



Safety Brief Series

Using Portable Generators Safely

With the winter months upon us, the possibility of power outages due to winter storms is increased. Portable generators are beneficial when short term electrical power is needed, but they can be dangerous if not used properly. Hazards to be aware of when using a portable generator include, but are not limited to: shock and electrocution, carbon monoxide poisoning and the risk of fire hazards.

It is important to recognize and follow safe portable generator guidelines.

Shock and Electrocution

- Never attach a generator directly to the electrical system of a structure such as a home, attached garage, office, trailer, etc. unless a qualified electrician has properly installed a generator with a transfer switch. Attaching a generator directly to a building's electrical system without a properly installed transfer switch can energize wiring systems for great distances. This creates a risk of electrocution for utility workers and others in the area.
- Plug electrical appliances directly into the generator using the manufacturers supplied cords that are grounded (3-pronged). Inspect the cords to make sure they are fully intact and not damaged, cut or worn. Never use frayed or damaged extension cords. Ensure the cords are appropriately rated in watts or amps for the intended use. Do not use underrated cords; replace them with appropriately rated cords that use heavier gauge wires.
- Do not overload your generator; this can lead to overheating.
- Use ground fault circuit interrupters (GFCIs), especially where electrical equipment is used in or around wet or damp locations. GFCI's and extension cords with built-in GFCI protection can be purchased at hardware stores, do-it-yourself centers, and other locations that sell electrical equipment. Regardless of GFCI use, electrical

equipment used in wet and damp locations must be listed and approved for those conditions.

- Make sure a generator is properly grounded and the grounding connections are tight.
- Keep a generator dry; do not use it in the rain or wet conditions. If needed, protect a generator with a canopy. Never manipulate a generator's electrical components if you are wet or standing in water.
- Do not use electrical equipment that has been submerged in water.
- Equipment must be thoroughly dried out and properly evaluated before using.
- Power off and do not use any electrical equipment that has strange odors or begins smoking.

Carbon Monoxide Poisoning (CO)

Carbon monoxide (CO) is a colorless, odorless, toxic gas. Many people have died from CO poisoning because their generator was not adequately ventilated.

- Never use a generator indoors or in enclosed spaces. Open windows and doors may not prevent CO from building up when a generator is located in an enclosed space.
- Make sure a generator has 3 to 4 feet of clear space on all sides and above it to ensure adequate ventilation.
- Do not use a generator outdoors if its placement near doors, windows, and vents could allow CO to enter and build up in occupied spaces.



Fire Hazards

- Generator fuels (such as gasoline, kerosene, etc.) can ignite when spilled on hot engine parts.
- Before refueling, shut down the generator and allow it to cool.

- Gasoline and other generator fuels should be stored and transported in approved containers that are properly designed and marked for their contents, and vented.
- Keep fuel containers away from flame producing and heat generating devices.
- Do not smoke around fuel containers.
- Do not store generator fuels in your home.



Resource

These portable generator safety tips are from the Occupational Safety and Health Administration's (OSHA), "Using Portable Generators Safely", fact sheet. We urge you to take the time to look over this list and visit OSHA's website and the fact sheet in its entirety: [www.osha.gov/OshDoc/data Hurricane Facts/portable generator safety.pdf](http://www.osha.gov/OshDoc/data/Hurricane%20Facts/portable_generator_safety.pdf)

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