



An Extended Guide · No. 1282

Connecting a Generator to Your Home Natural Gas Supply

What a proper hookup looks like

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! Before you begin — a quick safety note.

This guide covers work involving natural gas, 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

A natural-gas hookup is the one part of this whole series where my honest advice is simple: don't do it yourself. This guide isn't a how-to for the wrench work — it's a how-to for hiring it out well.

By the time you're done reading, you'll know exactly what a proper job looks like, what questions to ask, and what a shortcut looks like before it ever becomes your problem.

What you'll get out of this guide

- Why a natural-gas hookup is never a do-it-yourself project
- What a “dedicated branch” off the meter means, and why it matters
- How pipe sizing and BTUs keep your generator from starving
- The small parts — the drip trap and quick-connect — that make it work smoothly
- How to hire the right professional, and the questions worth asking first

★ Already leaning toward natural gas?

If you've decided a tri-fuel hookup is right for your home, I'm glad to help you find a trustworthy licensed gas fitter and make sure the job matches everything in this guide. (330) 200-8042 anytime.

The Whole Idea in One Page

If you read only one page today, make it this one.

- ❑ A natural-gas generator hookup is always a licensed plumber or gas fitter's job — never a DIY project.
- ❑ The generator needs its own dedicated branch off the meter, not a tap shared with the furnace or water heater.
- ❑ The pipe has to be sized for the BTU load, or the generator can starve for fuel under a real load.
- ❑ A small sediment/drip trap and a quick-connect fitting are standard parts of a job done right.
- ❑ Natural gas makes the least power of the three fuels — size your generator against its natural-gas rating.

✓ Bring a professional this guide

Handing your gas fitter a clear picture of what you want — a dedicated branch, sized for your generator, with a drip trap and quick-connect — helps the whole job go smoothly.

Why Bother Tapping the Gas Line At All

The appeal is simple: once it's hooked up, you never haul a tank or watch a gauge again.

- As long as the gas main is flowing, the supply doesn't run out — no refueling, no storage.
- It's the **cleanest-burning** of the three fuels.
- It pairs naturally with a tri-fuel generator you might already be considering for the flexibility alone.

There's a whole guide elsewhere in this series comparing gasoline, propane, and natural gas in detail. This one assumes you've already leaned toward natural gas and want to know how the hookup itself should go.

✓ Still weighing your fuels?

There's a head-to-head comparison of gasoline, propane, and natural gas, and a separate guide on what running on natural gas is actually like day to day, elsewhere in this series.

Why This Is Never a Do-It-Yourself Project

I'll help with a lot of things around your generator. This isn't one of them, and I want to be upfront about why.

- Gas work done wrong can mean a leak, a fire, or worse — there's no safe margin for guessing.
- A **licensed plumber or gas fitter** carries the training, tools, and permits to do it correctly and test it properly.
- Most municipalities require a permit and inspection for gas line work, whether or not you did it yourself.
- Your homeowner's insurance may not cover damage from unpermitted gas work.

! This is the hazard this whole guide centers on

Natural gas is not a fuel to experiment with. Leave the pipe work to a licensed plumber or gas fitter, every single time.

The Big Idea: A Branch of Its Own

If you remember one phrase from this whole guide, make it this one: dedicated branch.

A good hookup taps the gas line with its own separate branch, positioned **upstream** of your other gas appliances — meaning it draws from the line before the furnace, water heater, or stove ever get their share. Your generator isn't waiting in line behind the rest of the house.

✓ Ask for this specifically

When you talk to a gas fitter, use this exact phrase: “a dedicated branch, upstream of my other appliances.” It tells them exactly what you're expecting.

Sizing the Line: Why BTUs Matter

A gas line that's too narrow is a little like a garden hose trying to fill a swimming pool — the generator simply can't get gas fast enough.

Your gas fitter sizes the branch pipe to your generator's **BTU rating** (check the generator's manual or spec plate for this number) and the length of pipe run from the meter. Get this wrong — too small a pipe, or too long a run for its size — and the generator can bog down or stall exactly when you're leaning on it.

If the line is...	What you'll notice
Sized correctly	The generator runs steady, even under load.
Undersized or too long a run	The generator can bog down, stall, or never quite reach full power.

! Don't guess at this number

BTU sizing is exactly the kind of math a licensed gas fitter does routinely. Bring them your generator's specs and let them size the pipe correctly.

The Small Part With a Big Job: The Drip Trap

It's an unglamorous little fitting, but it's exactly the kind of detail that separates a good hookup from a so-so one.

A **sediment trap** — sometimes called a drip trap or drip leg — is a short, capped section of pipe installed at the branch, positioned to catch any debris or moisture traveling through the gas line before it can reach your generator's regulator and burner. It's a small, inexpensive part that protects a much more expensive machine.

✓ A quick way to spot a thorough job

If you ever have a hookup quoted or inspected, ask whether a drip trap is included. It's a fair way to gauge how thorough the work is.

The Quick-Connect Fitting

This is the part you'll actually touch every time you use the generator.

A **quick-connect fitting** lets a portable generator's hose snap on and off the gas branch easily, without tools, so you can disconnect it between uses rather than leaving it hooked up permanently. It's a simple convenience that makes natural gas as easy to use, day to day, as flipping a switch.

✓ Ask your gas fitter to show you

Have them walk you through connecting and disconnecting once while they're still there. It only takes a minute and saves confusion later.

Why Sharing a Branch Backfires

This is the shortcut I'd most encourage you to avoid, even though it can look tempting on a quote.

- Tapping the generator into the same branch as your furnace or water heater means they're all drawing from the same limited supply.
- Run the generator while the furnace kicks on, and a shared line may not deliver enough gas for both — the generator can **starve** for fuel.
- In the wrong conditions, a starved shared line can even snuff out a pilot light elsewhere in the house.
- A dedicated branch, sized for the generator alone, avoids all of this.

! A fair question to ask any quote

If a quote proposes tapping an existing appliance line instead of running a new dedicated branch, ask why — and get a second opinion before you agree to it.

What a Good Hookup Looks Like, Start to Finish

Putting it all together, here's the shape of a job done right.

- A licensed plumber or gas fitter assesses your meter, generator, and the distance between them.
- They run a **dedicated branch**, sized for your generator's BTU load, upstream of your other appliances.
- A **sediment/drip trap** and **quick-connect fitting** are installed at the end of the branch.
- The whole line gets pressure-tested and checked for leaks before anyone calls it done.
- Your local permit and inspection process is completed, not skipped.

★ I'm glad to help coordinate this

From finding the right gas fitter to being there while the work happens, I'm glad to help this go smoothly from start to finish.

If You Live in Town or the Suburbs

Natural gas is often already at the curb for town and suburban homes, which makes this guide especially relevant to you.

- Most in-town homes already have a gas meter and an existing line into the house, which usually makes adding a dedicated branch a more modest project than running gas to a home for the first time.
- Permits and inspections typically go through your local building department — your gas fitter usually handles this as part of the job.
- A tri-fuel setup lets you skip hauling propane tanks or gas cans altogether, which is a real convenience on a smaller in-town lot with less room for fuel storage.
- Keep the quick-connect and hose somewhere handy but out of the weather between uses.

✓ Check with your gas company too

Some utilities have their own requirements, or want to know about new branches off the meter. A quick call, or a question to your gas fitter, sorts this out early.

If You're Rural or on a Well

Let's be honest here: plenty of rural homes don't have a natural gas line at the road at all — and that's completely fine.

- If there's no gas main nearby, a dual-fuel generator on gasoline and propane is the natural, practical choice — there's a separate guide in this series on hooking up to a propane supply instead.
- If your rural home does have natural gas piped in, everything in this guide still applies — the same dedicated branch, BTU sizing, and licensed installation.
- This guide covers the gas connection only. If a well pump is part of your plan, that's a separate 240-volt **electrical** hookup through a transfer switch or interlock — there's a dedicated guide on that, and on backing up a well pump specifically.
- Rural properties sometimes mean a longer run of pipe from the meter to the generator's safe outdoor spot — mention that distance to your gas fitter up front so they can size it correctly.

★ No gas line? You're in good company

Most of my rural customers run on propane for exactly this reason. I'm glad to help you weigh a natural-gas hookup against a propane setup honestly, based on what's actually available at your home.

What to Expect for Power on Natural Gas

It's worth knowing this before the hookup is finished, not after.

Natural gas carries noticeably less energy in a cubic foot — roughly 1,000 BTU, versus roughly 2,500 for propane — than gasoline or propane does, so a generator running on it makes the **least** power of the three fuels. This isn't a flaw in the hookup; it's simply how the fuel works.

! Size against the fuel you'll use

If natural gas is your real plan, size your generator against its natural-gas rating, not the bigger gasoline number on the box. There's a whole guide in this series on sizing that walks through exactly how.

Make Sure Your Generator Can Actually Use Natural Gas

This sounds obvious once you hear it, but it trips people up more than you'd think.

Not every generator that runs on more than one fuel includes natural gas as an option. A **dual-fuel** generator typically runs on gasoline or propane only; you need a **tri-fuel** model with a natural-gas port and fuel selector built in. Confirm this before you schedule a hookup, not after.

✓ Check the spec plate or manual

Look for “tri-fuel” specifically, and confirm a natural-gas connection point is listed, before you invest in a hookup for a generator that can't actually use it.

Permits, Code, and the Pressure Test

The paperwork isn't the exciting part, but it's what makes sure the job is actually safe.

- Most areas require a permit for new gas branch work, along with an inspection once it's done.
- A licensed gas fitter typically pulls the permit and schedules the inspection as part of the job — ask up front whether that's included.
- Before anyone calls the job finished, the line should be **pressure-tested** and checked for leaks.
- Keep a copy of the permit and inspection paperwork with your home's records.

✓ Ask to see it

It's completely reasonable to ask your gas fitter to show you the pressure test, or to confirm in writing that the inspection passed.

Hiring the Right Professional for This Job

Not every plumber does gas branch work regularly — a little vetting goes a long way.

- Look for someone specifically licensed for **gas fitting** work in your area, not just general plumbing.
- Ask whether they're insured, and ask for a couple of references from similar generator hookups.
- A gas fitter who asks about your generator's BTU rating and where you'll place it is paying attention to the details that matter.
- Get the scope in writing — the dedicated branch, sizing, drip trap, and quick-connect, specifically.

★ I keep a short list

I work with licensed gas fitters I trust around Portage County and I'm glad to make an introduction, rather than you picking a name at random.

Good Questions to Ask Before You Hire

A few honest questions, asked up front, tell you a lot about the quote you're looking at.

- ☐ Will this be its own dedicated branch, upstream of my other appliances?
- ☐ How will you size the pipe for my generator's BTU rating?
- ☐ Does the job include a sediment/drip trap and a quick-connect fitting?
- ☐ Will you pull the permit and schedule the inspection?
- ☐ Will the line be pressure-tested before you call it finished?

✓ A good pro won't mind these

Anyone doing this work properly will be glad to answer all five without hesitation. Hesitation itself is useful information.

While We're Talking Generators: The Rule That Matters Most

A proper gas hookup makes your generator convenient. Running it safely is what keeps your family safe — please don't skip this page.

A running generator gives off **carbon monoxide**, or CO, no matter which fuel it's burning. It's **invisible**, has **no smell**, and can make you pass out or worse before you ever realize anything is wrong.

- Run the generator **outdoors only**, at least **20 feet** from the house, exhaust pointed away from doors and windows.
- **Never** in a garage, basement, shed, or carport — not even with the door open.
- Put **battery-backup CO alarms** on every floor, near the bedrooms, and test them.
- If an alarm sounds, or anyone feels dizzy, headachy, or sick, get everyone **outside into fresh air** right away and call 911.

! A hands-off fuel doesn't mean a hands-off generator

Natural gas takes fuel storage out of the picture, but the exhaust is exactly as dangerous as any other fuel's. The outdoor-only rule never changes.

If You Ever Smell Gas

Natural gas has a distinct rotten-egg smell added to it on purpose, specifically so you'll notice a leak.

- **Don't** flip light switches, light a match, or do anything that could spark.
- Get everyone out of the house and away from the area.
- Call your gas company's emergency line or 911 from a safe distance — not from inside the house.
- Know where your home's main gas shutoff is located before you ever need it in a hurry.

! This applies to the whole house, not just the new branch

A leak could be anywhere on your gas system, not necessarily the new branch. Treat any gas smell the same way, every time.

When to Give Me a Call

You won't be doing the gas work yourself — but there's plenty I can help with around it.

- Deciding whether natural gas or propane makes more sense for your home.
- Connecting you with a licensed plumber or gas fitter I trust.
- Confirming your generator is actually a tri-fuel model before you invest in a hookup.
- Making sure the finished job includes a dedicated branch, correct sizing, a drip trap, and a quick-connect.
- A yearly check to make sure the whole setup still runs the way it should.

I come to you, here in Portage County and nearby, and I'll help you get this right the first time rather than guessing.

★ Bill's Home Tech

Call or text (330) 200-8042. Tech Made Simple, Service Made Personal. Every visit is \$99 flat and 30-day come-back-free — if you're not happy, I'll make it right.

Everyday Cheat Sheet

Dog-ear this page or copy it onto a card. It's the quick answer to the things that come up most.

I want to...	Remember this
Hire this out	Licensed plumber or gas fitter only — never a DIY job.
Ask for the right setup	A dedicated branch off the meter, upstream of other appliances.
Avoid a starved generator	Make sure the pipe is sized for your generator's BTU load.
Spot a thorough job	Look for a sediment/drip trap and a quick-connect fitting.
Size the generator	Use its natural-gas rating — the lowest of the three fuels.
Stay safe from CO	Outdoors only, 20+ feet away; CO alarms inside; call 911 if one sounds.
Get help	Call Bill: (330) 200-8042.

Words People Use

A few terms you may hear around a natural-gas hookup, in everyday language. No quiz at the end.

Q: Dedicated branch

A separate gas line run just for the generator, rather than sharing an appliance's existing line.

Q: BTU

A unit of heat energy used to measure how much gas an appliance or generator needs — the number your gas fitter sizes the pipe against.

Q: Sediment / drip trap

A small fitting that catches debris and moisture before they reach the generator's regulator and burner.

Q: Quick-connect fitting

A tool-free fitting that lets a portable generator's hose snap on and off the gas branch easily.

Q: Upstream

Positioned ahead of other appliances on the line, so the generator draws gas before they do.

Q: Pressure test

A check, done before a job is finished, to confirm the line holds pressure with no leaks.

Q: Tri-fuel

A generator that can run on gasoline, propane, or natural gas, chosen with a selector.

Q: Carbon monoxide (CO)

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

How a Natural-Gas Hookup Comes Together

The same four steps behind a job done right

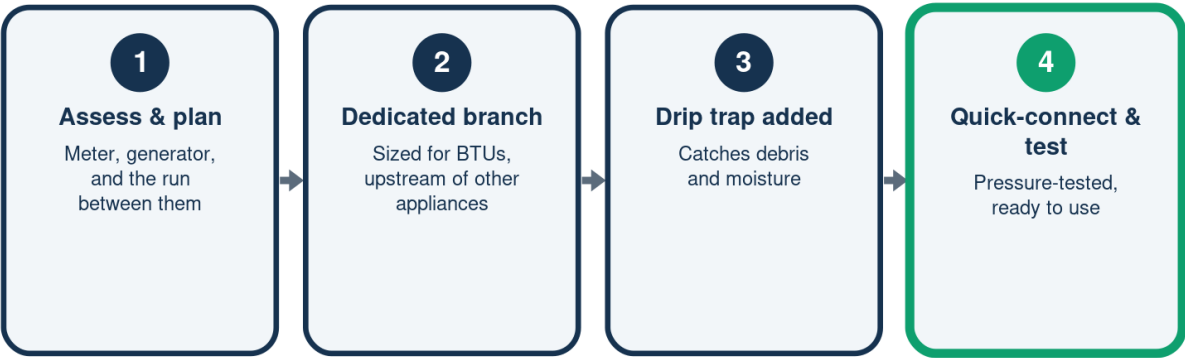


Illustration - a schematic, not to scale. Your setup may differ.

Shared Line vs. a Dedicated Branch

One competes for gas, one doesn't



Ask your gas fitter for the branch on the right

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

Natural Gas vs. Propane, at a Glance

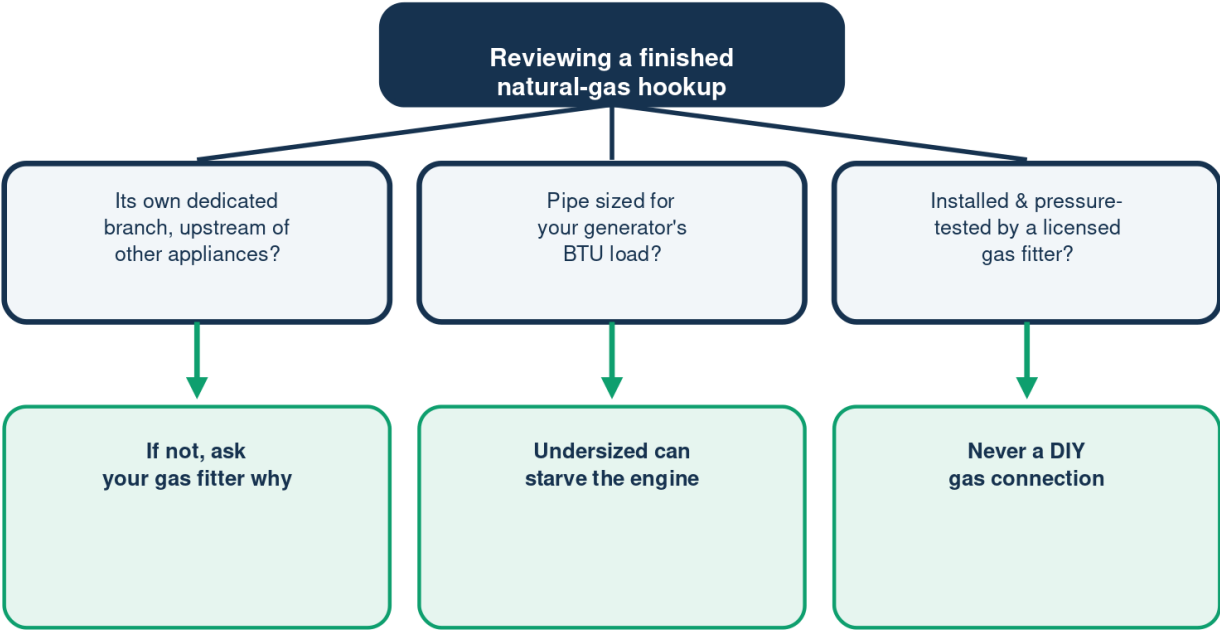
Both keep a tri-fuel generator running - a different feel to each

	Natural Gas	Propane
Energy per cubic foot	~1,000 BTU	~2,500 BTU
Refueling	Never - it's piped	Tank or cylinder
Generator power	Least of the three fuels	A little less than gasoline
Needs a pro to connect	Yes - gas fitter	Often - for bigger tanks

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

Is This Hookup Done Right?

Three quick checks before you call it finished



If you ever smell gas: leave the area, don't flip a switch, and call your gas company or 911.

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



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— Bill

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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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