



RURAL  
**MISSOURI**

# Sac Osage Electric Cooperative

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# News

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## C.Y.C.L.E.

Caeleigh Gardner, El Dorado Springs, sponsored by Sac Osage Electric Cooperative, was among the 98 high school students from across Missouri who participated in the Electric Cooperative CYCLE program. CYCLE stands for Cooperative Youth Conference and Leadership Experience. The conference was held July 15-17, 2015, in Jefferson City.

Each year in July, an action-filled three days provides high school students opportunities to learn first-hand what it is like to be involved in politics, the cooperative form of business and being a leader. The program included nationally known speakers and a day at the Missouri State Capitol learning how a bill goes through the process of becoming a law. To learn more about electric cooperatives, the group was divided up into small teams that competed in various events like the "build a cooperative" game. Another highlight was hearing from the Rachel's Challenge Organization. Rachel Scott was the first student killed in the Columbine High School tragedy on April 20, 1999. Today, her family and friends speak to youth around the world about Rachel's legacy of being a positive role model to everyone she met in life.

The CYCLE program is in its 12th year and is a recipient of the National Community Youth Service Award for the top youth program among all electric cooperatives in the country. For more information, contact program coordinator Mike Marsch at [mmarsch@amec.org](mailto:mmarsch@amec.org).



## Labor Day

**The office of Sac Osage Electric Cooperative will be closed on Monday, Sept. 7 in observance of Labor Day.**



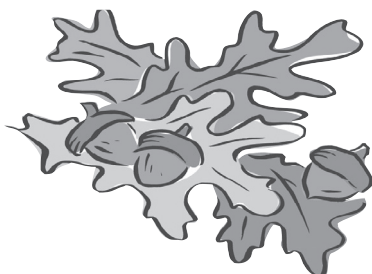
### Energy Efficiency

### *Tip of the Month*

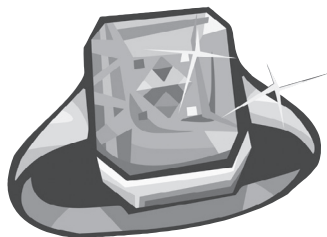
Considering adding your own renewable energy such as solar panels? First take a look at the energy efficiency of your home. Adding insulation, repairing window cracks, caulking air leaks and upgrading to Energy-Star rated appliances are all low-cost ways to cut your electric bill and help the environment. Electricity that is not needed is electricity that doesn't have to be made.

## Autumnal Equinox

This year's autumnal equinox occurs at 9:29 p.m. Central Daylight Time on Sept. 23. It is said that the wind and weather at the time of the equinoxes foretells the wind and weather during the following three months. If the autumn is warm, it is reputed that the winter will be long. If there's much autumn fog, there will be much winter snow. If the autumn is clear, the winter will be windy. If the storms of September clear off warm, however, you can expect the winter storms to be relatively warm as well.



## Peaceful Sapphire



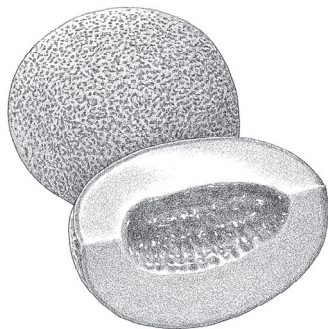
September's birthstone, the sapphire, was dedicated to Apollo, perhaps for its heavenly blue color or possibly for its extreme hardness, second only to that of the diamond. St. Jerome insisted that anyone wearing a sapphire could make peace with his enemies so, theoretically, Apollo wouldn't have needed the gem to wear into battle. For us mere mortals, the sapphire was supposed to help us gain favor with the gods. Pope Innocent III had these stones set in all his bishops' rings. The gem also was considered a guard against evil.

## First Labor Day Parade

It was on a Tuesday — not a Monday — in 1882 when the first Labor Day parade was held in New York City. Peter McGuire, who had proposed the idea for a holiday to honor American workers at a labor meeting earlier that year, initiated the first Labor Day celebration. Today's Labor Day parades are a far cry from that first event, but the tribute to the contributions American workers make toward our country's social and economic achievements remains the same.

For recipes, gardening tips and weather forecasts, visit:  
[www.almanac.com](http://www.almanac.com)

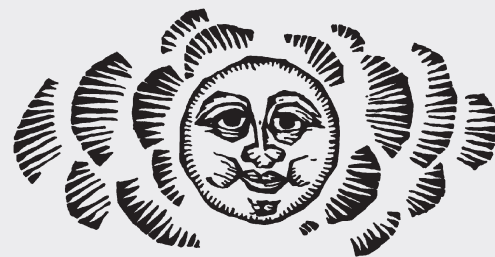
### Recipe for Cantaloupe Soup



1 ripe cantaloupe, peeled, seeded and cubed  
1 quart apricot juice  
juice of 1 lemon  
1 tablespoon sugar  
1/4 teaspoon cinnamon  
1/4 teaspoon ginger  
dash ground cloves  
1 cup sour cream  
sprigs of fresh mint for garnish

In a large pot, combine cantaloupe, apricot juice, lemon juice, sugar, cinnamon, ginger and ground cloves. Cover and simmer for about 30 minutes. Purée mixture in a blender and cool. Blend in sour cream and chill. Serve in chilled bowls, garnished with fresh mint. Makes 6 to 8 servings.

## THE OLD FARMER'S



## WEATHER PROVERBS

**Fair on Sept. 1, fair for the month.**

**September dries up ditches or breaks down bridges.**

**If red the sun begins his race, be sure the rain will fall apace.**

**Dew is produced in serene weather and in calm places.**

**A rainbow in the morn, put your hook in the corn; A rainbow in the eve, put your hook in the sheave.**

**When a cat sneezes, it is a sign of rain.**

**When pigs carry straw to their sties, bad weather may come.**

**When the bubbles of coffee collect in the center of the cup, expect fair weather.**



# Understanding home heat loss and gain

*Does heat rise?  
And how does it affect  
heating and cooling  
choices for your home?*

**Dear Jim: I plan to make a few efficiency improvements to my home and hire a contractor for the job. I would like a better understanding of how a home loses and gains heat so that I am not persuaded into unnecessary projects. Can you help? - Sheri W.**



by Jim Dulley

Dear Sheri: It never hurts to be as informed as possible about the projects you are considering. Using just a few of the proper terms and displaying some knowledge can keep a contractor from attempting anything unnecessary or unethical. Keep in mind, you will not know if the improvements helped until next year's utility bills arrive.

There are many DIY books about efficiency improvements, which would be a great starting point. Each home is unique though, so what some books recommend in general may not provide the best payback for your specific living space.

The most common misconception about a home is that heat rises. Heat does not actually rise. Instead, heat, which is a form of energy, flows equally in all directions. What does rise is warm air because it is less dense than cool air. This is important to keep in mind when determining where, how much and what types of insulation to use for various areas of your home.

The basic types of heat flow — out of your home during winter or into it during summer — are conduction, convection, radiation and air infiltration (leakage). Conduction is probably the most common type. This is how the handle on a cup gets hot from the coffee, or how heat flows through the wood studs inside the walls.

The amount of heat lost or gained from conduction is primarily a function of the temperature difference between the indoor and outdoor surfaces of an outside wall. If the outdoor temperature drops so that the temperature difference is twice as large, twice as much heat will be lost through the wall. This is why setting the thermostat lower during winter or higher during summer saves energy.

The insulation level of a home also affects heat loss. If the insulation R-value is doubled, the amount of heat loss is cut in half.

Convection refers to heat flow from a fluid, such as air or water, moving over a surface. The heat lost by convection also will double if the temperature difference doubles, but it will increase even more as the air blows faster. This is what causes a wind-chill factor during the winter.

Radiation is heat flow, which moves through space or air. This is how the sun warms us. Just as it warms you, your home also loses radiant heat to the outdoors, especially on a clear cold night.

The way radiant heat flow is unique is when the temperature difference is doubled, the heat flow increases by 16 times. On a clear night, outer space is minus 460 degrees, so the heat loss increases dramatically. On a summer afternoon, a black shingle roof can easily reach 160 degrees, which radiates heat through the insulation and the ceiling.

Now that you have this background knowledge, make a list of prob-

Above: A solid privacy fence creates an efficient windbreak to reduce convective heat loss from a home. Below: Keep tight-fitting fireplace doors closed when there is a fire burning. When the fire is out, close the chimney damper and the doors to block room air loss.



lem areas, such as a persistently chilly room. If the room is located on the northwest side of the home, convection losses and air infiltration from winter winds could be a factor. Erecting some type of windbreak — a privacy fence or even planting evergreen trees — can help.

Since heat moves down as well as up, check the lumber band joist, which rests on the foundation. If it is not insulated, which is not uncommon, much heat can be lost by conduction moving out of it. If this is the case, I recommend insulating the joint. While the insulation is being installed, caulk where the joist rests on the top of the foundation. This spot is often uneven and leaks air.

Installing shades and closing them at night can block the direct radiant heat flow to the cold night sky or from the hot afternoon sun. This is much less expensive than installing new windows. Have low-emissivity, reflective foil stapled under the roof rafters. This dramatically reduces the radiant heat flow downward on hot summer afternoons.

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





## WHAT'S AN AVAILABILITY CHARGE?

When we discuss Service Availability, population density is at the heart of the matter. As cooperatives, we purchase and distribute power to members who live across a vast region. This means we purchase, inspect and replace lots of poles, conductor and transformers. The more remote the location where the member lives, the more electrical infrastructure it takes to make service available. In contrast, municipal and large investor-owned utilities have more customers packed closer together. This means each transformer may serve five homes as opposed to one. They could also have twice as many customers in one block than cooperatives have in a mile. Providing power to densely populated areas allows for maximum profit with minimal investment.

Rural areas simply cost too much for large for-profit utilities to electrify. Too many poles, too many miles of line and too few customers deterred for-profit utilities from providing service in the 1930's. They determined, at the time, that there just was not a high enough return on investment. Realizing that rural America was not profitable enough for these utilities to electrify, friends and neighbors came together so they could create an electrical system, your cooperative. Those individuals became members, not customers.

To make service available to all members, no matter how far off the beaten path they live, most cooperatives have some form of service availability charge. This charge helps cover the minimum cost that is required to deliver service to every meter on the system.

As cooperatives have grown, they have maintained and added to their original systems. Items are inspected on a regular basis, and repairs or replacements are made to increase reliability. Likewise, if a storm damages the system, it is repaired at no out-of-pocket cost to the member. Service availability ensures that you have service, no matter how much or how little energy you purchase. This means each member of our cooperative helps pay their fair share.

Some items that are paid for by Service Availability include: Trucks, buildings, tools and other fixed costs that remain no matter how much electricity is sold. Think of it like this. If you own a car, you have to pay for insurance, license and taxes, whether you drive every day or once a year. Fixed costs are like those expenses that come with your car, and your co-op budgets for these costs the same as you. While you may not use much electricity, your local electric cooperative must keep the system functional, so that you have the ability to use electricity whenever you need it.

It costs just as much to ensure the reliability and availability of power for your cabin or grain bin as it does for your home.

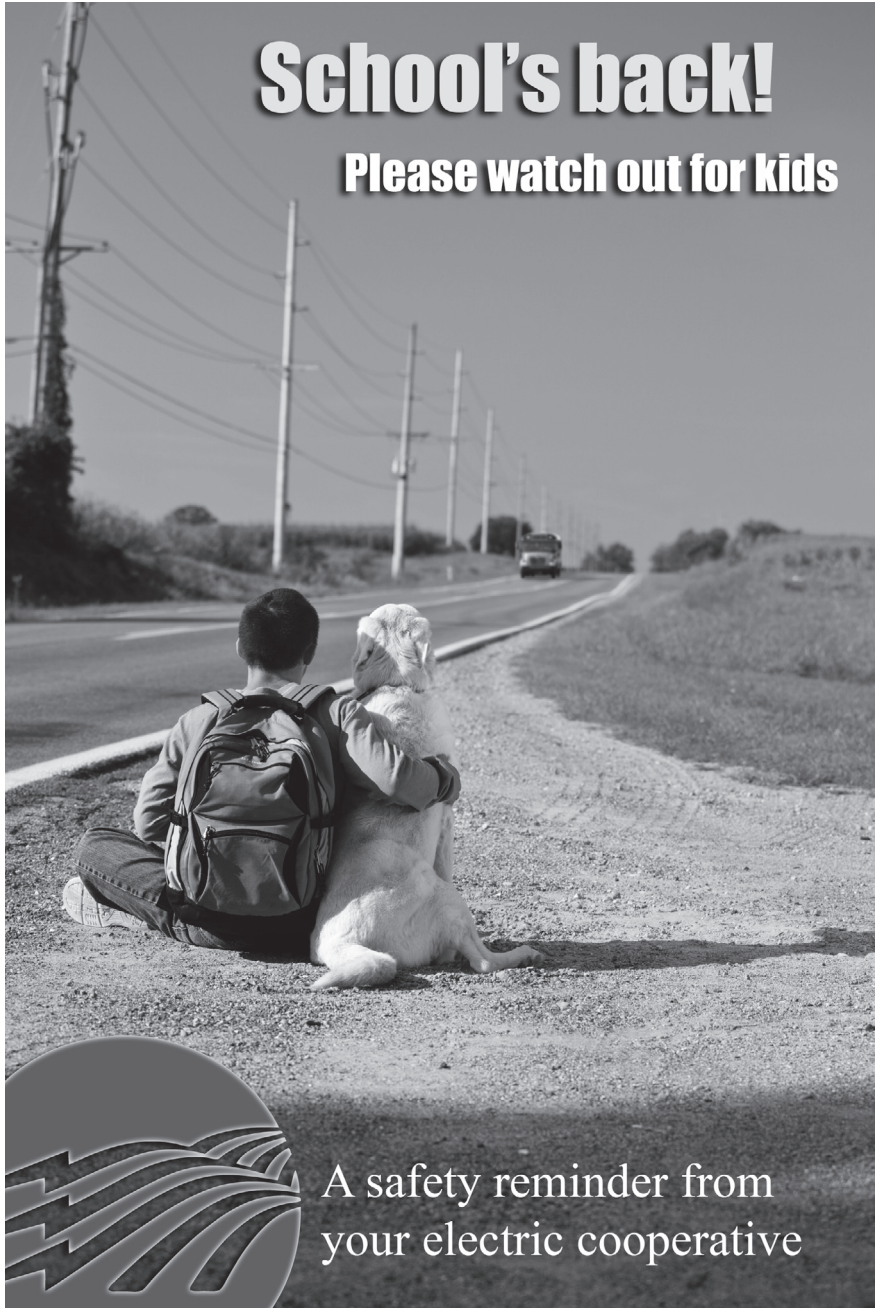
Another way to think of Service Availability is like insurance. You do not get billed if a storm takes down poles that feed electricity to your house, nor are you charged when a transformer goes bad. We do not charge you for each tree you have that we must trim to prevent outages. This is because every member helps pay their fair share each month.

We project the costs that we expect when we figure Service Availability. This allows us to be both proactive, by replacing items before they fail, and reactive, by responding with the tools and equipment needed when an outage occurs.

Since we operate under the cooperative model, we do not make profits to put back into the wallets of investors. This means that we estimate, as closely as we can, the costs associated with keeping the system reliable. If there are any revenues over margins, you receive Capital Credits at your board's discretion and based on the financial condition of your cooperative. That is the cooperative difference.

## School's back!

Please watch out for kids



A safety reminder from your electric cooperative

# SAFETY FIRST!

As the weather begins to cool, now is the time to inspect those electric devices you put away for the summer. Space heaters, electric blankets, humidifiers, etc. should be inspected to ensure you can safely operate them as needed.

