



Town of BEACON FALLS
Connecticut

Building Inspector

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ELECTRIC GENERATOR SAFETY

It appears that catastrophic storms and resulting power loss is being called the "new normal" for our area. It is understandable that homeowners want to install emergency generators. We want you to know how to use a generator safely.

According to the Consumer Product Safety Commission, the misuse of the portable power sources killed at least five people and sickened dozens more after Hurricane Katrina.

As reported in the CT Post, 36 cases of Carbon Monoxide Poisoning have been reported in Fairfield County alone, during Hurricane Sandy. Tragically, a Firefighter in the Town of Easton died while responding to a generator fire during Hurricane Sandy.

All of these generator-related deaths and accidents could have been prevented.

Here are some basics regarding generators. But the first thing to do is **Read the Instruction Booklet or Manual** that came with the generator. If the manual is lost or missing, contact the generator's manufacturer. Get a Building Permit for all permanently installed generators.

Wind and Rain don't mix with electricity and fuel.

Don't use your portable or permanent generator during a storm with strong winds, rain, or winter precipitation. Water and electricity don't mix. Falling trees with propane or gasoline fired equipment don't mix, either. Save your generator for the recovery period after adverse weather conditions have passed.

Never use a generator indoors or in a garage, even if the door is open!

A portable generator is an internal combustion engine that exhausts a deadly gas called carbon monoxide or CO. CO is odorless and colorless, and you can be overcome if the generator is indoors.

Be sure to place the generator outside where exhaust fumes will not enter into enclosed spaces. Only operate a generator outdoors in a well-ventilated, dry area, away from air intakes to the home. The generator should be protected from direct exposure to rain and snow.

Don't connect a portable generator directly to your home's wiring.

Connecting a portable electric generator directly to your household wiring can be deadly. A generator that is directly connected to your home's wiring can 'back-feed' into the power lines connected to your home.

Utility transformers can then increase this lower electrical voltage to thousands of volts. That's more than enough to kill a utility lineman or tree cutter making outage repairs many miles away. You could also cause expensive damage to utility equipment and your generator.

If you wish to hard-wire a generator to your home, it should be installed by a licensed electrician with an approved transfer switch that will disconnect the home from the power grid when the generator is being used. In CT, our Building Code does permit homeowners to perform their own wiring tasks on their own homes without being a licensed electrician, however a permit from the Town Building Department is required. The Beacon Falls Building Official will help direct you to the proper Electrical Codes and reference material necessary to connect your generator safely.

Don't plug a portable generator into an electrical outlet in your home or garage.

If a generator is plugged into your home's electrical circuits, it can still 'backfeed' power into the utility company lines, which can injure or kill utility workers fixing on the downed power lines.

The correct way to use a generator is to connect a heavy-duty, outdoor-rated power cord to the generator. Appliances can then be connected to the power cord.

Make sure that the outdoor-rated power cord has a sufficient wire gauge to handle the electrical load.

Don't overload the generator.

All generators have a power rating. They should be used only when necessary and only to power a limited number of appliances or equipment.

The total wattage used by the appliances should be less than the output rating of the generator. If you put too many appliances on the generator, it could seriously damage the appliances and electronics. Overloading the generator could also cause fires in the power cord. A Generator

should be sized to handle twice any motor load rating, such as a well pump, or refrigerator compressor.

Make sure your generator is properly grounded to avoid electrical shocks.

Check the generator owner's manual for correct grounding information.

Do not store gasoline for the generator indoors.

Gasoline should be stored in approved, non-glass safety containers.

Don't store gasoline in a garage or your basement if there's a water heater or other fuel-burning appliance in the garage or basement. Vapor from gasoline is heavier than air and can travel invisibly along the floor. It could be ignited by a pilot light or other source of flame, such as an electric spark.

Extinguish all flames or cigarettes when handling gasoline or the generator.

Shut off the generator before refueling. Turn off all equipment powered by the generator before shutting it down. Wait 10 minutes after re-fueling to allow fumes to dissipate before re-starting your generator.

Always have a fully charged, approved fire extinguisher located near the generator.

Propane Fired Generators

Propane connections require a Building Permit, and must be installed by a properly licensed contractor, or the Homeowner working on their own home. Propane connections are vulnerable to falling trees, vibration, and decay from weather exposure. It is advised to shut off the propane tank during inclement weather, and save the fuel and generator for the recovery period after the storm has passed. Locate the fuel tank far enough away from the generator so that you can shut off the fuel valve should the generator catch on fire. Train every member of your household how to do this safely. Keep a fire extinguisher at hand.

Read and adhere to the manufacturer's directions for safe operation.

Read the owner's manual before you operate the generator. If you've lost the manual, contact the manufacturer for another copy. You can often download the manual from a manufacturer's Web site. Keep the owner's manual with the generator in a zip-lock bag to keep it dry.

Final Tips

Many generator parts are hot enough to burn you during operation. Stay away from the muffler and other hot areas.

Keep children away from portable electric generators and their electrical and fuel connections at all times.