

# Western Cooperative Electric, Inc.

Darrin Lynch, General Manager

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### Office Information

635 S. 13th Street P.O. Box 278 WaKeeney, KS 67672 785-743-5561 FAX: 785-743-2717 www.westerncoop.com

### **Thank You Veterans**

Veterans Day is November 11. Western Cooperative Electric would like to thank all veterans for their service and sacrifice.

## Capacitor Bank Project Enhances Energy Supply for Ellsworth Area

In mid-2016, the Southwest Power Pool (SPP) notified Mid-Kansas Electric Company, an SPP member, that voltage support is needed in the Ellsworth, Kan., vicinity.

The SPP is the regional transmission organization that oversees reliability of the electric grid in a 14-state area. Western Cooperative Electric and five other distribution cooperatives own two wholesale generation and transmission companies—Mid-Kansas and Sunflower Electric Power Corporation—to better serve you, our member.

Ellsworth is an area in Western's system that is somewhat isolated from nearby generation and has significant industrial load. This situation creates a lack of voltage necessary to move power through electric grid to the member.

A capacitor bank is often installed in a substation when a boost in voltage is needed. Capacitor banks are a cost-effective method for boosting system efficiency because they better utilize existing facilities and eliminate the need for new, costly transmission. Maximizing current assets on this project saves money, not only for Mid-Kansas but also for Western and our members.

The cost of the Ellsworth capacitor bank project is estimated at

approximately \$3 million. Since the project is classified by SPP as a base-plan upgrade project, two-thirds of the project's cost will be allocated to the Mid-Kansas transmission zone, and one-third will be assigned to all SPP members. In essence, the transmission system in Western's geographic footprint is receiving a reliability upgrade, part of which is benefiting the wholesale power supply.

"As a result, the Ellsworth capacitor bank addition will enhance the energy supply for Western's members in the Ellsworth area and in the region," said Darrin Lynch, Western's general manager. "Just as importantly, SPP's cost allocation approach allows the continued build out of a robust regional transmission system without overburdening electric consumers in the area where the project is built."

For the Ellsworth capacitor bank project, Mid-Kansas will purchase additional land (.78 acres) directly south of the Ellsworth Substation, and the disruption to Western's system will be minimal. It is anticipated that the project will be in service in 2017.

Capacitor banks are a cost-effective method for boosting system efficiency.

### Call 811 Before You Dig

Spring is an optimal time of year to dream up and achieve your landscaping masterpiece, but in many parts of the country planting shrubs in early fall gives the plants a head start at establishing roots in the season's cool, moist soil. Or perhaps you're planning to build a new deck to enjoy those cool autumn evenings. If any of your fall projects require digging—such as planting trees or shrubs, or setting posts—remember to dial 811 first.

Underground utilities, such as buried gas, water and electric lines, can be a shovel thrust away from turning a fall project into a disaster.

Play it safe by dialing 811 to find out where utility lines run. Your call will be routed to a local "one call" center. Tell the operator where you're planning to dig and what type of work you will be doing, and the affected local utilities will be notified.

In a few days, a locator will arrive to designate the approximate location of any underground lines, pipes and cables. These areas will be marked with flags or paint so you'll know what's below. Then the safe digging can begin.

Never assume the location or depth of underground utility lines. There's no need: the 811 service is free, prevents the inconvenience of having utilities interrupted and can help you avoid serious injury. For more information about local services, visit www.call811.com.



## **Keep Your Heat off the Street**

Recent reports show that heating a home typically accounts for 42 percent of energy bills. Western Cooperative Electric shares tips to help members be more efficient in their winter energy use to reduce energy waste and save money while staying warm.

Always be sure your heating system is maintained regularly and serviced by a professional to ensure that it is working at peak efficiency. Keep your furnace clean, and change the filter monthly. Also, regularly unblock and clean radiators, baseboards and vents so they work at peak efficiency.

If you have a fireplace, be sure to keep the damper closed when it is not being used. You may need to add caulking around the hearth so heat is not lost. If you do not use your fireplace, plug and seal the flume.

Close off vents and doors to direct air flow to the rooms that you use most. Also, by installing a programmable thermostat, you can automatically lower the temperature in your home while you are away at work or school or while you are sleeping. Lowering the temperature between 7 and 10 degrees for eight hours a day can reduce energy costs by up to 10 percent.

Windows and doors are common culprits for air leaks, accounting for around 10- to 25 percent of heating loss. By adding weather stripping and



Avoid heat loss by adding weather stripping and caulking to your windows.



Conserve energy by using a programmable thermostat to lower the temperature of your home when you are away.

caulking to windows and doors, you will be able to add an extra level of protection against heat loss. Also, make sure walls, attics and flooring especially above unheated spaces such as crawl spaces and garages—are properly insulated.

Employ the help of the sun to heat the home free of charge. Let sun shine in through open curtains during the day, but be sure to close all blinds and curtains after dusk to reduce heat loss.

Also, during cold winter months, make sure you are running your ceiling fans in a clockwise direction. Doing so will push down and redistribute hot air that naturally rises up close to the ceiling.

Turn down the temperature of the water heater to 120 degrees Fahrenheit. This saves money on heating costs and is still warm enough for your hot water needs.

It is recommended having your heating system evaluated if it is more than 10 years old or if it is not keeping your home comfortable. If your system needs to be replaced, talk to your installer about getting the most efficient unit you can afford. Doing so can help you save on your monthly heating bills.

## Safely Operating Your Portable Generator

Install a battery-

operated carbon

monoxide detector

for signs of carbon

monoxide inhalation.

and test it often, but

also be on the lookout

When you have lost power, a generator can provide the electricity you need to keep your home warm and power your appliances. However, if a generator is not used properly, it may present serious hazards. Western Cooperative Electric suggests these tips on using a portable generator safely.

A portable generator is usually

gas powered and movable. Before putting it to use, read and follow all manufacturer instructions. Also. check cords for damage and ensure that the device is able to handle the wattage or

amperage of the appliances you plan to use. Your generator should have more output than the wattage of the electronics you will plug into it. Make sure there is nothing plugged into the generator when turning it on.

Perform regular maintenance on your generator. It is recommended that a generator be operated once a month for 10 minutes to ensure it is running properly.

Always make sure the generator is grounded and used in a dry area. Use a generator only when necessary during moist conditions. Protect the generator by operating it under an open, canopy-like structure and on a dry surface where water cannot form puddles or drain under it.

Never connect your portable generator to the structure directly. This can result in potentially deadly backfeed power. Backfeed power

occurs when electricity gets fed back through the electrical system and meter into the power lines creating a hazard to line workers and others who may be near downed lines.

Remember to shut down your generator and give it time to cool before refueling. Always store your fuel away from the generator in an ap-

> proved, non-glass safety container with a charged fire extinguisher nearby. Never operate your generator near flame-producing devices, and be sure not to smoke nearby.

> > Never use

a portable generator indoors, and remember that opening a window or door or turning on a fan will not produce enough fresh air to reduce the danger of carbon monoxide emissions. Never run the generator near windows or doors that can draw the carbon monoxide back indoors. It is a good idea to clear at least three to four feet on all sides of the generator to allow for ventilation.

Install a battery-operated carbon monoxide detector and test it often, but also be on the lookout for signs of carbon monoxide inhalation. Symptoms include dizziness, nausea, headaches and lethargy. If you suspect that you or someone with you is exhibiting these symptoms, seek fresh air and medical attention.

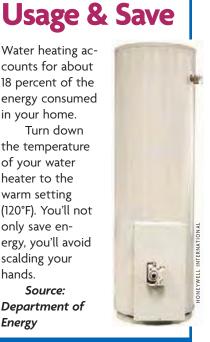
Next month, we will address backfeed with your portable generator and how to prevent it.

# **ENERGY HOGS Lower Your Water Heater**

Water heating accounts for about 18 percent of the energy consumed in your home.

Turn down the temperature of your water heater to the warm setting (120°F). You'll not only save energy, you'll avoid scalding your hands.

Source: Department of Energy



## Tip of the Month

Heating your living space uses more energy than any other system in your home—typically making up about 42 percent of your utility bill. By combining proper equipment maintenance and upgrades with recommended insulation, air sealing and thermostat settings, you can save about 30 percent on your energy bill.

## **Holiday Office Closing**

Our offices will be closed Nov. 24 and 25 in observance of the holiday. Western Cooperative Electric wishes you a happy Thanksgiving.



## **Busting the Myths about "Smart Meters"**

**Smart Meter** 

**Smart Metering** 

**System** 

By now, most Americans have likely heard of the "smart grid." This phrase describes the computerization of America's electrical infrastructure. The purpose of this computerization is to improve the reliability, efficiency, resiliency and security of the electric grid.

A key component of the smart grid is an advanced metering infrastructure, "AMI." AMI systems utilize digital meters as well as computer technology to measure electric use at homes and businesses more precisely than was possible with analog meters. The digital meters communicate via radio or existing power lines and Report have been loosely termed as "smart meters." AMI benefits Western's members with

greater accuracy in billing,

faster outage restoration, operational savings from digital versus manual meter reading, and detailed data that both you and Western can use to manage electric usage more accurately.

Unfortunately, a number of myths have developed over the years concerning these meters. These myths seem to fall into one of three categories: privacy, security, and health.

#### **Privacy**

Western Cooperative Electric keeps its members information private, that's the bottom line. The only people who see usage data are a handful of Western employees and you. Western will not release this information to anyone else without your specific permission. One myth is that the data collected can tell when you are home or away, exactly what you are doing when you are home, and that the data is being shared with the government. Naturally, the data could indicate when you are home because, for most families, energy consumption is higher during that time. The AMI meter cannot identify what activities are taking place down to the specific appliance in use. This myth is simply a myth!

### Security

Another myth is that smart meters actually make the electric grid less secure by providing an avenue for hackers to break into systems through the AMI meter and wreak havoc. While hackers continually attempt to break into electric systems, their focus is at higher

levels in the operation. Hacking a meter is unlikely for a variety of reasons. Hackers like to work remotely via the Internet. AMI meters do not offer that option. Network Radio-based AMI meters require the hacker to be nearby to catch the weak communication signal, break the proprietary communication proto-

col, and to be present for extended periods of time to collect the short burst of data sent. AMI meters are simply an unlikely and unprofitable target for hackers.



### Health

Finally, there are the myths surrounding AMI meters and ill effects on health. These concerns purport that having the radio-based AMI meter is the equivalent to having a cell tower attached to the side of your home. Again, this is unfounded. Let's look at why. Firstly, these devices communicate intermittently for as few as five minutes a day. They are regulated by the Federal Communications Commission ("FCC," and their output is well below the levels established by the FCC. As one expert observed, the radio waves emitted are more like those of a cordless phone or wireless router. Radio waves emitted by AMI meters are much weaker and less frequent than other sources we use daily.

We will all benefit from the continued development of America's smart grid and can rest easy with the knowledge that the current myths surrounding radio-based AMI meters are just that—myths and by definition, untrue!