

# HOME STANDBY GENERATOR BUYER'S GUIDE

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How to Choose the Right Backup Power System  
Before Spending \$6,000-\$15,000

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ACCORDING TO CLIMATE CENTRAL, MAJOR POWER OUTAGES CAUSED BY SEVERE WEATHER INCREASED BY 78% BETWEEN 2011–2021 COMPARED WITH 2000–2010, WITH THE LENGTH OF OUTAGES DOUBLING DURING THAT TIME.

Many homeowners are considering installing a home standby generator (HSB) to keep their homes running during blackouts.

A standby generator automatically starts when the grid fails and can power essential systems or even your entire home until utility power returns.

But standby generators are complex systems involving electrical infrastructure, fuel supply, installation costs, and long-term maintenance.

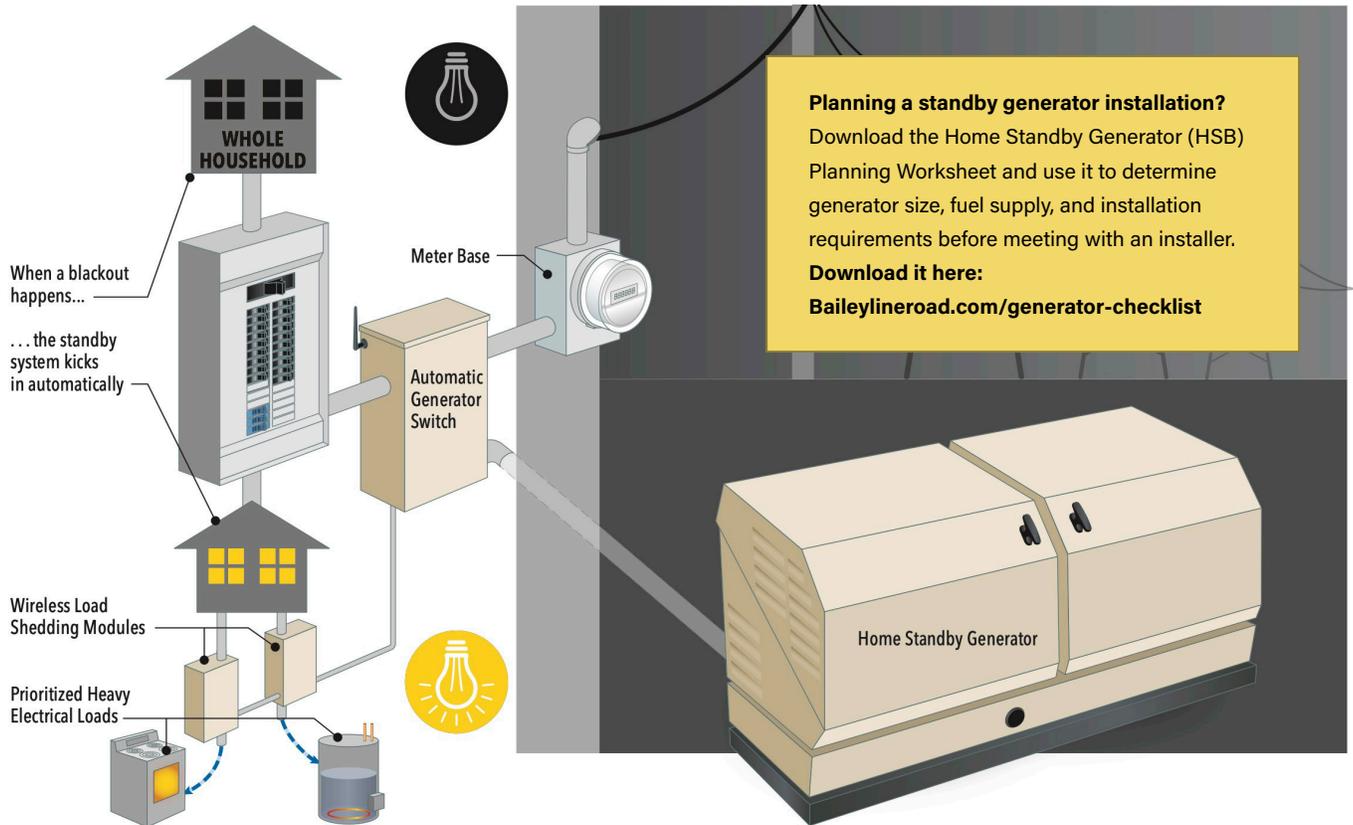
This guide explains the most important things to understand before purchasing a system so you can choose the right generator with confidence.



## WHAT'S IN THIS GUIDE

- HOW A HOME STANDBY SYSTEM WORKS
- DO YOU NEED A HOME STANDBY GENERATOR?
- CHOOSING GENERATOR SIZE
- FUEL CHOICES: NATURAL VS PROPANE
- TYPICAL INSTALLATION COSTS
- QUESTIONS TO ASK A GENERATOR INSTALLER
- TOP 5 GENERATOR BUYING MISTAKES
- GENERATOR SIZING WORKSHEET
- HOME STANDBY GENERATOR BUYER CHECKLIST

# HOW A HOME GENERATOR SYSTEM WORKS



**A standby generator system typically includes three key components:**

## GENERATOR UNIT

A fuel-powered engine connected to an alternator that produces electricity.

## AUTOMATIC TRANSFER SWITCH

Monitors grid power and automatically switches your home to generator power during outages.

## LOAD MANAGEMENT MODULES

Temporarily disconnect large appliances when generator capacity is reached so the generator is not overloaded.

# DO YOU NEED A HOME STANDBY GENERATOR?

STANDBY GENERATORS ARE MOST USEFUL FOR HOMEOWNERS WHO DEPEND ON ELECTRICITY FOR CRITICAL SYSTEMS.

Good candidates include:

- Rural homes with frequent outages
- Homes with sump pumps
- Homes with well pumps
- Cold climates where frozen pipes are a risk
- Homes left unattended in winter

**Portable generators may be a better choice** when outages are rare, budgets are limited, or homeowners are comfortable setting up equipment manually.



## CHOOSING GENERATOR SIZE



A rural home with a well pump, sump pump, refrigerator, and furnace typically needs a 14–18 kW generator to keep essential systems running. More if you have air conditioning.

GENERATOR SIZE	TYPICAL COVERAGE
10-14 kW	Essential circuits such as refrigerator, lights, sump pump
18-22 kW	Most household circuits
24-30 kW	Large homes or homes with electric heating

# FUEL CHOICES: NATURAL GAS VS PROPANE

## NATURAL GAS

- Usually the least expensive fuel
- Unlimited supply from the utility
- No on-site storage required
- Highly resistant to storm damage
- 10% less power output than propane

## PROPANE

- Available almost everywhere
- Independent fuel supply stored on your property
- Requires installation of a storage tank
- A 500-gallon propane tank can typically run a residential standby generator for about a week depending on electrical usage.

## TYPICAL INSTALLATION COSTS



Installation cost depends on electrical service location, gas piping distance, permitting requirements, and whether load-management modules are required. Always obtain an on-site quote from a qualified electrician.

Prices below include generator, transfer switch, and electrical work.

GENERATOR SIZE	TYPICAL COVERAGE
10-14 kW	\$6,000 – \$9,000
18-22 kW	\$9,000 – \$13,000
24-30 kW	\$12,000 – \$15,000

- Annual maintenance typically costs \$150–\$350 per year depending on service requirements

# QUESTIONS TO ASK A GENERATOR INSTALLER

## Before hiring an installer, ask the following questions:

- What generator size do you recommend for my home and why?
- Will my installation require load-management modules?
- Where will the transfer switch be installed?
- How long will installation take?
- Will permits or inspections be required?
- How much fuel will the generator consume during extended outages?
- What maintenance will be required each year?
- Do you offer service plans?
- What warranty does the generator manufacturer provide?

# TOP 5 GENERATOR BUYING MISTAKES

## 1. CHOOSING THE WRONG GENERATOR SIZE

Too small and critical systems will not run; too large and you overspend.

## 2. IGNORING INSTALLATION COMPLEXITY

Electrical service routing can significantly increase installation costs.

## 3. NOT PLANNING FUEL SUPPLY

Propane tank size or natural gas access must be determined early.

## 4. UNDERESTIMATING OPERATING COST

Generator power can cost several times more than grid electricity.

## 5. NEGLECTING MAINTENANCE

Annual servicing ensures reliability when outages occur.

# GENERATOR SIZING WORKSHEET

- Use this worksheet to estimate the size of standby generator your home may require.
- Home size (square feet): \_\_\_\_\_
- Major electrical loads:
  - Electric furnace or baseboard heating
  - Electric water heater
  - Well pump
  - Sump pump
  - Electric range or oven
  - Central air conditioning
- Essential circuits you want powered during an outage:
  - \_\_\_\_\_
  - \_\_\_\_\_
- Estimated generator size:
  - 10-14 kW
  - 18-22 kW
  - 24+ kW
- You can also use Champion's online generator sizing calculator:
- <https://www.championpowerequipment.com/home-standby-generator-selector/>

# HOME STANDBY GENERATOR BUYER CHECKLIST

- Before purchasing a standby generator confirm the following:
  - Correct generator size determined
  - Fuel supply available (natural gas or propane)
  - Installation quote obtained
  - Transfer switch location determined
  - Load-management modules included if needed
  - Propane tank size adequate for extended outages
  - Noise and placement requirements understood
  - Maintenance plan in place