



FEMA

Protecting Your Business From Disasters

ARE YOU AT RISK?

If you aren't sure whether your business is at risk from disasters caused by natural hazards, check with your local building official, city engineer, or planning and zoning administrator. They can tell you whether you are in an area where hurricanes, floods, earthquakes, wildfires, or tornadoes are likely to occur. Also, they usually can tell you how to protect your business.

WHAT YOU CAN DO

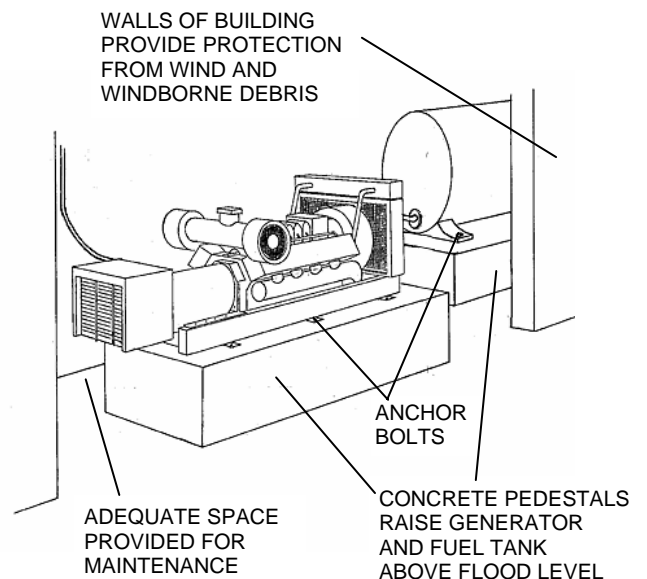
Protecting your business from disasters caused by natural hazards can involve a variety of actions, from inspecting and maintaining your buildings to installing protective devices. Most of these actions, especially those that affect the structure of your buildings or their utility systems, should be carried out by qualified maintenance staff or professional contractors licensed to work in your state, county, or city. One example of disaster protection is installing a generator to provide electricity during power outages.

INSTALL A GENERATOR FOR EMERGENCY POWER

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.



DIESEL GENERATOR FOR EMERGENCY POWER

Install a Generator for Emergency Power

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.
- ✓ 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 if it has regulations that govern the use of emergency power equipment. Also, the installation of the generator and all wiring, switches, and other electrical components must meet the requirements of your local electrical code.
- ✓ 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 recommendations for routine maintenance of your generator.

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, the type of generator you choose and its specifications (amperage, voltage).

OTHER SOURCES OF INFORMATION

Emergency Management Guide for Business & Industry, FEMA, 1996

Engineering Principles and Practices for Retrofitting Flood-Prone Residential Structures, FEMA 259, 2001

National Center for Appropriate Technology
(<http://www.ncat.org/energy.html>)

To obtain copies of FEMA documents, call FEMA Publications at 1-800-480-2520. Information is also available on the World Wide Web at <http://www.fema.gov>.