Before the storm approaches, make sure your generator is installed correctly. Contact a licensed electrical contractor for help.

**COMMON APPLIANCES**

<table>
<thead>
<tr>
<th>Appliance</th>
<th>Wattage</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Furnace Fan</td>
<td>600 (1/4 HP)</td>
</tr>
<tr>
<td>*Washing Machine</td>
<td>750</td>
</tr>
<tr>
<td>*Air Conditioner</td>
<td>3800 (24,000BTU)</td>
</tr>
<tr>
<td>*Clothes Dryer (gas)</td>
<td>700</td>
</tr>
<tr>
<td>*Clothes Dryer (electric)</td>
<td>5750</td>
</tr>
<tr>
<td>*Refrigerator</td>
<td>600 (average)</td>
</tr>
<tr>
<td>*Well Pump</td>
<td>1000 (1/2 HP)</td>
</tr>
<tr>
<td>*Freezer</td>
<td>2500</td>
</tr>
<tr>
<td>*Sump Pump</td>
<td>1050 (1/2 HP)</td>
</tr>
<tr>
<td>Electric Range element (8&quot;)</td>
<td>2100</td>
</tr>
<tr>
<td>Electric Range element (6&quot;)</td>
<td>1500</td>
</tr>
<tr>
<td>Television (color)</td>
<td>300</td>
</tr>
<tr>
<td>*Microwave 750 Watts</td>
<td>750</td>
</tr>
<tr>
<td>Hair Dryer</td>
<td>800-1700</td>
</tr>
<tr>
<td>Coffee Maker</td>
<td>1200</td>
</tr>
<tr>
<td>Space Heater</td>
<td>1000-1500</td>
</tr>
</tbody>
</table>

*Be sure to consider induction motor start-up needs in determining generator size. These requirements are often significant.

**Consider:**

- Watts = Amps × Volts
- Amps = Watts ÷ Volts
- Volts = Watts ÷ Amps
INTRODUCTION
A home generator can be very useful in the event of an extended power outage. Choosing a generator that will suit your needs is very important. Various size (output) generators are available in permanent and portable models. There are several safety considerations when selecting a generator.

Typically, a generator produces 1,000 watts of power for every HP of motor output. It is important to choose a generator that produces 25 percent more power than the total load to be connected. Adding up the power requirements of the appliances and equipment you desire to use during a power outage will help you determine the size generator needed.

Connecting the generator is another important consideration.

An improperly connected generator poses a serious risk to you, your neighbors and to utility crews restoring your power.

Before permanently installing a generator, contact your local electrical inspector and a qualified electrician to obtain the proper permits and connection criteria. Always read the Owner’s Manual provided with your generator to obtain specific operating guidelines.

PERMANENT GENERATORS
- Permanent generators must meet local, state and national fire and electric codes and should only be installed by a licensed electrical contractor.
- There are several ways to connect your generator to your home’s wiring circuit. However, the generator must be electrically isolated from Consumers Energy’s distribution system.
  - A double-throw transfer switch, or similarly approved isolation switch, must be installed to isolate the generator from Consumers Energy’s distribution system.
- Be sure to obtain the proper electric permits and have your installations inspected.

PORTABLE GENERATORS
- Never pull your electric meter to disconnect from the utility’s distribution system.
- When using a portable generator, connect appliances to the generator using flexible extension cords with current ratings adequate for the appliances being served.
- A double-throw transfer switch is not required when a portable generator serves appliances via a properly rated extension cord, i.e., refrigerators, freezers, space heaters, etc.
- Never plug a portable generator into a wall outlet; you could damage your home’s wiring.

SELECTING A GENERATOR
- Select a generator that produces 25 percent more power than your connected appliances require or stagger their use.

USING A GENERATOR
- Never operate a generator in your home, garage, basement or any other enclosed area.
  - A generator needs to be at least 3 feet to 4 feet from an enclosed area as well as away from doors, windows and fresh air intakes where exhaust fumes and carbon monoxide can enter the home. Proper ventilation is critical.
  - A temporary canopy can be constructed over the portable generator to keep it dry. Leave adequate room for proper ventilation.
- Always read the owners manual carefully following all manufacturer instructions and precautions before starting and operating your generator.
- By alternating your appliances, you can stay within your portable generator’s output.

NEVER
- Never use a generator in an enclosed area.
- Never use a generator near a window.
- Never plug a generator into a wall outlet.
- Never fuel a generator when it is running. Turn the generator off and let it cool before refueling.
- Never operate more equipment and appliances than the output rating of the generator.
- Never pull your electric meter.

ALWAYS
- Get your permits and inspections.
- Properly connect your generator so it is isolated from your utility’s distribution system.
- Use your generator in a properly vented area.
- Check cords for signs of damage and replace if necessary.

HAZARDS OF USING A GENERATOR
- Carbon monoxide poisoning
- Electric shock or electrocution
- Fire