

Home Electrical Safety



Lomond Business Center
10323 Lomond Drive
Mailing Address:
P.O. Box 2710
Manassas, VA 20108-0875
703-335-0500 or 1-888-335-0500
www.novec.com





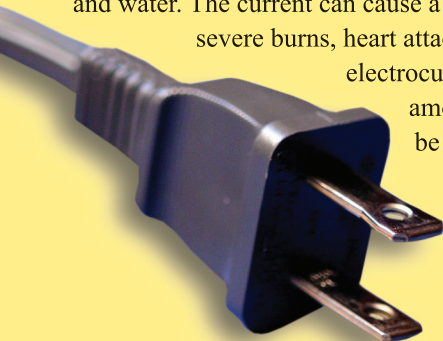
Electrical Safety and You

NOVEC substations receive high-voltage electricity and decrease it to 240 or 120 volts before distributing it to homes and businesses. Our professional line technicians respect the power of electricity, and we want you to have a “safety-first” attitude, as well.

Americans have woven electricity into their daily lives since Thomas Edison opened the first electric utility in the United States in 1882. From switching on a light to enter a dark room, to switching on a computer to browse the Internet, electricity has made life easier and more entertaining, and informative.

As Americans use more power, some of them plug high-tech appliances and devices into electrical systems that are too old to handle the power demand safely, especially in homes 20 or more years old. Sadly, the Consumer Product Safety Commission says, “Problems in home wiring, like arcing and sparking, are associated with more than 40,000 home fires each year.” Accidents also occur when consumers fail to follow safety guidelines when using electric appliances around the home or working in the proximity of power lines.

Electric current can race through a person who contacts an energized electrical circuit or an object or substance that has become energized, such as metal and water. The current can cause a slight shock, severe burns, heart attack, or electrocution. Even a small amount of current can be fatal.



Safety Improvements

Appliance manufacturers and home builders have made several safety improvements in recent years to reduce electrical shock and electrocution risks, including:

- Polarized plugs for lamps and other appliances — one prong is wider than the other
- Double-insulated polarized plugs for power and garden tools
- Ground fault circuit interrupters (GFCIs) for household circuits and electrical outlets — GFCIs, introduced in the 1970s, shut off power to circuits when they detect danger
- Arc fault circuit interrupters (AFCIs) — required for new construction in many states and counties since 2002 — shut off electricity when they detect dangerous arcing resulting from damaged or deteriorating wires or cords, or poorly wired switches and outlets

Home Wiring Basics

NOVEC delivers power to customers by overhead wires and underground cables. Electricity enters the “main switch,” located in the electric control panel. The main switch controls all the power in the house. Homeowners should shut off power in an emergency by flipping this switch.

If electricity shuts off because of a blown fuse or a tripped circuit, find out why. A frayed wire, too many devices plugged into one circuit, or a defective appliance may be the cause. If you cannot find the cause, call an electrician.

From the breaker panel, electrical wiring carries electricity to outlets and wall switches. Flipping a switch completes a circuit and sends power to lights and appliances.

Home Electrical Safety

Most electrical accidents can be grouped into four categories: electrical fires; contacting power lines; contacting energized water and other conductors; and

improperly installing, using, or repairing household electrical products.

1. Electrical Fires from Faulty Wiring

Old and faulty electric systems are the third leading cause of home fires and fire in the form of flames and smoke, is the second leading cause of accidental death in the home, according to the U. S. Consumer Product Safety Commission. Homes built before 1970 may have fuse boxes instead of safer circuit breakers. Homes built between 1965 and 1972 may have aluminum wiring, which can be a fire hazard.

Warning Signs:

- Circuit breakers that trip frequently or fuses that blow
- Dim or flickering lights
- Arcs and sparks coming from the system
- Overheating — hot or discolored switch plates or outlet covers
- Electrical shocks — even a mild tingle
- Cut, broken, or cracked wire insulation

Have a Licensed Electrician:

- Inspect the electrical system in an older home and a home previously owned
- Replace a fuse box with a circuit breaker system
- Replace aluminum wiring with copper
- Make sure GFCIs and AFCIs are installed

2. Don't Contact Power Lines and Utility Equipment

Use a fiberglass or wooden ladder if you must work near overhead power lines and stay at least 10 feet away from the lines. Metal ladders conduct electricity. Never touch a person or ladder touching a

power line. Call 911 and NOVEC immediately for assistance.

- Never fly kites or Mylar balloons near power lines and make

sure children understand this safety rule. If a kite or a Mylar balloon becomes stuck on a power line, do not touch it. Call NOVEC for assistance. Never release Mylar balloons outdoors; the metal in Mylar can cause major outages when entangled in power lines.

- Do not use long-handled swimming pool nets or tree-trimmers near overhead power lines.
- Call Miss Utility crews at 811 before digging on your property to mark where underground power lines are located.

Plant new plants outside NOVEC's right-of-way easement (usually 30 feet wide) and away from pad-mounted transformers, power poles, and overhead lines. Overgrown plants can cause outages or fires.

- Teach children to never play near pad-mounted electric transformers and substations. Make sure they understand what the posted warning signs mean.



3. Use Household Electrical Appliances and Devices Safely

- Make sure all bathrooms and the kitchen have GFCI outlets. GFCIs usually — but not always — detect electrical faults and shut off electricity to the circuit before a device user is seriously harmed.
- Never use an electric hair dryer or curling iron near a sink or bathtub full of water, or while standing on a wet or damp floor. The same caution applies to electric knives, toasters, and other devices near the kitchen sink. Keep radios and televisions away as well. If a device falls into water, turn off the circuit and unplug the device before removing it.
- Unplug clothing irons, hair dryers, curling irons, hot rollers, and electric razors when not in use.
- Keep all electrical devices and appliances in good working condition. Periodically, clean a curling iron barrel, hot-roller posts, toaster, and electric can opener — unplugged. Clean the lint out of clothes dryers before every use. Clean the oven, cooktop, and





microwave according to manufacturers' instructions.

- If a cord is frayed, have an electrician replace it or buy a new gadget or appliance.
- Don't overload an outlet or extension cord with too many devices.
- Keep a fire extinguisher handy in the kitchen. Never throw water on an electrical fire; water conducts electricity

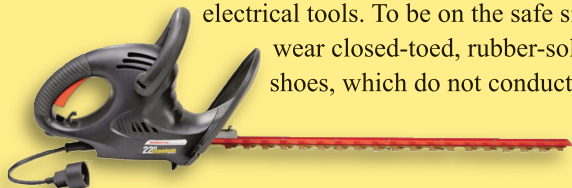
and can shock or electrocute you.

- A space heater is not energy efficient, but if used it should have the Underwriters Laboratories UL mark to show it has been tested for safety and has an automatic shut-off feature. Keep the heater at least three feet away from furniture, bedding or any combustible material. Turn it off when leaving a room or before going to sleep.
- If using an electric blanket, make sure it is less than 10 years old and is in safe working condition. Look for the UL label. Do not put another blanket or bedspread on top. Do not tuck in the electric blanket along the sides of the bed. To be on the safe side, heat the bed with the blanket, then turn it off before going to sleep.
- Use only closet-approved lights in closets.

4. Yard Work

- Inspect electric hedge trimmers and other power tools for frayed cords, broken plugs, and cracked or broken housings. Repair or replace damaged tools and cords. Use only cords labeled for outdoor use; check for power capacity.
- Carry power tools by the handle — never by the cord.
- Always unplug power tools not in use.
- Store power tools indoors so they will not get wet.
- Never stand on wet or damp floors when using

electrical tools. To be on the safe side, wear closed-toed, rubber-soled shoes, which do not conduct



electricity.

5. Outdoor Recreation

- Use GFCI outlets on or near hot tubs, spas, and swimming pools. Use outlet covers to keep them dry. Upgrade outlets near older pools that pre-date GFCIs.
- Keep cords and plugs away from pools and puddles, especially when wet bathers are nearby.
- Never handle electrical items, plugs, or outlets when wet or standing in water.
- If an electrical appliance or product falls into water, do not reach for it. Towel dry, put on rubber-soled shoes, and shut off the circuit before unplugging the device.

6. Lightning Storms

- Do not plug in or unplug anything during a storm.
- Do not use corded telephones; using this type of phone during storms is the number one cause of indoor lightning injuries in the U.S.
- Avoid contact with water, pipes, washers, or dryers.
- Do not swim if you hear thunder. If you are swimming, leave the water immediately and seek shelter.

7. Electrical Safety Tips for the Holidays

- Be sure all holiday lights have UL safety labels.
- Use light sets according to indoor or outdoor specifications. Some brands can be used in both environments.
- Before installation, check for frayed wires, damaged sockets, or cracked insulation. If you find any defects, replace the entire light set.
- To minimize fire and shock danger, make sure there is a bulb in each socket. If a bulb is burned out, leave it in until you





unplug the light set and replace the bulb.

- Only connect three or fewer light strings to avoid cords overheating.
- Plug lights and decorations into circuits protected by GFCIs. Portable GFCIs can be purchased where electrical supplies are sold.

- Fasten light strings securely to trees, walls or other firm supports, but don't puncture them with nails or staples.
- New, light-emitting diode (LED) holiday lights use much less energy than traditional lights. Consequently, they should not become hot enough to burn fingers or catch trees on fire.
- Since traditional bulbs produce heat and can ignite dry tree branches, keep a cut Christmas tree watered well and keep extension cords and light strings away from the water.
- Never light candles on a Christmas tree.
- Keep a working fire extinguisher handy. Be sure smoke detectors have fresh batteries and are working properly.
- Do not tuck power cords or extension cords under rugs or drapes.
- Turn off heat-producing lights and decorations before leaving home or going to bed.

Power is NOVEC's
business, but safety is
our first concern.

