

Install a Generator for Emergency Power

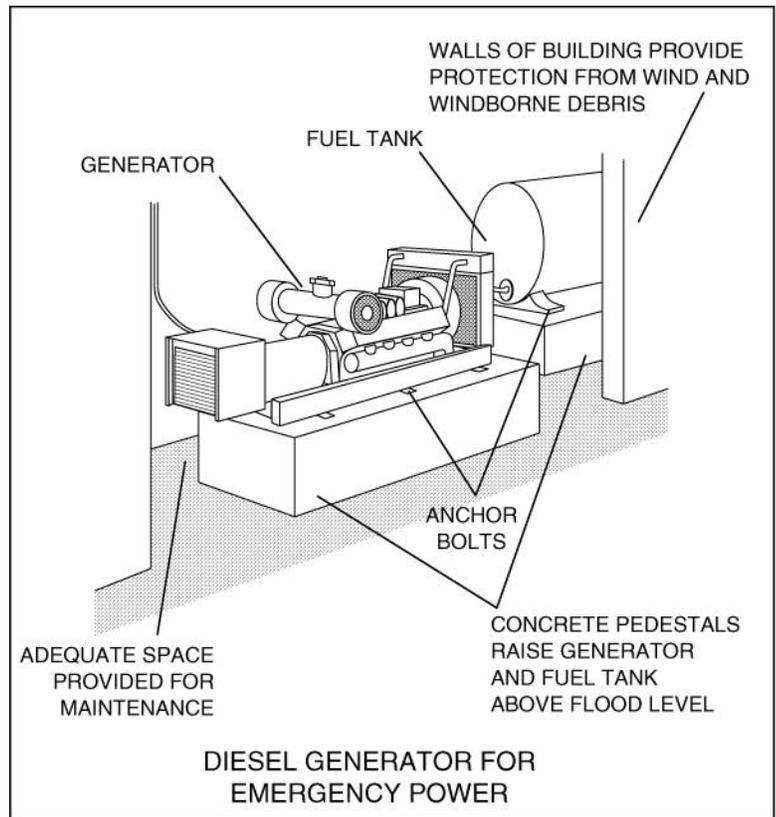


FEMA

PROTECTING YOUR PROPERTY FROM NATURAL HAZARDS

Power outages are commonplace during disasters, and they may last for several days. As a result, even businesses that are not severely damaged can suffer losses because of the interruption of normal operations or the loss of perishable stock. You can reduce these losses and speed the recovery process by installing an emergency generator. First, determine which systems and equipment are essential to the continued operation of your business. They may include one or more of the following:

- Heating, ventilation, and air conditioning (HVAC) systems
- Industrial equipment and major appliances, such as refrigerators and freezers
- Lights (interior and exterior), computers, and other office equipment
- Pumps, including sump pumps, sprinkler system pumps, and well water pumps
- Alarm systems



Once you have identified the essential systems and equipment, determine how much power they require. Then check with a generator sales representative regarding the appropriate size and type of generator. The sales representative can also help you select other components of the emergency power system, including the main transfer switch and the electrical panel.

BENEFITS OF USING GENERATORS

- Helps to prevent the interruption of normal business operations
- Helps to prevent the loss of perishable stock
- Helps to speed the recovery process

TIPS

Keep these points in mind when you select and install a generator:

- ✓ Protect your generator and its fuel tank from flooding and high winds. In flood hazard areas, mount the generator and tank securely on concrete platforms, above the expected flood level. Install the generator and tank inside or next to a building or protective structure to shield them from wind and windborne debris.

Electrical and fuel supply lines must also be protected. And remember that your generator must be accessible for maintenance and that exhaust gases must be routed to the outside if the generator is installed in an enclosed area.

- ✓ The installation of the generator and all wiring, switches, and other electrical components must meet the requirements of your local electrical codes.
- ✓ Some systems and equipment may have to operate continuously (refrigerators for example), while others may be needed only during normal business hours (such as office equipment).
- ✓ You will need more power to restart systems and equipment when the power fails than to continue operating them after startup. The generator you choose must be able to meet both of these needs. (You can minimize the power requirements for startup by starting individual systems and equipment in sequence rather than all at once.)
- ✓ Before you buy a generator, ask your utility company and local building departments if it has regulations that govern the use of emergency power equipment. Specifically check the requirements for the use of automatic or manual transfer switches or mechanical disconnecting means to ensure the safety of power company personnel working to restore power.
- ✓ Be sure to maintain an adequate supply of fuel. Your sales representative should be able to tell you the generator's rate of fuel consumption at various power output levels.
- ✓ Follow the manufacturer's installation instructions and the manufacturer's recommendations for routine maintenance of your generator.
- ✓ **CAUTION** – Improperly installed generators can accidentally energized electricity onto power company lines and cause severe injuries or death to linemen working to restore power. Generators should be installed by qualified individuals and in accordance with power company regulations, local and national building and electric codes to ensure the safety of power company personnel.

ESTIMATED COST

The cost of a generator will depend on the types and amount of equipment and systems that need to be powered, the requirements of local codes and utility companies, and the type of generator you choose and its specifications (i.e., amperage, voltage).

OTHER SOURCES OF INFORMATION

FEMA 141, *Emergency Management Guide for Business and Industry*, October 1993,
<http://www.fema.gov/library/viewRecord.do?id=1689>.

FEMA 259, *Engineering Principles and Practices of Retrofitting Floodprone Structures*, January 1995,
<http://www.fema.gov/library/viewRecord.do?id=1645>. (New FEMA 259 will be available in Fall 2011).

To view and download FEMA publications visit the FEMA Library at <http://www.fema.gov/library>. To obtain FEMA publications please call 1-800-480-2520 or fax 1-240-699-0525 Monday through Friday 8 a.m. – 5 p.m. EST. You may also email your request to FEMA-Publications-Warehouse@dhs.gov. Please provide the title, item number, short number, and quantity of each publication, along with your name, address, zip code, and daytime telephone number.