

# BATTLE BUSINESS DISRUPTION WITH A GENERATOR

According to the Department of Energy, blackouts (power outages longer than one hour) in the U.S. are steadily increasing—we now experience more than any other developed nation. These events are estimated to cost American businesses more than \$100 billion on average each year, due to disruption of daily operations, food spoilage, destruction of inventory, failure of alarm systems, and other cascading consequences. During Hurricanes Harvey and Irma, for example, many businesses that did not experience any physical damage were still forced to close due to widespread power loss. This problem, which also is common after a severe winter storm, can be one of the biggest barriers to a speedy recovery.

While it may be impossible to address all of the root causes of power failures—severe weather, site-specific accidents, infrastructure failures, and other events—an onsite generator is a critical defense against electrical interruption and business downtime. A generator is an independent source of electricity that powers important electrical utilities when the normal power supply is not active. Here are several reasons why it is important to consider purchasing a generator.

- 1** During a power outage, generators help operate items necessary for a business to continue with normal operations, or at worst, reduce downtime.
- 2** Generators can maintain internal climate control to reduce and mitigate commercial property damage from high heat and humidity, as well as freezing temperatures.
- 3** Climate-controlled inventory, such as produce and meats, can be saved by attaching a refrigerator and/or freezer to a generator.

## COMMUNITY-MINDED



During states of emergency, generators help keep businesses open and able to provide services for the community. For example, restaurants that run on backup power can provide food shortly after a hurricane or severe winter storm.



*A permanent diesel generator, shown above, is a reliable backup option for larger businesses during a power outage.*



*A portable diesel generator, shown above, provides a significant source of power and flexibility for a business in need.*



*A portable gasoline generator, shown above, is a quick and easy backup option for small electrical needs.*

## PORTABLE VS. PERMANENT

Generators come in two forms: portable and permanent. The following chart, along with information from the IBHS website (Power Up with Commercial Generators), will help you understand which type of generator is best designed and sized for your business to provide cost-effective benefits, while minimizing associated risks.

	PORTABLE	PERMANENT
<b>Size</b>	Relatively small (approximately 3 ft x 4 ft x 3 ft).	Fairy large depending on the model.
<b>Approximate Cost (Purchase and Install)</b>	\$	\$\$\$
<b>Target Users</b>	Small to mid-size businesses or those located in a remote location.	Larger businesses, business running sensitive equipment or numerous large appliances.
<b>Running Time</b>	A few hours; may need to refuel several times a day. Requires supervision during operation. See safety and maintenance for more information.	Long-lasting; good for prolonged out-ages. Minimal supervision is required. See safety and maintenance for more information.
<b>Fuel Source</b>	Gasoline; must be imported to the site.	Natural gas, propane, or on a bi-fuel basis; generator should be compatible with the local fuels available in your area.
<b>Wattage*</b>	0–17,500 watts	7,000 watts and up
<b>Number of Items It Can Simultaneously Power</b>	Few, depending on the wattage output.	Can replace your typical power source running all aspects of your business, depending on the size installed.
<b>Portability</b>	Can be moved; it is not fixed to the ground.	Cannot be moved; it is fixed on property. Requires anchorage to a concrete slab.
<b>Location</b>	Must be run outside. Additional cabling (extension cords) needed from the generator to appliances.	Located outside of business on an isolated generator concrete slab. Hard wiring is installed.
<b>Security Risk (Theft)</b>	Since they are small, theft rates are higher. Can be latched down with a chain and lock.	Connections lock unit to slab. Theft not as likely.
<b>Business Downtime After Power Outage</b>	Depends on response and generator setup.	No downtime; typically wired directly into building's electrical system through a transfer switch.

\*For small businesses, estimate the amount of wattage needed using the Department of Energy's "Estimating Appliance and Home Energy Use" tool at <https://energy.gov/energysaver/estimating-appliance-and-home-electronic-energy-use>. For medium to larger size businesses, contact a licensed electrician for more information.

## SAFETY AND MAINTENANCE

Once your generator is properly installed, put procedures in place to ensure regular maintenance and safe operating practices are followed. Business and building owners should always operate and maintain generators in accordance with manufacturer recommendations, including periodic testing and refreshing of fuel (for portable generators). Similar to automobiles, generators also need to be periodically run. Properly maintaining backup power will help ensure the system will perform as needed in the event of an emergency.

Safe operating practices are also critical to reducing health hazards for employees operating a generator and/or working in a building powered by one.

- Portable generators pose a risk of carbon monoxide poisoning due to improper operations. They must be operated outside, in a well-ventilated area. Operation in a garage or similar setting, which might seem ventilated, is strongly discouraged and is one of the leading causes of poisoning.
- With all generators, some level of supervision is required during operation. Portable generators should not run unattended and should be checked periodically (review manufacturer recommendations). Permanent generators are more independent than portable ones but should still be monitored periodically throughout operation.

### WARNING!



- Never refill a portable generator with fuel such as gasoline while the generator is hot—this could start a fire.
- Don't allow snow to accumulate on a generator if left out and running during a snow storm.



*Snow accumulation on a generator, as shown above, can significantly impact performance during a snow storm.*