



RURAL
MISSOURI

Sac Osage Electric Cooperative

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February 2015

News

Visit us on the Web - www.sacosage.com

It's Youth Tour Time...Picture Yourself Here!

WIN an all-expense-paid week in Washington D.C. this summer. Local winners will join about 80 Missouri high school students and will unite with a thousand other students from across the nation for a whirlwind tour of our nation's capitol and an opportunity to learn more about how government works. You will visit Capitol Hill, the Smithsonian, Arlington National Cemetery, the Vietnam Wall and other war memorials, including many other sites such as the Jefferson and the Lincoln Memorial, just to name a few.

The purpose of the tour is to provide an opportunity for outstanding youth to better understand the value of rural electrification and to become more familiar with the historical and political environment of the nation's capitol. This is achieved through visits to monuments, government buildings and cooperative organizations. Also, the opportunity to visit elected officials allows youth to better understand how the federal government works.

The other winner will visit Jefferson City for an award winning Cooperative Youth Conference and Leadership Experience (CYCLE) trip with lots of fun and an opportunity to learn more about our government, co-ops, and develop their own leadership skills.

If you know a high school junior, please encourage them to participate. It's their world to discover. It is an opportunity to see the process of government up close and personal. With the support of Sac Osage Electric members, it truly is an opportunity of a lifetime for these students and a chance to open more windows of opportunity for their future.



TRIP DATES:

Washington, D.C. Youth Tour:
June 12-18, 2015

Jefferson City, MO CYCLE:
July 15-17, 2015

To participate, high school juniors must write a 250-500 word essay. The schools in the following counties in our service area can participate in the contest: Cedar, Barton, Benton, Dade, Henry, Hickory, Polk, St. Clair and Vernon counties.

ESSAY TOPIC:

How electricity has affected my education?

Applying is simple. Visit our website www.sacosage.com or contact our office at 417-876-2721.



Energy Efficiency

Tip of the Month

Saving water means saving money, especially if that water is hot. Wash clothes in cold water whenever possible. Install low-flow shower heads and faucets. Fix drips as soon as they happen. Insulate the first 6 feet of hot water pipes. Choose the right water heater to meet your needs, and make sure it is set no higher than 120 degrees.

Rebates Plan Continues in 2015

No changes have been made to the existing rebate program for this year.

Sac Osage Electric rebates for the following:

- Dual-Fuel Air-Source Heat Pump Rebate (16.5 SEER minimum and must have a gas backup)
- \$300/ton Ground-Source Heat Pump Rebate (19.1 EER minimum)
- \$750/ton new install
- \$300/ton replacement unit

IMPORTANT - Completed application AND invoice/receipt must be submitted within 90 days of purchase.

A day for the birds

Most of us associate Valentine's Day with romance, but some old-timers used it as a gauge of their goose's productivity: "On Valentine's Day will a good goose lay; if she be a good goose, her dame well to pay, she will lay two eggs before Valentine's Day." Another old belief was that "on St. Valentine's



Day, all the birds of the air in couples do join." Poet Geoffrey Chaucer wrote: "For this was sent on Seynt Valentyne's day/ Whan every foul cometh ther to choose his mate." Doves became a symbol of Valentine's Day in part because they mate for life.

Little half-pint

Feb. 7 marks the birthday of Laura Ingalls Wilder, who was born in 1867 and known affectionately by her "Pa," Charles Ingalls, as "little half-pint." Her series of "Little House" children's books has been a favorite for generations and gives a vivid picture of early



American pioneer life. At one time, an attempt was made to ban "Little House on the Prairie" from some library and school bookshelves because of its portrayal of American Indians. The effort proved to be ill-considered and unsuccessful. In fact, the books are quite open-minded about the effects of early settlement.

Leap Year

The length of an actual year is about 365.24219 days; most yearly calendars have just 365. Without leap days added to the calendar every few years, the calendar would be off by 5 hours, 48 minutes and 45 seconds each year. A year is a leap year if it is divisible by 4, but century years



are not leap years unless they are divisible by 400. Century leap years include 1600, 2000 and 2400. The longest time possible between leap years is eight years, such as will occur between 2096 and 2104.

For recipes, gardening tips and weather forecasts, visit:
www.almanac.com

Recipe for Cornmeal Cookies



- 1 cup (2 sticks) butter, softened
- 1 cup sugar
- 2 egg yolks
- 2 teaspoons lemon zest, grated
- 1-1/2 cups sifted flour
- 1 cup yellow cornmeal

Cream the butter and sugar. Add the egg yolks, zest, flour and cornmeal and mix well. Shape dough into a log about 2-1/2 inches in diameter and chill for one hour. Preheat the oven to 350 degrees. Cut the dough into slices, place on a greased baking sheet and bake for 8 to 10 minutes. Cool on a rack.

THE OLD FARMER'S



WEATHER PROVERBS

Stick to your winter flannels till your winter flannels stick to you.

Violent north winds in February herald a fertile year.

If the bees get out in February, the next day will be windy and rainy.

The full moon brings long cold snaps; a pale full moon brings rain.

If February gives much snow, a fine summer it doth foreshow.

If you walk on snow, you cannot hide your footprints.

Some say thunder on Shrove Tuesday (Feb. 17) foretelleth wind, store of fruit and plenty.

Staying in the zone

Keep the temperature just right in your home

Dear Jim: Some rooms in our house are too hot or too cold, and someone is always complaining. What can we do to even out the room temperatures to keep everyone happy? Will doing this lower our utility bills? — Sean H.



by Jim Dulley

Dear Sean: It's likely there's not a single home in the entire country that has even temperatures throughout all the rooms. There are many factors — such as the length of ductwork, bends, orientation to the sun and the number of windows and exterior walls — that impact the room air temperature. The items you keep in a room also affect the air temperature. For example, if you have a large TV in a small room, it can raise the temperature.

Actually, it is not desirable to have all the rooms at the same temperature. Depending upon the activity level in various rooms, a range of temperatures may be more comfortable for you and your family. Also, some people simply prefer to have it warmer or cooler.

Many homes contain a single furnace or heat pump. If you set the thermostat to keep the chilliest room warm, this results in many of the other rooms becoming too warm. A warmer house loses more heat, forcing the heating system to work harder. According to the U.S. Department of Energy, for each degree the thermostat is set lower for an eight-hour period, heating bills can be reduced by up to 1 percent.

Installing an automatic zone control system is the best and most energy-efficient method to control individual room temperatures. A zone control system adjusts special duct dampers based upon the actual room temperatures and the desired temperatures.

Many homes have access to only main ducts, which later branch out to the individual rooms. In this case, the zone control system will control the temperatures in each room grouping, such as all the bedrooms, kitchen/dining areas and the living room. Although it is optimum to control each room independently, having just three or four zones is adequate for comfort and energy savings.

A programmable thermostat is mounted in each room or zone grouping to control the motorized duct damper leading to it. If the room is too warm during winter, the damper in the duct lead-

ing to that room partially closes. For example, a zone thermostat may continuously readjust the damper position as the intensity of the sun shining through a window changes throughout the day.

The majority of the energy savings with an automatic zoning system is realized because each room temperature can be varied throughout the day. There is no need to keep the bedrooms toasty warm during the daytime or the living room warm overnight. The programmable thermostats are designed to bring room temperatures back up without having the backup resistance elements come on.

There are various designs of zoning dampers from just a simple flat damper to bladders, which inflate with air to close off the ducts. They all function equally well. With the many new thermostats and use-control electronics, adding a zoning system requires professional installation. Talk to a qualified technician, and design a system that works best for your home.

Of course, another good reason to consider zoned temperature control is the potential to save on your energy bill. According to the U.S. Department of Energy, zoning combined with a programmable thermostat strategy can save you up to 30 percent on your energy bill.

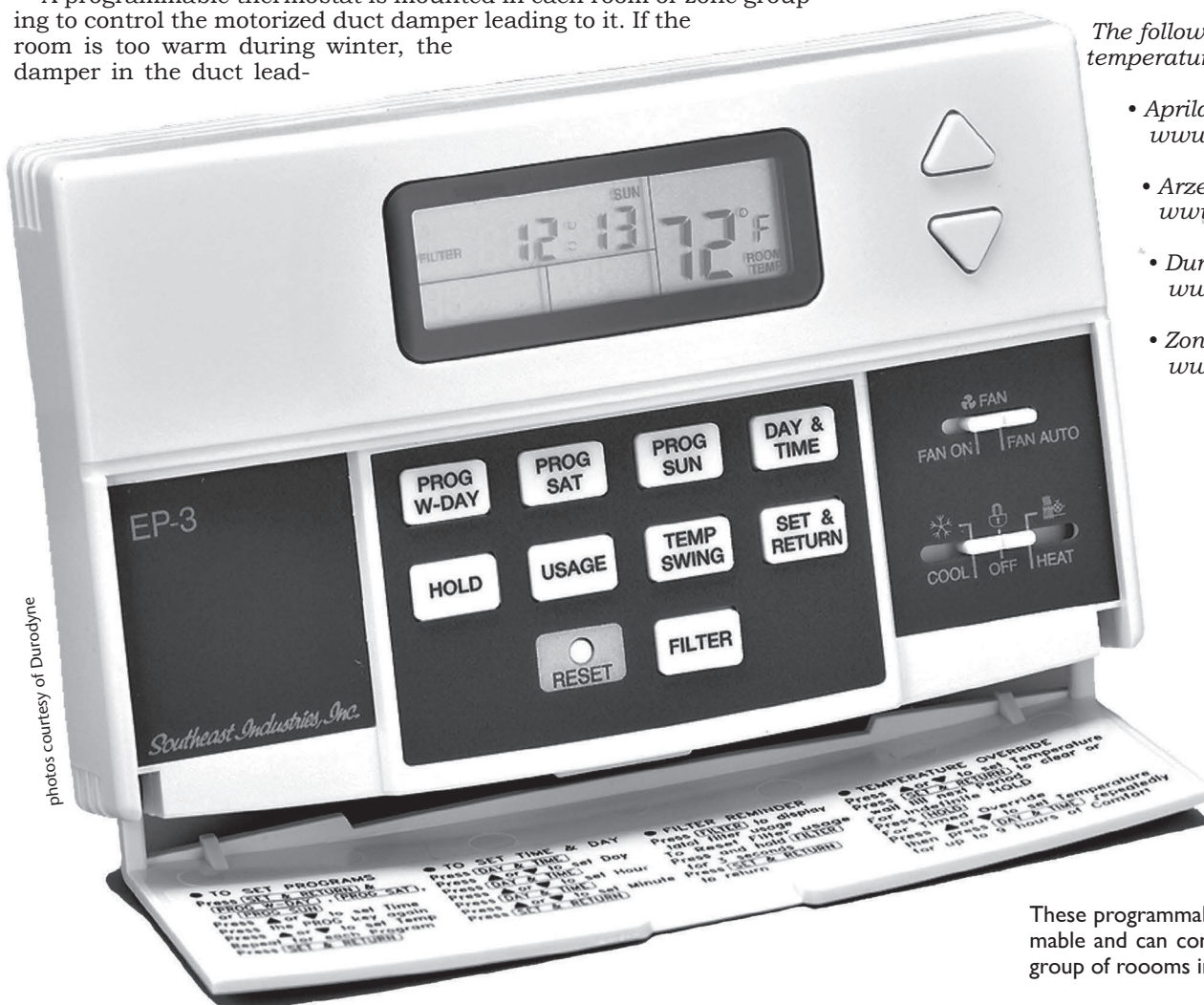
Consider zoned temperature control in your home if one or more of these conditions exist:

- More than one level.
- Large, open areas such as vaulted ceilings, lofts or an atrium.
- A room off the back or over the garage.
- Finished rooms in the basement or attic.
- A room or rooms with expansive glass areas.
- A portion built over a concrete slab floor.
- A rambling floor plan or wings extending off the main living area.

Do you have an energy-efficiency question for Jim? Email him at contact@dulley.com or write to: James Dulley, Rural Missouri, 6906 Royalgreen Drive, Cincinnati, OH 45244.

The following suppliers offer zoned temperature system:

- **Aprilaire**, 800-334-6011; www.aprilaire.com
- **Arzel Zoning Technology**; www.arzel.com
- **Durodyne**, 800-899-3876; www.durodyne.com
- **Zonex Systems**, 800-228-2966; www.zonexsystems.com



photos courtesy of Durodyne



photos courtesy of Zonex

These programmable zone control thermostats are programmable and can control the temperatures in one room or a group of rooms in one zone.

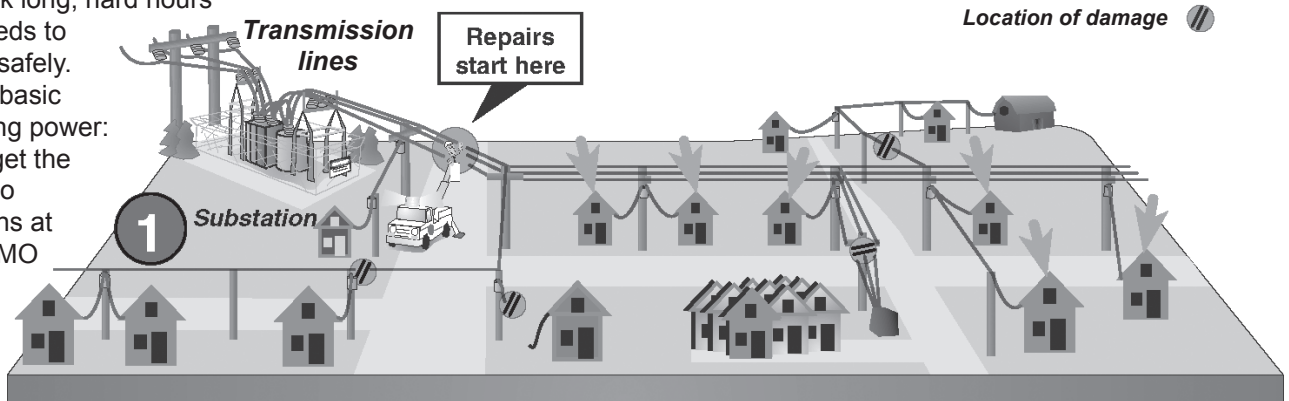


Getting Sac Osage members back on line

As members of a cooperative, we have come to expect that if we lose electric service it will be restored within a few hours at most. But when a devastating event, like a tornado, ice or snow storm causes major damage to our electric distribution system, longer outages are unavoidable. Crews work long, hard hours restoring service, but this task needs to be done methodically to be done safely.

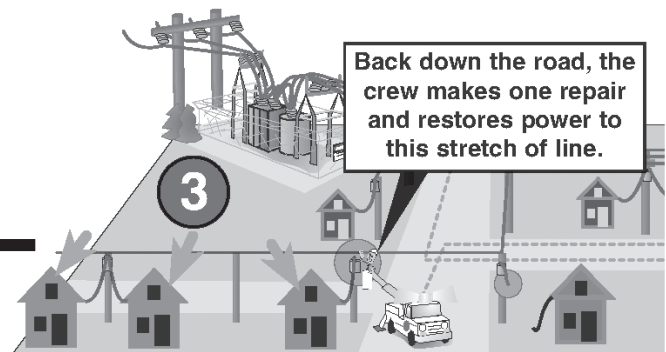
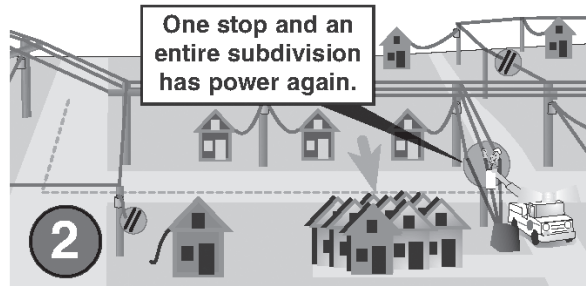
Electric cooperatives follow a basic principle when it comes to restoring power: priority goes to the lines that will get the most people back in service and to critical facilities. This usually begins at the substation (maintained by KAMO Power) with main feeder lines that can affect 300-3,000 members. Work continues out to tap lines, which may affect 20-200 members, and then to individual service lines affecting just 1-5 members.

If a major storm hit Sac Osage Electric Cooperative's system, here's a simplified look at how we would prioritize repairs and restore electric service.

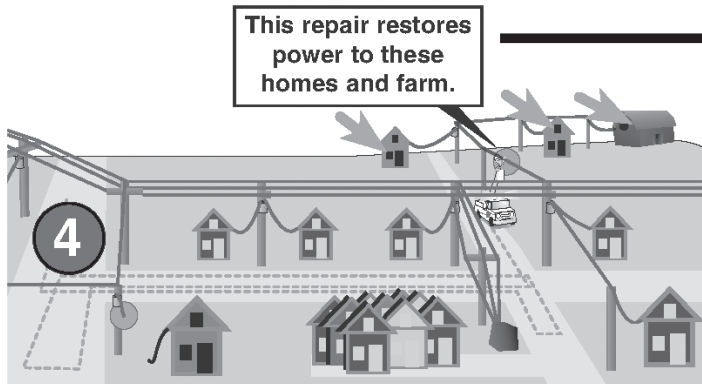


Step 1: The substation is energized but a main line is damaged nearby. Hundreds of members are without power. All repairs start with the main line. Many homes (shown with arrows) will receive power once the main line is fixed. All other repairs are ineffective until this line is restored, as it feeds all the other lines.

Step 2: With the main line restored, the line crew can isolate other damage and prioritize repairs. Although a couple of repairs were closer, fixing the line that serves the subdivision down the road will get a larger number of consumers on more quickly.

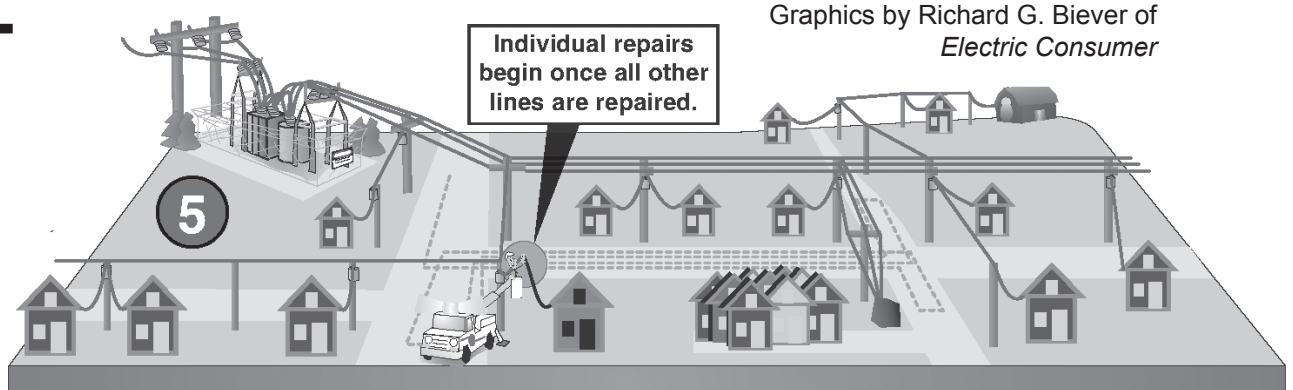


Step 3: Moving back down the road, fixing this tap line will restore electricity to the three homes marked with arrows.



Step 4: A smaller tap line serving a number of homes and the farm on the hill is next on the list for the line crew. The move probably doesn't make the family in the single house too happy. They've seen the crew driving by their home and working right across the road. They see lights in homes of all their neighbors but they still don't have power. Even though electricity is coming to their pole (that happened with the first repair in Step 1), the service line from their pole to their meter is damaged. Individual repairs are made after all distribution and tap lines are restored.

Step 5: After tap lines are repaired the crew can work on individual service lines. The crew has passed the single house three times, and could have stopped anytime after the main line repair restored electricity to the pole nearby. But it's not fair to other members for a crew to spend hours on a single repair when the crew can move down the road and restore power to dozens of homes in the same amount of time.



Graphics by Richard G. Biever of *Electric Consumer*

To learn the extent of damage from a major storm, check the **Outage Viewer** link available on www.sacosage.com.