GENERATOR OPTIONS

There are two main Generator Options

1. Combustion Engine Generators (Three types)
2. Solar Generators

Why do we need generators?

Our homes use electricity. Generators produce electricity when our public electricity is cut off.
Different appliances use different amounts of electricity. The Wattage (W) is a measure of how much electricity different appliances use. Most appliances have a label that describes how many Watts that appliance uses.
When considering which generator to purchase, you first need to add up the wattage of the appliances you intend to run AT THE SAME TIME during power outages. The total RUNNING Watts you use concurrently will determine the size generator you will need to supply power to these appliances.

- Refrigerator / Freezer: 500 W (running), 800 W (surge) ALWAYS RUNNING IF PLUGGED IN
- Deep Freezer: 300 W (running), 600 W (surge) ALWAYS RUNNING IF PLUGGED IN
- Toaster: 850 W
- Toaster Oven: 1,200 W
- Electric Oven: 2,150 W
- Dishwasher: 1,500 W (running), 1,500 W (surge)
- Clothes Washer: 500 W (running), 1,400 W (surge)
- Clothes Dryer: 1,000 W (running), 4,000 W (surge)
- Hair Dryer: 1,200 W (running), 1,500 W (surge)
- Microwave: 1,000 W (running), 0 W (surge)
- Hot Water Kettle: 1,200 W (running), 3,000 W (surge)
- Air Fryer: 1,500 W (running), 0 W (surge)
- Bread Maker: 500 W (running), 0 W (surge)
- Ceiling Fan: 60-70 W
- Central AC (10,000 BTU): 1,500 W
- Dehumidifier: 240 W
- Electric Heater (Fan): 2,000 W
- Electric Water Heater: 4,000 W
- Natural Gas Water Heater (Tankless): 50-60 W
- Electric Water Heater (Tankless): 6,600 W
- Furnace Fan Blower (1/2 HP): 800 W
- Garage Door Opener (1/2 HP): 875 W
- Light Bulb (Common): 75 W
- Light Bulb (LED): 9 W
- Night Light: 1 W
- Space Heater: 1,800 W
- Tube Light (1500mm): 22 W
- Window AC (10,000 BTU): 1,200 W
- Window AC (12,000 BTU): 3,250 W

Some appliances use more electricity to get started. That momentary extra (1-2 seconds) of electricity is called the “surge”. Most of these appliances may be used sporadically at different times in order to use less power.

COMBUSTION GENERATORS (Open frame, Inverter, or Whole House)

- Fuel for combustion generators is either gasoline, propane, or Natural Gas
- Portable units weight 30 - 150 lbs.
- MUST operate outdoors, and portable units will require extension cords
- Portable units produce from 1,000 to 10,000 Watts. (Larger units available but weigh more)
- Portable units cost from $450 to $2000 or more.
- Fuel costs are about $50/day
- Require regular (occasional) maintenance like oil changes and carburetor cleaning.
- Life span of 10 years or more.
- **Open frame generators** are noisy and not suitable for computers, TV's, etc., but are the least expensive type for a given size (eg. 10,000 watts for $800-$1200).
- **Inverter generators** cost a bit more (eg. 5000 watts for $800-$1200), but make less noise and produce "clean" power, suitable for electronic components, such as computers, TV's etc.
- Propane Generators use Liquid Propane Gas (LP Gas) in tanks, which may be purchased ahead, and stored indefinitely (better for emergency prep than gasoline)
- Gasoline has a shelf life of only 6-12 months (less desirable for emergency prep)
- **Whole House Generators** (10,000-26,000 Watts) are the most expensive units ($10k-$25k including professional installation), but can be run on Natural Gas (usually still running during power outages), turn on automatically when power cuts out, and can power an entire home (power accessible through regular outlets).

SOLAR GENERATORS

- Fuel sources include sunshine and/or house current (when available).
- Weight 30 - 150 lbs
- Can operate indoors and be moved around to avoid long extension cords.
- Produces 1,000 to 5,000 Watts from batteries and solar panels
- Cost from $600 to $4500 including 3 to 15 100 Watt solar panels
- Fuel cost is $0.00/day when charging and using solar panels - Sunshine is free. When charging with house current, regular electrical rate charges will be incurred.
- Require very little to no maintenance
- Life span of 10 years or more
- Produce "clean" electricity suitable for sensitive electronics, such as computers, TV's etc.
- Run silently
- Limited use at night and during cloudy daytime weather unless power is stored in batteries
- Accessory batteries are required in order to use power 24/7 (outside of sunshine hours)