

# PUBLIC POWER CONNECTIONS

## DON'T LET COOLING COSTS MAKE YOU SWEAT

*It's time to start thinking about energy efficiency and how you can save this summer season*

Keeping cool can come with a big price tag in the summer. Improving efficiency inside your home will help you save money on your electric bill.

The average U.S. household spends more than \$2,200 per year on energy bills, with nearly half going to heating and cooling costs, according to Energy Star. Your expenditures may be more or less based on your rates and usage.

There are many ways, big and small, to be more energy efficient this summer.

Improving insulation and air sealing helps keep heat from coming into your home. Air leaks in the attic should be your top priority. According to Energy Star, about 20 percent of the air that moves through the duct system is lost due to leaks, holes and poorly connected ducts. Connections at vents and registers are common places to find leaks.

Building a new home or replacing your roof? Consider a "cool roof," which can be made of a highly reflective type of paint, tiles or shingles. A cool roof can lower the temperature of your roof by up to 50°F, which saves energy and money by using less air conditioning.



Programmable thermostats are an easy and inexpensive way to save. During the times you are away from your home, you can set the temperature higher to cut back on energy use. You can save 3 to 5 percent on air conditioning costs for each degree you are able to raise the thermostat above 78°F, according to the American Council for an Energy-Efficient Economy. As a side note: Setting your thermostat to a colder-than-normal temperature when you first turn on the AC does not cool your home any quicker, and expends extra energy.

Ceiling fans are also a great and simple way to help cool off, and can help you tolerate raising that thermostat a few degrees. But remember, it doesn't actually reduce room temperature, so be sure to turn it off when you leave the room.

To ensure efficiency of your heating and cooling system, it is important to perform routine maintenance. This includes regularly changing air filters and tuning up HVAC equipment when needed. When the weather starts to get warmer, it's your signal to clean the indoor and outdoor coils of your cooling system, and make sure there is proper airflow by cleaning and adjusting blower components. It's a good idea to hire a professional technician every two to three years to inspect, clean and tune your AC system for maximum efficiency.

### WHAT IS...? DEMAND

In the power industry, "demand" is known as the amount of electricity needed by consumers and/or businesses. Your demand consists of activities such as turning on lights, using appliances, watching TV, running air conditioning, etc. Demand fluctuates throughout any given day, week, month or year. It is usually highest at midday, and during the hottest and coldest months of the year. When the demand for electricity is at its maximum, this is known as "peak demand."

Power grids are designed for normal and peak demand, and also have a reserve margin. "Peak generation" is the maximum and most active period of generation for a facility. Electricity is generated at the same time it is used with almost no storage. This instantaneous reaction means that the more things you turn on, the more electricity needs to be generated.

Power companies determine the price of power according to demand. "Peak shaving" is the process where organizations reduce the amount of energy they purchase from a utility company during peak hours, when it costs the most. "Demand response" is a conscious

decision by consumers to cut down their electricity use during the times of high demand.

You can help lower peak demand by turning off unnecessary lights and appliances, or using an adjustable thermostat to keep from heating or cooling an empty house. By waiting to do your laundry until after 8 p.m., when the grid is less stressed, you are helping to free up more electricity during peak hours. Unlike other things we need and use, excess or wasted energy isn't something tangible. It takes a conscious effort to be on the lookout for where you can be more energy efficient in your lifestyle.

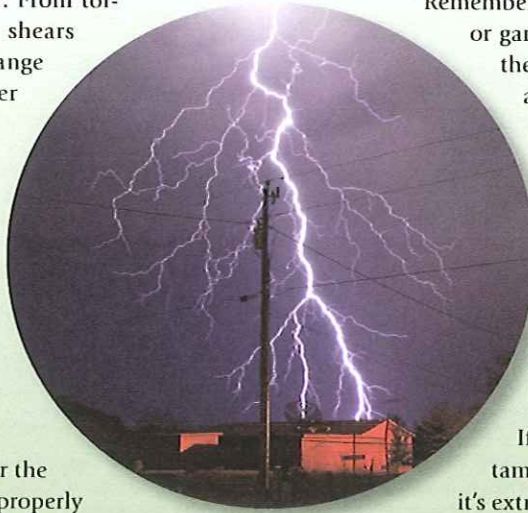
# BE PREPARED FOR POWER OF SUMMER STORMS

Summer can bring a variety of weather. From tornadoes and thunderstorms to wind shears and flash flooding, severe weather can change rapidly and have ramifications on the power industry.

So what do you do in the case of a summer power outage?

Firstly, every family should have a disaster kit on hand in case of an emergency. Disaster kits should contain nonperishable food, drinking water, flashlight, battery-operated radio or television and extra batteries. Kits should be customized to meet the needs of your household and reevaluated at least once a year.

If you own a generator, make sure it is rated for the amount of power you will use and connected properly to avoid overloading or stressing the unit. If you own a portable generator, don't connect it to your home's electrical system. Use a heavy-duty exterior-use extension cord to connect your appliances and equipment directly to the outlets in the generator. If you have a stationary generator, make sure a licensed electrician has installed a UL-approved transfer switch to prevent generator power from feeding into the power lines and harming unsuspecting lineworkers and others.



Remember to never run a generator inside your home or garage, or near entryways or open windows. Per the American Red Cross, the primary hazards to avoid when using a generator are carbon monoxide poisoning from the engine exhaust, electric shock or electrocution, and fire. Be sure to properly and diligently follow the directions supplied with the generator.

If there is a downed line outside your home, you should consider it energized unless you can clearly see both ends are cut. If a line is down and you don't know how to contact the power company, call 911.

If your meter comes loose after a storm, do not tamper with it yourself. Not only is it illegal, but it's extremely dangerous.

If your refrigerator was without power during an outage, make sure to throw out any unsafe food. You should discard any food that has been exposed to temperatures 40°F for two or more hours. When in doubt, throw it out.

And remember, if you're without power on a hot day, make sure to drink plenty of water whether you feel thirsty or not.

## HOW IT WORKS: LANDFILL GAS

Landfill gas-to-energy sites produce electricity through a process of collecting the gas given off by decomposing garbage.

At these facilities, the landfill has no access to oxygen because it is sealed airtight. This causes an accelerated natural bacterial decomposition of organic material, which gives off gases – almost entirely carbon dioxide and methane.

The goal of landfill gas-to-energy sites is to capture the methane (the principal component of natural gas) and then create energy using internal combustion engines – the same type of engine in your car only much larger. The methane is collected by a series of wells and perforated tubes, and then sucked from the landfill with a gas blower. The gas is compressed,

dried and sent to the internal combustion engines as fuel to ultimately spin generators which produce electricity.

According to the U.S. Environmental Protection Agency (EPA), the overall environmental improvement from landfill gas electricity generation projects is significant because of the large methane reductions, hazardous air pollutant reductions, and avoidance of the use of limited non-renewable resources.

Landfill gas is a medium-Btu gas and has about half the heating value of natural gas.

Methane, which is 20 times stronger than carbon dioxide, is a key contributor to climate change. By preventing the methane gas from escaping into the atmosphere, landfill gas-to-energy sites directly reduce greenhouse gas emissions.

According to the EPA, it is estimated that as many as 540 additional landfills could cost-effectively have methane turned into an energy resource, producing enough electricity to power nearly 716,000 homes across the United States. That is equivalent to the annual greenhouse gas emissions from more than 10 million passenger vehicles.

With the average person generating more than four pounds of trash every day, landfill gas-to-energy facilities have an abundance of resources.

AMP began contracting to receive electricity generated by landfill gas-to-energy sites in 2001. In 2011, AMP signed a 10-year agreement for the purchase of 56 megawatts of methane-gas-generated power from existing projects in northern Ohio and their expansion.

## SAFETY SPOTLIGHT

How do you childproof your house from an electrical perspective? Make sure every electrical outlet and surge protector has a cover. Use cord shorteners or secure electrical cords to the wall so they aren't lying around. Bundle entertainment center and computer cords together with cord tubes so children don't get tangled. Don't place electrical cords under rugs; they can overheat.

