

UCC Generators Installation Guidelines

Installation of Standby Power Generators at Single-family

Dwellings

The Department has received several questions concerning the installation of standby generators at single family dwellings: Who is responsible for plan review and inspection? and Where does the generator need to be located?

The Uniform Construction Code (UCC) and the one-and two-family dwelling subcode do not have specific requirements for these installations. However, the International Residential Code/2009 (IRC), Section M1301.1, Scope, requires compliance with the International Mechanical Code (IMC) and International Fuel Gas Code (IFGC) when installations are not specifically covered by the IRC. IMC, Section 915, Engine and Gas Turbine-Powered Equipment and Appliances, and IFGC, Section 616, Engine and Gas Turbine-Powered Equipment, both reference National Fire Protection Association (NFPA) 37-2006, Installation and Use of Stationary Combustion Engines and Gas Turbines, and both require that the requirements of UL 2200, Stationary Engine Generator Assemblies are met.

NFPA 37, Section 4.1.4, Engines Located Outdoors, has specific information on the location of the generator or engine-driven generators located outside. The generators must be installed a minimum of **five feet** from any opening into the structure and at least **five feet** from structures that have combustible walls. There are two exceptions to the five foot separation:

- (1) No minimum separation is required when the wall adjacent to the generator has a fire resistance rating of at least one hour; and
- (2) A distance of less than five feet is acceptable when documentation is provided showing that a fire located inside the noncombustible weatherproof enclosure did not ignite combustible materials location outside. This exception applies because some generator manufacturers have performed burn tests and have proven their units can be within 18 inches of combustible materials without ignition. The subcode official who performs the review must make sure the applicant supplies documentation from the manufacturer indicating that the unit proposed to be installed closer than five feet has been tested and approved in accordance with the standard for clearance to combustibles. The documentation must include the model and size of the unit being installed.

NFPA 37 requires the generator be supported on a foundation or secured to noncombustible framework.

NFPA 37 also provides information on generators that are installed inside and those installed on top of structures.

The review and inspection responsibilities are assigned to the building subcode official and fire protection subcode official, as follows:

IMC requires building and fire review with building final inspection; IFGC requires building and fire review with fire final inspection.

When generators are being installed at Group R-3, R-4 or R-5 structures, the UCC (at N.J.A.C. 5:23-3.4(d)), allows a construction official to assign these responsibilities to the mechanical inspector when there is one employed by the enforcing agency.

In addition, the plumbing subcode official and electrical subcode official have inspection responsibilities for the connection of the gas line and the installation of electric wiring and sizing of the generator, respectively. The National Electrical Code (NEC), Article 702.4, Capacity and Rating, also requires that standby sources have the capacity to supply all the loads connected to them, unless an automatic load management system is used to ensure that the transferred loads do not overload the source.

This requirement applies only to systems where the switching between power sources occurs automatically.