

STAND-BY ELECTRIC GENERATORS

This year it seems everyone is preparing for power outages by purchasing a standby generator to provide emergency electrical power. Without doubt this is one purchase which boosts our confidence level in dealing with the stress associated with any loss of power to our home. Being prepared is of critical importance to the community so the purchase and installation of an emergency back up generator system is certainly worth while – if done correctly.

Let's look quickly at a few of the principle considerations involved in making this decision.

Noise

Generators need to be properly maintained which includes running them on a regular basis. All generators currently manufactured exceed Jupiter's noise restrictions. To fully meet the intent of the Town Code the generator must not exceed 55 decibels at the closest point on the neighbor's property during the day and 45 decibels at night. Consideration must be given to the neighbor's reaction should the noise created by the generator become annoying.

Placement

Engine exhaust fumes are dangerous. Only use a portable generator outdoors in a dry area far away from doors, windows and vents that can allow carbon monoxide (CO) to come indoors. Never use a portable generator indoors, even with ventilation. Opening doors and windows or using fans will not prevent carbon monoxide buildup. Permanent generators require a building permit and inspections by the building department, and must be installed in accordance with the Florida Building Code. Generator exhaust outlets must be 10 feet from all openings such windows, doors, soffit vents, etc. Clearance for cooling and servicing and from combustible materials is important so refer to the manufacturer's installation instructions. The unit should be as far as practical from the neighboring residence and by code must be placed within the established building set backs on a properly sized concrete slab. On a small lot finding an approved location for a permanent generator may be difficult.

Sizing

The electrical calculations required to properly size any generator are based on the connected load. For example, a 40,000 watt (40 kW) generator is needed to fully power a small residence. Permanently connected generators including automatic transfer switches which safely manage the load must be installed by a licensed electrical contractor. Portable units in the 3,000 to 7,000 watt range are designed and intended to be connected to only three or four things such as fans, a refrigerator, a TV, a couple of lights or a small window AC unit. Connection to portable units is made with heavy gauge (12 AWG) extension cords and the total electrical load should be limited to no more that 80% of the generators rating.

Fuel Storage

Generators operate with natural gas, propane, diesel and gasoline. A 7,000 watt unit will burn 15 to 24 gallons of gasoline per day. Storing adequate fuel safely or finding fuel following a hurricane may be challenging. It certainly was last year. Refueling portable units is hazardous so wear appropriate clothing, have a fire extinguisher nearby and keep children clear of the area.

Warning

Do not directly connect (back feed) the generator to the existing electric panel board or electrical outlet. This is an unsafe practice which has resulted in numerous electrical accidents and creates substantial delays in scheduling reconnections. Florida Power and Light will not energize any electrical system which has been illegally back fed. Install battery-operated or plug-in CO alarms with battery back-up in your home, test them frequently, and replace dead batteries. Get to fresh air right away if you start to feel dizzy or weak. The CO from generators can rapidly lead to full incapacitation and death. According to the U.S. Consumer Product Safety Commission (CSPC), at least 55 people died from carbon monoxide poisoning associated with portable generators – 28 of which in the aftermath of the hurricanes that struck the Gulf Coast region.

By now it should become apparent the installation of a generator is not a simple task and requires considerable thought before purchasing. As important as it is for all of us to be prepared it is equally important to have a safe and reliable installation. The Town of Jupiter Building Department is available to assist you with any generator building permit or inspection needs. Feel free to give us a call regarding the Town's installation requirements at 561-741-2287 or 561-741-2576.