

Electric Safety Tips

Used correctly, electricity can enhance our life-style, powering appliances for entertainment and convenience. Used carelessly, electricity can kill. To ensure your safety, know how to identify and prevent electric hazards.

- **Do not overload receptacles.** Connecting too many appliances to one outlet can overload the circuit and cause a fire. Use inexpensive outlet plugs to over empty sockets.
- **Inspect appliances and cords.** Checks appliance cords for worn or cracked insulation or signs of overheating. Do not run cords under carpeting or heavy furniture.
- **Pull firmly on the plug to disconnect equipment.** Never yank the cord to disconnect an appliance from the outlet.
- **Stay away from downed power lines.** You cannot tell if a line is energized just by looking at it. Keep people and animals away from downed lines and call MLGW immediately.
- **Keep appliances away from water.** Never use an electric appliance with wet hands. Keep electric appliances a safe distance from sinks, bathtubs, pools and other bodies of water.
- **Turn off the circuit breaker when making repairs.** Flip the circuit breaker and unplug the cord before you adjust or repair electric appliances.
- **Use proper-sized fuses.** Circuit breakers and fuses are designed to shut down overloaded circuits and help prevent fires. When replacing fuses, make sure you use the proper size.

Electric Outages

When a power outage is widespread, affecting homes and businesses on multiple circuits, the best way to manage is to be prepared. In severe situations, you may be without power for days or even weeks, making advanced preparation essential.

Your Emergency Survival Kit

Keep an emergency survival kit stored in a central location. Include a flashlight, radio or portable television and fresh batteries; water, canned food and high-energy snacks such as peanut butter, crackers and granola bars; first aid supplies

and medicines. Do not forget the special needs of babies and pets.

What Information to Report

In case of a widespread power outage, such as an ice storm or tornado, the electric distribution system is likely to be damaged. It is not necessary to call MLGW to report individual outages in such situations. Listen to television and radio broadcasts for announcement on when to call MLGW.

If the power outage affects a smaller area, or only your home, call MLGW to report the problem. Employees are available 24 hours a day to take your report.

When you do call, provide the Service Advisor with the following information: time of outage, possible number of homes affected and presence of downed lines between utility poles (primary lines) or between poles and homes (service lines). Do not call repeatedly as this jams phone lines and causes duplicate reports rather than quick repairs.

What to Do During an Extended Outage

The cause of a power outage will determine its length. Isolated problems can be corrected quickly, while widespread damage can take days or weeks to repair. Knowing what to do during an extended outage can reduce stress and discomfort.

Find shelter. Many people prefer to leave their homes during extended power outage. Contact family and friends to see if they have power and can provide temporary shelter. Remember, since homes on the same street can be connected to different circuits, it is possible your next-door neighbor may have power when you do not.

If you do not wish to leave your home, during a winter power outage make sure you have a safe source of heat. Close off one room and turn it into your heat zone. Gather blankets, sleeping bags and extra clothes. Wear a hat and mittens, even indoors, to trap body heat. Never use a gas oven to heat your home.

Avoid opening the freezer and refrigerator. The cooled air trapped inside an unopened appliance will preserve food for several hours, even daytime depending on the contents and outside temperature. Cover the freezer with a thick blanket or quilt to provide additional insulation. When

power is restored, check foods carefully before eating. If you have any doubts throw the food away. Replacing spoiled groceries costs less than treating food poisoning.

Cook carefully. Cooking options change drastically in a power outage. Use an outdoor grill, the fireplace or a can of Sterno to heat food. Never use a camp stove or gas/charcoal grill indoors. These appliances are designed for outdoor use where fresh air is plentiful. In enclosed areas, there is an increased risk of fire hazards, and poisonous carbon monoxide fumes.

Electric Referrals

Electric Outage Customer Care Center
544-6549 (MLGW)

Downed lines or other emergencies
528-4465 (24 hours)

Billing Inquiries, average utility bill, verification of information
544-6549 (MLGW)

Residential electric consumption, appliance operating costs, heat pump operation, conservation, energy efficiency and other household questions.

Residential Energy Services
528-4188

Streetlight maintenance
544-6549 (MLGW)

mlgw.com



From Source to Socket

A User's Guide to Electricity



Flip a switch or push a button and electricity instantly brings equipment to life. Most of us take this energy form for granted, without ever considering its true impact on our lives. Then one day we flip a switch, and nothing happens. Knowing how electricity is distributed can prepare you to make the most of this multi-purpose energy form.

The Electric Journey

Transferring one source of energy to another generates electricity. Water, fossil fuels, nuclear fission and other sources can be converted to electricity to meet the most basic or complex of energy needs.

Memphis Light, Gas and Water Division, the nation’s largest three-service public utility does not generate electricity. Instead, MLGW buys electric power from the Tennessee Valley Authority (TVA) and distributes it to more than 350,000 residential, commercial and industrial customers in Shelby County. One of TVA’s generation facilities, the Allen Steam Plant, is located in Memphis and supplies a small portion of the county’s electric needs.

From the generation site, electricity travels to its destination at high voltage. Once it has reached Shelby County, electric current is regulated for consumer use and distribute through thousands of miles of power lines. The illustration highlights the journey electricity takes from source to socket.

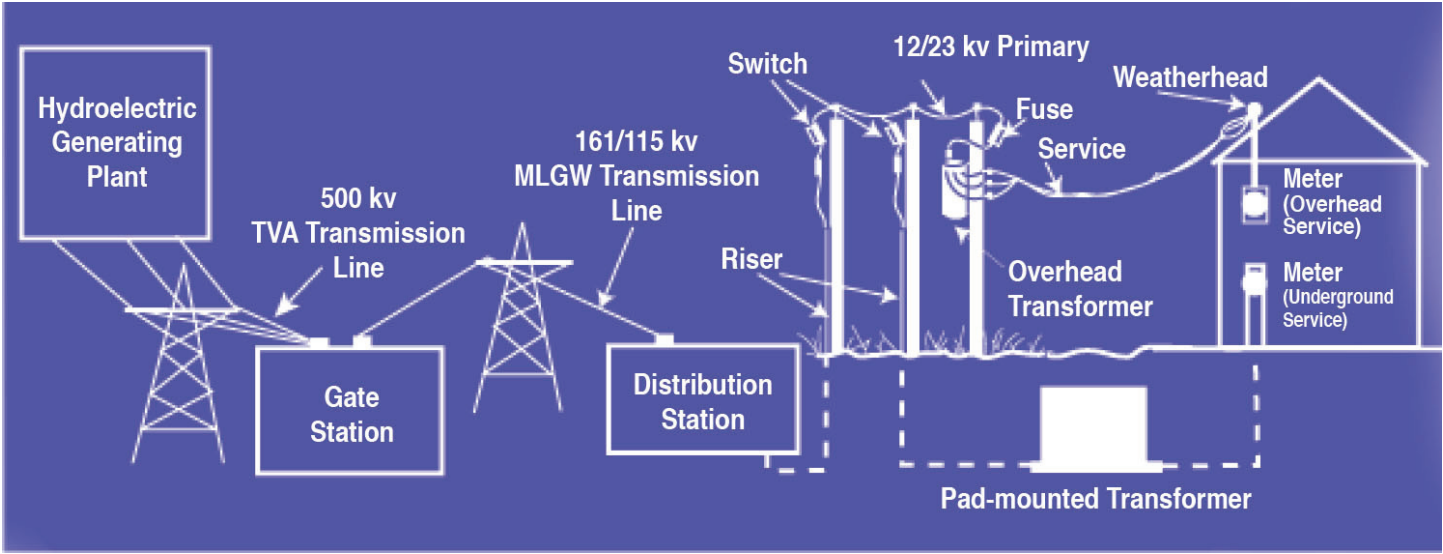
Electric Encyclopedia

Breaker panel: Unit containing circuit breakers or fuses, which protect the customer’s system from overloaded circuits, faulty wiring and other electric hazards.

Circuit breaker: Device which trips to interrupt the flow of electric current under over-loaded or short-circuit conditions.

Current: The flow of electricity, measured in amperes (amps).

Distribution circuit: Line that carries electricity from substation to customers. The number of cus-



tomers connected to one circuit varies from a few to more than 1,000.

Distribution substation: Facility where transmission voltage is lowered to 12 kv or 23 kv, providing sources for distribution circuits.

Electric meter: Equipment that measures the amount of energy consumed.

Fuse: A protective device designed to “blow,” interrupting the flow of electric current under over-loaded or short circuit conditions. Rated in amps for the circuit breaker.

Gate station: Facility where transmission voltages may be further reduced and routed to distribution substations. May be owned by MLGW or TVA.

Generation site: The location where electric power is produced, such as a nuclear plant, steam plant or hydroelectric plant.

Ground Fault Circuit Interrupter (GFCI): A safety device that senses a very small amount of electrical current to ground and switches the circuit off. The most common type is a GFCI receptacle typically used in kitchens and bathrooms.

Ground wire (grounding conductor): Wire that connects appliances to earth or ground.

Handhole: A concrete vault containing underground connections. Sometimes called a pullbox.

High voltage tower: Steel structure that supports high voltage transmission lines to carry electricity over long distances.

Kilovolt: Unit of measure representing 1,000 volts of electricity.

Kilowatt: Unit of measure representing 1,000 watts of electricity.

Kilowatt hour (kwh): Unit for measuring and selling electric energy. Equals 1,000 watts of electricity used for one hour.

Manhole: An access to the underground system that houses electric cables. (Accessible from street level for repairs.)

Meter center: A box housing the electric meter and connected housing. Customer is responsible for repairs to unit, excluding the meter itself.

Network: Underground electric system consisting of manholes and transformer vaults interconnected to form an electric grid. Used in densely populated areas, such as Downtown.

Overhead: Electric lines, which are mounted on utility poles above, ground, less costly to install and maintain.

Primary line: A distribution line installed at the top of a utility pole or underground. Carries electricity at 12 kV or 23 kV to a pole – or pad-mounted transformer.

Pothed: A weatherproof cable termination used to connect underground and overhead lines.

Receptacle: Point of usage where the appliance plug connects to electrical wiring. Also called an outlet or socket.

Right-of-way: Portion of land purchased or leased for the passage of electric lines and other utilities.

Riser: A vertical conduit that connects overhead lines to underground lines.

Secondary line: A low voltage distribution line which runs from the low voltage terminals of the transformer to another pole or manhole.

Service line: A group of cables, which carry low

voltage electricity from a secondary source to the customer. May be overhead or underground.

Single-phase: Service used for most residential customers and small commercial customers. 120/240 volts.

Step-down/step-up: Terms used to describe the reduction/ increase of voltage as electricity passes through transformers.

Switch: Device used to intentionally disconnect or close circuits, taps, and transformer stations.

Tap: A single-phase or multi-phase line, usually a small wire that can be fused or unfused.

Three-phase: Service used for large residential, commercial or industrial customers.

Transformer: Device for changing voltage from high to low at substation, gate station or site closer to the customer. Transformers may be mounted on the utility pole or on a concrete pad on the ground.

Transmission line: A high voltage line carrying electricity between generators and substations. Owned by MLGW and TVA.

Underground: Electric lines, which have been, buried underground. More costly to install and maintain.

Utility pole: A structure designed to keep electric lines safely out of reach.

Volt: A measure of electric pressure Standard residential voltage is 120/240 volts.

Watt: A measure of electric power.

Weatherhead: The point in an overhead system where the service line connects to the customer’s wiring. Customer owns the weatherhead and is responsible for repairs from this point down, excluding electric meter.