



An Extended Guide · No. 1221

Gas, Propane, or Dual-Fuel?

Choosing the right
fuel for backup power

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! Read this first — carbon monoxide is the real danger

A running generator's exhaust contains carbon monoxide — an invisible, odorless gas that can kill in minutes. Never run a generator indoors, in a garage, in a shed, or on a porch, not even with the door open and a fan going. Run it outside only, well away from the house — the safety agencies say at least 20 feet — with the exhaust pointed away from every window, door, and vent. Put battery-backup carbon-monoxide alarms on each floor and outside the bedrooms. If an alarm sounds, or anyone feels dizzy, sick, or sleepy, get everyone into fresh air first and ask questions later. Gasoline and propane produce different amounts of it, but as you will see throughout this guide, the safe-running rules never change no matter which fuel you choose.

Let's sort out gasoline, propane, and dual-fuel

Every portable generator runs on something, and which fuel you choose shapes how it stores, how it starts, and how ready it will be the night you need it. This guide walks through the honest trade-offs so you can pick with confidence.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. Fuel questions are some of the most common ones I get — often after the fact, from a generator that sat too long and wouldn't start. Let's get you ahead of that.

There's no single 'right' fuel, only the one that matches your outage pattern, your storage space, and how much fussing you want to do. We'll go through gasoline, propane, and the dual-fuel machines that run on either.

★ Not sure which camp you're in?

If you tell me how often your power tends to go out and for how long, I can help you weigh gas against propane for your exact situation — free, and with nothing to sell you. Call or text me at (330) 200-8042.

The whole guide, on one page

If you remember only these things about fuel, you're in good shape.

- ❑ Gasoline is everywhere and gives full power, but it goes stale in months and needs stabilizer and rotation.
- ❑ Propane stores for years without going bad and burns cleaner, but gives up a little power and struggles in bitter cold.
- ❑ Propane makes less carbon monoxide than gasoline — but never zero. The outdoor rule always applies, to both.
- ❑ Dual-fuel generators run on either one, switched with a valve or knob — a flexible middle ground.
- ❑ Tanks and cans both live outdoors, away from the house and any flame or pilot light.
- ❑ Stale gasoline is the single most common reason a generator won't start. Our fuel-storage guide covers keeping it fresh.

✓ Think about how you'll actually use it

A generator you'll run often and can easily rotate fuel through suits gasoline just fine. One that mostly waits in a shed for months at a time is where propane's patience really pays off.

Three ways to fuel a generator

Before we go deep on each one, here's the short introduction to all three.

Gasoline

The fuel most of us already have around — easy to find, and it gives a generator its full power.

Propane

The same fuel as a backyard grill tank. It waits patiently for years without going bad.

Dual-fuel (and sometimes tri-fuel)

A generator built to run on either gasoline or propane, switched with a valve. Some newer machines add a third option — natural gas, for a home that already has a gas line run to the yard.

✓ None of these is 'wrong'

Plenty of happy generator owners run each of these three ways. The right one is simply the one that matches your outage pattern and how much maintenance you want to do. Let's look at each in turn.

Gasoline: the fuel you already know

Familiar, easy to find, and it gives your generator everything it's got. Here's the honest picture.

Gasoline is sold on nearly every corner, so restocking is rarely the problem — until the power's out over a wide area and the pumps themselves have no electricity to run. Keep that in mind when you're planning your fuel reserve.

The upside

A generator running on gasoline delivers its full rated power, starts easily in most weather, and the engine underneath is the same familiar small-engine technology as your mower or trimmer.

The catch

Gasoline doesn't wait well. It begins to break down within a matter of months, and old gas can gum up a carburetor with a sticky varnish that keeps an engine from starting at all. It needs stabilizer and a rotation plan — our fuel-storage guide walks through exactly how.

✓ A good fit if...

You'll exercise the generator regularly, don't mind rotating fuel through the car or mower, and want the simplest fuel to find in a hurry.

Propane: the fuel that waits

The same tank that feeds your grill can feed a generator built for it — and it's remarkably patient.

Propane is stored under pressure in a sealed tank, so it doesn't break down or go stale the way gasoline does. A tank filled today can sit for years and still light right up when you need it.

The upside

Long shelf life is the headline, but it's not the only one. Propane burns cleaner than gasoline, leaves less residue in the engine, and produces noticeably less carbon monoxide — though never zero; the same outdoor rule still applies.

The catch

You'll give up a little power compared to gasoline in the same engine, and propane doesn't vaporize as well in bitter cold, which can make cold-morning starts harder. Tanks also need to be swapped, refilled, or plumbed in — a bit more planning than a jug of gas.

✓ A good fit if...

Your generator will sit unused for long stretches between outages, and you'd rather not think about fuel going bad while you wait.

Dual-fuel: why choose when you can do both?

A dual-fuel generator runs on either gasoline or propane, switched with a valve or knob — genuinely the best of both for a lot of households.

The appeal is flexibility. Keep a couple of propane tanks on hand for the long wait between outages, and fall back on gasoline when it's what you've got, or when you want every bit of power the engine can give.

Some newer machines go a step further and add a third option: natural gas, for a home that already has a gas line run to where the generator sits. That line is a licensed professional's job to install, the same as any gas work.

The trade-off

A dual-fuel machine is a little more complex than a single-fuel one, and switching between fuels means following the manual's steps rather than just topping off a tank. For most folks, the flexibility is worth that small extra step.

✓ A good fit if...

You like having options, or your household genuinely isn't sure yet which fuel it prefers. Dual-fuel lets you decide later, one fill-up at a time.

Does the fuel change the carbon monoxide risk?

A little — but not enough to change how you run the generator.

Propane genuinely produces less carbon monoxide than gasoline, engine for engine. That's a real, meaningful difference, and it's one more point in propane's favor if clean-burning matters to you.

But 'less' is not 'none.' A propane generator still produces carbon monoxide, and it can still build to a deadly level in an enclosed space just as fast as gasoline's exhaust can. The fuel changes the amount — it never changes the rule.

! The rule never changes, whatever the fuel

Gasoline, propane, or dual-fuel — every generator runs outdoors only, well away from the house, with the exhaust pointed away from windows and doors. Keep carbon-monoxide alarms on every level. A cleaner-burning fuel is a bonus, never a reason to run it closer.

Power, side by side

Here's the honest comparison in plain terms — no invented numbers, just how they stack up against each other.

	Gasoline	Propane	Dual-Fuel
Power output	Full power	Slightly less	Full on gas side
Availability mid-outage	May be scarce	Tank-dependent	Either option
Shelf life	Months	Years	Depends on fuel used
Cold-weather starting	Generally easier	Can be harder	Pick per weather

Runtime, for any of them, depends far more on your load and tank size than on the fuel itself — our choosing and sizing guides cover working out your load.

✓ **Don't let the table decide alone**

These trade-offs matter, but your own outage pattern — how often, how long, how you store things — usually points to an obvious winner. That's what the next few pages help you find.

How each fuel behaves in the cold

If your outages tend to come with a winter storm, this page is worth extra attention.

Gasoline in the cold

Gasoline generally starts more reliably in cold weather than propane does, though a very cold engine of any kind can be stubborn. A charged electric-start battery helps, and it's worth letting the engine warm up before you add a big load.

Propane in the cold

Propane can struggle to vaporize properly in bitter cold, which can make a cold-morning start harder or weaken performance. If winter outages are your main concern, weigh this honestly against propane's other advantages.

✓ Dual-fuel hedges this bet

A dual-fuel machine lets you lean on gasoline for the coldest stretches and propane the rest of the year — one more reason it appeals to folks in a four-season climate.

What each fuel leaves behind

Fuel choice affects more than the tank — it affects how happy the engine is over the years.

Gasoline that's allowed to sit and go stale leaves a sticky varnish inside the carburetor's tiny passages, which is the single most common reason a generator won't start after sitting. Even fresh gasoline burns a bit dirtier than propane, leaving more residue over time.

Propane burns cleaner, leaves less carbon buildup, and doesn't gum up a carburetor the way old gasoline can — there's no 'stale propane' problem the way there's stale gas.

★ A cleaner-running generator is a happier one

Whichever fuel you choose, regular use and the basic care in our maintenance guide keep it running smoothly for years. Fuel choice is one piece of that puzzle, not the whole thing.

How a dual-fuel switch actually works

It's simpler than it sounds, but it's worth doing it right.

Most dual-fuel generators have a selector valve or switch near the engine. The manual will walk you through the exact sequence for your model — typically, you stop the engine, move the selector to the fuel you want, and restart using that fuel's normal starting steps.

- Follow the manual's order — some models want the engine off before you switch, others allow it while idling. Don't guess.
- Make sure the fuel you're switching to is actually connected and turned on before you try to start on it.
- Keep the fuel you're not using properly shut off at its own valve when it's not in service.
- If it won't start on the fuel you just switched to, walk through the usual troubleshooting basics before assuming something's wrong with the switch itself.

✓ When in doubt, read the manual first

Every dual-fuel model handles the switch a little differently. Five minutes with the manual the day you bring it home saves confusion the night you actually need it.

Where the fuel itself lives

This page is the short version — our fuel-storage guide covers containers, quantities, and rotation in full detail.

Whichever fuel you choose, it does not live in the house, the attached garage, or anywhere near a flame or pilot light. Propane tanks and gasoline cans both belong outdoors, in a ventilated spot detached from living space.

- Gasoline: only in approved, tightly capped containers, never a repurposed jug.
- Propane: tanks stored upright, outdoors, valve protected, away from any heat source.
- Both: away from the water heater, furnace, and any other pilot light in the house.

! Don't store fuel where you run the generator

Keep spare fuel well away from the generator itself while it's running — refuel only after it's off and cooled, outdoors, away from any flame.

Two kinds of homes, two sets of needs

Where you live shapes which fuel makes the most sense — and how much of it you'll want on hand.

If you live in town or the suburbs

In town or a close-in suburb, outages tend to be shorter and the hardware store or gas station usually isn't far once the roads clear. You likely have room for a modest amount of stored fuel, not a stockpile.

- Gasoline is often perfectly practical — you can rotate it through the car or mower without much thought.
- A small propane cylinder or two adds backup without taking over the garage.
- Shorter outages mean you're less likely to run out mid-event either way.
- Check any local rules on how much fuel you can store before you stockpile.

If you are out in the country on a well

Out in the country, outages often run longer and help arrives later — and if you're on a well, no power means no water at all, which raises the stakes on keeping fuel ready.

- Propane's long shelf life is a real advantage when a generator might sit for a season between uses.
- A dual-fuel unit gives you a fallback if one fuel runs short during a long outage.
- Plan a bigger stored reserve than you think you need — deliveries and open stations may be a longer drive away.
- Whatever you store, keep it detached from the house and rotate the gasoline portion on a schedule.

★ Tell me your setup

How long your outages usually run and how far you are from a gas station or propane dealer both matter here. Tell me your situation and I'll help you land on the right fuel plan. Call (330) 200-8042.

Match the fuel to how you'll actually use it

The best fuel isn't an abstract question — it's about your own outage pattern.

Frequent, short outages

If your power blips out a few times a year for an hour or an evening, you'll be running the generator — and burning through fuel — often enough that gasoline's shelf life rarely becomes a problem.

Rare, but it really matters

If outages are uncommon but you absolutely need the generator to start the one time it counts, propane's patience removes a whole category of worry — there's no stale fuel to discover at the worst moment.

You're honestly not sure

That's exactly what dual-fuel is for. Keep propane as the patient backup and gasoline as the everyday option, and let the situation decide which one you reach for.

✓ Ask yourself one honest question

'If the power went out tonight, is the fuel in my garage actually fresh?' If you can't answer yes with confidence, that alone may be your answer.

A gasoline detail worth knowing: ethanol-free

Not all gasoline at the pump is the same for storage purposes.

Most gasoline sold at the pump today is blended with ethanol. Ethanol-blended gas tends to absorb moisture from the air and break down faster than gasoline without it, which shortens how long it stays good in a can or a tank.

Ethanol-free gasoline — sometimes sold at marinas, small-engine shops, or select stations — generally stores better and is worth seeking out for fuel you're setting aside rather than using right away.

✓ It still isn't forever

Ethanol-free gasoline stores better, not indefinitely. It still benefits from stabilizer and a rotation plan — see our fuel-storage guide for the full how-to.

What running costs actually depend on

It's tempting to want a simple answer here. The honest one has a few moving parts.

How long a tank of fuel lasts depends far more on how hard you're working the generator than on which fuel it burns — a lightly loaded generator sips fuel; one working near its limit drinks it. We cover sizing your load correctly in our choosing and sizing guides, because that decision affects runtime more than fuel type does.

Propane is typically sold and measured differently than gasoline — by the tank rather than the gallon at a pump — which can make side-by-side cost comparisons feel like apples to oranges. Rather than chase a number, plan your fuel supply around your expected outage length plus a modest, safely stored reserve.

✓ Plan fuel like you plan food for a storm

Enough for the outage you expect, plus a bit extra — not a garage full. That's true whether it's gallons or tanks.

Common mistakes people make choosing fuel

A handful of avoidable missteps account for most fuel-related regret.

- **Assuming gasoline is always available** in a widespread outage, when the pumps themselves may be without power.
- **Buying a single-fuel machine, then wishing for flexibility** once you realize how long a generator actually sits idle.
- **Choosing propane for the shelf life, then storing it wrong anyway** — a tank left on its side or too close to heat undoes the benefit.
- **Never testing the switch on a dual-fuel unit** until the night it's actually needed.
- **Letting gasoline sit untouched for a year 'just in case'** and discovering it's varnish when the power finally goes out.

! The costly one

Letting gasoline go stale is the single most common reason a generator won't start when it matters. Whichever fuel you choose, a rotation plan isn't optional — it's the difference between a generator that works and one that doesn't.

We've kept fuel freshness brief here on purpose

This guide is about choosing your fuel. Keeping it fresh once you have it is its own subject, and we've given it its own guide.

You now know the big-picture trade-offs: gasoline goes stale in months and needs stabilizer and rotation; propane stores for years; ethanol-free gas holds up a little better than the blended kind; and everything lives outdoors, away from heat and flame.

For the full how-to — exactly which containers to use, how much to keep on hand, a simple rotation system, and the specifics of propane tank storage and handling — turn to our fuel-storage guide. It picks up right where this page leaves off.

★ One guide leads to the next

I wrote these guides to be read together. Choose your fuel here, then let the fuel-storage guide keep it fresh — and call me anytime a question falls between the two. (330) 200-8042.

A simple fuel-decision checklist

Work through these before you commit to a fuel type.

- ☐ I know roughly how often my power tends to go out, and for how long.
- ☐ I've been honest about whether I'll actually rotate stored gasoline.
- ☐ I have safe, ventilated, detached space to store tanks or cans outdoors.
- ☐ I've weighed cold-weather starting if winter outages are a real concern.
- ☐ I've considered dual-fuel if I can't decide, or want both options covered.
- ☐ I know that whichever fuel I pick, the outdoor carbon-monoxide rule doesn't change.

✓ Bring your answers to the store

A salesperson (or I) can help a lot faster once you know your own outage pattern and storage space. That's most of the decision, right there.

Questions to ask before you decide

Whether you're talking to a dealer or to me, these get you to a confident answer.

Q: Will this generator run on more than one fuel?

If it's dual-fuel, ask how the switch works and whether the engine needs to be off to change fuels. Try to see it demonstrated if you can.

Q: How is the propane side fed — a small cylinder, a large tank, or both?

Some units only accept a certain size or connection. Know what tank you already own, or plan to buy, before you're standing in the store.

Q: What's the realistic shelf life if I choose gasoline?

Get an honest answer, then plan your rotation schedule around it — and read our fuel-storage guide for the specifics.

Q: Does the fuel choice affect the safety features?

It shouldn't — an automatic carbon-monoxide shutoff and a low-oil shutoff matter regardless of fuel. Confirm both are present either way.

✓ There's no silly question

Fuel questions trip up first-time buyers more than almost anything else. Ask until you're sure — that's what I'm here for too.

Common Questions

The fuel questions I hear most often, answered plainly.

Q: Is propane really safer than gasoline?

It produces less carbon monoxide and doesn't carry the fire risk of a spilled, evaporating liquid, so in that sense, yes, a bit. But it's still a fuel that demands respect, and the outdoor running rule never changes for either one.

Q: Can I just switch my gasoline generator to run on propane?

Some units can be converted with a proper conversion setup, but this isn't a guess-and-check project — follow the manufacturer's guidance or a qualified small-engine shop rather than improvising.

Q: How much fuel should I actually keep on hand?

Enough for your expected outage plus a modest, safely stored reserve — not a garage full. Our fuel-storage guide walks through a sensible amount and where to keep it.

Q: Does dual-fuel cost more to buy?

Generally, yes, a little, for the added flexibility and hardware. Whether that's worth it comes down to how much you value not having to choose one fuel and live with it.

★ Still deciding?

Fuel is one of the more personal choices in this whole process — it depends on your habits as much as your home. Call or text me at (330) 200-8042 and let's talk through what fits you.

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 choosing the right generator fuel 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

Gasoline vs. Propane vs. Dual-Fuel

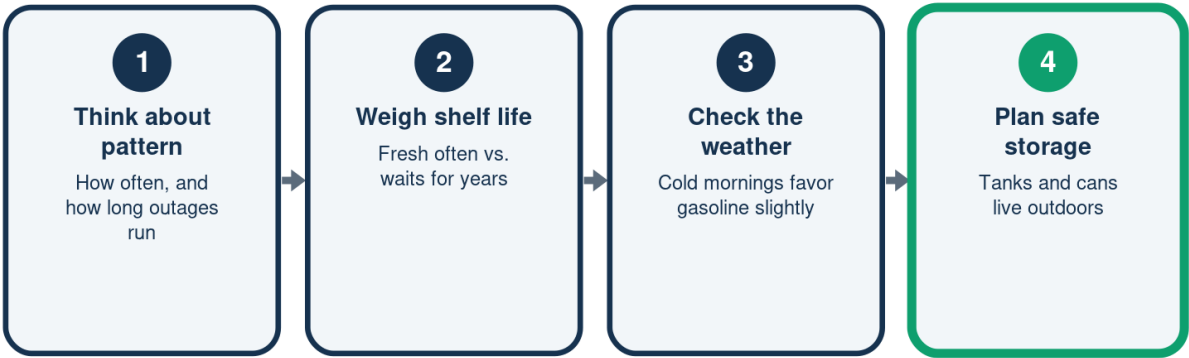
The honest trade-offs, side by side

	Gasoline	Propane	Dual-Fuel
Power output	Full power	Slightly less	Full on gas side
Shelf life	Months	Years	Depends on fuel
Cold weather	Generally easier	Can be harder	Pick per weather
Carbon monoxide	More CO	Less, not zero	Depends on fuel

Whichever you pick, the outdoor running rule never changes.

Choosing Your Fuel in Four Steps

The calm way to land on the right one



Do these in order and the right fuel almost picks itself.

The Carbon Monoxide Difference

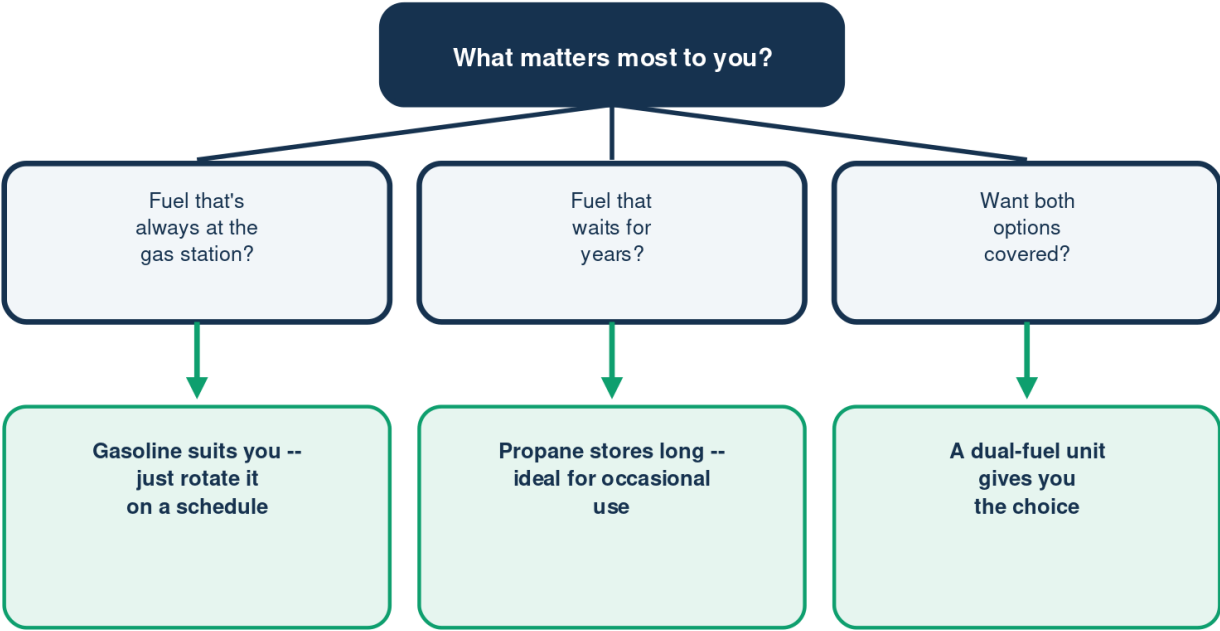
Less is not the same as none

	Gasoline	Propane
CO produced	The higher of the two	Noticeably less
Outdoor rule	Always applies	Always applies
CO alarms needed	Yes, every level	Yes, every level

A cleaner-burning fuel is a bonus -- never a reason to run closer to the house.

Which Fuel Fits Your Home?

Let your habits and your outages point the way



Whichever you choose, tanks and cans live outdoors, away from the house.

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



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A Note From Bill

A quick note from Bill.

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— *Bill*



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