BACKUP POWER PRO

The Portable Generator Power Guide

Everything you need to know about generator safety, what your generator can actually power, and how to connect it to your home the right way.

You made the smart move buying a generator. This guide helps you get the most out of it — and shows you the safest way to connect it to your home.

A free guide from Backup Power Pro
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What Your Generator Can Actually Power

Most homeowners have no idea how much their generator can handle. Here is a straightforward breakdown.

Running Watts vs. Starting Watts

Running watts is the steady power an appliance uses while it is on. **Starting watts** is the extra surge some appliances need for the first second or two when they kick on. Anything with a motor — fridge, well pump, A/C — draws 2–3x more watts to start than to run. Your generator needs to handle both.

APPLIANCE	RUNNING WATTS	STARTING WATTS
Refrigerator	200 W	1,200 W
Chest Freezer	75 W	800 W
Sump Pump (1/3 HP)	800 W	1,300 W
Well Pump (1/2 HP)	1,000 W	2,100 W
Window A/C (10,000 BTU)	1,200 W	3,600 W
Furnace Blower (gas furnace)	700 W	2,000 W
Garage Door Opener (1/2 HP)	725 W	1,400 W
Washing Machine	1,150 W	2,250 W
Ceiling Fan	70 W	140 W
Electric Water Heater	4,500 W	—
Dishwasher	1,800 W	1,800 W
Space Heater	1,500 W	—
Microwave (1,000 W cooking)	1,500 W	—
Coffee Maker	1,000 W	—
Toaster / Toaster Oven	1,200 W	—
Hair Dryer (high)	1,875 W	—
TV (55″ LED)	100 W	—
LED Lights (per room, 4–6 bulbs)	40–60 W	—
WiFi Router + Modem	20 W	—
Laptop Charger	65 W	—
Phone Charger	10 W	—
Security System + Cameras	100 W	—

*Common estimates — actual wattage varies by brand and model. Check your appliance label or owner's manual for exact figures. Gas appliances (gas dryer, gas water heater, gas stove) use significantly less electricity since the gas does the heating — they may only need 300–600 W for controls and fans.

RULE OF THUMB

Your generator's nameplate shows its maximum output. Plan your total running load at about 75% of that number to leave headroom for starting watts. A 7,500-watt generator should run about 5,600 watts of steady load comfortably.

The 5 Biggest Generator Safety Mistakes

These are the most common — and most dangerous — things homeowners get wrong with portable generators.

1. **Running It in the Garage With the Door "Cracked"**

   Carbon monoxide from a generator can kill in minutes. Over 80 people die from generator CO poisoning every year in the U.S. The only safe location is outside, at least 20 feet from any window, door, or vent. A cracked garage door is not enough.

2. **Plugging It Into a Wall Outlet (Backfeeding)**

   This sends power backward through your panel and out onto utility lines. It can electrocute a lineman working to restore your power. It is illegal in every state. Some homeowners do this without realizing the danger.

3. **Overloading the Generator**

   Running more watts than your generator can handle does not just trip a breaker. It can damage the generator, damage your appliances, or cause overheating. Know your wattage limits (see page 2).

4. **Running It in Rain Without Proper Cover**

   Water and electricity do not mix. A generator sitting in a puddle is a shock hazard. If you run it in rain, use a manufacturer-rated canopy. A tarp duct-taped to a frame does not count.

5. **Extension Cords Everywhere**

   Running six cords through a cracked window is the most common "plan" — and the least safe. Cords get pinched, overheat, get rained on, and create trip hazards. They also mean you cannot power anything hardwired — your furnace, well pump, sump pump, ceiling lights, or water heater. If it does not have a plug, an extension cord cannot reach it.

NOTICE

Four out of five of these problems are solved by how you connect your generator — not by the generator itself.

Extension Cords vs. a Proper Connection

Here is what changes when you stop running cords through your windows.

Running Extension Cords

- ✕ Can only power things with a plug — no furnace, no well pump, no sump pump
- ✕ Cords run through cracked windows — heat loss, rain entry, security risk
- ✕ Trip hazards throughout the house
- ✕ Easy to overload a single cord and create a fire risk
- ✕ Cannot power your home's circuits — only individual appliances
- ✕ Not code-compliant in any jurisdiction as a permanent solution
- ✕ Have to set it all up from scratch every time the power goes out

With an Inlet + Interlock

- ✓ Powers circuits through your breaker panel — furnace, well pump, sump pump, lights
- ✓ Generator stays outside, connected by one cord to a weatherproof inlet box
- ✓ You choose which circuits to power by flipping breakers — just like normal
- ✓ No cords running through windows, no trip hazards
- ✓ Hardwired appliances work normally
- ✓ Code-compliant, permitted, and inspected
- ✓ Set it up once — works every outage after that

WHAT ARE THESE THINGS?

An **inlet box** is a weatherproof plug mounted on the outside of your house. An **interlock kit** is a small mechanical device on your breaker panel that prevents your main breaker and generator breaker from being on at the same time — which is what prevents backfeeding. Together, they give you a safe, permanent, code-compliant way to connect your portable generator to your home.

How an Inlet + Interlock Actually Works

Here is exactly what happens when the power goes out — step by step.

1. **Power Goes Out**
   You walk to your generator, wherever you store it (garage, shed, carport). Roll or carry it to the inlet box on the side of your house.

2. **Plug In**
   Connect the generator cord to the weatherproof inlet box on your exterior wall. One cord, one connection.

3. **Start the Generator**
   Fire it up and let it warm up for about 60 seconds before connecting any load.

4. **Flip Your Breakers**
   Go to your panel inside. Switch the interlock to the generator position — this automatically disconnects you from the grid (that is the safety mechanism). Then flip on the circuits you want: refrigerator, lights, furnace, well pump, whatever you chose.

5. **When Power Returns**
   Reverse the process. Flip breakers off, switch the interlock back, unplug the cord, turn off the generator. Done.

GOOD TO KNOW

The whole process takes about 3 minutes once you have done it once. Most people say it becomes second nature after the first outage.

What About My Specific Setup?

Every home's panel is different. The number of circuits you can run depends on your generator size, your panel layout, and which circuits matter most to you. A quick video assessment covers all of this in about 10 minutes — just point your phone at your breaker panel. No one needs to come to your house.

Can I Run My Central A/C?

Central air conditioners draw 3,000–6,000 starting watts — more than most portable generators can handle. But a device called a **soft start** can cut that surge by up to 70%. An HVAC technician installs it on your A/C unit (not the generator), and it lets the compressor ramp up gradually instead of all at once. With a soft start, many homeowners can run their A/C on a mid-size portable generator. Ask your HVAC tech about it.

What About Sensitive Electronics?

Standard generators produce rougher power with voltage fluctuations. That is fine for fridges, lights, pumps, and furnace blowers. But sensitive electronics like computers and medical equipment do better with an **inverter generator**, which produces clean, stable power. For a typical outage running the essentials, a regular generator through an inlet and interlock works great.

Your Outage Power Plan

Fill this out and keep it with your generator. When the power goes out, you will already know exactly what to do.

A. My Generator

Brand / Model: _____

Rated Running Watts: _____ W

Rated Starting Watts: _____ W

Fuel Type: _____

B. What I Want to Power During an Outage

- ☐ Refrigerator (200W)
- ☐ Chest Freezer (75W)
- ☐ Sump Pump (800W)
- ☐ Well Pump (1,000W)
- ☐ Furnace Blower (700W)
- ☐ Window A/C (1,200W)
- ☐ Space Heater (1,500W)
- ☐ Garage Door Opener (725W)
- ☐ Washing Machine (1,150W)
- ☐ Dishwasher (1,800W)
- ☐ Electric Water Heater (4,500W)
- ☐ Microwave (1,500W)
- ☐ Coffee Maker (1,000W)
- ☐ LED Lights ___ rooms (50W ea.)
- ☐ Ceiling Fan (70W)
- ☐ TV (100W)
- ☐ WiFi Router + Modem (20W)
- ☐ Phone Chargers (10W ea.)
- ☐ Security System (100W)
- ☐ Medical Equipment: _____
- ☐ Other: _____

C. My Totals

Total Running Watts Needed: _____ W

My Generator's Rated Output: _____ W

75% of My Generator's Output: _____ W

Is My Total Under 75%? **Yes / No**

IF YOUR TOTAL IS CLOSE OR OVER

That is okay — it just means you will manage which circuits are on at the same time. With an interlock, this is easy. You control each circuit with its own breaker switch, so you turn things on and off as needed.

Generator Storage & Maintenance Basics

A generator that sits unused for two years and will not start when you need it is not backup power. It is a paperweight.

Storage

- Store in a dry, ventilated area — garage or shed is fine, not a sealed space
- Keep fuel fresh: use fuel stabilizer if storing gas for more than 30 days
- Keep the battery tender connected if your generator has electric start
- Store the generator cord with the generator so everything is together when you need it

Before Storm Season

- Run the generator for 15 minutes once a quarter — this keeps seals lubricated and the carburetor clear
- Check oil level and condition
- Verify you have at least 5 gallons of fresh fuel (treated with stabilizer)
- Test your connection: if you have an inlet, plug in and flip your interlock to make sure everything works before you actually need it

During an Outage

- Let the generator warm up for 60 seconds before connecting load
- Add circuits one at a time to manage starting watts — do not flip everything on at once
- Refuel only when the generator is OFF and cooled down — never refuel a running generator
- Check fuel level every 4–6 hours during extended outages

After the Outage

- Let the generator run for a few minutes with no load before shutting it off
- If you will not use it again soon, add fuel stabilizer to the remaining gas
- Store it cleaned and dry — wipe off any moisture or debris
- Make a note of anything that did not work as expected so you can address it before the next outage

Fuel Planning

- Most portable generators burn 0.5–1 gallon per hour at half load
- A 5-gallon tank gives you roughly 6–10 hours of runtime depending on load
- Keep at least 10–15 gallons on hand for a multi-day outage
- Store gas in approved containers, in a ventilated area away from heat sources
- Rotate your stored fuel every 6 months or treat it with stabilizer

15 MINUTES, ONCE A QUARTER

That is all it takes to make sure your generator starts when it matters. About 50 cents in gas buys you peace of mind that your backup power actually works.

Ready to Make Your Generator Actually Useful?

If you have read this far, you probably already know that extension cords are not the answer. An inlet and interlock kit gives you a safe, permanent, code-compliant way to connect your generator to your home's electrical panel. It works with the generator you already own.

1

Book a Free Video Assessment

Point your phone at your breaker panel. Takes about 10 minutes. No one comes to your house.

2

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