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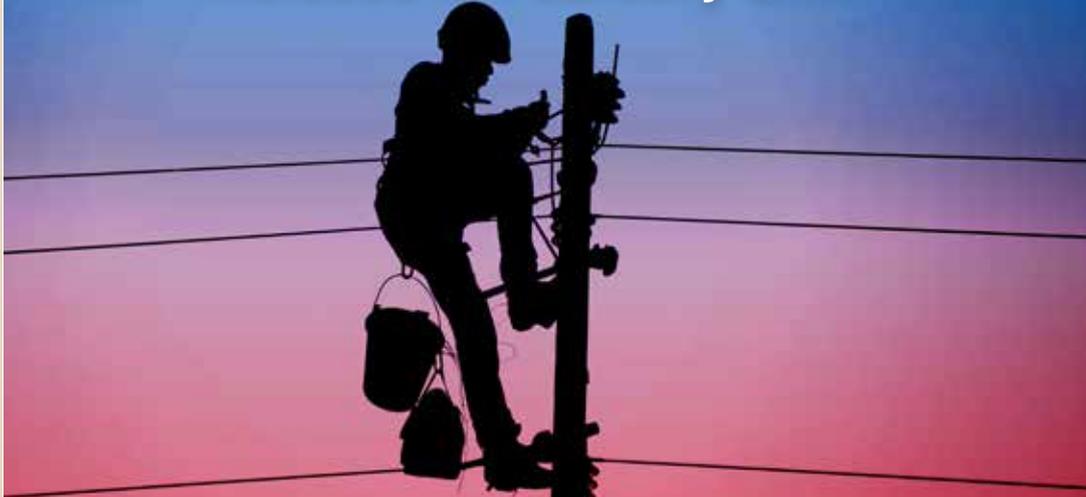
The Wire

McDonough Power Cooperative • Macomb, Illinois 61455



Mike Smith
President and CEO

Rate adjustments to be included in February bill



Rate design is a balancing act between meeting our revenue needs and minimizing member impact. Since we are a not-for-profit organization, we do not need large profits to satisfy far-away owners. Rather, we simply need to recover our costs of doing business, as well as provide sufficient margins to reinvest back into our electric distribution system.

Effective January 1, 2017 the majority of our membership, which is residential, will receive a \$1.00 facility charge increase. Members on three-phase and hog confinement rates will see a \$2.00 facility charge increase. Additionally, members on the residential rate will see a slight decrease in the energy charge; moving from \$.1095 per kilowatt hour to \$.109. Members should expect the changes on February bills for January usage.

We are asked from time-to-time, 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. **6324A1-704B**

McDonough Power Cooperative's rate design mission is to establish rates for the membership that are consistent, transparent and ensure the financial stability of the cooperative. The rates established will provide for sustainable, high-quality delivery of electric service.



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Utilities are raising awareness about scams

By Tracy Warren

When a scammer called Florida pet clinic operator Cindy Evers last year and demanded immediate payment on an overdue electric bill, it sounded real.

“They knew my account number and gave me a figure that I owed that’s close to what I usually pay on my electric bill,” Evers said. She paid, even though, in the back of her mind, she knew her payment wasn’t late.

“I have pets under sedation, and I’m taking care of animals. I think I just panicked, thinking they were going to shut my electricity off. I did what they told me to do.”

Evers lost \$900 because the call was a scam. 5428D2A-1250B

The scam that duped Evers has been plaguing utility consumers across North America for several years, robbing them of millions.

Now, utilities are fighting back.

Recently, more than 80 utilities and energy industry organizations from across the U.S. and Canada joined forces to recognize the first-ever North American Utilities United Against Scams Day on November 16, 2016.

Electric co-ops have increased their communication efforts, sending information directly to members and encouraging local TV stations and newspapers to warn citizens about the scam, how it works and what people should do and not do, if they are ever targeted.

Even the wariest consumers can be duped, however. The scammers are developing new tactics every day.

The “past due” scam, similar to the one Florida customer Evers experienced, goes something like this: A customer gets a call from an 800-number that looks like a valid utility company phone number. Widely available spoofing software allows crooks to display what appears to be an official number on caller IDs. The caller threatens to cut off power if the customer doesn’t pay.

But here’s the giveaway: The crook will demand payment via a prepaid debit card or money order. And he’ll ask for it within a specified time frame—often an hour or less.

The scammer may even quote an amount that sounds like your typical monthly bill. That way, the threat has even more credibility.

Scammers might direct the customer to a specific store nearby that sells the prepaid cards and instruct the customer to put money on the card and provide the card number to the scammer.

Some scammers have even been bold enough to contact potential victims in person, coming to the member’s house.

Here are some tips on how to protect yourself:

- Do not assume the name and number on your caller ID are legitimate. Caller IDs can be spoofed.
- Never share your personal information, including date of birth, Social Security number or banking account information.
- Never wire money to someone you don’t know.
- Do not click links or call numbers in unexpected emails or texts – especially those asking for your account information.
- Most utilities will NOT require their customers to purchase prepaid debit cards or money orders to avoid an immediate disconnection.
- If you receive a call that sounds like it may be a scam, or if you believe the call is a scam, hang up, call the police and report the incident to your local utility.

How you can help

You can alert your family members and friends. Share the scammers’ tactics described in this article or those you have heard about. You can also help raise awareness and warn others by reposting scam awareness information on social media; use the hashtag #stopscams.

Wind at work

By Tom Tate

The energy industry is changing. As technology advances, the use of electricity delivered by renewable energy sources is growing. Many Americans are interested in harnessing energy from the sun through the use of solar panels, but you might be surprised to learn that wind, as a renewable energy source, is a much larger contributor to America's diverse energy mix. Wind accounts for 4.7 percent of our nation's fuel mix.

So how is wind harvested? In simplest terms, the wind turns a propeller that is connected to a generator via a gear box; these parts are contained in a housing called a nacelle. This mechanical connection increases the revolutions of the blades from a leisurely 15-20 revolutions per minute (rpm) to 1,800 rpm at the generator, where wind becomes electricity.

As the wind changes direction, the nacelle turns the blades to continue generating. When wind farms are laid out, the placement of the turbines is strategically planned so the turbulence from one turbine does not interfere with the operation of others behind it. The turbines also have protective mechanisms built in that will furl the blades once a certain wind speed is reached to prevent the turbine from spinning itself to pieces.

Like everything else, technology is driving the development of larger capacity wind turbines. Earlier models of turbines had the capacity to produce 660 kW (kilowatts) to 1 MW (megawatts) of power. Current models have the capacity to produce 1.2 to 2 MW. And turbines able to produce 12 to 21 MW are currently being tested and developed. Larger capacity is critical to production because of Metz's Law. This theory was developed in 1919 by Albert Metz and stated that a wind generator would

be able to convert a maximum of 59.3 percent of wind energy into electricity. Larger capacity equates to more output.

Next, why are there typically three blades on a turbine? Single blade turbines have been found to be unstable in operation. Adding a second blade increases output by 10 percent. Adding a third blade increases output by 5 percent. Each additional blade increases the output, but the increase is considered small—and the increased cost of materials and construction make it uneconomical—so, three blades has become the norm. **8120SL41-864C**

Because of the enormous stresses the blades face—and the need for lighter weight—the blades are typically built from resin impregnated composite materials. The most common form of construction is molding epoxy soaked fiberglass into the desired shape with cores of balsa wood. Anyone who has ever built a balsa wood model airplane will question this, as those assemblies are extremely fragile. However, balsa's light weight and composition make it an excellent contributor to the stability and durability of these monster blades.

The largest blade being produced today is 75 meters (m) in length, just a bit less than the wingspan of an Airbus A380!

In the wind generation game, height is a critical consideration. Near the surface of the earth, wind conditions become unstable and erratic as the sun warms the ground. The temperature difference between the ground and the air creates effects like wind shear, which can make efficient operation difficult. At higher levels, undesirable ground effects rapidly diminish and wind speed becomes much more consistent.

The U.S. Government and other agencies produce wind speed maps at a

United States 2015 Fuel Mix (EIA)

- Coal = 33%
- Natural gas = 33%
- Nuclear = 20%
- Hydropower = 6%
- Other renewables = 7%
 - Biomass = 1.6%
 - Geothermal = 0.4%
 - Solar = 0.6%
 - Wind = 4.7%
 - Petroleum = 1%
 - Other gases = <1%

number of heights. Today's standard wind speed map uses a height of 80 meters. When a company looks to develop a commercial wind farm, they use these maps to locate areas where they can find a consistent 13 mph wind speed or higher.

A key challenge facing wind and solar energy is variability. The output of solar and wind, for example, can vary significantly over short periods, like when the wind stops blowing or the sun goes behind a cloud. One way to deal with that issue is energy storage, an advancing technology that will equip electric co-ops to beat peak energy prices and save members money.

For now, wind and solar are best deployed as components of a diverse energy portfolio that also includes traditional generating resources, but continued technological developments will ensure more reliable power from renewable resources in the future.

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.

Energy Efficiency Tip of the Month



A crackling fire in the hearth warms the house, but don't let it heat up your electric bill! Caulk around the fireplace hearth and keep the damper closed when a fire is not burning.

McDonough Power is looking for the next generation of leaders



What do 1,500 high school students, our nation's capital and electric cooperatives have in common? The Electric Cooperative Youth Tour, of course!

Youth Tour was established with one thought in mind – to inspire our next generation of leaders. Since 1964, more than 50,000 young Americans have taken advantage of this special opportunity offered by their electric cooperative. And McDonough Power alone has sent more than a hundred students over the past fifty-plus years.

It all takes place in June, when hundreds of electric co-ops across the country send participants to Washington, D.C. for a chance to learn about the cooperative business model and a full week of sightseeing.

While in D.C., participants have a chance to meet with their elected officials and discuss the issues that are important back home. Without a doubt, Youth Tour has grown into an invaluable program that gives young Americans an experience that will stay with them for the rest of their lives.

In January and February, McDonough Power will begin seeking

out local students to attend Youth Tour 2017. If you are a high school sophomore or junior interested in traveling to Washington, D.C. to experience the trip of a lifetime, please contact your guidance counselor to sign up.

Perhaps you know of an exceptional student who would be a great candidate for the program. If you do, please share this article with them. Each year McDonough Power Cooperative and McDonough Telephone Cooperative team up to take approximately 30 area students to Springfield for Youth Day. During Youth Day, students tour the Illinois Capitol, meet with state representatives, visit the Abraham Lincoln Museum and meet students from across Illinois. At the end of Youth Day, finalists are selected to participate in brief interviews. Immediately following the interviews, Youth to Washington winners are announced. 7319D1-600C

Youth Tour is so much more than a sightseeing trip. Students have repeatedly shared that this experience has helped them grow into successful professionals. It has also benefited our local communities. Youth Tour participants return home with a deeper understanding and

skillset of what it takes to be leader, and as a result, they put these skills to use right here in our community.

Help us find the next generation of leaders by sharing the Youth Tour experience with a promising student. For more information about McDonough Power's Youth Tour program, call 309.833.2101 or visit mcdonoughpower.com.



Member Prizes

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.