



## BUILDING INSPECTOR'S OFFICE

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### **Residential Generators – Guidelines for Proper Installation and Inspections** **Effective January 01, 2016**

#### **PURPOSE**

This informational sheet was created to aid residents and contractors/installers with the permitting and inspection process when installing a residential standby generator. Included are the required permits, items that must be available to the inspector at the job site, and what the inspector will be verifying in the field during the inspection process.

#### **Permits Required**

- **Generator Permit** – must include:
  - Site plan showing location of generator (to scale), lot lines, wetlands (if applicable), house and any other structures.
  - KW of the generator.
- **Electrical Permit** – must include:
  - Load analysis (calculations), identifying the electrical loads selected, to verify generator and transfer switch are appropriately sized for the designated loads.
  - One line diagram for wiring installation and conduit size.
- **Gas Permit** – must include:
  - Size, type and distance of gas line.

#### **General Requirements**

- May be installed no closer than ten feet (10') to rear and side lot lines.
- Must be at least five feet (5') from combustibles and building openings (doors, windows, vents, etc.).
- Electrical conduit must be a minimum of 18" below grade.
- Gas line must be a minimum of 12" below grade.
- The manufacturer's installation manual and all permits must remain on the job site at all times.

#### **Inspections**

***\*\*PRIOR TO ANY BACKFILLING: Trades are responsible for scheduling and attending their own inspections. \*\****

- Rough Inspection:
  - Electrical Underground
    - Generator placed as shown on plan.
    - Pad for generator as proposed.
    - All conduit shall be placed a minimum of 18" below grade.
    - Conduit to be laid on a bed of sand.
    - Backfill to be sand for a minimum of 6" above conduit.
    - Warning tape available for placement during backfill.
    - Conduit approved for use.
  - Gas Pipe Underground
    - All pipe shall be placed a minimum of 12" below grade.
    - A tracer wire (18 AWG minimum) is required to be placed in the trench with all plastic UG gas piping.

- Plastic gas pipe may only enter a building through a foundation wall or be installed under a slab, if installed in a sleeve, two sizes larger.
- Gas Pipe Pressure Test
  - Plumber is required to tag the pressure gauge indicating the original applied test pressure and the date the pressure was first applied.
- Final Inspection:
  - Electrical
    - The electrician, or his representative, must be on site to open all equipment to allow for the proper inspection.
    - The electric meter and main electrical panel are required to have a sign indicating the type and generator location as well as KW.
    - A warning sign shall be installed at the normal power source equipment stating: "WARNING: SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED" (non-separately derived system).
    - If the manufacturer's specs indicate that CO detectors are to be installed, then an inspection of the house shall be made to verify that they are installed per the manufacturer's specs.
  - Gas
    - All new and existing yellow CSST pipe that is not bonded will be required to have a #6 wire bond.
    - Gas pipe "drip tees" are not allowed outside where they may be subject to freezing.
    - A "sediment trap" is required and shall be located as close to the generator unit as possible (Sect. 2419.4, IRC).
    - Black pipe must be protected from corrosion.

If you have any questions, please do not hesitate to contact our office: Monday through Friday, 7:45 a.m. to 3:45 p.m.