



An Extended Guide · No. 1694

Jet Pumps vs. Submersible Pumps

Which kind you have, and
what it means for backup

Tech Made Simple — Service Made Personal

BillsHomeTech.com · (330) 200-8042 · Atwater, Ohio

Free & printable — share it with someone who needs it



Book a visit —
billshometech.com/book

! Read this first — on a well, no power means no water

On a home with a private well, a power outage isn't just dark — it's dry. The pump that lifts your water runs on your home's electricity, so when the power stops, every tap, toilet, and hose stops with it. Keep a few days of stored drinking water on hand as a backup you can count on — a common guideline is about a gallon per person per day. And know this from the start: a well pump is almost always a 240-volt appliance wired straight into your electrical panel, so any backup hookup for it is a licensed electrician's job. Never try to feed it with a cord or by backfeeding an outlet — that is unsafe, against code, and can put deadly voltage on the power lines outside. The first thing to sort out is which kind of pump you have — a jet pump or a submersible — because that one answer changes what your backup options really are.

Start here — which kind of pump do you have?

Not all well pumps are the same. There are two families — jet pumps and submersible pumps — and which one sits on your well quietly decides how hard, or how easy, it will be to keep the water on when the power goes out.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. When someone out on a well asks me about backup power, my very first question is a simple one — what kind of pump do you have? The honest answer shapes everything that comes after it, and a lot of folks have never had a reason to know.

This guide is here to help you tell the two apart in plain English, and to explain what each one means for a generator or a battery. It does not teach sizing or wiring in depth — other guides in this set do that — but it gives you the one piece that has to come first.

★ Not sure which you have? That is fine

Most people have never needed to know until now. Call or text me at (330) 200-8042 and we can figure out together what is on your well — no obligation, no sales pitch.

The two families, in about a minute

If you remember only these things, you are already most of the way to the right plan.

- ❑ There are two families of home well pump — jet pumps and submersible pumps.
- ❑ A jet pump sits above ground, near the tank or in a well house — and some are 120 volts.
- ❑ A submersible pump lives down inside the well, and is usually 240 volts.
- ❑ A shallow well with a 120-volt jet pump is often the easier one to back up.
- ❑ A deep submersible needs 240 volts, a big starting surge, and a licensed electrician's hookup.
- ❑ Either way, get the real details before you buy — and never assume.

✓ First things first

Before any of this matters, find out which kind of pump you have. The rest of this guide helps you do exactly that.

Meet the two families of well pump

Almost every home well pump is one of two kinds. Knowing the difference is the whole point of this guide.

A submersible pump is the one most modern homes have. The whole motor sits down inside the well, below the water, and pushes water up a pipe to a pressure tank in the house. You never see it, so it is easy to forget it is there at all.

A jet pump is the other kind. It sits above ground — near the pressure tank, in the basement, or out in a small well house — and pulls water up from the well by suction. Because it is up where you can see it, you can often tell at a glance that you have one.

★ Two kinds, two different plans

The reason this matters is simple: the two kinds ask for very different backup power. Sorting out which you have is step one, every time. Call me at (330) 200-8042 if you would like a hand.

The submersible pump, down in the well

Let's take the two one at a time, starting with the more common one.

A submersible pump is a sealed motor and pump in one long, narrow body, lowered deep into the well casing and sitting below the water line. It pushes — rather than pulls — water all the way up to your pressure tank. Because it is down in the water doing the hard work of lifting, it is a strong motor, and it is almost always wired for 240 volts, straight into your electrical panel with no plug.

That is the short version. Our guide on how a well pump works walks through the submersible setup in more detail if you would like it. For our purposes here, the thing to hold onto is this: down in the well, 240 volts, and a serious motor.

✓ You will not see a submersible pump

If the only thing you can find outside is a capped pipe sticking up — the wellhead — with no pump in sight, you very likely have a submersible pump down inside it.

The jet pump, up where you can see it

The other family sits above ground, and that alone tells you a lot.

A jet pump does its work from the surface. Instead of a motor down in the water, it uses suction to draw water up from the well — the way a straw pulls up a drink. You will usually find it near the pressure tank, in a basement or utility room, or out in a small well house or pit.

Because it sits up top and does not have to be a deep-well lifting motor, a jet pump is often a smaller machine, and some — not all — run on ordinary 120-volt house current. That single fact is why jet pumps come up so often when we talk about easier backup options.

★ See a pump above ground?

If there is an actual pump you can put your hand on — above ground, near the tank — you are most likely looking at a jet pump. Not sure? Call or text me at (330) 200-8042.

Shallow-well and deep-well jet pumps

Even within the jet-pump family, there is a little more to know — kept simple here, on purpose.

A shallow-well jet pump is the simplest. It uses a single pipe to draw water up, and it works when the water is not too far down. This is the classic above-ground pump on a shallow well.

A deep-well or convertible jet pump uses two pipes and a part down in the well called a foot valve, which helps it reach water that sits farther down. It is still an above-ground pump, but it is set up to pull from deeper. The details of single-line versus two-line are a well professional's world — what matters to you is just knowing your jet pump may be one or the other.

✓ Do not worry about the plumbing details

You do not need to master foot valves and pipe counts. Your well company knows your exact setup, and that is who to ask when the specifics matter.

Voltage — why 120 or 240 changes everything

Here is where the difference between the two families really starts to matter for backup power.

Some jet pumps run on 120 volts — the same as a lamp or a toaster plugs into. A submersible pump, and plenty of jet pumps too, run on 240 volts, the heavier circuit used for a range or a dryer. That number is not a small detail. It decides what kind of generator or battery could ever run the pump at all.

A 240-volt pump needs backup equipment that can deliver 240 volts, which rules out most of the smaller, simpler options right away. A 120-volt pump opens the door to gear that a 240-volt pump would leave shut. Notice I said opens the door — not guarantees — because voltage is only half the story. The other half is the starting surge, which we will get to.

! Do not guess at your voltage

Never assume your pump is 120 volts because you are hoping for an easier answer. Check the nameplate or ask your well company — guessing low here leads to buying the wrong equipment.

What each kind means for a portable generator

Same outage, two very different generator conversations.

If you are leaning toward a portable generator, the kind of pump you have points you in very different directions.

- **A deep submersible (usually 240 volts)** needs a generator with a 240-volt outlet and enough headroom for the pump's big starting surge — plus a proper hookup at the panel. This is the bigger, more involved setup.
- **A 120-volt shallow jet pump** may run on a smaller generator, because it asks for less to get going. It is still not a sure thing, and it still needs a safe hookup — but it is a friendlier starting point.

Either way, sizing matters and the hookup is not a do-it-yourself job. Our sizing guide walks through the numbers, and our guide on connecting backup power safely covers the transfer switch or interlock a licensed electrician installs. I will not repeat all of that here.

✓ A smaller generator is a maybe, not a promise

Even a 120-volt jet pump has to be matched to a generator that can actually start it. Treat 'a smaller unit might work' as a lead worth checking, not a decision already made.

What each kind means for a battery or power station

This is where the difference between the two families is at its sharpest.

Most portable power stations — the battery boxes many folks are curious about — put out 120 volts only. That means they usually cannot run a 240-volt submersible pump at all, no matter how large the battery is. It is not a matter of size; it is the wrong kind of power for that pump.

A 120-volt shallow jet pump is the more realistic candidate for a battery or power station — the one case where this option is genuinely worth exploring. Even then, you have to verify that the battery can handle the pump's starting surge and will not drain too fast. Our guide on power stations and batteries covers those honest limits in detail.

★ Hoping a battery will do it?

For a shallow 120-volt jet, maybe — and I am glad to help you check. For a deep submersible, I will tell you honestly if it is not the right tool. Call me at (330) 200-8042.

Two kinds of homes, two sets of needs

This guide is about the pump itself, so it helps to picture where each kind tends to turn up.

If you live in town or the suburbs

Many in-town homes are on city water and have no well pump at all, so this guide is not really aimed at you. But some suburban homes — often older ones, or those on larger lots — do have a private well, and when they do, it is frequently a shallow well with a jet pump sitting above ground. That is the more back-up-friendly case, and sometimes it even runs on 120 volts.

- If you are on city water, you have no pump to power, and an outage does not touch your water at all.
- If you do have a well, look for a pump above ground near the tank — that points to a jet pump.
- A shallow-well jet, especially a 120-volt one, is the case most open to a smaller generator or a battery.
- Even so, verify the details before you buy — an easier case is not an automatic yes.

If you are out in the country on a well

Out in the country, deep wells are the rule, and a deep well almost always means a submersible pump down in the casing, running on 240 volts. This is the harder backup to plan — the one that needs 240-volt equipment, real surge headroom, and a licensed electrician's hookup.

- A capped pipe at the wellhead with no pump in sight usually means a submersible, down deep.
- Plan on 240-volt backup equipment and a proper transfer switch or interlock, not a cord.
- The pump's big starting surge is likely the largest number in your whole backup plan.
- Rural outages tend to run longer, so a fuller plan and stored water matter even more.

★ Not sure which describes your place?

Whether you are on a shallow suburban well or a deep rural one, I can help you pin down what you have and what it means. Call or text me at (330) 200-8042.

How to tell which kind you have

You can often narrow it down in a few minutes, without any tools.

- ❑ Look above ground near your pressure tank — a pump you can see and touch points to a jet pump.
- ❑ Look outside for the wellhead — if all you find is a capped pipe with no pump, it is likely a submersible down in the well.
- ❑ Note whether the pump's circuit is a 120-volt or a 240-volt breaker — but do not open the panel yourself if you are unsure.
- ❑ Look for a nameplate or a tag on the pump or its control box, and note what it says.
- ❑ When in doubt, call the company that drilled or services your well — they will know for certain.

✓ The well company is your shortcut

You do not have to play detective. One call to whoever drilled or services your well usually settles it, and they can tell you the voltage too.

The starting surge applies to both kinds

Whichever family your pump belongs to, it shares one demanding habit.

Every pump motor — jet or submersible — needs a brief, much larger jolt of power to start than it uses once it is running, often around three times its running power for a second or two. That surge is the reason a battery or generator that looks big enough on paper can still fail to start a pump.

So even a friendly little 120-volt jet pump has a surge to reckon with. It is a smaller surge than a big submersible's, but it is real, and it is exactly why 'this should work' has to become 'I checked that it works.' Our guide on the starting surge and soft starters explains the surge, and the add-on device that can tame it, in full.

! The surge is why we verify

This is the single biggest reason not to trust a small generator or battery on faith. Match the equipment to the pump's surge — or, better, have a pro confirm it — before you rely on it.

One jet pump can be set up two ways

A quick note that saves confusion later.

Some jet pumps are called convertible, meaning the same pump can be plumbed for a shallow well or a deep well depending on how it is set up. So two homes with what looks like the same pump on the shelf can have quite different installations.

You do not need to sort this out on your own. The point is only that 'I have a jet pump' does not tell the whole story by itself — the way it is set up, and its voltage, fill in the rest. When those specifics matter, your well company has the answer.

✓ The label is a starting point, not the finish

Knowing you have a jet pump is a great first step. The voltage and the setup are what turn that into a real backup plan.

Constant-pressure pumps are a separate topic

There is a third thing you may hear about, and it is worth setting apart clearly.

Some newer wells use a constant-pressure, or variable-speed, system that holds steady water pressure by adjusting the pump's speed. This is not really a third family of pump so much as a different way of controlling one — but it behaves differently on backup power, because its electronics can be fussy about rough generator power.

Because it is its own subject, I am not going to fold it in here. If you think you have a constant-pressure or variable-speed setup — steady pressure, a smaller tank, a control box with a screen or dial — our guide on constant-pressure and variable-speed pumps is the one you want.

✓ **Steady pressure everywhere? Read that guide**

If your water pressure never seems to change as taps open and close, you may have a variable-speed system, and that guide is written just for you.

Jet pumps and losing prime

One more jet-pump trait, mentioned so it does not catch you off guard.

Because a jet pump works by suction, it depends on being primed — having water already in the pump and its pipe to pull against. If it loses that prime, from an air leak, a dry spell, or sitting unused, it can run without actually moving water. A submersible, sitting down in the water, does not have this particular quirk.

If your jet pump ever loses prime, that is a job for your well professional, not a backyard fix. Re-priming the wrong way can run the motor dry and damage it. I mention it only so you recognize the symptom — the pump runs but no water comes — and know who to call.

! Do not tinker with a pump that lost prime

A pump running dry can be ruined quickly. If water stops while the pump still runs, shut it off and call your well company rather than experimenting.

Sizing depends on which kind you have

Because the two families draw such different power, they size differently too.

A big 240-volt submersible and a small 120-volt jet pump are not in the same weight class, so the backup you size for them is not the same either. That is a good thing — it means a shallow-well home may get away with less — but it also means you cannot borrow a neighbor's answer. Their pump may be nothing like yours.

Whatever kind you have, the method is the same: get the pump's real numbers from its nameplate or your well company, and size around its running draw plus its single biggest surge, with room to spare. Our sizing guide walks through that step by step. I never guess at these numbers, and neither should you.

★ Bring me your pump's numbers

A photo of the nameplate, or just your well company's name, is the fastest path to a real answer. Call or text me at (330) 200-8042 and we will translate it into the right size, honestly.

What I help with, and what the pros handle

It helps to know who does what, so you are never left wondering who to call.

I am a tech helper, not a licensed electrician or a well contractor — and I am careful about that line, because it keeps you safe.

- **What I help with:** figuring out which kind of pump you have, understanding what it means for backup, sizing the equipment honestly, and lining up the right pros.
- **What the well or pump professional handles:** the pump itself, priming, the pressure tank, and anything down in the well.
- **What the licensed electrician handles:** the 240-volt wiring, the transfer switch or interlock, and any panel work.

I sell no pumps, generators, or batteries and earn no commission, so the advice you get from me is just honest advice. When a job belongs to a pro, I will tell you plainly and help you find a trustworthy one.

★ One call to start

You do not have to know who to call for what. Start with me at (330) 200-8042, and I will help you sort out which pro you actually need.

Questions to ask your well company

These few questions get you real, usable answers instead of a shrug.

Q: Is my pump a jet pump or a submersible?

This is the first thing to nail down — your well company will know from their records or a quick look, and it shapes every backup choice after it.

Q: Is my pump 120 volts or 240 volts?

The voltage decides what kind of generator or battery could ever run it, so get this confirmed rather than assumed.

Q: If it is a jet pump, is it shallow-well, deep-well, or convertible?

This tells you how your pump is set up and helps a pro judge what backup makes sense — you do not need the details, just the answer.

Q: Do you have my pump's nameplate numbers on file?

The running and starting figures are what sizing depends on, and your well company often has them from the last service visit.

✓ Write the answers down

Keep these answers with your home papers, next to your generator or battery manual. Future you, mid-outage, will be grateful.

Common Questions

The questions I hear most often about the two kinds of pump, answered plainly.

Q: Is a jet pump always easier to back up than a submersible?

Usually, especially a 120-volt one — but not always. A jet pump still has a starting surge and still needs a safe hookup, so you verify before you count on it.

Q: Can I run my submersible pump on a small 120-volt power station?

Almost never. Most power stations put out 120 volts only, and a submersible is usually 240 volts, so it is the wrong kind of power — not just too little of it.

Q: How do I know if my jet pump is 120 or 240 volts?

Check the nameplate on the pump or its control box, or ask your well company. Do not assume the easier answer — confirm it.

Q: I have steady water pressure all the time — what kind is that?

That may be a constant-pressure or variable-speed system, which is a separate topic with its own guide. It is worth reading before you plan backup.

★ Still not sure what you have?

This is one of the most common things folks ask me out on a well, and I enjoy sorting it out with them. Call or text me at (330) 200-8042.

A word on safety, either way

Whichever kind of pump you have, one thing does not change.

Jet or submersible, 120 volts or 240, a well pump is an electrical appliance, and it is almost always wired straight into your home rather than plugged in. That means connecting any backup power to it is a licensed electrician's job — not a cord, not an adapter, and never backfeeding through an outlet.

! The hookup is always a pro's job

Never try to feed a well pump with a so-called suicide cord or by backfeeding a dryer or range outlet. It can put deadly voltage on the lines outside, risk a fire or shock, and it is against code. Our guide on connecting backup power safely explains the safe way.

✓ The easier case is still not a DIY case

Even a friendly 120-volt jet pump needs a safe, proper hookup. 'Easier to power' never means 'wire it yourself.'

Bringing it all together

It really does come down to one question first, then a plan built on the answer.

Find out which kind of pump you have — a jet pump above ground or a submersible down in the well — and whether it runs on 120 or 240 volts. That one answer tells you whether you are in the friendlier shallow-well case or the more demanding deep-well one, and it points you to the right guides for sizing and hookup.

From there, the path is calm and clear. A 120-volt shallow jet may open the door to a smaller generator or even a battery, always after you verify the surge. A 240-volt submersible calls for 240-volt equipment, real headroom, and a licensed electrician. Either way, you get real numbers and you never guess.

★ Let's figure out your pump together

Identifying your pump is the first step, and it is one I am glad to take with you. Call or text me at (330) 200-8042, and we will get your water plan started on the right foot.

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 figuring out what kind of well pump you have 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

Jet Pump vs. Submersible Pump

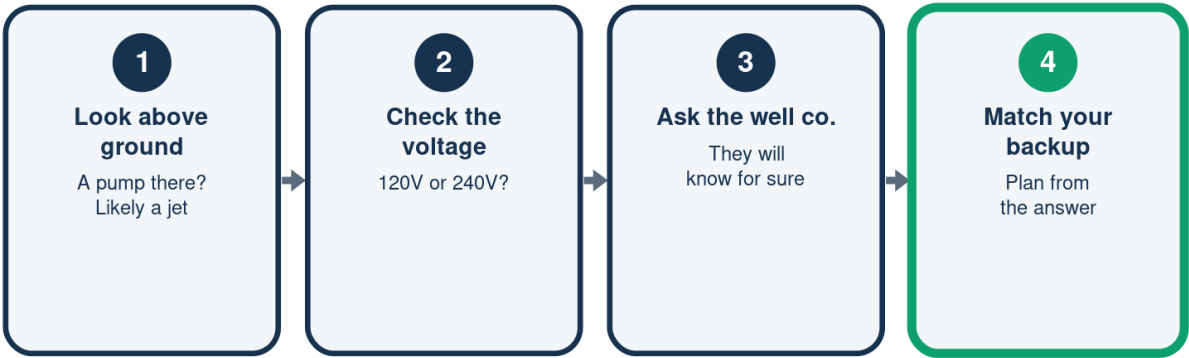
The two families at a glance

	Jet (shallow)	Submersible (deep)
Where it sits	Above ground	Down the well
Common voltage	Sometimes 120V	Usually 240V
Best for	Shallow wells	Deep wells
Easier to back up?	Often yes	Usually harder

Knowing which you have points to the right backup.

Which Pump Do I Have?

Four ways to tell



When in doubt, the well company has your answer.

What Each Means for Backup

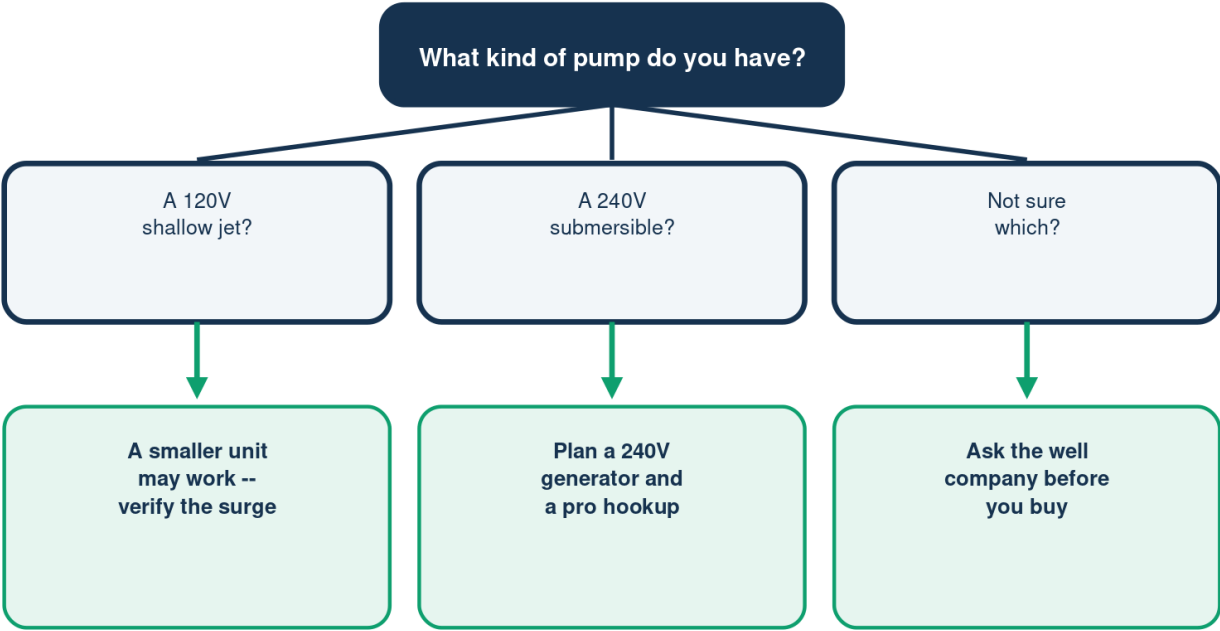
Same outage, different plan

	Jet (shallow)	Submersible (deep)
Generator	A smaller may do	Needs 240V + surge
Battery/station	Maybe, if 120V	Usually not
Hookup	Still a pro	Transfer switch

A 120V shallow jet is the more realistic battery candidate.

Backing Up Which Type?

Let your pump type point the way



Verify the surge before trusting any small unit to start a pump.

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



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.

(330) 200-8042 · BillsHomeTech.com

Bill@BillsHomeTech.com · Mon–Sat 9:00 AM – 7:30 PM

— Bill

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*



Book a visit —
billshometech.com/book

Use of these guides is subject to our Terms of Use (billshometech.com/terms-of-use).

(330) 200-8042 · BillsHomeTech.com

Bill@BillsHomeTech.com · Mon–Sat 9:00 AM – 7:30 PM

For general information only — not professional advice. Use at your own risk. For electrical, gas, water, or ladder work, please call a licensed professional. — Bill's Home Tech