

# HEARTBEAT

## QUARTERLY NEWSLETTER



Issue #63

Winter 2017

### Operation RoundUp grants awarded

Nearly \$50,000 was raised last year through Heartland's Operation Round Up, making it possible to provide grants to 23 area organizations.

See page 2

### Annual Meeting to be held March 28

Heartland's Annual Meeting will be held at 7 p.m. Tuesday, March 28 at the Ellis Family Fine Arts Center on the campus of Fort Scott Community College.

See page 3

### What is a service availability charge?

Learn more about the service availability charge on your bill and how it helps Heartland.

See page 4

### Generators come in a variety of sizes

Whole-house generators can be convenient, but there's a lot to consider before making that investment in your home.

See page 7

## Substation Protection



Heartland Lineman Bob Rhodes installs equipment designed to prevent birds, snakes and other animals from causing outages in the co-op's substations. Additional information about this project is on page 4 of this issue of Heartbeat.

## Changing times could mean changing Heartland rates

Our board of directors has been engaged in discussions for quite a while regarding the changes we are seeing in

our electric utility industry. These changes include a low-growth environment, efficiency measures and renewable energy with solar and wind power.

The effects of these changes are shared by many electric cooperatives across the country and are having an impact on Heartland in varying degrees. The main result is sales of electricity remaining flat or even declining. This affects our financial performance which ultimately affects the rates the cooperative charges its members.

It is the board's duty and responsibility to ensure rates are responsible, fair and affordable. They have begun to examine the rates and their structure to determine if adjustments are needed

### KEEPING YOU INFORMED



DALE COOMES  
HEARTLAND CEO

See INFORMED, page 2

## INFORMED: From page 1

to ensure rates are fair, reasonable and affordable and the cooperative remains healthy into the future. They are looking specifically at areas involving the service availability charge, distributed generation charge, on-peak demand charges for the small commercial class, and an optional coincident peak demand charge for the residential class. These areas all relate to the issues that are pressing for attention by the board.

There is an excellent article in Heartbeat this month on page 5 called Changing Technologies that explains very well the fixed monthly charge, which you see on your bill as the service availability charge. It explains how and why the level of the service availability charge is set. The service availability charge is very important in ensuring members pay a fair rate to have access to the electric system. The board is considering whether any changes should be

made to our charge. The article also does a great job of explaining demand charges. This is another area the board is considering. Demand charges are a great way to send the right signal to electric users of when electricity is most expensive. Using electricity when it is less expensive results in opportunities for our members to save money on their electric bill while helping the cooperative to save on its power bill.

A distributed generation charge allows the cooperative to charge the proper amount to a member who is generating some or all of their own electricity with wind or solar power. The charge makes sure that the cooperative is properly compensated for the use of its electric system when usage has been reduced or eliminated with wind or solar power, but backup or partial supply is still needed. As the popularity of wind and solar power continues to grow, this will become a very important issue for the cooperative.

These areas will receive strong consideration by the board of directors. Please watch Heartbeat for more information.

## Operation RoundUp grants awarded

Many families in need are receiving help from 23 non-profit organizations this year as part of Heartland's Operation RoundUp.

Last year, nearly \$50,000 was raised by Heartland's Operation RoundUp program, which is entirely funded by donations from Heartland members and employees.

Grants awarded this past year include:

- Immanuel Lutheran in Hepler for mattresses for those in need;
- ECSE, Haderlein Elementary in Girard for swings;
- Save Haven Outreach Mission in Parsons for the homeless shelter;
- the Reach Out Food Pantry in Prescott;
- The Parker Elementary PTO for their Draw Along Assembly;
- Concern Inc. in Mound City for utility assistance, medicine, gas and rent;
- The Erie Area Christmas Baskets for food, clothing and diapers;
- Mound City United Methodist Church for utility assistance, medicine, gas and rent;
- Riverton First Baptist Church, Share With Love Food Pantry;
- The Otterbein Food Pantry in Chanute;

- Cherokee First Baptist Church Food Pantry;
- The Columbus Christian Center Circle of Life Recovery & Jail Ministry;
- Interlocal 637 in Pittsburg, mixer for cooking classes;
- A Meal in His Name in Farlington;
- United Methodist Church's Wesley House in Pittsburg for their food pantry;
- The Cherry Street Youth Center in Chanute for equipment for the youth program;
- United Methodist Church Columbus, food pantry;
- Feeding Families in His Name in Fort Scott;
- Greenbush Learning Tree Institute for children's summer camps for the needy;
- Life Christian School in Columbus for new computers for students;
- Mana Depot food pantry in Columbus;
- Chanute Homeschool Co-op for physical education items and pre-school curriculum;
- Friends of the Library in Linn County for summer lunch packs & family dinner book club.

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# Co-op annual Meeting of the Members set for Tuesday, March 28 at Fort Scott, Kan.

Heartland Rural Electric Cooperative has a long history.

Cooperative Electric Power and Light Company, based in Iola, was incorporated April 16, 1937. Sekan Electric Cooperative Association, Girard, was incorporated on April 19, 1939. And Mound City's Sugar Valley Electric Cooperative Association was incorporated on June 5, 1940.

That's a lot of years of history.

And in each of those years, a co-op annual meeting has been held to give those served by the cooperative the opportunity to make their voice heard in the utility's operation. It's an opportunity to learn about the cooperative, ask questions and voice concerns.

That tradition continues at this month's annual Meeting of the Members, to be held at 7 p.m. Tuesday, March 28 at the Ellis Family Fine Arts Center on the campus of Fort Scott

Community College.

Doors will open at 6:30, with the meeting starting at 7 p.m. Representatives of the cooperative and the HREC Board of Directors will give their reports, provide an update on the finances of the cooperative, and answer questions from members in attendance.

Results of the co-op's annual director election will also be announced at the meeting. This year, two of Heartland's four districts have competitive elections.

The first 100 members will receive a free heavy-duty stainless steel insulated 20-ounce tumbler.

In addition, a total of \$1,000 in cash will be given away during a drawing to be held at the end of the meeting.

There are no bylaw changes or voting issues on the agenda.

As in previous years, the meeting will not include a meal, but an ice cream social will be

held after the meeting, which is expected to take about an hour.

As a cooperative, Heartland offers members the opportunity to make their voice heard and have a say in the operation of the company.

Members elect the Board of Directors from the membership and get to participate in the business of the cooperative at the annual meeting every year. Local ownership and governance are what sets Heartland REC apart from other electric utilities.

Electric cooperatives are owned by their members and focus on members' needs and local priorities. Members have a voice in business decisions and know they can trust their cooperative because it was created not to make profits, but simply to deliver on the promise of providing safe, reliable and affordable electricity.

For additional information call the office at 620-724-8251.



Heartland's Annual Meeting will be held Tuesday, March 28 at the Ellis Family Fine Arts Center at Fort Scott Community College.

# Heartland pays members to reduce peak power use

Last summer, nearly 2,300 members of Heartland Rural Electric Cooperative participated in the Peak Savers program. By reducing electric use during key

hours on peak days, the members helped Heartland reduce our consumption of



peak electricity, lower power costs, and save money.

As a result of this power savings, Heartland paid successful program participants their share

of nearly \$45,000 in rewards. Of the 2,277 participants in the program, 1,374

earned a financial reward.

Our Peak Savers program had a great year in 2016. This summer we had three Peak Alert days, which was four less than in 2015.

We also reduced the window of our Peak Alerts from four hours to three, which made life easier for our pool of Peak Savers.

Another change in 2016 was to issue rewards as bill credits instead of individual checks. This helped us cut costs,

and pass the savings on to our members.

We appreciate the sacrifice our members make turning up thermostats in such hot weather. We know it's not easy.

We also know that many Heartland members take steps every day to conserve and be efficient in their use of electric power.

Those who take measures to conserve every day don't earn big Peak Savers rewards, but will instead save more on monthly electric bills.

# Understanding your utility bill: Service availability

## Monthly fee is an investment in the cooperative

As a member of Heartland REC, you make an investment in the co-op every time you pay your bill. This collective investment in the co-op benefits you and the community im-

mediately and over time. So what exactly is this monthly investment, and how do you benefit from it?

The service availability charge is a monthly investment that helps your co-op cover the expenses of maintaining the overall electric system. Combating cyber security threats and maintaining poles, wires, substations and co-op equipment takes strategic planning

and significant resources. The service availability charge essentially ensures that all equipment operates properly and staff is trained and ready so the lights turn on when you need them.

Regardless of how much electricity a particular family uses, the cost of delivering power to that house is the same. As a not-for-profit electric cooperative, we believe the op-

erational costs should be spread fairly and equitably across all of our members, regardless of the level of electricity use. That is why every member pays the service availability charge each month to cover basic operational costs. All members are charged the same amount for the cost of operation since all members benefit from the same service. In essence, this gives each co-op member an equal

share in Heartland's operation.

Your monthly investment ensures you have access to safe, reliable and affordable power when you need it. We appreciate and value the investment that you make in the co-op each month, and we strive to use that investment wisely for the benefit of all members of our community.

To learn more, please call our office.

# Project targets outages caused by animals

Outages are being reduced for many Heartland members thanks to new protective coverup at several substations.

One frustrating cause of outages for Heartland is animals that manage to get into the co-op's substations. Birds, snakes and squirrels are the most common culprits, blowing fuses and causing outages when they inadvertently make contact with the wrong wires.

But Heartland has found a new solution to this problem. Four of Heartland's 14 substations (Weber, Miami, Prescott and Conger) now have protective rubber and plastic wildlife protection that keeps critters from causing those outages.

It costs Heartland about \$12,000 to install this protective equipment in a typical substation, but the results have been so encouraging that the co-op is looking to eventually install it across the entire system.

The improvements are one of many ways that Heartland is looking to improve reliability. Other methods include annual system patrols, pole inspections, vegetation management and infrared photography of key elements that can help identify overheating equipment that is likely to fail and cause an outage.

**Heartland Lineman Bob Rhodes installs equipment designed to prevent birds, snakes and other animals from causing outages in the co-op's substations.**



# Changing technologies

## New rate structures give utilities new tools to keep prices fair for all

Advances in technology are bringing major changes to the energy industry. A growing portion of electricity is generated with renewable resources, and advances in automation and communications technology make the power grid smarter and more reliable than ever.

While these advances are exciting for American energy consumers, they also change the cost structure of the industry. Since electric utilities use costs to determine their rates, changing costs require corresponding changes to rates.

Not-for-profit electric utilities work hard to ensure their rates are fair to all members. To accomplish this mission, utilities design their rates so the bill each consumer receives matches the cost of serving that consumer as closely as possible.

As the energy sector moves through this period of innovation and change, utilities across the U.S. are experimenting with new rate structures in a quest to find the best way to recover costs and pay for the electric grid in a manner fiscally responsible and fair to all consumers.

Following is a quick look at three of the approaches electric utilities are trying.

### Time-of-Use Rates

With time-of-use rates, when you use electricity is just as important as how much you use.

Rather than paying the same price for electricity at all times, time-of-use rates charge different prices based on the time of day the energy is used.

The goal is to encourage consumers to reduce their

energy use when demand for energy is highest.

For most electric utilities, demand for electricity spikes in the afternoon and early evening as families return home from school and work and set about their evening routines.

When demand for energy spikes, utilities must buy extra electricity to meet the demand. That extra power typically comes from more-expensive power plants.

A time-of-use rate ensures there is always power available when consumers need it, but provides price incentives to shift certain activities—such as running the dryer or dishwasher—to times when demand for electricity is lower.

When consumers embrace this model, they can lower their monthly bills and help the utility reduce its costs—which can save consumers even more money in the long run.

### Demand Charges

Perhaps the most confusing concept in energy billing is the demand charge.

Historically, most residential consumers have not paid demand charges. But as the grid becomes smarter and our network of generation resources gets more complex, it is likely more electric utilities will incorporate demand charges into their residential rate structures.

Demand measures the highest amount of electricity you demand from the system at one moment in time. The higher the demand, the more it costs to build, operate and maintain

the equipment delivering that energy to you.

If you demand large quantities of electricity be delivered to you all at once, the electric utility has to build larger, more-expensive equipment to accommodate that demand.

Even if you only demand that much energy every once in a while, the utility has to ensure its system is capable of handling that request when it comes.

### Fixed Monthly Charges

Electric utilities charge a fixed monthly fee to be connected to the utility's lines.

At Heartland, that fixed charge is the service availability charge, which is currently \$30 a month for all residential and most commercial members

The goal of the service availability charge is to recover the cost of the poles, wires, bucket trucks, computers, switches and people that bring electricity to your home or business. Those costs are the same every month whether you use a lot of electricity or turn off everything in your house and go on a month-long vacation.

Most utilities have never charged the full monthly cost of service as a flat fee. Often, the fixed portion of a member's bill is only a fraction of the actual cost to build and maintain the power lines to their home or business. The rest of that cost has been made up with a separate delivery charge that varies based on how much energy you consume.

While not ideal, it is a model that has worked for years.

Most consumers are famil-



**New technology not only makes electricity more reliable, but makes possible new rates and cost structures.**

iar and comfortable with that approach. But as renewable technologies become more popular and consumers make better energy choices, the old model does not fully cover the cost of maintaining the grid.

Electric utilities want to help consumers find the best energy solutions to meet their needs.

If consumers want to reduce their energy use through home improvements and efficient appliances, utilities are eager to give advice. But even if we all consume less energy, we still need the power grid, and it is expensive to operate and maintain.

By lowering the variable

delivery charge and increasing the fixed charge, electric utilities can keep the grid running safely and reliably while allowing consumers to make the energy choices that work best for their lives.

This system does a better job of fairly charging each consumer for the actual cost of their service. The total amount of money raised by the utility remains unchanged, but some consumers pay a bit more, and some a bit less.

The coming years will bring many changes to the way we generate, deliver and use electricity, and advances in energy technology promise to improve quality of life.

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# Big generators offer big convenience

*Dear Jim: With all the severe weather, I am considering getting a backup generator. What are the best types to get to take care of the entire house? Can I run one continuously to lower my electric bills? - Jon H.*

Dear Jon: With most families dependent on electricity for almost every activity these days, backup generators are becoming more commonplace for houses. In addition to the loss of electricity from severe storms, there are more brownouts during summertime because the grid is stressed on hot afternoons from all the air-conditioning demands.

Backup generators for houses are called standby models because they are supposed to come on only when the electricity from the utility grid fails. They are designed to run for a relatively short time period until the power is restored. This typically may be several days or a week at the most.

If you attempted to run a standby generator continuously to totally eliminate the need for the utility company's electricity, it probably would not last long and would require much maintenance. Also, the cost for the fuel to operate it continuously would be much greater than your current electric bills. It is difficult to beat the efficiency of a major utility generation.

You must first decide what you mean by powering the entire house in order to determine the size of backup generator you will need. There are essential items such as the refrigerator, cooking, lighting, etc. which you will definitely need. Other items, such as air-conditioning, washing/drying clothes, vacuuming, etc. may not be needed during the power outage.

Backup generators are sized by their KW (kilowatt) electricity output. A 12-KW generator can power most the electrical needs of a typical family of

four. If you can eliminate nonessentials, a less expensive, smaller unit will be adequate and the fuel costs to operate it will be less.

To get a rough idea of the size of generator you will need, list all the electric items you want to power. Total up the wattages for all of these items. Ones with motors often require more electric current at start-up, so round up when determining the total. The contractor/installer can also advise you on the proper size. Installing a whole-house backup generator is not a do-it-yourself project.

For convenience and safety (for both your family and the utility company's emergency line workers), install an ATS (automatic transfer switch). This switch senses when the grid electricity goes off or the voltage drops below a critical point (brownout). It automatically disconnects your house wiring from the utility grid and starts the generator. This occurs quickly so there is very little down time.

The ATS also runs the generator periodically (called exercising) to test if it and the generator are working properly. You may hear the generator start the exercise cycle, so don't assume the electricity has necessarily gone off.

If you have natural gas available at your house, this is the best fuel to power the backup generator. Natural gas engines run cleanly, require little maintenance and are relatively inexpensive to run. Also, if you have natural gas, you probably have a gas furnace for heat, so the size of the generator required is smaller.

Another clean-running fuel for a generator is propane. Many homes with electric heat still have propane available for cooking. Propane is more expensive per Btu than natural gas. In order to power a whole-house generator, a larger propane tank would be required than just



**ABOVE:** This is a whole-house sized standby generator being installed at a home. Notice the small gas engine inside the housing. **RIGHT:** This shows the typical electrical connect from a standby generator to the house wiring.



for cooking.

A diesel engine-powered generator also requires a fuel tank and the shelf life of the diesel fuel is only a couple of years even with stabilizer. The overall cost of installing a diesel generator will be higher. An advantage of diesel though is that you can always pour more fuel into the tank if you must run it for a longer than expected time.

Another option is a less-expensive smaller portable gasoline-powered generator with several electrical outlets. This will provide enough electricity for the refrigerator, several lamps and to operate the blower in a gas, propane or oil furnace for heat.

Never try to just plug this type of generator into an electrical output with a homemade double-male cord for convenience during a power outage. This can backfeed 120-volt current into the grid which is a hazard for line repairmen.

Heartland offers an affordable transfer switch that can be installed by the co-op at the member's meter pole for the connection of portable generators with a 30 or 50 amp cord.

*The following companies offer backup standby generators: Baldor, (479) 646-4711, [www.baldor.com](http://www.baldor.com); Coleman Powermate, (888) 977-2622, [www.powermate.com](http://www.powermate.com); Cummins Onan, (800) 888-6626, [www.cumminsonan.com](http://www.cumminsonan.com); Generac Power Systems, (888) 436-3722, [www.generac.com](http://www.generac.com); and Kohler Power Systems, (800) 544-2444, [www.kohlergenerators.com](http://www.kohlergenerators.com).*

Send inquiries to James Dullely, Heartbeat, 6906 Royalgreen Drive, Cincinnati, OH 45244 or visit [www.dullely.com](http://www.dullely.com).

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For more information contact *Heartbeat* Editor Ron Graber at our Girard office or call 1-800-835-9586. He can also be reached at [rong@heartland-rec.com](mailto:rong@heartland-rec.com)



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# Be safe when using propane in your home

## What is propane?

Propane is a portable, clean and efficient energy source which supplies about four percent of total U.S. energy needs. It is a byproduct of natural gas processing and petroleum refining, and exists as both a liquid and a gas.

Propane is sometimes referred to as liquified petroleum gas, LP gas, or LPG. About 90 percent of our propane is produced in America, making it a stable, domestic energy source. It is nontoxic, colorless and virtually odorless - but, for your protection, odor is added so it can be easily detected when necessary. The chemical odorant that is added is called ethyl mercaptan, which has a strong smell similar to rotten eggs.

1910, Dr. Walter O. Snelling, a chemist and explosives expert with the U.S. Bureau of Mines, was asked to investigate vapors coming from the gasoline tank vent of a newly purchased Ford Model T. Snelling filled a glass jug with the gasoline from the car and discovered on his way back to the lab that volatile vapors were forming in the jug, causing its cork to repeatedly pop out. He began experimenting with these vaporous gases to find methods to control and hold them. After dividing the gas into its liquid and gaseous

components, he learned that propane was one component of the liquefied gas mixture. He soon learned that this propane component could be used for lighting, metal cutting, and cooking. That discovery marked the birth of the propane industry.

## Is propane clean?

Yes, propane is one of the cleanest burning fossil fuels. It creates less pollution than many other fossil fuels, providing all of us with cleaner, more breathable air.

Propane is a valuable alternative to electricity and significantly reduces emission of greenhouse gases.

## Propane use - safe handling tips & information

Many homes and businesses use propane gas for heat, hot water, cooking and electricity generation. It's important that you use caution when handling tanks, fuel lines, appliances and generators to ensure safety.

Here are some important propane safety tips:

- Don't use or store propane tanks in basements or living spaces
- Properly secure portable propane tanks when transporting
- Do not leave portable propane tanks in cars or closed vehicles
- Secure temporary tanks when used for building heat, hot water, or cooking
- Contact a qualified propane service retailer to connect tanks to appliances
- Do not use propane gas BBQ grills inside

■ Refrain from using stoves or ovens for space heating

■ Do not use portable electric generators indoors – keep them outside of buildings

■ Have a qualified propane service technician connect appliances and perform a leak test

## If you smell gas

■ Immediately extinguish all smoking materials and open flames

■ Get everyone out of the area where you suspect the gas is leaking

■ Turn off the gas supply valve of your propane tank if it is safe to do so

■ Once away from the leak, contact your propane supplier. If you can't reach them, call 911

■ Do not return to the area until your propane retailer, emergency responder, or qualified service technician determines it is safe to do so

## Don't run out of gas

Serious safety hazards, including fire or explosion, can result. If an appliance valve or a gas line is left open when the propane supply runs out, a leak could occur when the system is recharged with propane.

Air and moisture could get into an empty or depleted storage tank, which can cause rust build-up inside the tank. Rust can decrease the concentration of the odor of propane, making it harder to smell. If your propane tank runs out of gas, any pilot lights on your appliances will go out. This can be extremely dangerous.

