BILL'S HOME TECH

Home & Small Business Tech Solutions

An Extended Guide · No. 1403

The Install and Permit Process

What installation day looks like, step by step

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! Read this first — this is a licensed electrician's job

A whole-home battery ties into your home's main electrical panel, and that makes the installation real electrical work — a job for a licensed electrician, done with a permit, and often with your utility's approval before it is switched on. It is not a do-it-yourself project. The happy news, and one of a battery's real advantages, is that once it is installed it runs silently and gives off no exhaust and no carbon monoxide, so unlike a generator it is safe indoors or in the garage. But the battery still stores a great deal of energy, so leave the wiring, the mounting, and any service to the pros, and follow the installer's and maker's instructions. I help you plan it and line up a trustworthy licensed electrician — I do not do the wiring myself. This guide walks you through that whole install, step by step, so the permit, the inspection, and the utility's sign-off feel familiar and manageable rather than a mystery.

What installing a home battery actually looks like

Getting a home battery onto your wall is a real project, but a well-run one is calm and orderly. This guide walks you through it start to finish, so you know what happens, who does what, and where your part fits in.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. I'm a tech helper, not a licensed electrician — so I don't do the wiring myself. What I do is help you plan the job, decide what to back up, and line up a licensed electrician you can trust.

Knowing the shape of the process ahead of time takes the mystery out of it. You'll be able to follow along, ask good questions, and feel confident that each step is being done properly.

★ I'll help you get organized first

Before any installer sets foot in your home, call or text me at (330) 200-8042. I'll help you sort out what you want to back up and what to ask — free, and with nothing to sell you.

The whole process, on one page

If you remember only these things, you already understand how a home battery install goes and where you fit in.

- ❑ It starts with a site visit and a load calculation — the installer sees your home and works out what your plan really needs.
- ❑ You help choose a good location and decide what to back up; the professional handles everything with wires in it.
- ❑ The battery and inverter are mounted and wired into your main panel, often through a small backup subpanel for your essential circuits.
- ❑ The work is done under a permit and checked by an inspector — that's not red tape, it's your safety net.
- ❑ Your utility usually must approve the connection before the system is switched on, so it ties into the grid safely.
- ❑ Finally it's commissioned and the app is set up, and you're shown the one or two screens worth knowing.

> **✔ The one-sentence version**
> A home battery install is an orderly, permitted, professional job — your part is choosing a good installer, deciding what to back up, and picking a spot; the pros do the rest.

The big picture, before the steps

Every good install follows the same broad arc. Seeing it whole first makes each step easier to place.

In plain terms, the job goes like this: someone comes out and studies your home, a plan and a permit are drawn up, the equipment is mounted and wired in, an inspector checks the work, your utility signs off, and the system is switched on and set up. That's the whole journey.

A great installer makes that feel smooth and unhurried, keeping you in the loop at each stage. The pages that follow simply slow the process down and walk each step one at a time, so nothing feels like a black box.

> **✔ You're a guide, not a laborer**
> Notice how much of this is decisions and sign-offs rather than sweat. Your role is to steer — what to back up, where it goes, which installer — while the licensed pros carry the tools.

Step 1: The site visit and load calculation

Everything good starts here, with a professional actually looking at your home rather than guessing from afar.

A qualified installer comes out, looks at your electrical panel, and talks with you about what you'd want running in an outage. From that they do a load calculation — working out the demands of the things you want to back up so the system is sized to reality, not to a brochure.

This is also when they scout possible locations and check how your panel is set up. It's the foundation the whole job rests on, which is why anyone quoting a firm system or price before seeing your home is guessing. Our sizing guide explains why the load calculation matters so much.

> **✔ Have your must-run list ready**
> The single most helpful thing you can bring to this visit is a short list of what you truly want running when the power's out. It points the whole design in the right direction from minute one.

Your big decision: what to back up

This is the choice that shapes everything else, and it's genuinely yours to make. Let's make it well.

You can back up just a handful of essential circuits — the fridge, some lights, the internet, a furnace's controls, a medical device — or aim for the whole home, which asks for more battery and more careful design. Neither is right or wrong; it depends on what you want to protect.

- **Start from your must-run list.** What would you truly miss in an outage? That list is the honest starting point.
- **Weigh the heavy loads.** Central air, an electric range, a well pump — these are demanding, and they steer the design.
- **Think about how long.** A shorter list stretches a battery further; the whole home drains it faster.

> **★ Let's write the list together**
> This decision is where I'm most useful, and it costs you nothing. Call (330) 200-8042 and we'll sort your must-haves from your nice-to-haves before you get quotes. Our whole-home vs essential-loads guide helps too.

Step 2: Choosing where it lives

A home battery needs a sensible spot, and a few plain rules guide the choice. You and the installer settle this together.

Clearances and code

The battery and inverter need room around them — the maker specifies clearances, and local code has its say too. That's why a wall or corner that looks fine to you may not qualify, and why the professional's judgment matters here.

Temperature and access

A moderate, steady spot — a garage, basement, or utility area — is often kinder than harsh outdoor exposure, following the maker's temperature ratings. It also wants reasonable access, so a technician can reach it for setup and any future service.

> **✔ Bring your preferences, not the rulebook**
> Tell the installer where you'd like it and what you'd rather not look at; let them fit that to the clearances, temperature ratings, and code. That's the happiest way to land on a spot you'll both be glad about.

Step 3: Pulling the permit

The word 'permit' makes some folks groan, but it's genuinely on your side. Here's what it is and who handles it.

Because a home battery ties into your main electrical panel, the work needs a permit from your local building authority. A good installer pulls that permit as a matter of course — it's part of doing the job right, not an extra you have to chase.

A permit means the work will be inspected against the electrical code by someone whose only job is to confirm it's safe. Far from a hassle, it's an independent check that protects you, your home, and anyone who owns the house after you.

> **✔ Make 'who pulls the permit' an early question**
> The answer you want is a confident 'we handle the permit and the inspection.' If an installer is vague about permitting or hints at skipping it, that's a serious red flag — keep looking.

Step 4: Mounting the battery and inverter

Now the physical work begins — and it's steadier and quieter than you might picture.

On install day, the crew mounts the battery in its chosen spot and puts the inverter — the device that translates between the battery and your home's wiring — in place beside or near it. These units are heavy and precise, secured to the wall or floor to the maker's specifications.

It's careful, methodical work rather than anything dramatic. Our inverter-and-panel guide explains what the inverter does if you're curious; for the install itself, this is simply the stage where the hardware goes where it belongs.

> **✔ Clear the way beforehand**
> You can make install day smoother by clearing a path to the spot and moving anything fragile or in the way. The crew handles the heavy lifting — you just help them reach the wall easily.

Step 5: Wiring into your main panel

This is the heart of the job, and the exact reason it's a licensed electrician's work from start to finish.

The electrician wires the battery and inverter into your main electrical panel, very often through a small backup — or 'critical-loads' — subpanel that holds the circuits you chose to protect. They also fit the control gear that safely disconnects your home from the grid during an outage, so it never sends power back onto the utility lines.

This is precise, code-governed work at the very center of your home's electrical system. Done properly it's safe and reliable for decades; done wrong it's dangerous and won't pass inspection. There is no shortcut worth taking here.

> **! Why this is never, ever a DIY project**
> A home battery stores a great deal of energy and connects to the core of your wiring, alongside live utility power. That combination is exactly why the law requires a licensed electrician and a permit. I'll gladly help you line up a trustworthy one — I never do the wiring myself, and neither should any unlicensed hand.

Two kinds of homes, two sets of needs

An install unfolds a little differently for a close-in home than for a rural home on a well — from which offices sign off to how far the crew and the inspector have to travel.

If you live in town or the suburbs

In town or the suburbs, the permit office and your utility are usually close at hand, and installers work in your area often. The steps are the same, but the logistics tend to be tidy and familiar.

- Permitting and inspection are routine for local installers who do this work in your community regularly.
- Your utility's interconnection process is a well-worn path, so the sign-off is often straightforward.
- A tighter lot or an HOA can add rules about placement and appearance — worth raising with your installer early.
- Shorter travel usually makes scheduling the visit, the install, and the inspection simpler to line up.

If you are out in the country on a well

Out in the country, the same steps still apply, but distance and a well pump shape the job — and there's a water reality no install can change.

- A 240-volt well pump is a heavy load with a big starting surge; sizing the system to handle it is a real part of the plan — one for the installer.
- Longer drives can mean the crew and the inspector schedule around travel; a little patience on timing goes a long way.
- Outbuildings, a septic system, or a long service run can add wrinkles the site visit will sort out.
- Store drinking water regardless: when the power's out the well is out until it's back on, and no install changes that.

> **★ In town or out on a well, I'll help you prepare**
> Tell me where you are and what you're on for water, and I'll help you know what to expect from your local permitting and utility. Call (330) 200-8042.

Step 6: The inspection

After the wiring is done, an independent set of eyes confirms it was done right. This is a good day, not a nerve-wracking one.

An inspector from your local building authority checks the completed work against the electrical code — the mounting, the wiring, the connections into your panel. Their whole purpose is to verify the job is safe and correct before it goes into service.

A reputable installer expects this and welcomes it; they've built the job to pass. You typically don't need to do anything but provide access. When the inspector signs off, you have real, independent proof the work meets the standard.

> **✔ The inspection is your free second opinion**
> Think of the inspector as an impartial expert double-checking your installer's work at no extra cost to you. That's a reassurance worth having — and one more reason skipping the permit is never worth it.

Step 7: The utility's approval

There's one more sign-off that often has to come before the system runs — and it's a different one from the building permit.

Because a grid-connected battery ties into the same wires that serve your neighborhood, your utility generally needs to approve the connection before it's switched on. This is called interconnection approval, and it's the utility confirming the system will play safely with their grid.

Your installer normally handles this paperwork as part of the job. Our interconnection-and-incentives guide covers the why and how at a general level; the key point for install day is simply that this approval is a real, separate step, and it often has to happen before the switch is flipped.

> **! Don't let anyone energize it before the utility's OK**
> If your utility requires interconnection approval, the system shouldn't be switched on until that's granted. An installer who wants to skip or rush past it is cutting a corner that can cause real trouble. Make sure this step is respected.

Step 8: Commissioning and app setup

The finish line: the system is brought to life, tested, and connected to its app — and you're shown how to live with it.

Commissioning is where the installer powers everything up, confirms it charges and switches over correctly, and sets the reserve and modes to suit your plan. They'll often deliberately test the switchover so you can see it work before they leave.

They'll also connect the monitoring app so you can glance at the battery's charge and get outage alerts. Our monitoring guide goes deeper on the app; the important thing on the day is that you leave knowing the one or two screens that actually matter.

> **★ Nervous about the app? That's my specialty**
> If a new app feels daunting, that's exactly what I help with. On a visit I'll set it up, turn on the alerts that matter, and show you just the screens worth knowing — at your pace. Call (330) 200-8042.

How long does the whole thing take?

The honest answer is: it varies, and I won't pretend otherwise. But here's the shape of it.

The hands-on install itself is usually a matter of a day or so of work, depending on your home and the setup. But the whole journey — from the first visit through permitting, scheduling, the inspection, and utility approval — naturally takes longer, because several separate parties are involved.

How long each piece takes depends on your local permit office, your utility's process, and the installer's schedule, none of which I'd responsibly guess at. A good installer will give you a realistic timeline for your area and keep you posted as things move.

> **✔ Patience on the paperwork is normal**
> The waiting is usually the permit and the utility, not the wiring. That's the system working as intended, protecting you — so a little patience on the sign-offs is a good sign, not a bad one.

Choosing a good installer

This is the most important decision you make, because a great installer makes everything else easy. Here's what to look for.

- **Properly licensed and insured.** Ask directly, and expect a straight, confident answer with no hedging.
- **Handles permits and the utility.** They should own the permitting and interconnection paperwork as a normal part of the job.
- **Explains things plainly.** A good installer welcomes your questions and answers them without jargon or pressure.
- **Gives a clear, itemized quote.** You should be able to see what you're paying for, not just a single mystery number.
- **Stands behind the work.** Ask about their workmanship warranty and how you'd reach them if something needed attention later.

> **✔ Get more than one quote**
> Comparing two or three installers helps you judge both price and manner. I'm glad to help you read the quotes side by side so you can choose with confidence rather than on a hunch.

So what do you actually have to do?

Let's gather your whole part into one short, unintimidating list. It's less than you might fear.

- ❑ Decide what you want to back up — your must-run list is the heart of it.
- ❑ Choose a good, licensed installer, ideally after comparing a couple of quotes.
- ❑ Help pick a sensible location, sharing your preferences and letting the pro fit them to the rules.
- ❑ Provide access for the install and the inspection, and clear a path to the spot.
- ❑ Learn the basics of the app at the end — just the screens that matter, which I can teach you.

> **★ That's genuinely the whole job for you**
> Everything with wires in it belongs to the licensed pros. Your part is decisions and access — and I can help with every one of these. Call or text me at (330) 200-8042.

Getting your home ready for install day

A little preparation makes the day go smoothly for everyone. None of it is heavy or hard.

- **Clear the path and the spot.** Move boxes, bins, or furniture so the crew can reach the chosen wall easily.
- **Sort out parking.** The crew may need space for a van and to carry equipment in — a clear driveway helps.
- **Plan for pets.** A quiet room for a nervous dog or cat keeps everyone calm while doors are opening.
- **Expect a brief power-off.** Working on your panel may mean the power is off for a while; charge phones and plan around it.

> **✔ Ask your installer what to expect**
> Every job is a little different, so ask your installer ahead of time whether the power will be off, how long they expect to be there, and where they'll need access. A five-minute call prevents most day-of surprises.

What it costs — and why I won't quote a figure

I won't put a dollar number on your install, and here's the honest reason why.

The cost of an install depends on your home, your panel, what you're backing up, the location, and the equipment chosen — far too much to responsibly guess at from a page. Permit fees and utility charges vary by area too. Anyone quoting a firm figure before seeing your home is guessing, and you deserve better than a guess.

What I can tell you is that a clear, itemized quote from a licensed installer is the honest way to learn your real number — and that home batteries may qualify for incentives that change the math. Our interconnection-and-incentives guide covers that at a general level.

> **✔ Compare quotes, not just headline prices**
> The lowest number isn't automatically the best deal — what's included matters enormously. I'll help you read competing quotes fairly so you're comparing like with like before you choose.

After it's in: what to expect

Once the system is live, the hard part is behind you. Day-to-day life with a battery asks very little.

From here, the battery mostly looks after itself — charging, riding out short outages, and switching over silently without any effort from you. There's no fuel, no engine, and no pull-cord. Now and then you might glance at the app, and that's about the size of it.

Care is light: keep the area around it clear, let the installer handle any updates or periodic checks, and don't open or block the unit. Our maintenance guide covers that gentle routine, and our monitoring guide covers the app in friendly detail.

> **✔ The install is the hard part — and it's the pro's part**
> That's the reassuring truth about a home battery: the demanding work is the one-time, professional install. What's left for you afterward is about as easy as home technology gets.

Red flags in an install quote

Most installers are honest professionals, but a few warning signs are worth knowing so you can steer clear.

- **Vague or dodgy about permits.** Any hint of skipping the permit or inspection to save time or money is a hard no.
- **Doesn't mention the utility.** A pro should know your utility's interconnection process and handle it — silence here is telling.
- **A firm price with no site visit.** A real number comes after seeing your home and doing a load calculation, not before.
- **High pressure or 'today only' deals.** A trustworthy installer gives you room to think and compare, never a countdown.

> **! When something feels off, slow down**
> Pressure and vagueness are exactly when to pause and get a second opinion. This ties into your home's wiring and your safety — there's no prize for rushing. Call me and we'll look at the quote together before you commit.

Common Questions

The questions I hear most about installing a home battery, answered plainly.

Q: Can I install a home battery myself to save money?

No. It ties into your main electrical panel, which is licensed electrician's work done under a permit — and often with utility approval before switch-on. It's not a DIY project, for real safety reasons.

Q: Do I really need a permit?

Yes, and you want one. A permit means an inspector confirms the work is safe and up to code. It protects you, your home, and future owners, and it's often what keeps the warranty valid too.

Q: What's the difference between the permit and the utility approval?

The permit and inspection come from your local building authority and check the wiring. The utility's interconnection approval is separate — it clears the system to tie into the grid, often before switch-on.

Q: How long will the whole process take?

It varies by your permit office, your utility, and the installer's schedule, so I won't guess. The hands-on install is usually quick; the sign-offs take longer. A good installer gives you a realistic timeline.

Q: What do I actually have to do?

Decide what to back up, choose a good installer, help pick a spot, provide access, and learn the app at the end. Everything with wires in it belongs to the licensed pros.

> **★ Still have questions? That's what I'm here for**
> Getting comfortable with the process before it starts is exactly what I love to help with. Call or text me at (330) 200-8042 and let's talk it through, no pressure.

You don't have to do this alone

You just have to remember that a friendly, patient person is one call away.

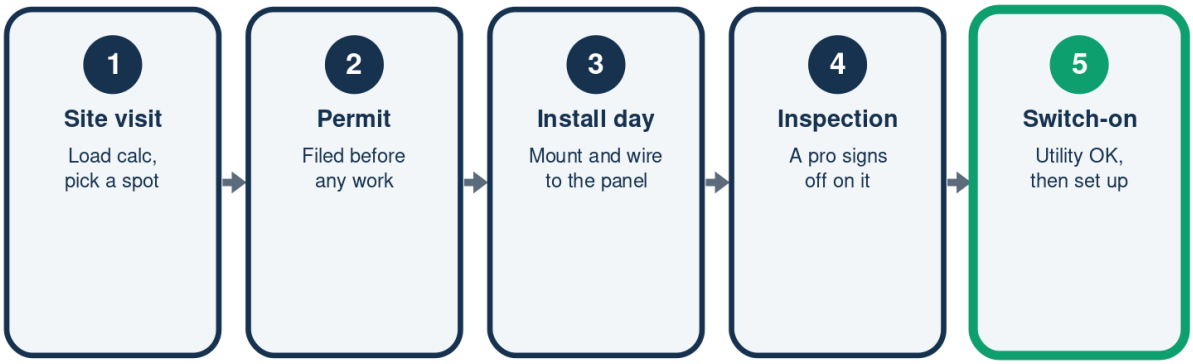
I hope this guide made your home battery install and permit process feel a little less daunting and a lot more doable. Keep it in a drawer with your other home papers, come back to a page whenever you need it, and don't worry about memorizing anything.

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 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

The Install Process, Start to Finish

Orderly, permitted, and professional



Timelines vary by your permit office, utility, and installer.

Your Part vs the Pro's Part

You steer; the licensed pros do the wiring

	You decide	The pro does
The plan	What to back up	The load calc
The spot	Where you'd like	Clearances, code
The work	Nothing wired	All wiring
The paperwork	Just sign off	Permit and OK

Everything with wires in it belongs to a licensed electrician.

Two Separate Sign-Offs

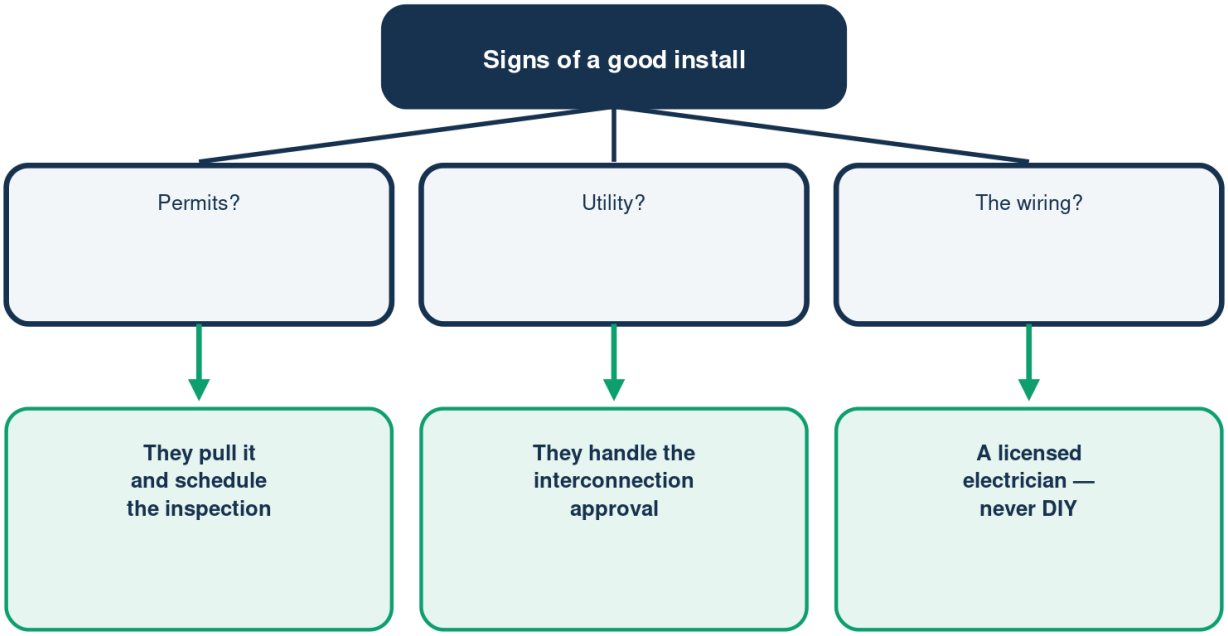
The permit and the utility are not the same

	The permit	Utility OK
Who runs it	Local building	Your utility
Checks	Safe wiring	Grid safety
When	Before, after	Before switch-on

Both usually come before the system runs for good.

Is Your Installer Doing It Right?

Three signs of a job done properly



Vagueness on permits or the utility is a serious red flag.

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

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You do not have to remember all of it.
You just have to remember you can call.
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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.

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— Bill

Prefer help without a visit?

Bill can screen-share and fix many things remotely — a flat $49, free for Support Plan members.

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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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