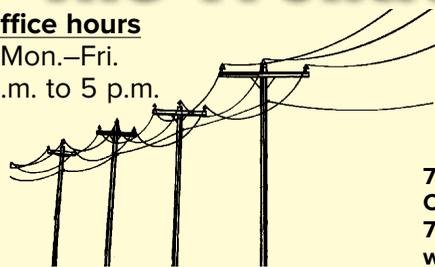


The Frontier Power Company LINES

Office hours

Mon.–Fri.
8 a.m. to 5 p.m.



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Busting myths about digital meters

BY NOW, MOST AMERICANS HAVE LIKELY HEARD of the smart grid, which is the computerization of America's electrical infrastructure. The purpose of making the grid "smart" is to improve its reliability, efficiency, resiliency, and security.

A key component of the smart grid is an advanced metering infrastructure, also known as AMI in the utility world. AMI systems use digital meters and computer technology to measure electric use at homes and businesses more precisely than was possible with analog meters. The digital meters

communicate via radio or the existing power lines, which results in greater accuracy in billing, faster outage restoration, efficiency in meter reading, and detailed data that you can use to manage your electricity use.

Unfortunately, a number of myths have developed over the years concerning digital meters. These myths can be classified into three categories: privacy concerns, security, and health effects.

Frontier Power takes great pains to keep your information private, and that includes the details of your electricity use. The only people who see that data are co-op employees and you. Your co-op will not release this information to anyone else without your specific permission. The myths are that the data collected can tell when you are home or away and exactly what you are doing when you are there. Naturally, the data will show when you are home because for most families, energy consumption is higher then. But digital meters cannot identify what activities are taking place, down to the specific appliance in use. This myth is simply unfounded.

What about the myth that these meters actually make the electric grid less secure by providing an avenue for hackers to break into systems through the meter and wreak havoc? While hackers continually attempt to break into electrical systems, their focus is at higher levels in the operation. Hacking a meter is unlikely for a variety of reasons. For one, hackers like to work remotely via the internet,

and smart meters don't offer that option.

Radio-based digital meters require the hacker to be nearby to catch the weak communication signal, break the proprietary communication

protocol, and be there for extended periods of time to collect the short burst of data sent. Therefore, smart meters are an unlikely and unprofitable target for hackers.

Finally, there are the myths surrounding smart meters and ill effects on health, which state that having a radio-based smart meter is the equivalent to having a cell tower attached to the side of your home. Frontier Power's meters actually use the power lines to communicate information, so no radio waves are emitted at all. But if they were, the levels are as low as those of a cordless phone or a wireless router. These devices are regulated by the Federal Communications Commission, and their output is well below the levels the agency sets. Radio waves emitted by digital meters are much weaker and less frequent than other sources we use on a daily basis.

We will all benefit from the continued development of America's smart grid and can rest easy knowing that the rumors surrounding smart meters don't hold water. ☺



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A Touchstone Energy® Cooperative 

Generate Safely

Safe Generator Operation

Keep this card in your home's emergency kit or with your generator.

- Never connect a standby generator into your home's electrical system. There are only two safe ways to connect a standby generator to your equipment:
 - Stationary Generator:** An approved generator transfer switch, which keeps your house circuits separate from the electric co-op, should be installed by a professional.
 - Portable Generator:** Plug appliances directly into the outlet provided on the generator.
- Set up and run your generator in a well-ventilated area outside the home. Make sure it's out and away from your garage, doors, windows, and vents. The carbon monoxide generated is **DEADLY**.

- Use a heavy-duty extension cord to connect electric appliances to the outlet on the generator.
- Start the generator first **BEFORE** connecting appliances.

Source: SafeElectricity.org

Developed jointly by the Energy Education Council & Rural Electricity Resource Council



Electricity theft and meter tampering are CRIMES

Stealing electricity or tampering with a meter is serious business. And it's against the law! The law defines theft of utility service as a first-degree misdemeanor if the value of the stolen electricity, plus any utility equipment repair, is less than \$150. It's a fourth-degree felony if more than \$150.

Tampering crimes carry similar penalties. Tampering is defined as "to interfere with, damage or bypass a utility meter, conduit or attachment with intent to impede the correct registration of a meter or the proper function of a conduit or attachment."

Conviction of tampering can mean from six months in jail and a \$1,000 fine to up to five years and a \$2,500 fine.

Meter tampering costs all of us, and it's downright dangerous. If you witness someone tampering with their electric meter, please contact The Frontier Power Company at 740-622-6755 or 1-800-624-8050.

UTILITY POLES ARE NOT BULLETIN BOARDS

Think before you post that sign!

Staples, nails and tacks used to hang signs and fliers create dangerous obstacles for electric lineworkers.

Their jobs are dangerous enough – help us keep them safe!



Pros and cons

OF HEAT PUMP WATER HEATERS

BY TOM TATE

PROS

OF HEAT PUMP WATER HEATERS

- Efficiency can be as much as 2.5 times higher than an electric resistance alternative
- Cools surrounding space in the summer, making the area more comfortable
- Uses waste heat from the central furnace during winter months
- May qualify for \$300 federal tax credit in 2016
- Can save \$330 annually for a family of four, depending on water use and electricity rates

CONS

OF HEAT PUMP WATER HEATERS

- Cost about twice as much as electric resistance water heaters
- The compressor will make a noticeable noise — insulating the mechanical room can reduce the sound, but doing so reduces the amount of warm air for the unit's use
- Makes the heating system work harder during winter months because it generates cold air while operating
- Physical size can be greater than an electric resistance alternative
- Requires additional space for air flow (1,000 cubic feet) and a condensation drain or pump
- Slow recovery may be a problem when demand for water is high
- Not well-equipped for cost-saving electricity demand-management programs

A MAJOR CONSUMER OF ELECTRICITY in today's home is the water heater. Because of how electric water heaters work, using electric resistance elements, these units max out in efficiency around 96 percent. As the government and industry seek ways to reduce energy use and the resulting carbon dioxide emissions, they have turned their attention to the electric water heater. After a lengthy study, the U.S. Department of Energy issued rules governing the efficiency of electric water heaters that went into effect in 2015. The rules resulted in a jump in efficiency requirements for larger residential electric water heaters; enter the heat pump water heater (HPWH).

Heat pumps have been in use for home heating and cooling for decades. When the oil embargo of the 1970s brought the need for improved efficiency to the forefront, heat pumps became an important source of increased energy efficiency in the heating, ventilating, and air conditioning (HVAC) arena.

Heat pumps operate by using compressors, refrigerant, heat exchangers, and the difference in outside air temperature versus indoor temperatures to produce heating and cooling. These units historically have been most successful in areas with moderate winter temperatures, although advances in technology are making use in colder climates more feasible.

How does a HPWH function, and what are its advantages and disadvantages? In short, the HPWH absorbs heat from the surrounding air, using it to heat water within the tank. Because the HPWH uses heat pump technology, it can be up to 2.5 times more efficient than a traditional resistance electric water heater. This means it will use less electricity and cost less to produce hot water for your home.

See the table at left for the key advantages and disadvantages of the HPWH. As with heat pumps for general space conditioning, the HPWH will provide greater year-round savings in moderate climates.

TOM TATE writes for the National Rural Electric Cooperative Association, the service arm of the nation's 900-plus consumer-owned, not-for-profit electric cooperatives.

Appliance Rebates for cooperative members

\$100 REFRIGERATOR/FREEZER REBATE

ENERGY STAR®-labeled refrigerators and stand-alone deep freezers (10-30 cubic feet) can qualify for a \$100 rebate* from Frontier Power, as long as the old appliance is disposed of and the new appliance is installed at a location served by the cooperative.

Frontier Power offers rebates to cooperative members who replace their existing refrigerators or stand-alone freezers with a new ENERGY STAR®-listed appliance. Members must purchase the new ENERGY STAR-labeled appliance between July 1, 2016, and June 1, 2017. The existing appliance must be removed or recycled.



SPECIFIC REQUIREMENTS: Member is required to provide documentation, such as a purchase receipt, showing that the new appliance was installed in a home served by the cooperative. Member must also include proof of ENERGY STAR listing, such as a copy of the yellow Energy Guide label or

owner's manual (must include ENERGY STAR logo or statement of ENERGY STAR certification). Documentation showing that the old appliance was removed or recycled is also required to be eligible for the rebate.

All rebates are issued in the form of a credit to the member's electric account. Rebates may not exceed the purchase price, and items must have been purchased in the current program year. If you pay less for your refrigerator or deep freezer than the rebate amount, you will receive the amount you paid. A maximum of one rebate per appliance type (one refrigerator and one freezer), totaling \$400, may be paid per residential member home during the current program year from July 1, 2016, through June 1, 2017.



*Frontier Power's appliance rebate on refrigerators and freezers is limited. The offer expires when funds are depleted on a first-come, first-served basis, or when the program is discontinued. New construction does not qualify.

Frontier Power reserves the right to inspect the installation of any product qualifying for this rebate.



The Frontier Power Company

Your Touchstone Energy® Cooperative

Frontier Power will be closed **Nov. 24-25** for Thanksgiving.

Enjoy a safe and happy holiday!

Emergency service is available at 800-624-8050.



Co-op
Connections
Card



Because you are a Frontier Power cooperative member, your Co-op Connections® Card provides you with special discounts online and at participating local retailers. Be sure to visit this month's highlighted business, and check out offers on the Internet by clicking the Co-op Connections Card icon on our website, www.frontier-power.com.



**Peterman Plumbing and Heating
Dover**

**10% discount on spring and fall
HVAC services**