

Q: In an increasing trend for home/business owners to install permanent fuel-fired generators, and the system is not otherwise required by code, what are the installation requirements?

A: The codes adopted by the City of Dover are relatively silent on installation requirements, with exceptions. The International building Code Chapter 27 and NFPA 37, NFPA 10, and/or NFPA 101 address certain requirements for electrical, safety, operation and maintenance of optional generator systems.

NOTE: This does NOT apply to portable generators that are not permanently installed. However, if a portable system has any components that are permanently installed, those components must meet the applicable provisions of the authority having jurisdiction.

General Requirements

The NFPA Standard 37 is for the installation and use of Stationary Combustion Engines and Gas Turbines as the accepted installation standard for optional generator systems. For those issues not specifically addressed by code, ordinance, or NFPA 37, NFPA 10 and or NFPA 101, the manufacturer's installation instructions shall govern. To ensure proper installation, all applicable codes, this policy, NFPA 37 and the manufacturer's instructions must be followed; where conflicts arise, the most restrictive shall prevail.

* Any system that is listed and complies with UL standard 2200-98 may be installed in accordance with that listing.

* A third party inspection is required for electrical safety of the installation, operation and maintenance of generator systems.

* All generator equipment shall be sized to accommodate the desired load.

* All generators must have a maintained clearance of at least three (3) feet surrounding the equipment, unless otherwise stated in the manufacturer's instructions.

*Manufacturer's instructions must be specific and contain at least the following information:

Approved installation location (e.g. interior, exterior)
Specifications for the exhaust of the equipment,
Interior ventilation requirements, and interior combustion air requirements.

* This information must be provided along with the application before the permit will be approved.

Prescriptive Requirements:

Interior Installations

NOTE: Generators installed under carports, decks, or within garages shall be considered interior installations.

* Where generators are installed inside a building, the equipment shall be located in an enclosure providing a one-hour occupancy separation from all other portions of the home or duplex, uses or equipment, including mechanical equipment. This separation requirement applies to any fuel-fired appliance such as fuel-fired water heaters or furnaces. The most restrictive code requirements apply.

* Exhaust for all interior generator equipment shall terminate outdoors and shall not terminate beneath a portion of the residence including decks, porches, carports, patio covers or other similar design features. In addition, exhaust termination shall be located at least 12 inches above grade and a minimum of four feet from a property line. Where a forced air intake opening is located within 10 feet of the exhaust termination, the exhaust termination shall be at least 3 feet above the intake opening. Exhaust termination shall also be located a minimum of four feet below and four feet horizontally from a gravity air inlet, or not less than one foot above a door, window, or gravity air inlet.

Exterior Installations

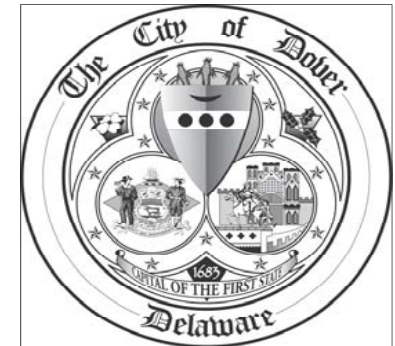
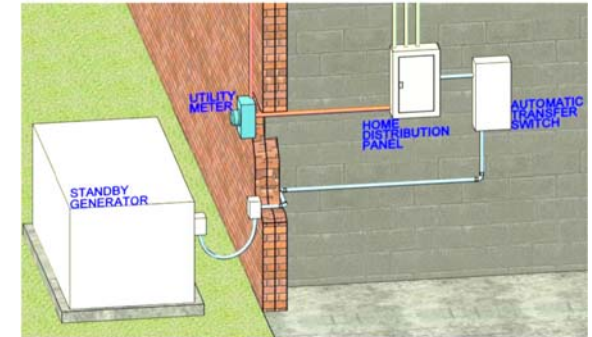
* Where a generator is installed outside a building and it is located closer than five feet from the building structure, a one-hour separation is required between the generator and the structure. A listed enclosure assembly may be approved in lieu of a traditional one hour separation.

* All generators installed outside of a building shall conform to all City noise ordinances and applicable zoning regulations.

* Where a separate fuel supply tank is used with the generator, the City Fire Marshal shall approve all fuel supply sources and tank locations.

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Generators



City of Dover
Planning & Inspections

Requirements for Stationary Generators

The following checklist will assist you in submitting a City of Dover generator permit application:

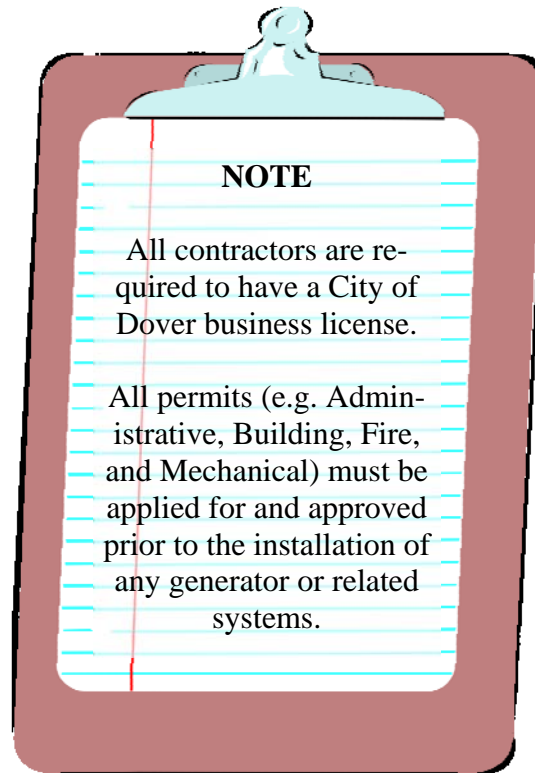
- A building permit application - this standard form is geared for “buildings”, and not specific to generators, but will be treated as an “administrative” permit. Permit fee is calculated by our staff, and is based on the total cost you provide. See “Permit Fees” brochure.
- Site plan - 2 copies (for approval by Zoning). Must reflect the address and location of the proposed equipment with dimensions, distances and sizes. Include any structures and footprint dimensions of the same, habitable or otherwise, within the limits of the property line.

Drawings - 2 copies (Building and Life Safety approval). Foundation drawings that reflect the manufacturer’s specifications as well as local code requirements, i.e. footing depth (minimum 2’ below grade), reinforcement, elevation above grade (top of slab), embedments, etc.
- Manufacturer’s Specifications - 2 copies (to complete the submission)
- Proposed scope of work, including, but not limited to the purpose of the generator and what the generator serves.
- The above information on CD in pdf format (for our archive).

Checklist (continued):

- Manufacturer specifications and/or design professional to provide codes data and confirmation that the applicable code requirements have been met and are demonstrated on the plans.
- Public Works Renovation Checklist

NOTE: Please allow 7 to 15 business days for review of your application. You will be contacted when the permit is approved and ready for pick up.



Inspections:

A list of standard inspections is located within the plans submission document. Use what applies, inclusive of, but not limited to the short list below.

- 1) Pre-slab to confirm depth of footing/slab and placement of steel/anchor embedments (prior to placement of concrete)
- 2) Confirmation of any electrical inspections (approved third party agency-information is within the plans submission document).
*The agency you use will leave a sticker for us to see.
- 3) Final inspection (includes close out of the permit) upon final electrical approval (third party as described) and written acceptance by the owner and/or design professional in charge that the generator is compliant and functions as intended.