



An Extended Guide · No. 1347

# Pairing an Automatic Transfer Switch With a Standby Generator

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How the switch and the generator work as a team

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**! Read this first — this is licensed electrician's work**

An automatic transfer switch is wired straight into your home's main electrical panel and works hand in hand with a standby generator. That makes installing one a licensed electrician's job from start to finish — almost always with a permit and an inspection — and never a do-it-yourself project. A big part of what the switch does is keep your generator's power from ever backfeeding onto the utility lines, which protects the crews working to bring your power back. Getting that right is exactly why the work belongs to a licensed pro. My job is to help you understand it, choose it, and live with it — not to open your panel. The switch and the standby generator are installed together, as one system, by that same licensed pro.

## The switch and the generator, as a team

An automatic transfer switch never works alone. It's one half of a matched pair, teamed with a permanently installed standby generator outside your home. This guide explains how the two work together, how they're chosen to fit each other, and what it's like to own the pair — all in plain English.

I'm Bill, and I help folks in Portage County understand these systems without the jargon. When people picture 'a generator that comes on by itself,' what they're really picturing is this pair: a standby generator that makes the power, and a transfer switch that decides when and how to use it.

You'll never install or wire any of this yourself — it's a licensed electrician's job from start to finish. But understanding how the pair cooperates helps you choose well and feel at home with your system.

**★ Thinking about a standby system?**

If you're weighing a standby generator and automatic switch, I'm glad to walk you through the whole picture before you spend a dollar. Call or text me at (330) 200-8042 — nothing to sell you.

## The whole guide, on one page

If you remember only these things, you understand the pair.

- ❑ A standby generator is a permanent unit outside that makes the power and starts itself.
- ❑ The automatic transfer switch is the brain that decides when to use it and safely moves your home over.
- ❑ The two are wired to talk to each other, so the switch can tell the generator to start.
- ❑ They're chosen to match — the generator's capacity and the switch have to agree.
- ❑ Standby generators usually run on natural gas or propane, so there's no fuel to pour or store by hand.
- ❑ The whole pair is installed together by a licensed electrician, with a permit and inspection.

### ✓ Buy the system, not just a box

It's tempting to shop for 'a generator' or 'a switch' alone. Think of it as one system instead — generator, switch, and fuel — and you'll make far better decisions.

## Two halves that make one system

The clearest way to understand a standby setup is to see each half's job.

The standby generator is the muscle: a permanent, weatherproof unit outside, wired to a fuel supply, that starts on command and produces electricity. The transfer switch is the brain: it watches the utility, decides when backup is needed, tells the generator to start, and safely moves your home between the two power sources.

Neither is 'the backup' on its own. A generator with no transfer switch can't safely power your home, and a switch with no generator has nothing to switch to. Together, they're a complete, automatic system.

### ✓ Muscle and brain

If it helps, picture the generator as the muscle and the switch as the brain. The brain decides; the muscle does the work. You need both for the team to function.

## What a standby generator is

Let's look at the muscle of the pair — the unit that lives outside your home.

A standby generator is permanently installed on a pad outside, much like a central air-conditioning unit. It's wired to a fuel supply, weatherproofed to sit out year-round, and built to start itself and run for long stretches. Unlike a portable, you never roll it out, pour fuel, or pull a cord — it simply waits, ready.

Because it's permanent and self-starting, it can protect your home whether you're there or not. It also runs a brief self-test now and then to prove it's ready — more on that in our testing-and-exercise guide.

### ✓ Set it and (mostly) forget it

The great appeal of a standby unit is that it asks almost nothing of you day to day. It waits patiently, tests itself, and springs into action when the switch calls — no muscle required.

## What the transfer switch contributes

Now the brain of the pair — the part this whole category is about.

The transfer switch watches the incoming utility power constantly. When it fails, the switch signals the generator to start, waits for it to steady, and moves your home over. When the utility returns, it switches you back and lets the generator cool down and stop. It also keeps the two power sources completely separate, so the generator can never backfeed the utility lines.

In short, the switch is what makes the whole thing automatic and safe. Our guide on what an automatic transfer switch is and how it works walks through each of these steps in detail.

### **! The brain also keeps you safe**

Beyond convenience, the switch's separation of the two power sources is what protects utility crews from your generator. That safety job is every bit as important as the automatic switching.

## How the two communicate

For the pair to act as a team, they have to talk to each other — and they do, over a simple wired connection.

During installation, your electrician runs control wiring between the switch and the generator. That's the line the switch uses to say 'start now' when an outage hits, and 'you can stop' when the utility returns. It's a modest connection, but it's what turns two devices into one cooperating system.

This communication is part of why the pair is installed together and why they need to be compatible. It's also why setup is precise, code-governed work for a licensed electrician — the two halves must be wired to understand each other perfectly.

### ✓ A quiet conversation you never hear

You'll never see or hear this exchange — it's just a signal down a wire. But it's the heart of what makes your backup automatic: the brain and the muscle, staying in touch.

## Matching the generator and the switch

The two halves have to agree with each other, and getting that match right is part of a good installation.

The switch has to suit the generator's capacity and the way your home is wired, and the generator has to be sized to the loads you want to back up. Often the pair comes from the same maker or as a matched package, which takes the guesswork out. Either way, your electrician and dealer make sure the two are a proper fit.

You don't have to figure out the matching yourself. Your part is knowing what you want running; the professionals turn that into a correctly matched generator and switch. Our sizing guide explains the thinking without any invented numbers.

### ✓ A matched package is often simplest

Buying the generator and switch as a matched set from one maker can make the pairing straightforward and the support simpler down the road. It's worth asking about.

## What fuel a standby generator uses

One of the nicest things about a standby unit is that you rarely handle fuel at all. Here are the usual choices.

### Natural gas

If your home has a natural-gas line, a standby generator can often run right off it — an effectively endless supply, with nothing to store or refill. For many town and suburban homes, this is the simplest, most hands-off option.

### Propane

Where there's no gas line — common in the country — a standby unit can run on propane from a large tank on your property. Propane stores for years and is widely available rurally; you'll want the tank sized so it lasts through a long outage.

#### ★ Fuel depends on your home

Which fuel makes sense comes down to what's available where you live. Tell me whether you have a gas line or would use propane, and I'll help you think it through. Call (330) 200-8042.

## Where the generator sits, and staying safe

You never place the generator yourself, but it's good to understand how its spot is chosen.

### **! The generator still makes carbon monoxide**

A standby generator burns fuel, so its exhaust still contains carbon monoxide — an invisible, odorless gas that is dangerous to breathe. Yours lives permanently outdoors, and your installer sets it the manufacturer's required distance from windows, doors, and vents so the exhaust drifts safely away from the house. You never have to place it yourself, but do keep that area clear, never box the unit in or enclose it to quiet it down, and keep tested carbon-monoxide alarms inside the house all the same.

Your installer selects the spot to meet the manufacturer's required clearances and local code — a safe distance from windows, doors, and vents, on a proper pad, with room to service it. All you need to do as an owner is keep that area clear of clutter, snow, and overgrowth so the unit can breathe and the exhaust drifts safely away.

### **! Keep its space clear and open**

Never build a shed around it, stack things against it, or box it in to quiet it — a standby generator needs open air, both to run and to keep its exhaust away from the house. And keep carbon-monoxide alarms inside, tested.

## Two kinds of homes, two sets of needs

A standby pair suits both town and country homes, but the fuel and the reasons for it often differ depending on where you live.

### If you live in town or the suburbs

In town or the suburbs, many homes have a natural-gas line, which makes a standby generator wonderfully hands-off — an endless fuel supply and nothing to store. With city water flowing regardless, the pair mainly buys you comfort and the freedom to never think about outages.

- A natural-gas line, where available, means truly hands-off fuel — nothing to pour or store.
- Outages tend to be shorter, so the pair's value is convenience and protection while you're away.
- A quieter, well-placed unit keeps the peace with close neighbors during its self-test and in an outage.
- The pair can be sized modestly for a town home's essentials, or for the whole home if you wish.

### If you are out in the country on a well

Out in the country on a well, the standby pair often runs on propane from a tank on your land, and it earns its keep by keeping the well pump, furnace, and sump pump running automatically through the long outages rural areas tend to get — even when no one's home.

- Propane from a sized tank suits rural homes with no gas line and stores for years.
- The pair keeps water flowing by powering the well pump automatically, day or night.
- Longer rural outages make the endless-fuel, self-starting nature of a standby pair especially valuable.
- Size the propane tank so it carries you through a multi-day outage with room to spare.

#### ★ Gas line or propane, let's map it out

Tell me whether you have natural gas or would use propane, and what you'd want backed up, and I'll help you picture the right standby pair for your home. Call (330) 200-8042.

## Buying as a package, or piecing it together

You can buy the generator and switch as a matched set, or separately. Here's the honest trade-off.

A matched package from one maker is often the simplest path: the two halves are designed to work together, the pairing is settled, and future support and parts come from one place.

Piecing it together can make sense in some cases, but it puts more weight on your electrician to ensure everything is compatible.

For most homeowners, especially first-timers, a matched package keeps things simple and dependable. Your electrician or dealer can tell you what pairs well, and I'm glad to help you weigh the options.

### ✓ Simplicity has real value

There's a lot to be said for one system, one maker, one place to call if you ever need help. Don't undervalue that simplicity when you're comparing options.

## Sizing the pair to your home

The generator and switch are sized together, to the loads you want to back up.

Your electrician sizes the generator to carry your chosen loads — whether that's the whole home or a set of essentials — and matches the switch to it. If you use load management, a smaller generator can cover more, as our load-management guide explains. Either way, the pair is sized as a unit, not two separate guesses.

You don't do the math. Your job is knowing what you want running; the professionals size the pair to fit. Our sizing guide walks through the plain-English thinking, with no invented numbers.

### ✓ Decide coverage first

The biggest factor in sizing the pair is how much you want to back up. Sort that out — whole-home or essentials — and the right-sized pair follows naturally.

## How the pair keeps itself ready

A standby pair doesn't just wait — it quietly proves itself ready on a schedule.

Every so often — commonly about once a week — the generator runs a brief self-test, starting up, running for a few minutes, and shutting down. It keeps the engine healthy and confirms the pair will perform when it's needed. You'll hear it hum for a little while, then go quiet.

This automatic exercise is one of the quiet advantages of a standby system: it looks after its own readiness. Our testing-and-exercise guide covers what to expect and how to make sure the self-test is doing its job.

### ✓ Learn your test day

It's worth knowing which day and time your generator self-tests, so the sound never startles you — and so you'd notice if it ever went quiet when it shouldn't.

## Installing the pair together

The generator and switch are installed as one project, by a licensed electrician, with a permit.

The electrician places and connects the generator, runs the fuel hookup (often with a licensed gas professional for that part), mounts and wires the switch, runs the control wiring between them, and pulls the permit so an inspector confirms it all meets code. Fuel work and electrical work each belong to the right licensed pro.

For cost, I won't guess — it depends on your home, your fuel, and your loads. Get a quote from a licensed electrician and generator dealer. Our install-and-permit guide covers the process step by step.

### **! Two kinds of licensed work**

A standby pair usually involves both electrical and gas work. Neither is a do-it-yourself job — each is handled by the properly licensed professional, and the inspection confirms both were done right.

## Living with a standby pair

Once it's in, the pair asks very little of you — which is rather the point.

Beyond the automatic self-test, the main things are keeping the generator's area clear, having it professionally serviced on schedule, and making sure your fuel supply stays ready — a propane tank kept filled, or simply enjoying the endless supply of a gas line. Our maintenance guide covers the upkeep, most of which is a pro's quick visit.

That's really it. No cords, no pouring fuel, no going outside in a storm. The pair waits, tests itself, and works when you need it — day or night, home or away.

### ★ I'll help you get comfortable with it

Once your pair is installed, I'm happy to come by and show you what the self-test sounds like, where everything is, and what the indicator lights mean — so your system never feels like a stranger. Call (330) 200-8042.

## Common mistakes to avoid

A few avoidable missteps come up with standby pairs.

- **Shopping for a generator alone**, forgetting the switch, fuel, and install that make it a working system.
- **Undersizing the fuel**, so a propane tank runs dry partway through a long outage.
- **Boxing in the generator** to quiet it — it needs open air for cooling and safe exhaust.
- **Skipping professional service**, assuming 'automatic' means 'never needs anything.'
- **Not learning the self-test schedule**, then worrying when the generator hums on a quiet afternoon.

### **! The pair is only as ready as its fuel**

An automatic system is wonderful, but it can't make fuel. If you're on propane, keep the tank filled and sized for a long outage — that's the one part that's still on you.

## Questions to ask before you buy the pair

These get you a well-matched, well-fueled system you understand.

**Q: Are the generator and switch a matched pair, or pieced together?**

A matched set can simplify pairing, support, and parts. If pieced together, confirm your electrician has ensured compatibility.

**Q: What fuel will it use, and is my supply sized for a long outage?**

Natural gas is endless; propane needs a tank sized to carry you through days, not hours.

**Q: How often does it self-test, and can we set the time?**

Ask so the sound never surprises you, and pick a considerate time for close neighbors.

**Q: Who handles the gas hookup and the inspection?**

Make sure both the electrical and gas work are done by the proper licensed pros and signed off.

**✓ There's no silly question**

A good dealer or electrician welcomes these. Buying the pair is a buy-it-once decision — take the time to understand it fully.

## Safety reminders for the pair

The system is designed to be safe; a couple of habits keep it that way.

### **! The rules that don't change**

Keep the generator's area clear and never enclose it; keep tested carbon-monoxide alarms inside the house; and leave all wiring, fuel, and repairs to the proper licensed professionals. The switch handles keeping your power off the utility lines automatically.

If the generator behaves oddly — won't complete its self-test, runs rough, throws a warning light, or you smell gas — treat it as a call to your dealer or electrician, not a do-it-yourself project. Our troubleshooting and warning-signs guides help you tell a small quirk from a real concern.

## What I do to help

A standby pair is a big, lasting purchase, so a friendly guide helps.

- **What I help with:** explaining how the pair works, weighing fuel and coverage, building your must-run list, and lining up a licensed electrician and dealer I trust.
- **What only licensed pros do:** place and wire the generator, connect the fuel, install the switch, and pull the permit.
- **What I never do:** the electrical or gas work myself — that's for the properly licensed professionals.
- **What I love to do:** come by afterward and make sure you understand and trust your own system.

### ★ Call while you're still planning

The most useful time to reach me is before you buy, while there's still everything to decide. Reach me at (330) 200-8042.

## Common Questions

The questions I hear most about pairing a switch with a standby generator, answered plainly.

### **Q: Do I need both a generator and a transfer switch?**

Yes — they're two halves of one system. The generator makes the power; the switch decides when to use it and moves your home over safely. Neither works properly without the other.

### **Q: What fuel does a standby generator use?**

Usually natural gas, if your home has a line, or propane from a tank on your property. Both mean you rarely handle fuel by hand — no pouring or pull-cords.

### **Q: Do the generator and switch have to be the same brand?**

Not always, but a matched pair — often from one maker — keeps pairing, support, and parts simple. Your electrician ensures the two are compatible either way.

### **Q: Does it really start on its own?**

Yes. The switch signals the generator to start when the power fails, and shuts it down when the utility returns — whether you're home or not.

### **Q: How much upkeep does it need?**

Little day to day: keep its area clear, keep any propane tank filled, and have it professionally serviced on schedule. It runs a brief self-test on its own.

### **★ Ready to picture your system?**

Call or text me at (330) 200-8042 with your fuel situation and must-run list, and I'll help you map out the right standby pair for your home.

## A simple checklist for the pair

Keep this handy as you plan a standby generator and switch.

- ☐ I've decided how much to back up — whole-home or essentials.
- ☐ I know my fuel: natural gas, or a propane tank sized for a long outage.
- ☐ The generator and switch are matched and sized to my loads.
- ☐ A licensed electrician (and gas pro) will install it, with a permit.
- ☐ I know the self-test schedule and how to keep the unit's area clear.
- ☐ I've planned for professional service to keep it ready.

### ✓ Check the boxes, buy with confidence

When you can tick each of these, you're not guessing — you're making a well-planned, buy-it-once decision. That's exactly where you want to be.

## You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

I hope this guide made pairing a switch with a standby generator feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

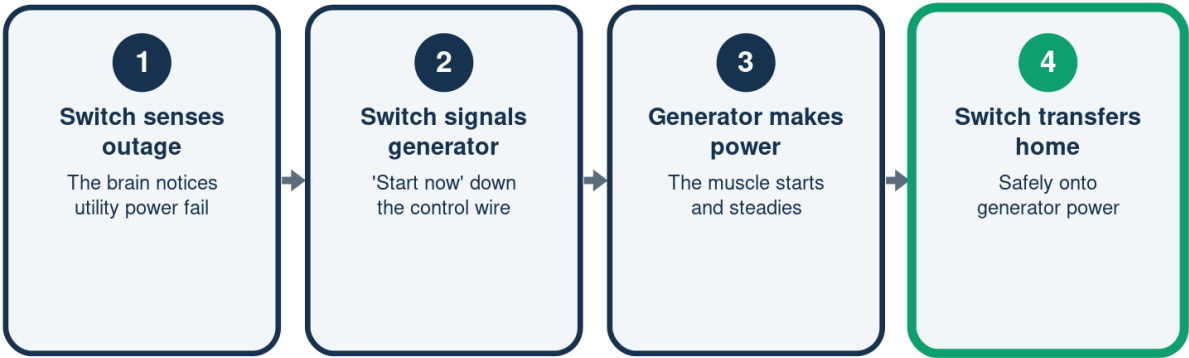
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, come-back-free guarantee. I don't do the licensed electrical or gas work myself — for that I'll help you line up a trustworthy local pro.

### ★ Bill's Home Tech — real help, close to home

Call or text me at (330) 200-8042, or visit BillsHomeTech.com. Serving Atwater and all of Portage County. 30+ years of patient, plain-English tech help — and if you're ever not 100% happy with a visit, I'll make it right or refund it. That's a promise. — Bill

## The Pair in Action

Brain and muscle, working together



Neither half is the backup alone -- together they're a system.

## Who Does What

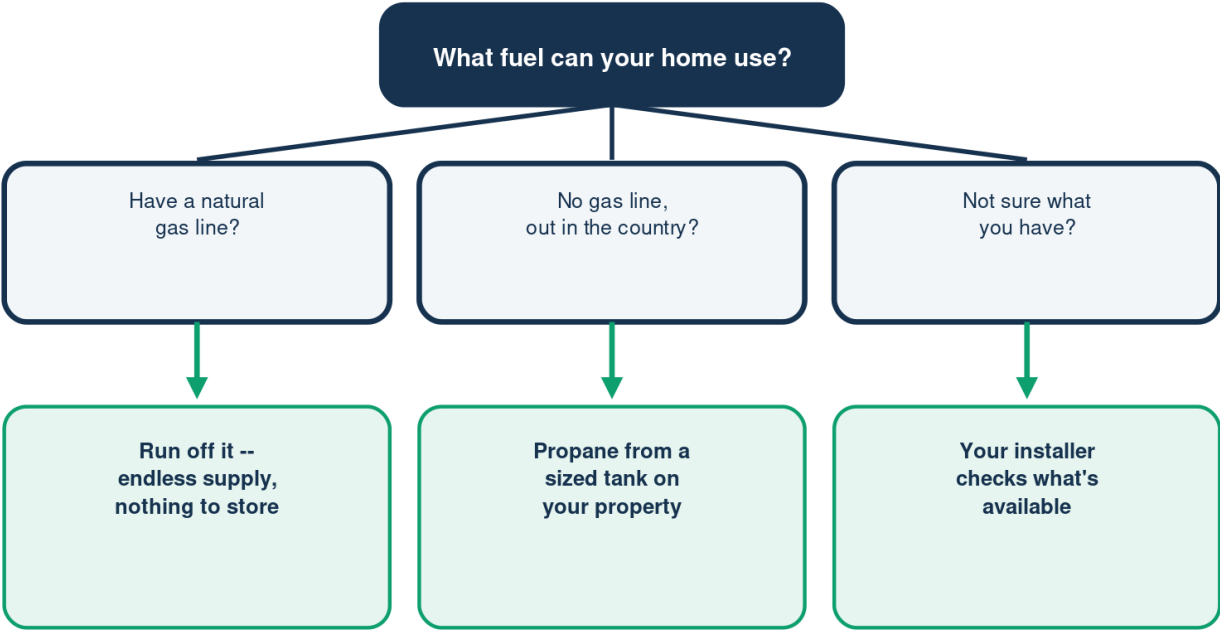
The two halves of a standby system

|                   | Standby generator    | Transfer switch    |
|-------------------|----------------------|--------------------|
| Role              | The muscle           | The brain          |
| Where it sits     | Outside, on a pad    | By your panel      |
| Its job           | Makes the power      | Decides & switches |
| Keeps you safe by | Venting exhaust away | Blocking backfeed  |

Installed together, as one system, by a licensed electrician.

# Which Fuel Fits Your Home?

It comes down to what's available

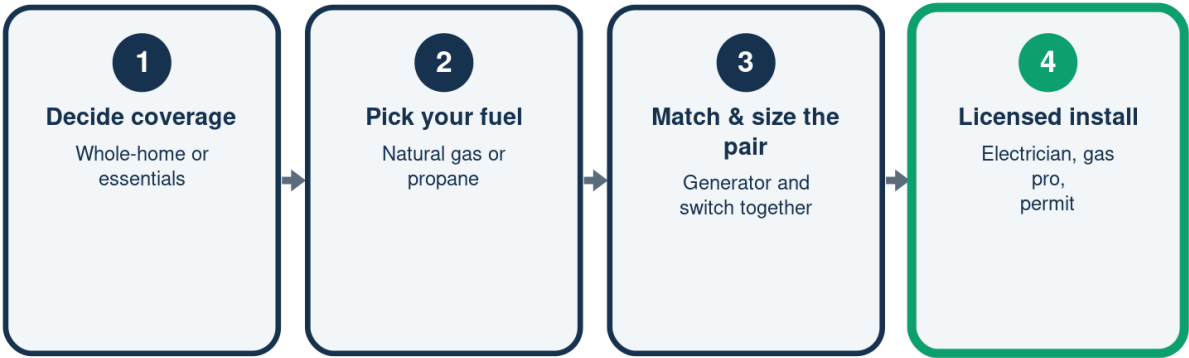


Size a propane tank to last through a multi-day outage.

Illustration - a schematic, not to scale. Your setup may differ.

# Planning the Pair

Four steps to a well-matched system



Decide coverage first -- the right-sized pair follows.



## Need a Real Person?

You do not have to remember all of it.  
You just have to remember you can call.  
Friendly, in-home tech help -- I come to you.

### BILL'S PROMISE

If you are not 100% happy with a visit, I will make it right -- or refund it. No awkwardness, no fine print. That is how I would want to be treated.

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— Bill

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### Prefer help without a visit?

Bill can screen-share and fix many things remotely — a flat \$49, free for Support Plan members.



## A Note From Bill

### A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

— *Bill*



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