



An Extended Guide · No. 1277

Running Your Generator on Natural Gas: What to Know

The real upside, and
the honest limits

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! Before you begin — a quick safety note.

This guide covers work involving natural gas and engine exhaust, which can cause serious injury, fire, or property damage if something goes wrong. It's here for general information only, not professional advice. If you're not completely comfortable — or if your local codes require a licensed pro — please stop and hire a qualified licensed plumber or gas fitter. Turn off the power at the breaker before any electrical step. Never work on gas lines yourself; if you smell gas, leave right away and call your gas company or 911. There's no shame in calling a pro — that's often the smart, safe choice. You follow this guide at your own risk. — Bill

A Note From Bill

If your tri-fuel generator is already hooked up to your home's natural gas line — or you're deciding whether it's worth doing — this guide is the plain-English rundown of what running on it is actually like.

I won't repeat the hookup instructions here; that's its own guide, since it's genuinely a licensed plumber's job. This page picks up once the pipe is in place and you're ready to use it.

What you'll get out of this guide

- The real upsides of natural gas — and the honest limits
- Why it needs a pro before you ever use it
- What kind of power to expect
- What happens if the gas system itself has a problem
- Town and country notes, and the safety habits that don't change

★ Don't have a gas line yet?

Plenty of homes around here don't, especially out in the country. That's completely fine — propane is a wonderful fuel on its own. There's a guide in this series comparing all three if you're still deciding.

Running on Natural Gas, in One Page

Everything below is detail. If you only remember five things, remember these.

- ❑ Natural gas only works if your tri-fuel generator already has a professional hookup to the gas line — that's not a DIY step.
- ❑ The big upside: you never refuel. As long as the gas keeps flowing, so does your power.
- ❑ The trade-off: it makes the least power of the three fuels — size for that if it's your main plan.
- ❑ If the gas line itself is ever disrupted, the generator can't run on it at all — keep another fuel option in reserve.
- ❑ Run it outdoors only, 20+ feet from the house — the same CO rule as any fuel.

✓ Two things worth knowing

Where your home's gas shutoff valve is, and that natural gas is the fuel you'll reach for least often but appreciate most during a long, quiet outage.

What “Running on Natural Gas” Actually Means

It sounds technical, but it's a simple idea once it's set up.

Natural gas is only available on **tri-fuel** generators — dual-fuel units run on gasoline or propane only. If your generator has a third setting, that's natural gas, and it taps directly into the same pipe that feeds your furnace or stove.

- There's nothing to carry, store, or refill.
- The gas company already delivers it — your generator just gets a dedicated branch of that supply.
- You still choose it with a selector, the same as any other fuel.

★ If you're picturing propane

It's a fair mix-up. Natural gas is piped in and never runs out; propane is stored in a tank you fill or swap. Different fuels, different feel — there's a guide comparing them side by side.

The Big Upside: You Never Refuel

This is the whole reason people love natural gas for backup power.

As long as the gas main is flowing, your generator has fuel. No trips to a station, no cans to fill, no cylinder to swap at 2 a.m. in the rain. For a multi-day outage, that's genuinely wonderful.

- No fuel to store, which means no stale-gasoline worries and no tanks taking up garage space.
- No running out mid-outage the way a small propane cylinder or a gas can might.
- One less thing to think about while everything else in the house is topsy-turvy.

✓ Still, know your limits

“Never refuel” assumes the gas keeps flowing. A page ahead covers the rare case where it doesn't — worth reading once, so it's never a surprise.

The Cleanest-Burning of the Three Fuels

Natural gas burns the cleanest of the bunch, and that shows up as less upkeep.

- Fewer deposits inside the engine over time.
- No stale fuel gumming up a carburetor — there's nothing sitting around to go bad.
- Less fuel-system maintenance than a generator that runs mostly on gasoline.

There's a whole guide in this series comparing maintenance by fuel type, but the short version is: natural gas asks the least of you between uses.

★ An easy yearly once-over

Even a low-maintenance fuel benefits from a yearly look — oil, filters, and a test run. Happy to handle that for you.

The Trade-Off: It Makes the Least Power

Here's the honest limit that comes with all that convenience.

Natural gas carries less energy per cubic foot than propane or gasoline, and that shows up as lower output. If the gasoline number on the box is the headline, natural gas is the **smallest** of the three numbers — lower than propane, which is already a little lower than gasoline.

- If natural gas is your real, everyday plan, size the generator — and your expectations — against **that** number, not the gasoline one.
- You may need to run fewer things at once, or take turns more carefully, than on gasoline.
- There's a whole guide in this series on sizing that walks through this fuel by fuel.

! Don't guess — check your label

The exact drop varies by model. Your generator's label or manual should list the natural-gas rating specifically — that's the number to plan around.

The Big Limit: If the Gas Line Itself Has a Problem

This is the flip side of “never refuel,” and it's worth understanding clearly.

A power outage on its own usually doesn't affect your natural gas supply — the gas keeps flowing through the pipe whether or not the electricity is on, which is exactly why this fuel is so appealing. But natural gas can, rarely, be disrupted on its own — construction damage to a line, a utility issue, or the gas company shutting off service to a street for safety. If that happens, a generator set to natural gas simply has no fuel to burn.

- This is uncommon, but it's the one scenario natural gas can't cover on its own.
- It's the main reason many folks choose **tri-fuel** rather than a natural-gas-only setup — propane or gasoline in reserve covers the gap.

! Keep a backup fuel in your plan

If natural gas is your primary plan, keep at least a little propane or gasoline on hand too. It's cheap insurance for a rare situation.

Why It Needs a Professional Hookup First

Unlike propane or gasoline, you can't just point a hose at natural gas and go. This one takes a licensed pro.

- The generator needs its own branch line off the meter, sized correctly for its fuel demand.
- That work is done by a **licensed plumber or gas fitter**, not a DIY project.
- A proper hookup includes safety details like a sediment trap, and often a quick-connect fitting so a portable unit can be attached and removed between uses.

There's a full guide in this series dedicated to exactly what that hookup involves, from the meter to the fitting. This page assumes it's already done and you're ready to run.

★ This is a job I coordinate often

I can't do the gas fitting myself, but I regularly help customers plan the project and connect them with a licensed gas fitter, then handle the generator side of things.

Selecting Natural Gas and Starting Up

Once the hookup exists, running on natural gas feels a lot like any other start-up.

- Set up in your safe outdoor spot, exhaust pointed away from the house.
- Set the fuel selector to natural gas **before** starting — never switch fuels on a running engine.
- Connect the quick-connect fitting to your home's gas line if it isn't already attached.
- Start the engine as usual, then let it settle a minute before plugging anything in.

Your manual will have model-specific notes, but that basic order — safe spot, fuel selected, connected, started — holds true across brands.

✓ Leave it connected or not — your call

Some households leave a portable unit connected to its quick-connect fitting between outages; others disconnect it. Either is fine — just confirm the valve is off when it's not running.

Running on Natural Gas in Town or the Suburbs

Natural gas is especially popular here, since many town and suburban homes already have a gas line at the street.

What usually matters most here

- **You likely already have the supply.** If your furnace, stove, or water heater runs on gas, the line is already there — the project is tapping into it, not bringing gas to the property.
- **Quiet, hands-off power.** No fuel runs to make, no cylinders to store — appealing in neighborhoods where space and quiet both matter.
- **Shorter outages fit natural gas well.** Town outages are often measured in hours, well within what a steady gas supply comfortably covers.
- **The sump pump and fridge** are the usual priority loads, and natural gas handles that everyday demand just fine.

A common town setup is a tri-fuel generator with the natural-gas hookup as the everyday, no-fuss choice, and a little propane or gasoline kept as backup for the rare time the gas line itself is affected.

✓ Apartment or condo?

A generator usually isn't practical if you rent or share walls, gas hookup or not. A battery power station is often the better fit — happy to help you think it through.

Natural Gas on a Well or in the Country

Out in the country, natural gas is the exception rather than the rule — but it's worth knowing where it fits if you do have it.

What usually matters most here

- **Many rural properties simply don't have a gas line.** If that's you, propane is the natural stand-in, and there's no shame in a dual-fuel setup instead of tri-fuel.
- **If you do have a line, the well pump still needs care.** Natural gas makes the least power of the three fuels, and well pumps need a strong 240-volt starting surge — size carefully against the natural-gas rating, not the gasoline headline number.
- **Longer outages are a real risk out here,** which is exactly when “never refuel” is most valuable — as long as the gas line itself stays intact.
- **Keep a fallback fuel.** Rural outages are often storm-related, and a downed line or utility disruption is more plausible when infrastructure is spread out — a little propane on hand covers that gap.

If you're weighing whether to add a natural-gas hookup on a rural property at all, the honest answer is: it depends on whether the line reaches you and what your outages usually look like. Happy to talk it through.

★ Well-pump backup is worth doing right

Whatever fuel ends up powering your well pump, sizing for that starting surge and wiring it safely is exactly the kind of job I help country customers with.

The Rule That Matters No Matter the Fuel

Natural gas burns clean, but its exhaust still contains carbon monoxide. Nothing about this rule changes.

CO is **invisible** and has **no smell**. Breathing enough of it can make you pass out — or worse — before you realize anything's wrong. It takes roughly a hundred lives a year, almost always in situations that were preventable.

- Run the generator **outdoors only**, at least **20 feet** from the house.
- Point the exhaust **away** from doors, windows, and vents.
- **Never** run it in a garage, basement, shed, or carport — even with the door open.
- Put **battery-backup CO alarms** on every level of the house and near bedrooms, and test them.
- If an alarm sounds, or anyone feels dizzy or sick, get outside into fresh air and call 911.

! Clean-burning doesn't mean safe indoors

It's tempting to think the cleanest fuel is the safest one to run close to the house. It isn't — the CO rule is identical for every fuel, every time.

Handling Natural Gas Safely

There's no tank to store or fuel to spill, but a couple of habits still matter.

- Know where your home's **gas shutoff valve** is, just in case.
- Leave the actual gas-line work — installation, repairs, adjustments — to a **licensed plumber or gas fitter**. It's not a DIY step.
- If you use a quick-connect fitting, make sure it's fully seated and the shutoff valve is off when the generator isn't running.

Natural gas has that same rotten-egg smell added to it as propane, on purpose, so a leak doesn't go unnoticed.

! If you ever smell gas

Don't flip switches, light anything, or try to fix it yourself. Get everyone away from the area and call your gas company or 911 from a safe distance. There's a whole guide in this series on safe gas handling and leaks.

Running It Smoothly Once It's Started

Once it's going, running on natural gas is about as low-maintenance as it gets.

- Add your loads a **few at a time**, biggest motor first, rather than everything at once.
- There's no fuel gauge to watch — as long as the gas is flowing, it keeps going.
- Give it room to breathe, same as any generator — don't crowd it against a wall or fence.

Many folks describe natural gas as the “set it and forget it” fuel, and that's a fair description once the hookup is in place.

✓ Still worth a listen

Even hands-off power benefits from a check-in now and then — make sure it's running smoothly and nothing smells off.

What Not to Count On

Natural gas is wonderful, but it isn't a substitute for a full backup plan on its own.

- Don't count on it if your home has **no gas line** at all — that's a project, not a switch you flip.
- Don't assume it's immune to every kind of outage — it's excellent for power outages, but a gas-supply disruption is a different animal.
- Don't skip the professional hookup step to save time — an improper connection is a genuine safety risk.

None of this takes away from how convenient natural gas is day to day. It just means treating it as one strong option among your fuels, not the only one.

★ My honest take

I love recommending natural gas to homes that already have the line — it's the closest thing to hands-off backup power. I just always suggest keeping a little propane or gasoline around too, for that one rare scenario.

If the Gas Utility Itself Has a Problem

This is the scenario natural gas can't cover on its own, so it's worth a plan.

- If the gas company shuts off service to your street, or a line is damaged, your generator's natural-gas setting has nothing to burn — no amount of troubleshooting fixes that.
- This is exactly why a **tri-fuel** generator — with propane or gasoline as a fallback — is worth the extra flexibility over a natural-gas-only setup.
- Keep at least a small propane cylinder or some fresh, stabilized gasoline on hand as your “just in case” fuel.

This situation is uncommon. But the whole idea of a tri-fuel generator is having options when the unexpected happens — this is the one time natural gas needs a partner.

! If you smell gas or hear a hiss near the meter

Leave the area immediately, don't operate any switches, and call your gas company or 911 from a safe distance.

The Quick-Connect Convenience

Many professional natural-gas hookups include a fitting that makes using the generator genuinely simple.

A **quick-connect** fitting lets you attach or detach a portable generator from the home's gas line without tools, similar to connecting a garden hose. It's installed as part of the professional hookup, and it's what makes “plug in and go” actually true for natural gas.

- You still set the fuel selector and follow the same start-up steps.
- The full detail on hookup hardware — including the quick-connect — lives in the dedicated guide on connecting to natural gas.

✓ Ask about it up front

If you're having a hookup installed, ask your gas fitter about a quick-connect fitting specifically — it's a small addition that makes every future outage easier.

If Something's Not Quite Right

Natural gas is reliable, but a few things are worth checking if it won't cooperate.

What's happening	Check this first
Won't start on natural gas	Selector actually set to NG; quick-connect fully seated; home's gas shutoff valve open
Runs, but feels underpowered	That's often normal — natural gas makes the least power of the three fuels; check you're not overloading it
No gas reaching the generator	Could mean a supply disruption — check whether your furnace or stove still has gas
Smell of gas near the fitting	Stop, don't operate anything — leave the area and call your gas company

If you've checked the basics and it's still not right, that's a good time to call rather than keep guessing — especially with anything gas-related.

★ **When you'd rather just call**

No shame in it — a quick call often sorts out in minutes what could be a frustrating afternoon on your own. (330) 200-8042.

Maintenance, the Natural-Gas Way

This is the lightest-maintenance fuel of the three, but a few basics still apply.

- Oil changes on the schedule your manual lists, same as any engine.
- An occasional air filter and spark plug check, per your manual.
- **Exercise the generator monthly** — run it a little while, even off-season — to keep it limber and, on electric-start models, keep the battery charged.

There's a whole guide in this series comparing maintenance by fuel; the short version for natural gas is: fewer fuel worries, same basic engine care.

✓ Set a reminder

A recurring monthly reminder to run the generator for a few minutes is a small habit that pays off the day you actually need it.

When to Give Me a Call

Natural gas is convenient, but a few parts genuinely need a professional, and I'm glad to help with the rest.

- Planning a natural-gas hookup and coordinating with a licensed gas fitter.
- Deciding whether tri-fuel is worth it for your home, or whether propane alone makes more sense.
- Sizing a generator correctly against the natural-gas rating, not the gasoline headline number.
- A start-up or running problem you can't pin down.
- A yearly check-up so everything's ready before the next storm.

I come to you, here in Portage County and nearby, and I explain everything in plain language at whatever pace suits you.

★ Bill's Home Tech

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Everyday Cheat Sheet

Dog-ear this page. It's the fast answer to what comes up most about running on natural gas.

I want to...	Remember this
Use natural gas at all	Needs a professional hookup first — not a DIY step
Start it up	Selector to natural gas BEFORE starting; connect the quick-connect fitting
Know the power hit	Lowest output of the three fuels — check your label for the NG rating
Plan for reliability	Keep propane or gasoline as backup in case the gas line is ever disrupted
Handle it safely	Know your shutoff valve; never DIY the gas line work
Stay safe from CO	Outdoors only, 20+ feet from the house, alarms working inside
Get help	Call Bill: (330) 200-8042

Words People Use

A few natural-gas-specific terms, in everyday language.

Q: Natural gas (NG)

The gas piped into many homes for the furnace, stove, or water heater. Some tri-fuel generators can tap into it as a third fuel option.

Q: Tri-fuel

A generator that can run on gasoline, propane, or natural gas — you pick one at a time with a selector.

Q: Branch line

The dedicated gas line, installed by a professional, that feeds the generator from the meter separately from your other appliances.

Q: Sediment trap

A small fitting in a gas line that catches debris before it reaches the generator's engine.

Q: Quick-connect

A tool-free fitting that lets a portable generator attach to or detach from a home's gas line, similar to a garden hose connection.

Q: BTU

British Thermal Unit — the measure of energy in a fuel. Natural gas carries less energy per cubic foot than propane, part of why it makes less power.

Q: Carbon monoxide (CO)

The invisible, odorless gas in engine exhaust that can kill. The reason a generator must always run far outdoors, on any fuel.

Getting Set Up & Running on Natural Gas

From a bare gas line to hands-off power

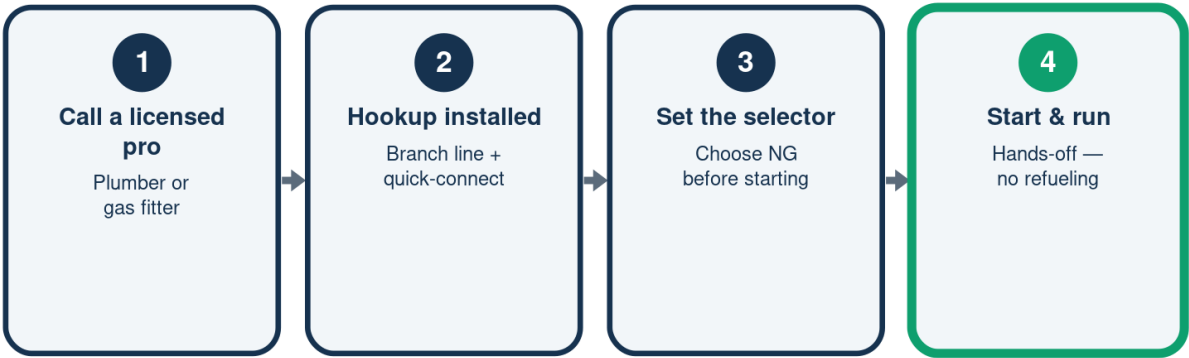


Illustration - a schematic, not to scale. Your setup may differ.

Natural Gas vs. Propane

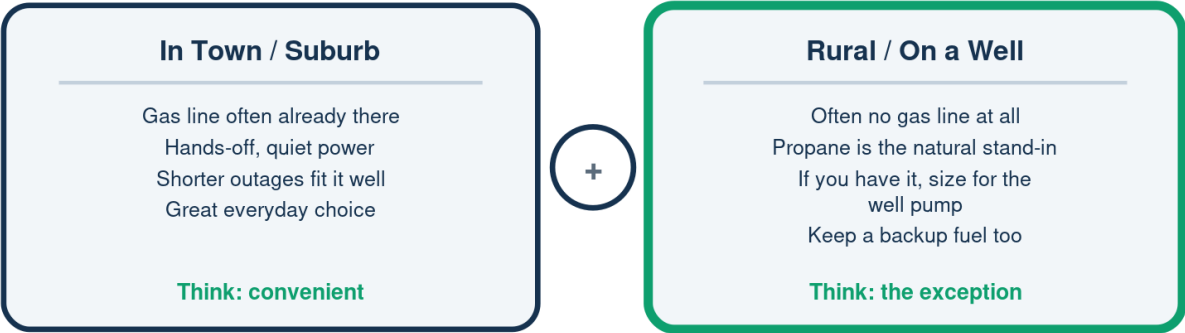
Two hands-off-ish fuels, compared

	Natural Gas	Propane
Refueling	Never — piped in	Swap or refill a tank
Power output	Lowest of the three	A bit less than gasoline
Getting set up	Professional hookup required	Tank, hose, and regulator
If supply is cut off	Generator can't run on it	Tank still has fuel

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

Town Natural Gas vs. Country Reality

Where this fuel fits best

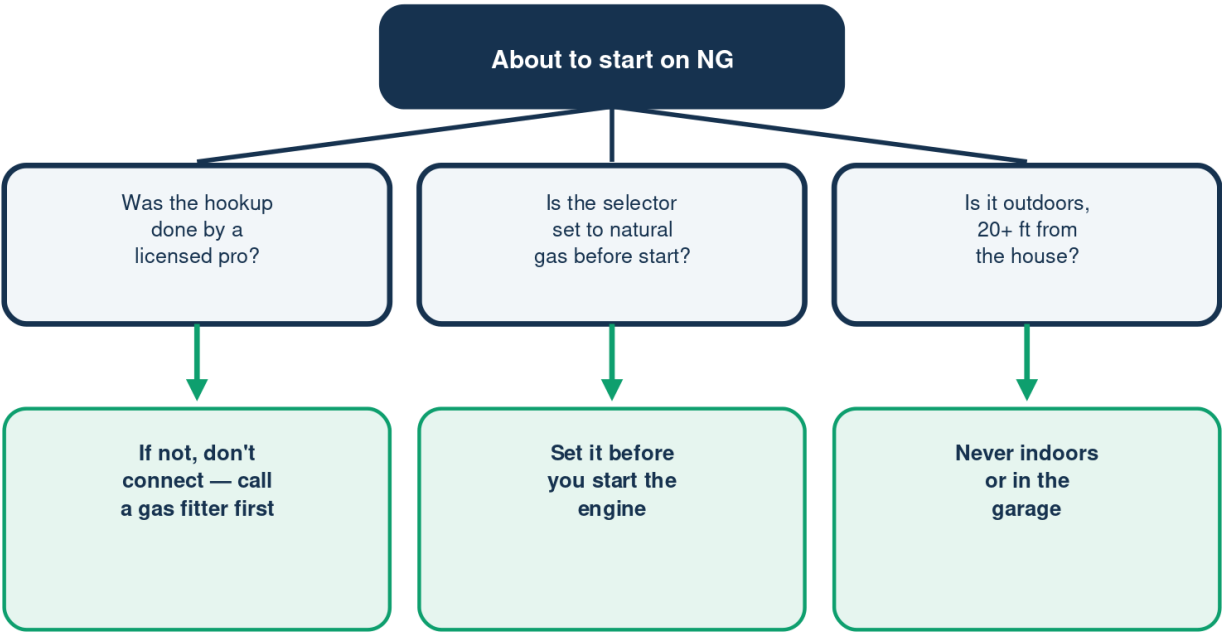


Same idea — very different availability

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

Before You Start on Natural Gas

Three quick checks



If you ever smell gas: don't flip switches — get away and call your gas company or 911.

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



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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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