RURAL MISSOURI

Sac Osage Electric Cooperative

September 2017

News CYCLE

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Cooperative Youth Conference and Leadership Experience

Ryan Owens and Charlie Lines, both of El Dorado Springs, were among the 109 high school students from across Missouri who participated in the Missouri Electric Cooperative CYCLE (Cooperative Youth Conference and Leadership Experience) program. The conference was held July 12-14, 2017, in Jefferson City. They were sponsored by Sac Osage Electric Cooperative, El Dorado Springs.

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 to become a law. To learn more about electric cooperatives, the group was divided up into 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 14th 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.

Energy Efficiency *Tip of the Month*

When is the last time you changed your filter? The long, hot summer likely has clogged that old one, causing your air conditioner to work harder. Install a new one as the first step to getting ready for the coming heating season. When you are done, mark your calendar so that you remember to change it later.

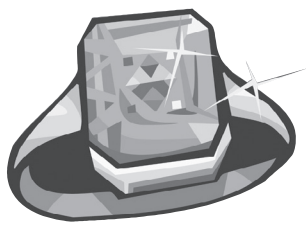
Labor Day

The office of Sac Osage Electric Cooperative will be closed on Monday, Sept. 4 in observance of Labor Day.

The OLD FARMER'S ALMANAC
This month with
September 2017

Peaceful Sapphire

September's birthstone, the sapphire, was dedicated to the mythical god, Apollo, perhaps for its heavenly blue color or possibly for its extreme hardness. Among gems, only the diamond is harder. St. Jerome insisted that anyone wearing a sapphire would



be able to make peace with his enemies, so, theoretically, Apollo wouldn't have needed the gem to wear into battle. For 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.

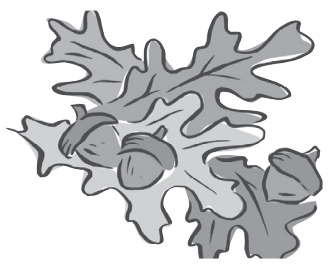
Michaelmas

Originally celebrated as the feast day of St. Michael on Sept. 29, Michaelmas continues to serve as a seasonal signpost. In the British Isles, crops were harvested and sold by late September, and farmers paid their yearly rent on Michaelmas. Everyone ate goose at Michaelmas to bring prosperity,

so many included "a goose fit for the lord's dinner" with their payment. Market fairs occurred on the feast day, and large crowds made it convenient to hold elections then as well. The custom of fall elections has continued, but today they have shifted to November.

Autumnal Equinox

This year's autumnal equinox occurs at 3:02 p.m. Central Daylight Time on Sept. 22. It is said that the wind and weather at the time of the equinox 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.

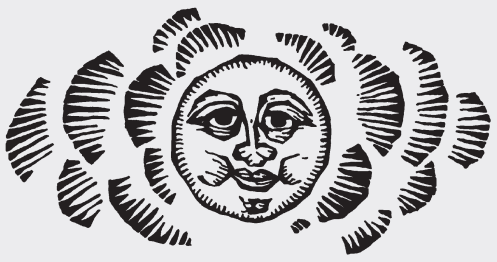
For recipes, gardening tips and weather forecasts, visit:
www.almanac.com

Recipe for
Red Cabbage with Apples

1 onion, chopped
4 tablespoons bacon fat
1 head cabbage, shredded
1/2 cup dry red wine
2 tablespoons vinegar
2 tablespoons brown sugar
2 apples, peeled, cored and sliced
Salt and pepper, to taste

Sauté the onion in the bacon fat until tender. Add the cabbage and stir well to coat. Add wine, vinegar and brown sugar. Bring to a boil and add apples, salt and pepper. Reduce heat, cover tightly and simmer for about 45 minutes until tender, adding water as necessary.

THE OLD FARMER'S



WEATHER PROVERBS

Fair on Sept. 1, fair for the month.

If St. Michael (Sept. 29) brings many acorns, Christmas will cover the fields with snow.

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.

The Benefits of Air

Advantages of upgrading to an air source heat pump

Dear Pat: It looks like we'll be needing to replace our furnace soon, and we're wondering if a heat pump would help us save some money. Do you have any suggestions? — Jonathon

Dear Jonathon: Your question is an excellent one, since for most of us, heating and cooling accounts for the largest part of our household energy use.

An electric air-source heat pump can be a good alternative to a furnace system that runs on propane or fuel oil. A heat pump also is a cost-effective alternative to electric resistance heat that is used in electric furnaces and in baseboard and wall units.

In the summer, an air-source heat pump acts as an air conditioner that draws heat from your home's air and transfers it outside. In the winter, the system's direction is reversed so that heat is pulled from the outside air and moved into your home.

The heat pump has two major components: the condenser (also called the compressor) that circulates refrigerant through the system and an air handler that distributes the conditioned air. Most heat pumps are split systems, with the condenser located outside and the air handler inside. A packaged system contains both components in one unit that is placed outside your home. Heat pumps usually distribute the hot or cold air through the duct system. Ductless mini-splits, which can serve as many as four rooms, will be covered in next month's column.

In the past, heat pumps weren't efficient enough to work in colder climates. In recent years, however, technology has advanced to make them viable in climates with long periods of sub-freezing temperature, such as the Northeast U.S.

If your old furnace has an air conditioner attached, replacing both the heating and cooling system with the all-in-one solution of a heat pump might produce significant cost savings. If you are currently cooling with window units, or have an older central AC, moving to an air-source heat pump could reduce your summer energy bills.

Heat pumps not only reduce energy costs, they can also eliminate the risk of carbon monoxide poisoning and problems that can occur with on-site storage of propane or heating oil.

Heat pumps must work harder to extract heat as the outside temperature drops. At some point the heat pump switches to resistance mode, which operates the same way a toaster or an electric baseboard heater works. If your area has very cold winters, you should consider a dual fuel system, which utilizes a heat pump along with a gas or propane furnace.

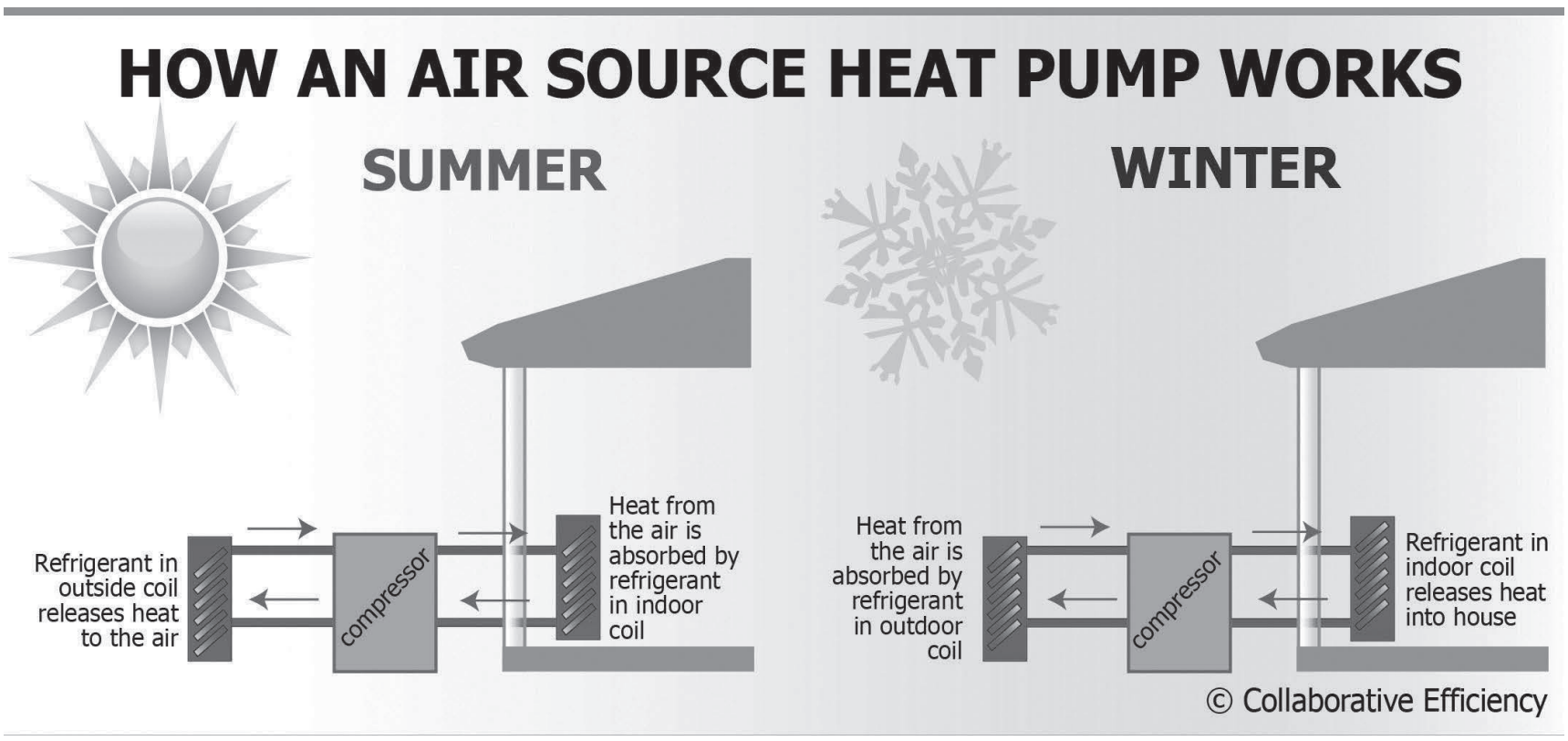
If you live in a cold climate, look for a unit with a higher HSPF rating, which measures heating efficiency: if you live in a warm climate, you probably want to focus more on the SEER rating, which measures cooling efficiency. The minimum standard heat pump is SEER 14 and HSPF 8.2 . An easy way to compare options is to look for the Energy Star label. This indicates the unit is at least 15 SEER and 8.5 HSPF. Visit www.energystar.gov to learn more about equipment, installation and qualified contractors.

How much can a heat pump reduce your energy costs? This depends upon the size and efficiency of your home, local energy prices and local climate. You can find calculators online that can help you predict energy savings. One entry with sample data found that the cost of heating in South Carolina, using a new heat pump and national average fuel costs, was less than half the cost of heating with a typical propane furnace or an electric resistance system.

Energy auditors can predict energy savings with greater precision, and they can offer advice on choosing a specific brand and size of the unit. More importantly, energy auditors can suggest other ways to improve comfort or reduce energy use such as duct sealing or insulating the building envelope.

Your local HVAC dealer, if they have heat pump experience, can be very helpful. Many heat pumps are not installed correctly, so be sure to ask how they will ensure a quality installation. Contact your local electric co-op to find out what they recommend. They may even offer rebates, free audits or discounted rates for electric heat.

This column was co-written by Pat Keegan and Brad Thiessen of Collaborative Efficiency. For more information on heat pumps, please visit wwww.collaborativeefficiency.com/energytips.



Sac Osage Electric Cooperative News

Utilities added to Move Over law

Thank you Missouri Legislature and Gov. Greitens! During the 2017 session, Missouri lawmakers added utility workers like those at your electric cooperative to Missouri's Move Over Law. The law requires drivers to move over — or if that's not possible to slow down and approach cautiously — when passing emergency vehicles, law enforcement, transportation workers and now utility workers.

Now this law will include employees of your electric cooperative as they work to restore power or repair lines along roadways.

Motorists must change lanes away from the emergency vehicle if they are on a multi-lane highway and can SAFELY do so. If drivers can't change lanes safely, or they are on a two-lane highway, they must slow down while maintaining a safe speed so as not to impede other traffic.

A violation can result in fines and/or imprisonment.

Work zones can be dangerous places, but by following this law the men and women who labor on your behalf can count on returning home to their families safe and sound. Their safety is on your shoulders.

Your electric cooperative encourages you to move over whenever you see flashing lights from our trucks or emergency vehicles.

What is Load Factor?

Steady, consistent, stable… While all words have good and bad meanings, these three words are often words we like to hear. A steady rain. Consistent growth. A stable income. You don't normally hear people say things like, "Boy, isn't it great how the stock market is fluctuating," or "That 8 inches of rain we got last night is really going to help the corn I just planted."

In the electric utility business, wild fluctuations generally aren't good for business or for our costs. If it were possible, we would like consistent and steady energy usage. The way that a utility can measure how consistently its members use energy over a given time period is through a formula called the Load Factor.

The Load Factor formula is simply kWh's (kilowatt hours) used, divided by the peak kW (kilowatt) demand during that period, divided by the number of hours in the period. A perfect load factor would be 100.0% and a terrible load factor would be close to 0%. The Load Factor in 2016 for Sac Osage Electric was 43.4% (150,151,320 kWh ÷ 39,483.4 kW ÷ 8,760 hours). The lower our system Load Factor is, the higher that the apparent cost per kWh is from our power supplier.

Since using more kWh's is not the way we want to go about improving our Load Factor, the only other way is to lower our peak Kw demand. Right now, members can help achieve this by reducing electric energy usage between the peak kW usage hours of 6-9 AM and 4-8 PM on days of temperature extremes.

Currently, members whose individual usage patterns fluctuate a great deal pay about the same as those with a steady usage pattern since we presently do not have a kW demand charge. However, due to technological advances in automated meter reading (AMR) and advanced metering infrastructure (AMI), a more equitable billing method is under development. Beginning in 2018, plans are being made to include a kW demand charge into a newly redesigned 3-part rate structure (availability charge, kW demand charge, and kWh charges).

As this new metering technology is integrated into Sac Osage Electric's billing system, it will allow us to reward members who use electricity at a steadier, more consistent rate.

PHOTO CONTEST

We are inviting our members to participate in a photo contest for our 2018 calendar. We would like photos for all seasons. Photos can be any appropriate subject or scene, but must be taken in the general Sac Osage Electric area. Deadline is October 6, 2017. Visit our website for details: www.sacosage.com or call our office 417-876-2721.