



An Extended Guide · No. 1419

How to Choose a Portable Power Station

A calm, no-jargon buyer's
guide for your home

Tech Made Simple — Service Made Personal

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✓ The best news first — this one is safe indoors

Here is the best news about a portable power station, and the reason it earns a place in your home: it is a big rechargeable battery in a case, not an engine. It burns no fuel, so it gives off no exhaust and no carbon monoxide — the invisible, deadly gas that makes a gas generator a strictly outdoors-only machine. That means a power station is safe to use right inside your home, in any room, with the windows closed — beside your chair, on the nightstand, next to a medical device. A few simple habits keep it that way: charge it with the cord it came with, give it a little air while it works (don't bury it under a blanket or shut it in a tight cabinet), keep it away from water and from baking heat, and never use one that is cracked, soaked, or swollen. So as you shop, remember you're choosing a machine you can actually keep and use in your living room — which opens up far more of your home than a gas generator ever could.

Let's find the right one for you

Choosing a power station can feel like a wall of numbers and specifications. It doesn't have to. This guide walks you through it the way I'd do it at your kitchen table — starting not with a spec sheet, but with a simple question: what would you want running when the power's out?

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. I've spent 30-plus years helping folks pick gear that actually fits their lives instead of the biggest or flashiest thing on the shelf. That's exactly what we'll do here, one plain step at a time.

You won't need to memorize anything. By the end you'll know how to size one up, what features are worth having, and which corners are safe to cut. And you'll know the questions to bring to me if you'd like a second look.

★ I sell nothing, so this is honest

I don't sell power stations and earn no commission, so I've no reason to steer you toward the priciest unit. If you'd like a hand before you spend a dollar, call or text me at (330) 200-8042 — free.

The whole buyer's guide, on one page

If you remember only these things, you'll shop wisely and land on a unit you're glad you bought.

- ❑ Start with a list of what you'd want to run in an outage — not with a spec sheet. The list decides everything else.
- ❑ Two numbers matter most: output (how much it runs at once) and capacity (how long it lasts). Match both to your list.
- ❑ Lean toward the LiFePO4 battery — it lasts far longer and is very stable — for anything you'll keep for years.
- ❑ Check the outlets, how you'll recharge it, and whether you can lift and carry it comfortably.
- ❑ Buy from a reputable maker with a real warranty. Skip the no-name bargain, and don't buy on the biggest number alone.
- ❑ Be honest about the heavy stuff: it won't run a 240-volt well pump or a space heater. Size it for the essentials.

✓ The one idea underneath it all

The 'best' power station isn't the biggest one — it's the one that matches your must-run list, fits your home, and you can actually lift. Fit beats muscle every time.

Start with a list, not a machine

Every good choice begins the same way: with a short, honest list of what you'd truly want running when the lights go out. The machine comes after.

Walk through your home and picture a real outage. What would matter most? For most folks it's the phone, the internet, a lamp or two, and any medical device — and maybe keeping the fridge cold. Write it down, plain as that. Don't reach for a spec sheet yet.

This list is the whole foundation. A short list of small, steady things points to a modest, easy-to-carry unit. Add the fridge, or picture a longer outage, and you're looking at something bigger. Everything else in this guide is just matching a machine to your list.

★ Bring me your list

That little must-run list is the heart of the whole decision. Jot down what you'd want running and text me a photo of it — I'll help you land on the right size, with no guessing and no overbuying. (330) 200-8042.

The two numbers, in brief

Nearly every specification comes down to two ideas. You only need a working feel for them here — our watts-versus-watt-hours guide goes deep.

Output — how much at once

Measured in watts, this is how much the station can deliver at any one moment. Think of it as how wide the pipe is: a wider pipe runs bigger things or more things at the same time. Plug in more than it allows and it simply protects itself and stops.

Capacity — how long it lasts

Measured in watt-hours, this is how much energy the battery holds. Think of it as the size of the tank: a bigger tank keeps your things running longer before it's empty. Together, the pipe and the tank tell you almost everything.

✓ Why we skip the actual numbers

Every model is different and the figures change as new ones come out. Learn the two ideas — pipe and tank — and you can read any unit you'll ever pick up, this year or next.

Matching the two numbers to your list

Here's where your list earns its keep. Each number answers a different question about the things you wrote down.

Output answers 'can it run everything at once?' Add up what you'd have plugged in at the same time and make sure the station's output rating comfortably covers it, with a little room to spare. If a motor is on your list — a fridge, a fan, a pump — remember it needs an extra jolt to start, so the surge rating matters too.

Capacity answers 'how long will it last?' The more watt-hours it holds, the longer it carries your list before needing a recharge. A short outage with a light list needs far less than a long one with the fridge included. Our sizing guide walks the actual arithmetic with you.

✓ Both, not either

You need enough of both — a wide-enough pipe to run your things at once, and a big-enough tank to last the outage you expect. A giant tank with a narrow pipe still can't start the fridge.

Which battery is inside

There are two main battery types, and the difference is worth a minute — especially for a unit you'll keep for years.

The newer, better kind is LiFePO4 — lithium iron phosphate, sometimes written LFP. It lasts through far more charge-ups over its life, it's very stable and safe, and it doesn't mind being kept full and ready. It's a touch heavier for the same size, and for a backup unit that mostly waits in a closet, it's usually well worth it.

The older kind is a lithium-ion battery like the ones in laptops — lighter for its size, but it wears out sooner and turns up in cheaper or ultra-light units. Our battery-chemistry guide compares the two in plain terms if you'd like to go deeper before deciding.

✓ A simple rule of thumb

For a home backup unit you'll lean on for years, favor LiFePO4. For a featherweight one you'll toss in a bag now and then, the older lithium may be perfectly fine.

The outlets and ports you'll want

A power station is only as useful as the plugs on its front. Look at what you'd actually connect and make sure the ports match.

- **Wall-style AC outlets:** for lamps, chargers, and small appliances. Count how many you'd use at once.
- **USB ports:** USB-A for older cables, USB-C for phones, tablets, and many laptops. More ports mean fewer squabbles over charging.
- **A 12-volt car-style socket and DC ports:** handy for car gear and, for some CPAP machines, a DC cord that skips the inverter.
- **Enough of the right kind:** a household with lots of devices wants plenty of USB; a medical device may want a specific outlet.

✓ Ports are easy to overlook

Folks fret over the big numbers and forget to count the plugs. Our ports-and-outlets guide gives you a full tour so you'll know exactly what each one is for.

How you plan to fill it back up

A station's power isn't endless, so think about how you'll recharge it before you buy. There are three good ways, and they shape your choice.

- **From the wall:** the everyday way and usually the fastest. Many units offer a quick-charge mode — handy if outages are short.
- **From the car:** a slow trickle while you drive, a real lifeline on a long outage or a road trip.
- **From the sun:** portable solar panels recharge it for free and silently — wonderful for a long outage or off-grid, if the unit accepts solar. Check that it does if this matters to you.

✓ Match recharging to your outages

Short town outages? Wall charging is plenty. Long rural ones? Make sure it takes solar, and consider panels. Our recharging and solar guides go through all three ways in full.

The features worth paying attention to

Beyond the two big numbers, a handful of features make a station far nicer to live with. These are the ones I'd look for.

- **A clear display or app:** so you can see at a glance how much charge is left and what's going in and out.
- **UPS or pass-through:** it can charge while powering your things, and switch to battery fast if the grid drops — good for a router or a medical device.
- **Expandable capacity:** the option to add a matching battery pack later, so you can grow without buying a whole new unit.
- **A quiet fan, a built-in light, a sturdy handle:** small comforts that matter a lot at 2 a.m. in an outage.

✓ Features should serve your list

Don't pay for bells you'll never ring. A feature is only worth it if it helps with something on your must-run list or makes the unit easier for you to live with.

Two kinds of homes, two sets of needs

The right size and setup depend a great deal on where you live. Here's how the choice tends to go for town folks and for those out in the country on a well.

If you live in town or the suburbs

In town, in the suburbs, or in an apartment, outages tend to be shorter and your water keeps flowing from the city main. You're powering comfort and connection, not a pump — so a modest unit often covers everything you need.

- A modest-size station usually handles the essentials — phones, the internet, lights, a CPAP — with room for the fridge in cycles if you size up a little.
- In an apartment or condo, where a generator isn't allowed, a power station may be your only realistic backup — so choose a reliable one.
- Wall charging between outages is plenty; you likely don't need solar.
- Favor a unit you can lift and tuck away easily in a smaller home.

If you are out in the country on a well

Out in the country the calculus changes: outages run longer, and when the power stops the well pump stops with it. Plan for more capacity and a way to refill it — while being honest about what a portable station can't do.

- Lean toward bigger capacity and a unit that accepts solar, so you can stretch through a long outage and refill from the sun.
- Be honest about the well pump: it's almost always 240-volt with a big surge, and a portable station generally can't run it. That stays a generator's job.
- Store drinking water for the outage, since the pump may be down while the power's out.
- Think of the station as the quiet indoor companion to a generator that handles the pump and the heavy loads outside.

★ Town or country, let's size it right

The right unit for an apartment is a very different thing from the right one for a rural well home. Tell me where you live and what's on your list and I'll help you choose honestly. Call (330) 200-8042.

Can you actually lift and move it?

This is the question the spec sheets never ask, and it's one of the most important. A unit you can't move is a unit that stays in one spot, or worse, hurts your back.

Bigger capacity means a heavier battery — there's no way around it. Before you fall for a large unit, picture yourself carrying it from the closet to the living room, or lifting it onto a counter to charge. If you have a bad back, arthritis, or limited strength, that matters more than any number on the box.

The good news: many larger units have wheels and a pull-handle, like rolling luggage, and smaller ones have a comfortable grip. If you need to move it often, weigh it as carefully as you weigh its capacity. Sometimes two smaller units beat one you can't budge.

! Lift with care, or don't lift at all

Please don't hurt yourself hoisting a heavy unit. Use the wheels, slide it on a towel, or ask for a hand. When I help set one up, finding it a home you can reach without straining is part of the job.

The maker, the build, and the warranty

You're not just buying a battery; you're buying whoever stands behind it. For something you'll count on in an emergency, that's worth real attention.

Favor a reputable, established maker over the cheapest no-name you can find. A known brand tends to build to a safer standard, quote honest ratings, ship a recognized safety mark, and actually answer the phone if something goes wrong. Read what other owners say about reliability and support, not just the sales page.

Check the warranty length and what it covers, and whether the company has a way to reach real help and get parts. A longer warranty is often a sign the maker trusts its own product — and it's genuine peace of mind for a unit you'll keep for years.

★ I'll help you read the fine print

Warranties and safety marks are easy to skim past. Send me a photo of what you're weighing and I'll help you tell a solid maker from a risky bargain. (330) 200-8042.

New or used?

A used power station can save money, but a battery hides its age. Go in with your eyes open — and know when new is the wiser buy.

The trouble with used is that batteries wear with age and use, and you can't see that wear from the outside. If you do consider used, ask how old it is, how many charge-ups it's been through, which chemistry it is, and how it was stored — sitting dead-empty or baking hot is hard on cells. Check for swelling, cracks, water marks, and that it actually holds a charge and its outlets power something.

The warranty often doesn't transfer, either. Our buying-used guide gives you the full checklist. For a unit you'll depend on in an emergency, weigh the savings against unknown battery health — often, new is worth it.

! The one you can't judge by looking

A used battery may look perfect and still be near the end of its life. If you can't learn its age and charge-up count, treat the price as a gamble — and never buy a swollen or damaged one at any price.

Leaving yourself room to grow

Your needs may change — a new medical device, a longer outage than you expected, a taste for camping. It's worth thinking about growing room before you buy.

Many modern stations accept add-on expansion battery packs that plug in to multiply the total capacity. That lets you start with a sensible unit today and scale up later, stretching to a whole day or multi-day backup, without buying a whole new machine. The catch: the add-on must be the same maker's compatible pack.

If you think your needs might grow, an expandable unit is a smart hedge. If you're confident your list is settled, you can skip it and save. Our expansion guide covers how packs connect and what to check.

✓ Buy for now, with a door open for later

You don't have to buy for the worst outage of your life on day one. An expandable unit lets you buy for today's needs and add capacity only if a real one shows up.

Matching the choice to your situation

A few common situations point clearly toward a certain kind of unit. See which sounds most like you.

- **Apartment or condo:** a reliable, modest unit for the essentials, since a station may be your only allowed backup. Reliability over size.
- **Medical device at home:** size for that device honestly, favor a fast, seamless switchover, and keep it as one layer of a plan. Our medical guides go deeper.
- **Camping or RV:** weight and solar matter most; you want it portable and refillable off-grid.
- **Rural companion:** bigger capacity plus solar for the indoor essentials, paired with a generator for the well pump outside.

A simple shopping checklist

Take this with you when you shop, on paper or on your phone. Tick each one and you'll have thought it all through.

- ☐ I've written my must-run list and know what I'd run at once.
- ☐ The output comfortably covers everything running together, with room to spare for any motor's starting surge.
- ☐ The capacity is enough to last the kind of outage I expect.
- ☐ It's LiFePO4 if I'll keep it for years, and it has the outlets I'll use.
- ☐ I can recharge it the way I need — wall, car, or solar.
- ☐ I can lift and move it comfortably, and it's from a reputable maker with a warranty I understand.

✓ If every box is ticked, buy with confidence

A unit that clears this whole list is one you'll be glad you chose. If you're stuck on even one line, that's the moment to pause and ask — not after it arrives.

Common mistakes buyers make

A few avoidable slip-ups account for most of the regret I hear about. Now you'll sidestep them all.

- **Buying on capacity alone.** A huge tank with a narrow pipe still won't start the fridge. You need enough output too.
- **Chasing the biggest peak number.** The bold surge figure isn't the one that runs your things all day — the continuous rating is.
- **Grabbing a no-name bargain.** For something in your home and your emergency plan, a reputable maker is cheap insurance.
- **Buying it too heavy to move.** A unit you can't lift lives in one spot and doesn't help where you need it.
- **Forgetting the honest limits.** No portable station runs a 240-volt well pump or a space heater. Size for the essentials.

! The regret I hear most

The saddest call is 'I bought the biggest one and it still won't run my heater.'
Heat-makers and 240-volt gear are off the menu for any portable battery. Know that going in, and you'll love what you buy.

Reading the spec label without the jargon

The label or listing can look like alphabet soup. Here's a plain translation of the terms that actually matter.

What the label says	What it means for you
Watt-hours (Wh)	How long it lasts
Watts (W) output	How much at once
Surge or peak watts	Brief jolt to start motors
LiFePO4 / LFP	The longer-lasting battery
Cycles	Charge-ups over its life

You don't need to decode every line. Find the capacity (watt-hours), the continuous output (watts), the surge figure, and the battery type, and you've got the four that decide whether a unit fits your list. Our watts-versus-watt-hours guide expands on each.

✓ **Ignore the marketing headline**

The giant number splashed across the box is often the peak surge, chosen because it's the biggest. Look past it to the continuous output and the watt-hours — those are the honest ones.

Questions worth asking a seller

Whether it's a website, a box, or a person, these plain questions cut through the sales talk and tell you what you need to know.

- What's the continuous output in watts, and what's the surge or peak?
- What's the capacity in watt-hours — and is it expandable later?
- What battery chemistry is it? (You're hoping to hear LiFePO4.)
- How do I recharge it, and does it accept solar?
- What does the warranty cover, and does it carry a recognized safety mark?
- How much does it weigh, and does it have wheels or a handle?

Setting honest expectations

The happiest owners are the ones who knew exactly what they were buying. So let's be clear about what a power station is — and isn't.

A power station is a battery that recharges. It's superb for electronics, the internet, medical devices, lights, and nursing a fridge through an outage — quietly and safely, indoors. Buy one for those jobs and it will delight you for years.

It is not a whole-house generator. It won't run a 240-volt well pump, an electric range or dryer, central air, or a space heater for long, if at all. If you need those, that's a generator's job — and many well-prepared homes happily keep both. Buy for what it does best and you'll never be disappointed.

✓ The right yardstick

Judge a power station by how well it keeps your essentials going, safely and quietly, through the outages you actually get. By that honest measure, a well-chosen one is a joy.

Common Questions

The questions I hear most from folks shopping for their first power station, answered plainly.

Q: How big a unit do I really need?

Start with your must-run list. A short list of small, steady things — phones, the internet, a lamp, a CPAP — points to a modest unit. Add the fridge or expect a long outage and you'll want more capacity. Match both output and capacity to the list, not to the biggest number.

Q: Is it worth paying more for LiFePO4?

For a home backup unit you'll keep for years, usually yes. It lasts through far more charge-ups and is very stable. For an ultra-light unit you'll rarely use, the older lithium can be fine.

Q: Should I buy the biggest one I can afford?

Not necessarily. Bigger means heavier and pricier, and a unit you can't lift or don't need is no bargain. Size to your list, with a little room to spare, and consider an expandable one if your needs might grow.

Q: Can I trust a cheap off-brand deal?

I'd be cautious. For something in your home and your emergency plan, a reputable maker, a recognized safety mark, and a real warranty are worth the extra. A no-name bargain can cost more in the end.

★ Still not sure?

That's exactly what I'm here for, and there's never a silly question. Call or text me at (330) 200-8042 and I'll help you choose with confidence.

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 a power station 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 licensed electrical work myself — for anything that needs to be wired into your home, 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

How Much Power Station Do You Need?

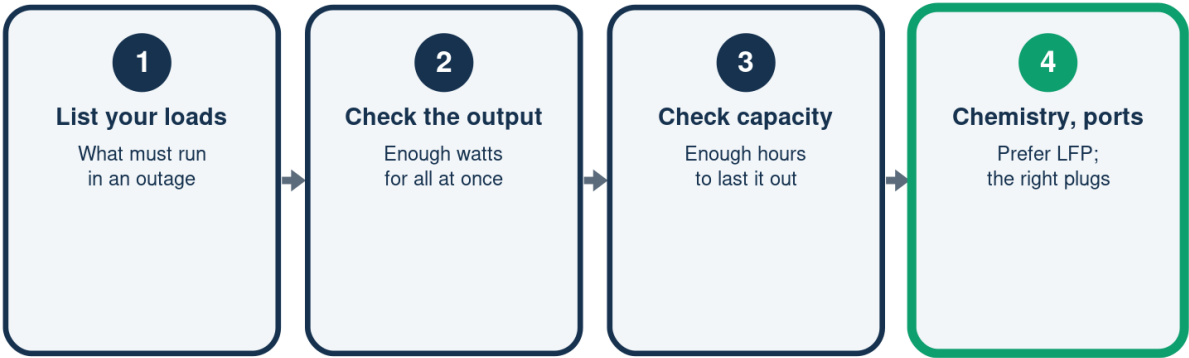
Let your must-run list set the size

	What it covers	Roughly the size
The essentials	Phones, lights, net	A modest unit
Add the fridge	Food kept cold	A mid-size unit
Long or off-grid	Days of backup	Large, add solar

A guide, not a rule. Your real numbers decide.

Choosing in Four Steps

The same simple path, every time



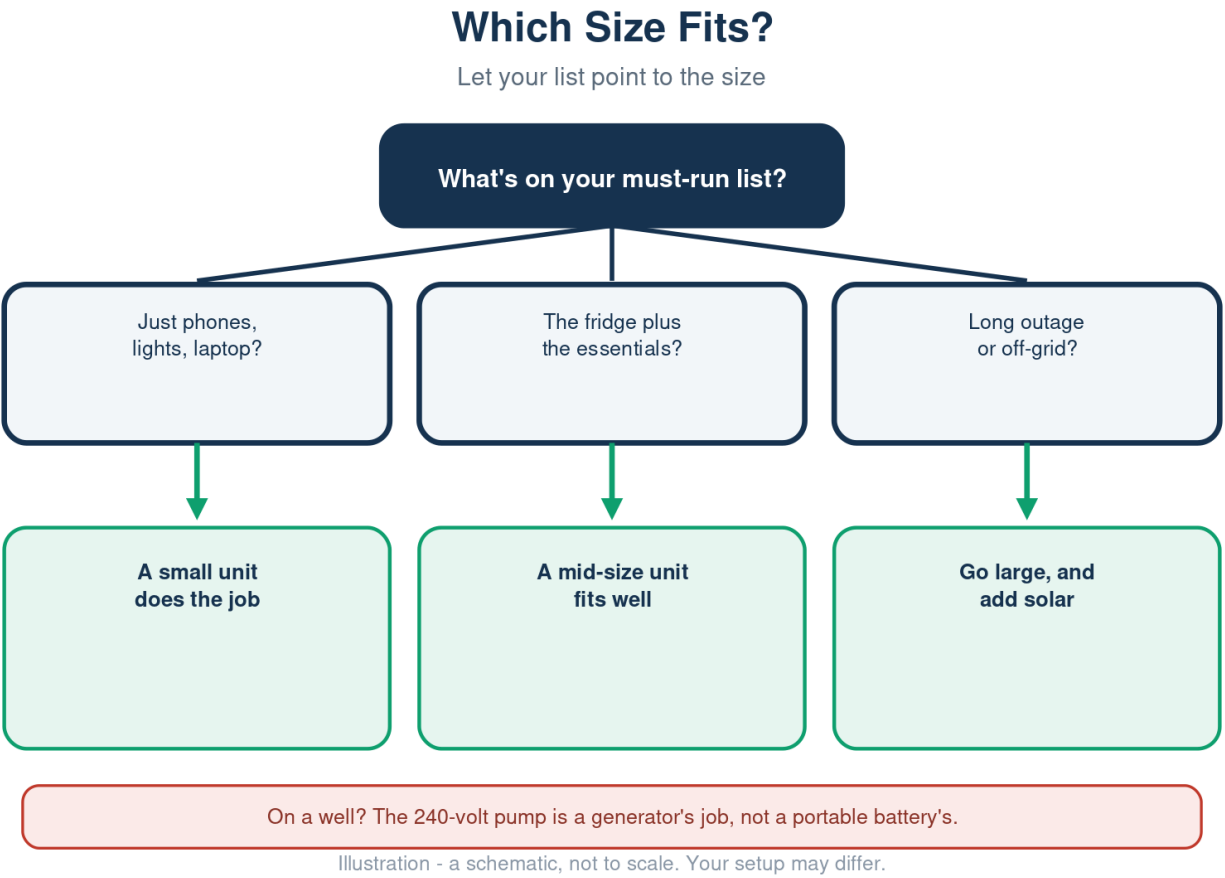
Start with the list; the machine comes after.

Features Worth Having

Small things that make one nicer to own

	Feature	Why it helps
Reading it	Clear display	See charge left
No gap	UPS mode	Protects gear
Growing	Expandable	Add capacity
At night	Built-in light	Handy in outage
Moving it	Sturdy handle	Easier to carry

A feature is worth it only if it serves your list.





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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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