



Mike Smith
President and CEO

From the CEO's desk

Last month, I wrote about how electric utilities like McDonough Power (MPC) are a high fixed cost business with very low variable cost. The fixed cost is all the infrastructure required to get power from a power plant to our members' meters and to be able to maintain that infrastructure 24 hours a day, 365 days a year. The variable cost is the energy (kWh) portion of the electric bill. The member makes a choice to shut power off or turn on every light in the house, which is why it is considered variable. We can estimate what our members will use in the future, but it is at best an educated guess. Currently, the price of market energy is around 3.5 cents per kWh. Since the market energy is around 3.5 cents per kWh, why is the energy charge on your bill much higher? The answer, we collect a substantial portion of our fixed expenses on our variable energy charge to the member. Historically, this has always been the case. The reason is a significant number of our meters would be considered low user accounts which average less than 500 kWhs per month. A majority of our members have agricultural related businesses such as grain bins, machine sheds and well pumps. Since we are owned by those we serve, an effort to minimize the higher fixed charge was made. Also, low income accounts relied on a lower fixed charge because if they were able to control their usage, their monthly bill was lower. As MPC total kWh sales grew each year, the energy charge increase recovered enough revenue for the fixed cost increases, which is how it worked for decades, but that is changing because our electric grid is changing with the development of distributed generation. Behind the meter generation or as it is

commonly referred to as distributed generation (DG) serves to offset the members own usage by allowing the member to generate their own power on site and eliminating the need to purchase as much power from the utility. Currently, MPC has two programs for renewable energy. Net metering was voluntarily adopted by the MPC board of directors in 2007 and allows a member the opportunity to self-generate for a DG systems up to 10 kW. The second program refers to Qualifying Facilities (QF) which is defined by the Public Utility Regulatory Policies Act (PURPA) of 1978 which say that utilities are required to purchase excess generation back from facilities that have excess power generation. **8331B9-672B**

The point to follow here is both the solar and non-solar members needs access to a high fixed cost asset (the electric grid) that is currently being supported by revenue that is tied to a variable (kWh) charge. To be fair, each member needs to pay their share of the fixed cost, and next month I will talk about what we need to do in order to make this happen.





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Considering solar? We're here to help.

Today's consumers want and expect options, including the type of energy powering their homes. Many homeowners are looking for a less expensive form of energy with ongoing savings. Some are looking for a green energy source. These two motives are why many homeowners are exploring solar panels.

The interest in alternative energy sources is also being fueled by decreasing costs for solar, the availability of financial incentives and the proliferation of companies offering solar panel installation.

However, as attractive and popular as rooftop solar may appear, it is important for consumers to fully understand its true costs, the operational reality of this form of energy and actual energy savings. To determine whether solar is right for their situation, homeowners must undertake their due diligence.

We're here to help.

As your trusted energy advisor, McDonough Power can offer an assessment of your specific situation. After all, McDonough Power has a different "bottom line" that is not directly tied to the sale of a product or service. We constantly strive to find new ways to help you use energy more efficiently.

Unlike a solar company that has one objective—to sell their products and services—we will look at the total energy picture and help you determine the best options for your home. While solar

certainly works for many people, it's not the answer for all.

Sizing the system appropriately is key. It's in your best interest to offset only the energy you consume. Energy sent back to the grid receives credit for about 3 cents per kilowatt hour, not the 10-12 cents retail rate. The retail rate that members pay includes the costs involved in getting power from the power plant to members' meters, which is a large portion of McDonough Power's bill from the wholesale supplier.

There are several financial factors at the utility level to consider when you are contemplating solar or any type of distributed generation. **8436D7-672B**

- Will the service need to be upgraded to accommodate the load?
- What is the cost of a \$1 million liability insurance policy that is required?
- If the system is over 10 kW there could be a metering cost, monthly administrative fees, etc.

McDonough Power Cooperative recognizes that consumer interest in green energy sources and renewables is at an all-time high, and we stand ready to help our members determine their best options. Please visit the Distributed Generation & Net Metering section under the Member Services tab at www.mcdonoughpower.com for further details.

Three easy DIY projects to save energy

By Abby Berry, NRECA

Winter weather can have a big impact on your energy bills, hitting your pockets a little harder than you would have liked – remember back in January when we were experiencing sub-zero temperatures. Now that spring is just around the corner, it's the perfect time to tackle a few DIY efficiency projects for your home. The good news: You don't have to be an energy expert to do this! **7426D9-606A**

There are several easy ways to save energy, but if you're willing to take a hands-on approach, here are three projects you can do now to start saving.

Make the Most of Your Water Heater.

Let's start with one of the easiest projects: insulating your water heater. Insulating a water heater that's warm to the touch can save 7 to 16 percent annually on your water heating bills. It should also be noted that if your water heater is new, it is likely already insulated. But if your water heater is warm to the touch, it needs additional insulation. You can purchase a pre-cut jacket or blanket for about \$20. You'll also need two people for this project. Before you start, turn off the water heater. Wrap the blanket around the water heater and tape it to temporarily keep it in place. If necessary, use a marker to note the areas where the controls are so you can cut them out. Once the blanket is positioned correctly tape it permanently in place, then turn the water heater back on. If you have an electric water heater, do not set the thermostat above 130 degrees, which can cause overheating.

Seal Air Leaks with Caulk.

The average American family spends \$2,000 annually on energy bills, but unfortunately, much of that money is wasted through air leaks in the home. Applying caulk around windows, doors, electrical wiring and plumbing can save energy and money. There are many different types of caulking compounds

available, but the most popular choice is silicone. Silicone caulk is waterproof, flexible and won't shrink or crack. Before applying new caulk, clean and remove any old caulk or paint with a putty knife, screwdriver, brush or solvent. The area should be dry before you apply the new caulk.

Apply the caulk in one continuous stream, and make sure it sticks to both sides of the crack or seam. Afterwards, use a putty knife to smooth out the caulk, then wipe the surface with a dry cloth.

Weather Strip Exterior Doors.

One of the best ways to seal air leaks is to weather strip exterior doors, which can keep out drafts and help you control energy costs. Weather stripping materials vary, but you can ask your local hardware or home store for assistance if you're unsure about the supplies you need.

When choosing weather stripping materials, make sure it can withstand temperature changes, friction and the general "wear and tear" for the location of the door. Keep in mind, you will need separate materials for the door sweep (at the bottom of the door) and the top and sides.

Before applying the new weather stripping, clean the molding with water and soap, then let the area dry completely. Measure each side of the door, then cut the weather stripping to fit each section. Make sure the weather-stripping fits snugly against both surfaces so it compresses when the door is closed.

By completing these simple efficiency projects, you can save energy (and money!) while increasing the comfort level of your home. And you can impress your family and friends with your savvy energy-saving skills.

Energy Efficiency Tip of the Month

Spring is nearly here! Now is the perfect time to test your A/C and ensure it's ready for summer. Remember to check the evaporator coil, which should be cleaned annually for optimal efficiency.

Source: energy.gov



**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.

Would your home pass an electrical inspection?

If you're getting ready to sell your home or just wondering how electrically sound it is, there are some general guidelines out there to assess the condition of your home's wiring and electrical bones. Although it varies depending on where you live, most local codes follow the National Electric Code (NEC).

The NEC is an industry-specific, jargon-filled document that outlines required practices for all aspects of residential and commercial electrical installation. Don't worry, you don't have to google it and read it from cover to cover, but know that your local code could vary. Local code always wins out when there are variances, so be sure to check with your qualified electrician or local building department (start with your city or town) for specific code requirements.

Electrical malfunction is dangerous. U.S. fire departments responded to an estimated average of 45,210 reported U.S. home structure fires involving electrical failure or malfunction per year from 2010 to 2014, according to the National Fire Protection Agency. The home fires resulted in 420 deaths, 1,370 injuries and an annual \$1.4 billion in direct property damage.

In general, here are some all-house guidelines that an inspector would look for; remember they may or may not align with your local electrical code but they are NEC-mandated. If your home has any of the following defects, it may not pass an electrical safety inspection:

- Old knob-and-tube, along with BX cable wiring, common in the U.S. from about 1880 to 1930
- New lights and receptacles installed into old wiring
- Overcrowded wires; i.e. too many wires bundled together producing excess heat
- Spliced wires that were illegally installed (they must be installed by an approved method)
- Broken or missing carbon monoxide detectors or smoke alarms (whether smoke alarms must be hard wired

Home Electrical Inspection:
Pass or Fail?

Would your home pass an electrical inspection? Local electrical codes vary, so check with your qualified electrician, but here are **five things your home should have:**

- Wiring should be sound (not overcrowded or knob-and-tube wiring used in old homes).
- Ceiling fixtures should be controlled by a wall switch and not just a pull chain.
- Outlets near water should have GFCIs (ground fault circuit interrupters).
- Your refrigerator, microwave and garbage disposal should each have its own circuit.
- Your island should have its own outlet.

Learn more at SafeElectricity.org

depends on the age of the home and in most cases, whether any home improvement projects required a permit)

- Non-insulated/non-contact-rated recessed lights that touch attic insulation, which is a fire hazard
- Improper overcurrent protection, which means the breaker or fuse is too large for the wire rating
- Improper Grounding and Bonding of electrical panels and devices
- Some other room-specific things to look for include:

Kitchen

- Does your electric range, cooktop or oven have a dedicated 240-volt circuit? **7426B7-606A**
- Is the breaker for the range, cooktop or oven sized correctly?

- Does your island have its own outlet? (The NEC has outlet requirements for kitchen islands, peninsulas and countertops.)
- Does your microwave, refrigerator, microwave and garbage disposal each have its own circuit?

Bathroom

- Are outlets GFCI (ground fault circuit interrupters)? GFCIs are designed to protect people from electric shock around water.
- Do your combination fan/lights have their own 20-amp circuit?
- Do the light fixtures in the shower or tub area have a "lens" cover? Are they moisture resistant?

Other Rooms (living, dining, family, bedrooms)

- Does each room have a wall switch installed beside the entry door?
- Are outlets installed no farther than 12 feet apart?
- Are ceiling fixtures controlled by a wall switch and not just a pull chain?

There are also hallway, staircase and garage code requirements, as well as those for the electrical service panel and wiring. Check with your qualified electrician or the city or town where you live for specific code requirements in all areas of your home.

Arc-Fault Circuit Interrupters (AFCI)

Many prominent electrical and homebuilding experts believe that using arc-fault circuit interrupters (AFCI) in these areas of homes has a significant impact on homeowner safety and that they reduce the number of lives lost in home electrical fires.

An AFCI is designed to detect series faults, line to neutral faults and line to ground faults, effectively stopping a fire before it starts.

For more about electrical safety, visit SafeElectricity.org.