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Important information about gas and electric safety at home

Staying safe around energy





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Electric safety

You probably use electricity every day to run your appliances and cool, heat or light your home. That familiarity can make it easy to forget how dangerous electric energy can be if you're not extremely careful whenever you use it. Even the amount of electricity needed by a small 15-watt light bulb could cause serious harm if improperly handled.

To help protect yourself, become familiar with the following facts and tips about electric safety.

Fuses and circuit breakers: your safety valves

Fuses and circuit breakers act as safety valves to help prevent overloads to the system. They have limits on how much current they can handle at any time. When overloaded, they're tripped, stopping the flow of electricity.

If your power goes out in all or part of your house, chances are your electric system was overloaded. Check outside first to see if your neighbors are also having problems. If not, you'll need to change a fuse or reset the circuit breaker.

Make it a point to become familiar with your fuses and circuit breakers – know where they are and which fuse or circuit covers which areas of your house. You may want to label them with masking tape. Also for fuse boxes, know what amperage (amp), your fuses are (amps are marked on the top of the fuse), and keep an extra supply.

Finally, whether you blow a fuse or trip a circuit breaker, please listen to what your system is telling you. You either have a potentially dangerous short circuit or ground fault condition, or you have too many appliances on one circuit.



Changing a fuse

If your house is equipped with a fuse box, you might want to upgrade to a modern system that uses circuit breakers instead of fuses. Until then, to change a fuse:

1. Turn off the appliance that caused the overload.
2. Shut off the main breaker (the switch located on the side of the fuse box).
3. If your fuse panel is located in a room or area that will be dark when the main breaker is turned off, make sure you have a flashlight or lantern with enough light to help you change the fuse.
4. Unscrew the blown fuse (look for a burned spot), and replace it with one of the same amp rating. When in doubt, use 15 amps.
5. **DO NOT** wrap the fuse in aluminum foil to repair it or stick a coin in the fuse slot. This could cause a short or seriously overload the wiring, which might result in a fire, or you could get a very serious shock.
6. Turn the main breaker back on.

Resetting a tripped circuit breaker

Before resetting the circuit breaker, first correct the overload by unplugging the affected appliances. If a short or ground fault condition is the cause of the malfunction, it's safest to seek professional assistance to repair shorts or ground fault conditions. Then reset the circuit breaker by moving the handle to the "full hard OFF" position and then back to the "ON" position.

Is your home wired for a fire?

One of the leading causes of fires in homes is electric distribution or lighting equipment, including fixed wiring, switches, receptacles, outlets, cords, plugs, fuses and circuit breakers. For your safety, have a

qualified electrician inspect your home's wiring if you've noticed any of the following warning signs:



- ▶ Blown fuses that need to be replaced frequently.
- ▶ Tripping circuit breakers that must be repeatedly reset.
- ▶ A tingling feeling when you touch an electric appliance or other metal objects. Unplug the appliance and stop using it until the source of the shock can be fixed.
- ▶ Wall outlets and switch plates that are discolored, warm to the touch or emitting sparks. This could mean arcing, smoldering, burning, damaged or improperly installed wiring is hidden behind the outlet or switch, so don't use it.
- ▶ A burning or rubbery smell coming from an appliance. It could be overheating or malfunctioning, so unplug it or turn off the circuit breaker.
- ▶ Flickering or dimming lights. This could mean a short in the wiring, arcing or an overloaded electric system.

Also arrange an electrical inspection when you buy or remodel a house, especially one that's over 25 years old. If your home needs to be re-wired, don't overload the inadequate wiring in the meantime. Stagger your use of electric appliances, unplug appliances that you don't use all the time, and don't plug more than two cords into any outlet.


Protecting sensitive equipment

Power fluctuations and outages may be caused by high winds, storms, traffic accidents and other factors that are out of our control. Here are some ways you can help protect sensitive equipment, such as personal electronics and home appliances, from changes in the steady flow of electricity.



For protection against transient voltage or spikes, consider purchasing a transient voltage surge suppressor (TVSS). A TVSS helps prevent voltage disturbances from reaching electronic equipment by grounding the excess energy of a surge. Be sure to look for a TVSS that is marked with the words “Transient Voltage Surge Suppressor” and has been tested and listed by a Nationally Recognized Testing Laboratory (NRTL). Look for the testing laboratory certification mark, such as UL or CSA, on the device.

Another option to consider is installing an uninterruptible power supply (UPS) that automatically switches to battery power when an outage occurs, providing continuous power to your computer or other critical appliances during an outage.



During an outage, you should unplug sensitive equipment such as computers, televisions and microwave ovens to help prevent them from coming on unexpectedly. It's also a good idea to turn off major appliances like washers or air conditioners; but leave one light on so you will know when the power has been restored.

Tips for playing it safe with power

Regarding electricity, the term “ground” means having an electric connection to earth. If you come between electricity and the ground, you become the path through which the electricity travels – and that could shock, burn or even kill you. The following tips can help you stay out of harm’s way.

Appliance safety

- ▶ Many appliances must be grounded with a three-prong plug or by a separate wire from the appliance to the main grounding system (sometimes metallic plumbing), or both.
- ▶ If an appliance isn’t operating properly or gives you the lightest shock, disconnect it and call a service technician right away.
- ▶ Water is an excellent conductor of electricity. Never touch an electric appliance when you’re in, on or near water or a damp surface.
- ▶ When using an appliance with a detachable cord, always unplug the appliance from the wall before unplugging the cord from the appliance. Any cord connected to a wall socket is “energized” and you could get burned.
- ▶ Replace, don’t repair, worn or frayed electric cords.
- ▶ Never attempt to repair appliances while they’re still plugged in.
- ▶ Keep cords away from hot appliances.

- ▶ Pull the plug itself, not the cord attached to it.
- ▶ Don't run cords under rugs where they'll become worn by foot traffic, and you won't be able to notice damage to the cord.
- ▶ Keep appliances clean, especially those that gather flammable material such as lint or grease.
- ▶ Outlets that are next to sinks and tubs or located outdoors should be equipped with a ground fault circuit interrupter (GFCI). GFCI outlets are designed to open up the circuit quicker than a breaker or fuse if something you're handling comes in contact with water.



Portable generators

Never connect a portable electric generator or connect a motorhome/RV generator to your home's electric system during a power outage. Under the law, you're responsible for making sure your generator's electricity doesn't feed back into SDG&E's power lines. Failure to do so can cause serious injuries or death.

If you plan to use a generator for your home or business, please notify SDG&E first at **1-800-411-7343**. For tips on choosing and using a portable generator, visit [sdge.com/chooseagenerator](https://www.sdge.com/chooseagenerator).

Power tools

- ▶ Make sure each power tool is grounded or certified double insulated.
- ▶ Keep everything as dry as possible.
- ▶ Wear rubber-soled shoes when operating power tools.
- ▶ Avoid overloads; don't use power tools when other major appliances, such as clothes washers or dryers, are running.
- ▶ Unplug power tools when you're changing blades or doing minor repairs, and whenever they're not in use.

Safety in your attic

When properly installed, loose-fill attic insulation can conserve energy safely. But if improperly installed, it could cause a potential safety hazard. If you have loose-fill insulation installed or use your attic for storage, check regularly to make sure there's no danger.

Make sure the insulation doesn't come in contact with any heat-producing item, such as a light fixture, chimney or doorbell transformer. A minimum of 3 inches of horizontal clearance and 11 inches of vertical clearance above the insulation is required. Also, insulation should be clear from all bare wires, wiring, eaves and attic vents. You can use small blocks of wood to make sure the insulation is clear from any heat source.

Contact your insulation contractor for assistance if you have any questions about your installation.

Holiday lighting safety tips

Many people put a lot of energy into brightening the holiday season. That usually means using more electricity. Here are some safety tips to help keep your holidays bright:



- ▶ Only buy lights with the certification mark of a Nationally Recognized Testing Laboratory (NRTL).
- ▶ Before using, check seasonal lights for frayed cords, loose connections and broken sockets. Replace damaged electric cords; don't try to repair them.
- ▶ Never use indoor lights outside.
- ▶ Don't let tree light bulbs touch needles and branches.
- ▶ Keep your tree in water and your light cords out of it.
- ▶ Never use electric lights on a metallic tree; use colored directional lights instead.
- ▶ Don't plug all your holiday lights into one socket.
- ▶ Turn off lights when you leave the house or go to bed.
- ▶ Attach outdoor lights with hooks. Don't hammer nails or tacks through cords.
- ▶ Don't string outdoor lights when it's wet outside.

Outdoor safety

Call before you dig

To locate utility-owned lines that may be buried in your yard, call **811** at least two workdays before digging. Underground Service

Alert will coordinate with SDG&E and other utilities for this free marking service. It can help prevent injury, costly property damage and loss of utility service.



**Know what's below.
Call 811 before you dig.**

Outdoor safety tips

Outside, you're surrounded by conductors of electricity, such as water and power lines, metal ladders and TV antennas. So when you're outdoors, use all your indoor electric safety rules as well as the following:

- ▶ Never use indoor appliances, such as lamps, outside.
- ▶ Never use an electric appliance outside when it's raining or even just damp.
- ▶ When repairing roofs, painting, trimming trees or washing windows, stay away from overhead power lines, guy wires and TV antennas. If trees are actually in overhead lines, SDG&E's tree-trimming crew may be able to help. Call **1-800-411-7343** for information.
- ▶ Keep all electric appliances at least 10 feet from a pool.
- ▶ When putting up a TV or radio antenna, make sure you and the antenna are twice as far from any power lines as the length of the antenna. The same rule applies to drain pipes, flag poles or any long metal object.
- ▶ If you're using an aluminum ladder outside, keep yourself, your tools and your ladder well away from power lines.
- ▶ Keep kites far away from power lines.
- ▶ Clean your pool cautiously, especially when you're using aluminum poles. Stay clear of power sources.
- ▶ Make sure you and your children know to stay away from wires, substations and other electric equipment. They're dangerous and off-limits for play. The same goes for the large green transformer boxes you may see in your neighborhood. If you find a transformer box unlocked or open, call SDG&E at **1-800-411-7343** immediately.



- ▶ Never release Mylar balloons outside. Objects that get caught in power lines can cause power outages or fires.
- ▶ Electric bonding to or use of SDG&E gas service piping, gas risers or meter facilities for electric grounding isn't permitted. Use caution when touching gas meters. Faulty household appliances or faulty household electric wiring could inadvertently introduce electricity to gas facilities.

Natural gas safety

Natural gas is a clean, efficient way to heat your home, cook your food and dry your clothes. It's also completely safe, provided you use your head – and nose – to guard against potentially dangerous gas leaks.

Recognizing signs of a gas leak

Be alert to signs you may see, hear or smell when there's a natural gas leak.



See

- ▶ A damaged connection to a gas appliance.
- ▶ Dirt or water being blown in the air.
- ▶ Dead or dying vegetation (in an otherwise moist area) over or near pipeline areas.
- ▶ A fire or explosion near a pipeline.
- ▶ Exposed pipeline after an earthquake, fire, flood or other disaster.




Hear

- ▶ An unusual sound, such as a hissing, whistling or roaring sound near a pipeline.



Smell

- ▶ The distinctive odor of natural gas. (Some people may not be able to smell the odor because they have a diminished sense of smell, olfactory fatigue)



[normal, temporary inability to distinguish an odor after prolonged exposure to it] or because the odor is being masked or hidden by other odors that are present, such as cooking, damp, musty or chemical odors. In addition, certain conditions in pipes and soil can cause odor fade - the loss of odorant so that it is not detectable by smell.)

What to do if you suspect a natural gas leak

If you suspect signs of a natural gas leak, follow these important steps:

- ▶ **Remain** calm.
- ▶ **Don't** light a match, candle or cigarette.
- ▶ **Don't** turn electric appliances or lights on or off or use any device that could cause a spark. Note that gas leaking from a plastic pipe can create static electricity that can ignite the gas.
- ▶ **Immediately evacuate** the area and, from a safe location, call us at **1-800-411-7343**, 24 hours a day, seven days a week; or call **911**.

For more information on pipeline safety, visit sdge.com/pipelinesafety.

Carbon monoxide

Well-maintained appliances are more energy efficient and can help you save money on your monthly energy bill. You should have a licensed heating or plumbing contractor check your gas appliances every year for safe, efficient operation. If you receive gas service from SDG&E, you can schedule your annual gas appliance safety checkup with us online at sdge.com/serviceorder. Failure to perform such routine annual maintenance on your gas appliances may result in dangerous exposure to carbon monoxide.



Know the warning signs of carbon monoxide

When incomplete combustion occurs in the gas appliances in your home, carbon monoxide is produced, and this can lead to carbon monoxide poisoning. Even though you can't see, taste or smell carbon monoxide, you *can* learn to spot the warning signs. When using natural gas appliances, such as a furnace, suspect carbon monoxide if you notice any of the following warning signs:

- ▶ A yellow, large and unsteady burner flame (except in decorative logs with gas flames).
- ▶ Built-up soot in the appliance.
- ▶ An unusual, pungent odor caused by the same process that produces carbon monoxide.
- ▶ Triggering of a carbon monoxide detector or alarm (state law requires carbon monoxide devices in homes).
- ▶ Symptoms of carbon monoxide poisoning in yourself and others, including unexplained nausea, drowsiness, mental confusion or flu-like symptoms, such as headaches, dizziness, vomiting or shortness of breath.

Take the following steps if you think you've been exposed to carbon monoxide:

- ▶ Immediately turn off the suspected gas appliance, if it's safe to do so.
- ▶ Get everyone out of the house and call **911**.
- ▶ Seek medical attention for anyone who feels ill.
- ▶ Call immediately for an inspection of the appliance by a licensed, qualified heating or plumbing contractor or, if you're an SDG&E gas customer, call **1-800-411-7343**.
- ▶ Don't use the appliance until your contractor or SDG&E confirms it's safe.

Gas appliance safety

Here are a few safety tips to keep in mind when using natural gas appliances in your home. To learn more, visit sdge.com/gassafety.

- ▶ Most forced-air furnaces have a filter that cleans the air before heating and circulating it throughout the home. The filter should be checked monthly for lint build-up during periods of furnace use and cleaned or replaced if necessary.
- ▶ Never use your gas oven, range or outdoor barbecue to heat your home because they're not made for that purpose.
- ▶ Keep grease away from gas range burners.
- ▶ Never use water on a grease fire. Use a fire extinguisher or baking soda to smother a grease fire.
- ▶ Never store or use flammable products such as gasoline, paint thinner or cleaning products near or in the same room as any gas or heat-producing appliance.
- ▶ Know where the shut-off valves are on gas appliances and locate the main valve near your meter.
- ▶ Gas appliance maintenance is always the homeowner's responsibility. However, we will perform gas appliance safety checks for our gas service customers upon request. You can schedule this service online at sdge.com/serviceorder.



Maintain your gas lines

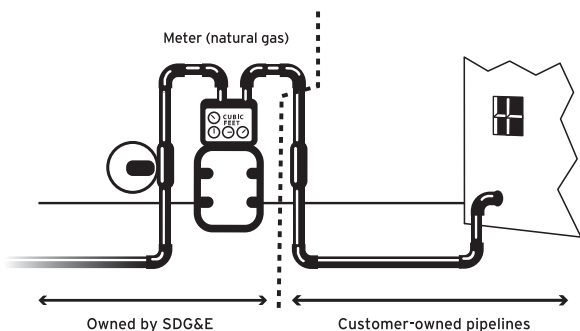
If you're a property owner, manager, tenant and/or occupant, you are responsible for maintaining all the natural gas lines on your side of the gas meter. SDG&E is only responsible for maintaining the pipelines that carry natural gas **to** your meter, not customer-owned piping.

You can tell which lines require your care by finding all those carrying gas:

- ▶ From your meter to the appliances on your property.
- ▶ From a curbside gas meter to your property (when the meter is not right beside your home or business).
- ▶ From your meter underground to a building, pool/spa heater, barbecue, stove or other gas equipment.

To avoid potential hazards, periodically check your gas lines and immediately repair any unsafe conditions, such as corrosion or leaks. You should locate buried gas piping before digging near it, and then dig carefully, using only hand tools. A licensed plumbing or heating contractor can help you find, inspect and repair your buried gas lines.

To locate utility-owned lines, always call **811** at least two workdays before digging in your yard so that Underground Service Alert can arrange this free marking service.





How to handle emergencies

Emergencies can happen anytime, so be prepared. Our emergency checklists at sdge.com/emergency-checklists can help you make a kit and a plan. Keep SDG&E's emergency number, **1-800-611-7343**, in the same place you keep phone numbers for the police, fire department and other emergency services.

Gas and electric emergencies

Electric fire

- ▶ Never use water to put out an electric fire. Unplug the appliance if you can do so safely and use a fire extinguisher or baking soda.

Downed power lines

- ▶ Never touch a fallen electric line or a person or vehicle in contact with the line. Call **911** and SDG&E to report any downed power lines immediately. Warn others to keep away.

Car accident

- ▶ If a car hits a power pole, knocks down lines or breaks a gas main, call **911** and SDG&E immediately. Never try to open a car door if there are live wires around – you could be electrocuted. If there's a gas leak, don't start the car or there may be an explosion. Also, remember not to smoke or use any open flames (such as flares).

Shock

- ▶ Don't touch the person or the equipment involved. If possible to do so safely, shut off power. A trained first responder such as a firefighter should rescue people from energized wires or equipment. You shouldn't attempt to remove anyone from energized wires or appliances unless you have been given appropriate training.

You should assume that all electric wires are “live” or energized unless you personally know: the wires have been disconnected; the wires or circuit are grounded; and they can’t be reconnected without your knowledge.

Once clear of the wires or appliances, call **911** for immediate medical aid. Keep the person warm and lying down. If the person’s face is pale, raise the feet slightly; if the face is red, keep the head slightly elevated. If the person is not breathing, start cardiopulmonary resuscitation (CPR).




Earthquakes and energy

During an earthquake, gas lines may break and electric lines may be pulled down. Following an earthquake, stay away from downed lines and be alert for gas leaks. It might take emergency crews some time to fix all the damage, so be patient.

Around your home, turn the gas off at the meter only if you smell natural gas. If you turn the gas off, don’t attempt to turn it back on – call SDG&E to turn it back on and relight all the pilots. Turning the electricity off at the circuit breakers or fuse box is also a good idea if there’s damage in your home.

Earthquakes can also cause improperly secured water heaters to move or topple. To help prevent this, strap them firmly to the wall studs in two



places – the upper and lower third of the tank – with heavy bolts and metal tape. Be sure to place the lower strap at least 4 inches above the thermostat controls. Kits are often available at your local hardware store. The state of California requires all new and replacement water heaters be strapped to resist movement.

Turnoffs you should know

You should know where and how to turn off your gas and electricity. This information covers most homes or apartments, but if you have questions, call SDG&E at **1-800-411-7343**.

The meter, main circuit breaker or fuses, and the gas shutoff valve for most homes are located outside. In very rare situations the main circuit breaker or fuses may be located in the utility room, bathroom, kitchen or closet.

Gas turnoffs

To turn off gas, the shut-off valve should be turned from a vertical position to a horizontal position. Meters for multi-family buildings such as apartments have a master shut-off valve and a valve for each individual meter. It's possible to shut off gas to one apartment without interrupting service to other parts of the building. The number of the apartment served should be near each meter. **Caution:** If you turn off your gas at the meter, leave it off. Don't turn it back on yourself. Call SDG&E to turn it back on and relight the pilots.

Electric turnoffs

The best way to shut off power in your home is to move the main circuit handle to the "off" position and turn all circuit breakers to "off."

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Contact us for more safety information

Phone: **1-800-411-7343**

TDD/TTY: **1-877-889-7343**

Email: *info@sdge.com*

Web: *sdge.com/safety*

Connect with us at **sdge.com**
and on social media:



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