you ever wanted to turn off the lights, listen to the news or order food by simply using your voice? That is the power a home assistant can provide. These handy products have made their way into many homes across the country since the first smart speaker became available in late 2014. By the end of 2018, there were 66.4 million users of smart home assistants or smart home speakers in the United States.

One in four Americans now owns a smart speaker, and 40% of those people also have more than one smart speaker in their homes. The most popular smart speaker is the Amazon Echo, although Google Home products are selling at a rapid rate and even taking over some of the market share from Amazon. Other brands of smart speakers include Apple's HomePod, the Sonos One and the JBL Link 10.

Smart speakers have become the next big thing to hit the residential market. Google Home starts at about $129 and the Amazon Echo starts at about $180. However, there are smaller, more basic versions that start

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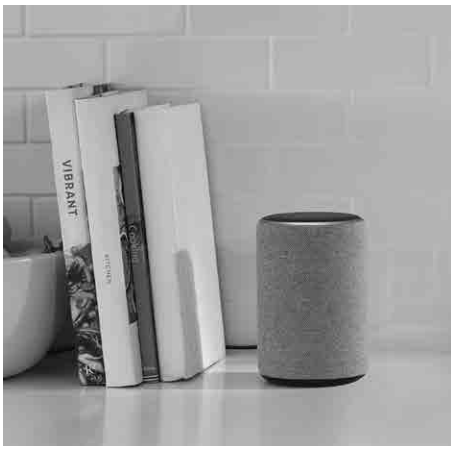

The Amazon Echo Plus is one of the most popular smart speakers available on the market today. Photo Credit: Amazon

KEEPING **YOUR** INFORMATION SAFE

Security-related issues continue to grow in importance for K.C. Electric. The importance of protecting each consumer's information, including payment card information, is a top priority. Payment card information is a high-value target for hackers, and a breach of payment card data can be detrimental to consumers and to K.C. Electric. To protect consumers' payment card data, it is mandatory that K.C. Electric be PCI compliant.

What is PCI compliance? PCI stands for Payment Card Industry. The official definition is for the Payment Card Industry Data Security Standard (PSI DSS) is: A set of standards created by major payment card companies to protect consumers and avoid liability by forcing businesses involved in the payment card ecosystem to implement safety measures and processes.

K.C. Electric must follow PCI DSS requirements in order to accept payment cards and to store, process and/or transmit cardholder data. Above is a list K.C. Electric is required to adhere to.

The phone lines and computers at K.C. Electric do not use secure lines, therefore, to be PCI compliant, absolutely no card or banking information may be taken over the counter or the phone. This includes payments or updating card numbers or expiration dates. The system is scanned quarterly to ensure that K.C. Electric is PCI compliant and cardholder data is not being entered through the unsecured portals.

Customers must trust that their financial information will remain secure. K.C. Electric offers its consumers two secure options to enter card and bank data. Information may be entered by logging into www.kcelectric.coop and selecting "SmartHub" or by calling 844-425-4317. The payment gateway sends information securely between the website or phone line and the credit card network for processing.

The impact of not being PCI compliant can be devastating for our consumers. A report from the Federal Reserve Bank of Kansas City reported that in 2014 credit and debit card fraud totaled $3.8 billion. The total average cost per breach: $5.5 million. The average number of breached records: 28,349. The average cost per breached record: $194. Over 17.6 million people in the United States experience some form of identity theft each year, according to the U.S. Department of Justice, and 14.2 million credit card numbers were exposed in 2017, according to the Theft Resource Center.

Not being PCI complaint would cost K.C. Electric. The credit card penalties for PCI noncompliance range from $5,000 per month to over $100,000 per year.

PCI compliance is complicated. Security will always be a priority. K.C. Electric continues to take steps to safeguard consumer information.

Although card payments cannot be made in any of our offices, please do not hesitate to contact one of the offices if you have any questions or need assistance in making a card payment online or by phone.

Payment Card Industry Data Security Standard		
Build and maintain a secure network	1. Install and maintain a firewall configuration to protect cardholder data. 2. Do not use vendor-supplied defaults for system passwords and other security parameters	✔
Protect cardholder data	3. Protect stored cardholder data 4. Encrypt transmission of cardholder data across open, public networks	✔
Maintain a vulnerability management program	5. Use and regularly update anti-virus software or programs 6. Develop and maintain secure systems and applications	✔
Implement strong access control measures	7. Restrict access to cardholder data by business need to know 8. Assign a unique ID to each person with computer access 9. Restrict physical access to cardholder data	✔
Regularly monitor and test networks	10. Track and monitor all access to network resources and cardholder data 11. Regularly test security systems and processes	✔
Maintain an information security policy	12. Maintain a policy that addresses information security for all personnel	✔

Claim Your Savings

Each month, consumer-members have a chance to claim a $10 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).

Sabrina Pinegar, Burlington — 1116290014

L H S Partnership–Hugo-U-Lock-It, Hugo — 640850000

Vagola Miller, Vona — 1006250001

Dale Anderson, Burlington — 1102620001

In August, three consumer-members called to claim their savings: Eugene Weiss, Bethune; Plowboy's Posse LLC, Wild Horse; Timothy Palfy, Arriba.

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at $25 for the Amazon Echo Dot, and $49 for the Google Home Mini. These smart speakers can truly act as assistants, whether by helping you set reminders, establishing routine commands or informing you of today's top stories. They include additional functions, like helping you order products online, playing music or even telling you a joke.

As smart speakers become more prevalent, you may be wondering if these products impact your energy bills. Tests have been conducted to see how much power a smart speaker uses, including different modes of use, like when the assistant is on standby mode or listening to a command. Moderate-level actions like playing music at full volume have also been tested.

The Amazon Echo speaker uses 3 watts of electricity while on standby, and if it were left on standby mode for one year, the total cost would only be about $3.15. While moderately active (like telling a joke or playing music at a medium volume), the Amazon Echo uses 4 watts. At the highest power use (like playing music at full volume), the Amazon Echo still only uses 6.6 watts, which is just slightly more than double its standby use, and if used consistently at this level, it would cost $6.93 for the year. For comparison, the Google Home uses slightly less energy than the Amazon Echo at 2 watts while in standby mode, saving you about $1 a year in total energy costs.

As you can see, the costs to use smart speakers are minimal, and the difference in prices between available products and their abilities are still relatively small. There are plenty of reasons to buy a smart speaker and the additional cost to your energy bill may not be as big of a deal as you thought it would be.

Maria Kanevsky is a program manager for the National Rural Electric Cooperative Association.

It's Large and In Charge: Respect the Mighty Substation

You may live near or drive by a substation each day and not give it much thought — unless you happen to be an electrical engineer or utility employee.

Although they look like something that could transform into a giant-sized, building-stomping futuristic robot, substations play an important role in providing electricity to your work or home.

Fenced-in substations are part of the electrical generation, transmission and distribution system. Transformers are contained inside many of them, and their job — as its name implies — is to transform voltage from high to low or vice versa, depending on its location on the distribution path.

Besides containing transformers, substations usually house switches, protective devices and control equipment. In large substations, circuit breakers are used to interrupt any short circuits or overloads that may occur.

Safety tips

Substations carry high voltages of electricity and they should be respected. Here are some safety tips from K.C. Electric:

- Never go near a substation.
- Teach children to never go near a substation or climb its fence to retrieve a ball or pet. Let them know to tell a parent or adult, who should call K.C. Electric to report the incident at 719-743-2431
- In general, teach children about the dangers of electricity from a young age.
- If a transformer near your home catches on fire, do not try to put out the fire yourself — water and electricity don't mix. Call 911 to report the fire.
- If you see an issue with or notice something unusual about a substation, transformer or power line, contact K.C. Electric. Never try to address a problem yourself.

Transmission substation types

Once you have the safety tips down, consider a fun fact to know about transmission substations. There are three types: step-up, step-down and distribution.

According to the Occupational Safety and Health Administration:

- A step-up version receives electric power from a nearby generating facility and uses a large power transformer to increase the voltage so it can travel to distant locations.
- Step-down transmission substations are located at switching points on an electrical grid and connect different parts of the electrical system.
- Finally, distribution substations are located near end-users like you and me and change voltages to lower levels to power homes and businesses.

For more information about substations, transformers and anything else concerning electricity, call us at 719-743-2431.