McDonough Power Cooperative
A Touchstone Energy® Cooperative

www.mcdonoughpower.com

The Wire 32

McDonough Power Cooperative • Macomb, Illinois 61455

Rate adjustments to be included in February bill

Mike Smith
President and CEO

One of the best parts of managing an electric cooperative is the ability, indeed the responsibility, to focus on providing the best possible service at the least possible cost. Costs of everything we use to operate, maintain and repair our system have seen substantial increases. Steel, copper, any item with a petroleum component, fuel, utilities (yes, we pay an electric bill, too) have all jumped significantly. Our wholesale power cost alone jumped 7% this year. While we're not passing that significant of an increase on to the membership; to maintain the quality, reliability and integrity of the services we provide, it is necessary for us to adjust our pricing structure.

Effective January 1, 2015, the following rate adjustments will occur. Members will realize this on their February bill for January usage. Additionally, our three-phase metered members will incur a $3.00 facility charge increase.

Rate Description	2014 Energy Charge	2015 Energy Charge	2014 Facility Charge	2015 Facility Charge
Single-Phase	$.11117	↓$.1095	$32.50	↑$36.00
Unmetered Electric Heat	$.8838 Oct-Apr $.11117 May-Sept	$.09500 (entire year)	$32.50	↑$36.00
Metered Electric Heat	$.08000 Oct-Apr $.11117 May-Sept	$.09500 (entire year)	$40.00	↓$37.00
Geothermal	$.08000	↑$.09500	$40.07	↓$37.00
Multi-Dwelling	$.10555	↑ $.1095	$59.00	↑$72.00

What is the facility charge? Let me explain this way. Your power bill has three components; the facility charge, the energy charge and a purchased power adjustment.

The intent of the facility charge is to cover the costs we incur to build and maintain the system that carries the electricity to your home or place of business. Even if we never move a single kilowatt over the wires, we still face these expenses in keeping the facilities in place to carry that energy.

You may be asking how increases can be avoided. The simple answer is that they can't. Costs will rise, technology and infrastructure upgrades will be necessary and usage will continue to increase. However, they can remain stable longer if you take steps to conserve energy. Every kilowatt hour the cooperative's members avoid using is one the cooperative doesn't have to buy and deliver. This newsletter and our website provide many great ways to save on electricity and better manage your energy use.

We invest in technology to improve reliability, operations and efficiency. We also live by the cooperative difference - as a cooperative, we are not driven by profits and making a return for shareholders. Rather, we are service-driven and operate at cost. Our focus is on keeping the business financially strong on behalf of all members, in order to continue to provide safe, reliable service at the lowest practical cost for many years to come.

7319D8-600C

Mike Smith
President and CEO

McDonough Power Cooperative

1210 West Jackson Street
P.O. Box 352
Macomb, Illinois
61455-0352

309-833-2101

www.mcdonoughpower.com

Office hours:
7 a.m. - 4 p.m. - Weekdays

Find us on: facebook

DIRECTORS

Steve Lynn, Chairman
Jerry Riggins, Vice Chairman
Steve Youngquist, Secretary
Jeffrey Moore, Treasurer
Mike Cox
Robert J. Dwyer
Steve Hall
Walter Lewis
David Lueck
John D. McMillan, Attorney

All Co-op Electric Outages 837-1400

A Touchstone Energy® Cooperative
The power of human connections

HomE 3.0 - Co-op energy efficiency rebates - round three

The HomE program (pronounced home E) started in 2010 with grant funding from the American Recovery and Reinvestment Act program through the Illinois Department of Commerce and Economic Opportunity's State Energy Plan. Your electric co-op and other co-ops across the state have helped make energy efficiency improvements to hundreds of homes with these funds.

The HomE program's initial success meant there would be approval for a second round of funding. And now there is a third round, but it is smaller and will likely be the last of the funds

If you didn't get a chance to participate in the first or second round of rebates, you now have a third and final chance. HomE 3.0 rebates are available until funding runs out, or until May 31. The program starts on February 1 and funds are on a first-come, first-served basis. So don't wait.

HomE 3.0 incentive rebates include:

Geothermal system - $1,000
Air-Source Heat Pump (16 SEER or higher) - $500

Insulation and Weatherization - 30 percent of total project cost, up to $500
Heat Pump Water Heater - $250

With the help of the first round of HomE funding McDonough Power Cooperative members-owners installed 24 geothermal heat pumps, 6 air-source heat pumps, and 20 made insulation and weatherization improvements.

7320C9-600C "We know a lot of members were unable to participate in the first two rounds of the HomE program for a variety of reasons," says Kelly Hamm. "All cooperative members are eligible for HomE 3.0. These rebates, plus the federal income tax credits that are available for some of the projects, make this a great time to make your home more energy efficient."

For more information contact Kelly Hamm at 309.833.2101.

HOME 3.0

Energy Efficiency Tip of the Month

Did you know that 90 percent of the energy used to operate a washing machine comes from using hot water? A simple switch from hot to cold can save a great deal of energy! Also, consider air drying or even line drying to save even more household energy.

Source: U.S. Department of Energy

Powerful smartphone apps

By Tom Tate

The smartphone is enabling the world to take advantage of the "Internet of things" and the "connected home" unlike any other device to come before it. In case you are not familiar with these two phrases, they both boil down to this – more products and appliances are being sold ready to connect to the Internet. The goal of this connectivity is many fold, including control, management, troubleshooting, comfort, convenience, security and entertainment.

Where does the smartphone enter this picture? According to several estimates, more than 50 percent of cell phones used in the United States qualify as smartphones. Because smartphone users almost never leave home without their device, and most keep it with them while they are home, it has become the catalyst that makes the "Internet of things" and the "connected home" a reality. Through apps for smartphones, appliances and products can now be commanded, controlled and managed from a single device.

Let's take a look at a selection of powerful smartphone apps. Since we are an electric cooperative, energy control and efficiency rank high on our list of priorities. Let's start there. Nest (www.nest.com) cracked the smart thermostat market open a few years back. Their device connects directly to your Wi-Fi network. This connectivity allows access for temperature control and monitoring, plus simplifies software updates to fix bugs and add features. Since then, Nest has introduced a smoke and carbon monoxide detector, as well as a video camera. And the company is working with other companies to allow their devices to work with Nests. Honeywell (http://lyric.honeywell.com) and Ecobee (https://www.ecobee.com) also offer their own lines of smart thermostats that are also controllable via an app.

Companies such as Belkin and Insteon have a wide range of products for home automation that include energy control features. Let's look at Insteon (http://www.insteon.com) for a moment. They offer replacement receptacles and switches that can be controlled via their app. They also offer sensors and security devices so you can create your own home security system. Insteon's products work with the app to send alerts, allow you to create schedules, monitor the devices and of course, directly control them. Belkin's entry falls under the name of WeMo (http://www.belkin.com/us/p/P-F7C030/) and offers similar functionality.

Aside from automating your home, there are a lot of additional things your smartphone can do. For those who are Star Trek fans, think of Spock's tri-corder, that marvelous device that allowed him to perform science magic on alien planets. The smartphone is bringing a tri-corder to everyone who has an interest. With small attachments, you can do amazing things. Camera buffs can use the Lumu Light Meter (http://lu.mu) to calculate light conditions for precise photography. Or you can simply download the LightMeter app from whitegoods to measure foot-candle levels wherever you desire.

For a truly Spock-esque experience, delve into the Lapka (https://www.mylapka.com/pem) world of Personal Environment Monitoring. With these modules and their app, you can measure organic (bacteria) levels, radiation, electromagnetic field and relative humidity. Or, if you want to know how much heat is leaking around your windows or if that manifold on the car is cool enough to touch, you can choose between the Seek (http://obtain.thermal.com/category-s/1818.htm) and Flir (http://flir.com/flirone/atHome.cfm) offerings. Of course, these allow you the opportunity to establish your own fledgling paranormal and big foot investigation unit for a fraction of the price of larger Infrared gear.

Other things smartphone-able include: padlocks, glucose monitors, door locks, light bulbs, personal protection, pet monitors and more health apps than you can shake a stick at. The list is practically endless!

As you may have already guessed, the proliferation of apps means a couple of things for smartphone users. One, they are going to need more memory and two, at some point, there will be a need to consolidate their apps to provide convenient control and monitoring. In a homage to J. R. R. Tolkien, we will need one app to control them all. An enterprising firm, Wink (http://www.wink.com), is already at work to consolidate home control. In the meantime, grab your smartphone, an app or two and see how you can shape your world.

522C3-150B

Tom Tate writes on cooperative issues for the National Rural Electric Cooperative Association, the Arlington, Va.-based service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

Every month we will have four map location numbers hidden throughout The Wire. If you find the map location number that corresponds to the one on your bill (found above the usage graph), call our office and identify your number and the page that it is on. If correct, you will win a $10 credit on your next electric bill.

Home heating: Calculating the benefits of electricity vs. propane

By Anne Prince

According to the U.S. Department of Energy, heating and cooling account for nearly half of the energy use in a typical U.S. home, making it the largest energy expense for most households. While few people enjoy spending money on home heating fuels, consumers are willing to pay for comfort in the form of heat.

In these colder months when the temperatures dip and the need to heat your home rises, it makes sense when trying to determine the most economical heating method to evaluate the cost per unit of heat. This is referred to as a British thermal unit (Btu).

Evaluating cost per unit of heat for propane and electricity

The Btu content per gallon of propane is 91,500 Btu. The Btu content for electricity is 3,413 Btu per kilowatt-hour (kWh). It takes 26.8 kWh to equal the Btu content of one gallon of propane.

Using the U.S. Energy Information Administration's table on residential propane and electricity rates for November 2014, $2.40 per gallon, excluding taxes, and 13.01 cents per kWh, we arrive at the following calculation:
26.8 kWh x 13.01¢ = $3.49

If we used only Btu content to determine the best energy source for home heating, it would appear that propane is less costly than electricity if the price for propane is below $3.49 per gallon.

Comparing usable heat costs

While we may have determined the cost of the actual heat content, what matters even more is the cost of the usable heat (warmth). A low-efficiency propane furnace may have an efficiency rating of 80 percent, and a high-efficiency propane furnace may have an efficiency rating of 95 percent. Let's assume we have a 90 percent efficient propane furnace. That means 10 percent of the Btus are not converted to useable heat (warmth). Here is the math:
91,500 Btu-10% Btu loss = 82,350 Btu
So now it only requires 24 kWh to equal the delivered Btu content of propane.
24 kWh x 13.01¢ = $3.12

Electric heat is 100 percent efficient

What may surprise most consumers is that the least efficient electric heating system delivers 100 percent efficient heat. Yes, electric resistance heat (i.e., space heaters, baseboard heating) is 100 percent energy efficient. Every single Btu in a kilowatt-hour is delivered as usable heat. So if you are paying more than $3.12 per gallon of propane for a 90 percent efficient propane furnace, it would be cheaper to use electric resistance heat.

Are we recommending that you use electric resistance heat as your sole heating source? No. While we are proud to offer a reliable source of electricity, we don't want to empty your wallet. However, if your only choice is electric resistance heat, we are happy to share saving tips – visit www.togetherwesave.com. **6224C2A-116B**

Pumping up efficiency

There are even more efficient electric heating systems called heat pumps. An air-source heat pump is at least 250 percent energy efficient. How is it so efficient?

In the heating mode, heat pumps do not use electric energy to create heat; they use it to pump heat into your home through a reversal of the refrigeration process. If you have central air conditioning, you have already experienced this process in reverse when your unit pumps heat out of your home in the summer. If you have ever stood next to the outdoor components you know the air conditioning system is exhausting very hot air. In winter, it simply does the opposite, moving heat into your home. Air source heat pumps are equipped with some type of auxiliary heat for those times when temperatures are near freezing or dip below. The typical back-up is in the form of electric resistance heat strips, but there is also a dual fuel propane option.

In calculating the Btu's per kilowatt hour for a heat pump we use this formula: **3413 Btu x 250% = 8532** Btu**.** This means that it only takes 9.65 kilowatts using an air source heat pump to deliver the same amount of warmth as a 90 percent efficient propane furnace.
9.65 kWh x 13.01= $1.25

The price of propane would need to drop to $1.25 per gallon to break even with the cost of home heating using an air source heat pump. Efficiency increases even more sharply when looking at the 350+ percent efficiencies of a geothermal (water source) heat pump. An additional advantage of geothermal systems is that they can be equipped to provide free water heating most of the year.

Providing reliable energy facts – regardless of fuel type

At McDonough Power, we believe it is our responsibility to provide members with reliable energy facts regardless of fuel type so you can get the most from your energy dollars. We are committed to helping you find the best energy solution for your budget and lifestyle and hope you will consult with your local co-op before making any big home-heating decisions.