



An Extended Guide · No. 1316

Standby, Batteries and Solar

How backup power
options work together

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! Read this first — carbon monoxide is still the real danger

A standby generator runs on an engine, and engine exhaust contains carbon monoxide — an invisible, odorless gas that can kill. Your installer sets the unit outdoors and spaces it away from windows, doors, and vents to meet the maker's instructions and local code, which is a big part of what keeps you safe. Your job is to keep it that way: never let anyone box it in, build a structure around it, or let snow, leaves, or drifts pile up against it, and never move it closer to the house. Put battery-backup carbon-monoxide alarms on every floor and outside the bedrooms, and test them — the safety agencies urge this for every home. If an alarm sounds, or anyone feels dizzy, sick, or sleepy, get everyone into fresh air first and ask questions later. A home battery makes no exhaust at all, but the moment a generator is part of your setup, this rule applies to it in full — outdoors, placed by a pro, alarms indoors.

Battery, generator, or solar — let's sort it out together

When folks look into backup power, they run into three ideas: a standby generator, a home battery, and solar panels. They're often pitched as rivals, but the honest truth is more useful — each does something the others don't, and they can work beautifully together.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. I've spent 30+ years helping folks make sense of home equipment in plain language, at a comfortable pace. Think of this guide as me at your kitchen table, laying out what each option really does — with no hype and nothing to sell you.

We won't quote you numbers or push a favorite. We'll cover how a battery, a generator, and solar each work, where each one shines, why they pair up so well, and one important safety fact about solar that surprises a lot of people.

★ There's nothing to sell you here

I don't sell generators, batteries, or panels, and I earn no commission, so this is just honest advice. If you'd like help weighing these options for your home, call or text me at (330) 200-8042 — free.

The whole guide, on one page

If you remember only these things, you already understand how the three options compare and combine.

- ❑ A home battery covers short outages silently and instantly — but its charge is finite, and recharging it off-grid is slow and limited.
- ❑ A standby generator runs as long as it has fuel, so it's the one for long outages, heavy loads, and whole-home coverage.
- ❑ They complement each other: the battery handles the instant, silent, short stretch; the generator carries the long haul.
- ❑ A battery can even bridge the few seconds before a generator starts, so you may not notice the gap at all.
- ❑ Solar panels by themselves usually can't power your home in an outage — a grid-tied array shuts off for safety when the grid goes down.
- ❑ To use solar during an outage, you need a battery and the right equipment; solar then helps stretch the battery, mostly in daylight.

✓ The one-sentence version

A battery is for short, silent, instant backup; a generator is for long, heavy, whole-home backup; solar helps only with the right battery and gear — and the smartest setups often pair them rather than pick just one.

How a home battery works

Start here, because a battery behaves very differently from an engine — and that difference is the whole point.

A home battery is a large rechargeable pack, usually mounted on a wall or in the garage. It quietly stores electricity when power is plentiful, then releases it when you need it. When the grid goes down, it can switch your home over almost instantly — no engine to start, no noise, no fumes.

The catch is capacity. A battery holds only so much, so it powers your home for a limited stretch, not indefinitely. And once it's drained, refilling it means recharging — from the grid when it's back, or from solar during the day, which is slower and depends on the weather.

✓ Think of it like a phone battery, scaled up

It's silent, instant, and wonderfully convenient — right up until it runs low and needs charging again. That single trait shapes everything a battery is good at, and everything it isn't.

How a standby generator works, in brief

You'll find the full story in our basics guide, but here's the part that matters for this comparison.

A standby generator is a permanent engine that lives outside, tied to a fuel supply — natural gas from the utility, or propane from a tank. When the power fails, an automatic transfer switch starts it and switches your home over, usually within seconds, then switches back and shuts it down when the utility returns.

The key difference from a battery is fuel. A generator doesn't store a fixed amount of energy; it makes power on demand for as long as it has fuel to burn. That's why it's the option built for long outages and for carrying heavy, whole-home loads hour after hour.

✓ The full picture is in our basics guide

How the transfer switch works, the fuel choice, sizing, and the install are all covered across this series. Here we're just placing the generator next to a battery and solar, so you can see where each fits.

How solar fits in — and a surprise

Solar is where folks most often have the wrong picture, so let me clear it up gently, because it matters for safety.

Most rooftop solar is grid-tied: the panels feed power to your home and back to the utility grid while the sun shines. Here's the surprise — when the grid goes down, a plain grid-tied array shuts itself off. It has to. That safety feature keeps your panels from sending power onto the lines and endangering the utility crews working to restore them.

So solar panels alone, without more equipment, usually go dark in an outage right along with everything else. To use your solar during an outage, you need a battery and the right control equipment that can safely 'island' your home — run it on its own, disconnected from the grid. Solar then helps recharge that battery, mostly during daylight.

! Why grid-tied solar shuts off in an outage

It's not a flaw — it's a required safety behavior that protects line workers from power backfeeding onto the grid. If you want backup from your solar, that takes a battery and the proper equipment, designed by a qualified installer. Don't assume panels alone will keep your lights on.

The honest comparison

Set a battery and a generator side by side and their strengths sort out cleanly. Neither is 'better' — they're built for different jobs.

- **Starting up:** a battery is instant; a generator takes a few seconds to start and transfer.
- **Noise:** a battery is silent; a generator is an engine, quietest during its brief test and louder under load.
- **How long it lasts:** a battery runs until its charge is spent; a generator runs as long as it has fuel.
- **Best for:** a battery suits short outages; a generator suits long outages and heavy, whole-home loads.
- **Refilling:** a battery recharges from the grid or solar; a generator draws on natural gas or propane.

✓ Match the tool to the outage

A brief flicker and a two-day storm are different problems. A battery is lovely for the first; a generator is what you want for the second. That's the whole comparison in a nutshell.

Where each one shines

Rather than crown a winner, it's more useful to see the moments where each option is clearly the right one.

A battery shines in the short, common outages — the flicker, the hour-long blip — and at night, when its silence and instant response are a real comfort and there's no engine to wake the house or the neighbors. It's also a graceful bridge for sensitive electronics that don't like even a moment's gap.

A generator shines when the outage stretches on, when the loads are heavy, or when you want the whole home carried — the well pump, the furnace, the air conditioning, a full refrigerator and freezer, day after day. Fuel is what makes that endurance possible, and it's the generator's great advantage.

✓ It's about your outages

Think about the outages you actually get. Short and occasional points toward a battery; long or severe points toward a generator. Many homes see both — which is exactly why the two pair so well.

Why they pair so well

Here's the part the 'which is better' arguments miss entirely: the battery and the generator cover each other's weak spots.

Picture the two together. The instant the power drops, the battery takes over silently — no gap, no flicker, nothing to notice. If the outage is brief, that may be all you ever need. If it drags on, the generator starts up and takes the long haul, carrying the heavy loads and even topping the battery back up.

You get the best of both: the battery's instant, silent grace for the common short outages and the seconds before the generator starts, and the generator's fuel-fed endurance for the long, heavy ones. It's not either-or — for many homes, it's the ideal pairing.

★ Let's talk about what fits your home

A pairing isn't right for everyone, and it's a bigger investment. Tell me about your outages and your priorities and I'll help you think through whether one, the other, or both makes sense. Call (330) 200-8042.

What solar alone can and can't do

Because this is the biggest misunderstanding, it's worth its own page. Solar is wonderful — but be clear-eyed about outages.

- **On a normal day:** grid-tied solar lowers your electric bill and feeds clean power to your home and the grid. That's its main job, and it does it well.
- **In an outage, panels alone:** a plain grid-tied array shuts off for safety, so it usually won't power your home when the grid is down.
- **To get backup from solar:** you need a battery and the right control equipment that can safely run your home on its own.
- **Even then:** solar mainly helps by recharging the battery during daylight — it's limited on cloudy days and does nothing at night.

! Don't count on panels alone for an outage

If keeping the lights on during outages is your goal, solar by itself won't get you there. It takes a battery and proper equipment — and for long or heavy outages, a generator's fuel is hard to beat. Plan for the outage you actually fear.

Two kinds of homes, two sets of needs

The best backup mix for a close-in home with short, occasional outages often isn't the best mix for a rural home that loses power for days — and the well changes everything.

If you live in town or the suburbs

In town or the suburbs, outages tend to be shorter, city water keeps flowing, and folks are often already interested in solar. That mix can make a battery — perhaps paired with solar — a genuinely good fit.

- For short, common outages, a battery's silent, instant backup covers most of what you'd actually face.
- If you have or want rooftop solar, a battery is what lets that solar do anything at all during an outage.
- For the rare long outage, a modest generator or a battery-plus-generator pairing fills the gap the battery can't.
- City water means backup is about food, warmth, and comfort — loads a battery can often carry for a short stretch.

If you are out in the country on a well

Out in the country, outages run longer, and your well pump quits when the power does — no electricity means no water at all. That endurance need tends to tip the balance toward a generator's fuel supply.

- Long rural outages favor a generator: fuel-fed endurance is exactly what a finite battery charge can't match.
- A 240-volt well pump is a heavy load a generator is well suited to carry day after day; a battery alone would drain fast under it.
- A battery can still earn its place bridging the seconds before the generator starts, silently and instantly.
- Solar can help stretch a battery during daylight, but for a multi-day outage the generator's fuel is what keeps water and heat flowing.

★ Not sure which camp you're in?

Plenty of homes sit in the middle. Tell me whether you're on city water or a well, how long your outages usually run, and whether solar interests you — and I'll help you picture the right mix. Call (330) 200-8042.

Capacity and the long outage

The clearest line between a battery and a generator shows up when an outage refuses to end. Let me walk through it plainly.

A battery holds a set amount of energy. Run modest loads and it stretches; run heavy ones and it empties faster. Either way, when it's spent, it's spent until something recharges it. During a grid outage, that recharging can only come from solar — slow, daylight-only, and at the mercy of the weather.

A generator has no such ceiling. As long as fuel keeps coming — a natural-gas line that flows on its own, or a propane tank you keep topped up — it keeps making power, through the night and through cloudy days alike. For a multi-day outage, that endurance is the whole difference.

✓ Sizing is the installer's job

How much a battery holds, how much solar you'd need to recharge it, how big a generator your loads call for — those are all questions for a qualified installer's calculation, not a guess. I'll help you know what to ask.

The quiet, instant comfort of a battery

Let's give the battery its due, because for the right home it's genuinely lovely to live with.

There's no engine, so there's no noise, no fumes, and nothing to start. When the power drops, a battery can carry your home over so smoothly you might only know from a neighbor's dark windows. At night, or for a home on a tight lot with close neighbors, that silence is a real gift.

It's also the gentlest option for sensitive electronics and for the many short outages that make up most of what folks actually experience. And in a paired setup, it's the piece that bridges the few seconds before a generator starts, so even that brief gap disappears.

✓ Silence has real value

For some homes, the quiet and the instant response are worth a great deal on their own. For others, endurance matters more. Neither is wrong — it's about what your household actually values.

The endurance of a generator

And let's give the generator its due, because when an outage turns serious, endurance is everything.

A generator's great gift is that it doesn't run down. Through a multi-day storm, it keeps the well pump pumping, the furnace running, the refrigerator and freezer cold, and — if it's sized for it — the air conditioning on, hour after hour. Fuel, not a fixed charge, is what powers it, and that changes what's possible in a long emergency.

It's also the option that most readily carries the heavy loads a whole home demands, including the big starting surge of motors like a well pump or an air conditioner. For folks who fear the long, severe outage most, that steady fuel-fed power is exactly the reassurance they're after.

✓ This series goes deep on the generator

Sizing, fuel, the transfer switch, the install — all the generator details live in the other guides in this series. Here it's enough to know that endurance and heavy loads are where it clearly leads.

How a paired setup actually behaves

If you're picturing a battery and a generator working together, here's the play-by-play so it's not a mystery.

The moment the grid drops, the battery takes the load instantly — silent, no gap. The generator senses the outage and starts up, and once it's ready it takes over the heavy lifting, powering the home and topping the battery back up as it runs. If the outage was only a blip, the generator may barely need to stir.

Add solar to that, and during the day the panels can help feed the home and recharge the battery, easing the generator's fuel use. It's a graceful system — but also a more complex and larger investment, and every piece has to be designed to work together safely.

! This is a job for a qualified installer

Combining a battery, a generator, and solar safely — so they never backfeed the grid and always hand off cleanly — takes proper design and the right transfer equipment. This is licensed work, not a mix-and-match project. I help you plan it and line up the pros; I don't do the wiring myself.

Cost and complexity, honestly

I won't quote dollar figures — they vary far too much — but I can be straight with you about the shape of the trade-offs.

More capability means more equipment, more to install, and more to maintain. A battery alone is one kind of investment; a generator alone is another; a battery-and-generator pairing, especially with solar, is the largest and most complex of all. None of that is a reason for or against — it's just the honest picture.

The right question isn't 'which is cheapest,' but 'which mix actually protects what I care about, for what I'm willing to spend.' A modest battery, a right-sized generator, or a thoughtful pairing can each be the smart money — it depends entirely on your home and your outages.

✓ We cover the generator's money side in full

What drives a standby generator's price — and how to get itemized quotes — is laid out in our cost-and-value guide. For batteries and solar, a qualified installer is the one to give you real numbers for your home.

A few myths, cleared up

Some very common beliefs about backup power just aren't so. Let's clear the air.

- **'I have solar, so I'm covered in an outage.'** Usually not — a plain grid-tied array shuts off when the grid goes down. You need a battery and the right equipment for backup.
- **'A battery will run my whole house through a storm.'** Its charge is finite. It's built for short outages, not multi-day, whole-home ones.
- **'A generator and a battery can't work together.'** They pair beautifully — the battery covers the instant, the generator the long haul.
- **'Solar will recharge my battery fast during an outage.'** Only in daylight, only as fast as the weather allows, and not at all at night.

✓ When in doubt, ask a plain question

If a salesperson's pitch leaves you thinking one option does it all, ask the hard questions — how long, how heavy, what happens at night. Or ask me. Clear beats clever every time.

Which mix tends to fit which home

There's no single right answer, but these patterns hold up well. See which sounds like you.

- **Short, occasional outages, quiet a priority:** a battery alone may be all you need — silent and instant.
- **Long or severe outages, or a well:** a generator's fuel-fed endurance is usually the anchor of your plan.
- **Want instant-and-silent plus long-haul:** a battery paired with a generator gives you both.
- **Have or want solar:** add a battery and the right equipment to make it useful in an outage; a generator still covers the long haul.
- **Medical or well-water needs:** lean toward the generator's endurance, with a battery to bridge the start silently.

★ Let's find your mix

Tell me your outages, your priorities, and whether solar's in the picture, and I'll help you land on a mix that fits — without overspending on capability you won't use. Call (330) 200-8042.

A few honest trade-offs to hold in mind

Every choice here trades one good thing for another. Naming those trades keeps your decision clear-eyed.

- **Silence vs. endurance:** a battery is silent but finite; a generator endures but is an engine.
- **Instant vs. long-haul:** a battery responds instantly; a generator takes seconds but then runs on and on.
- **Simplicity vs. capability:** one device is simpler; a pairing does more but is larger and more complex.
- **Clean-and-quiet vs. fuel-fed:** solar-and-battery is clean and quiet but weather-bound; a generator needs fuel but ignores the weather.

✓ No option is all upside

Anyone who tells you their one product does everything with no trade-offs is selling, not advising. The honest path is matching the trade-offs to what your home actually needs.

What I do, and what I leave to the pros

Worth saying plainly, because it's the honest shape of how I can help you weigh these options.

- **What I help with:** thinking through your outages and priorities, explaining how batteries, generators, and solar really compare, and lining up licensed pros I trust for each.
- **What only licensed pros do:** sizing and designing the system, the electrical work and transfer equipment, the gas connection, and pulling the permit.
- **What I never do:** the licensed wiring, the gas work, or the install — that's not my license, and your safety deserves the real thing.

★ Call while you're still deciding

The best time to reach me is before you've committed to any one option — a little guidance up front saves a lot of second-guessing later. Reach me at (330) 200-8042.

Questions worth asking before you decide

Whether you're talking to a salesperson or to me, these questions keep the pitch honest.

Q: How long will this actually power my home in an outage?

For a battery, that depends on its capacity and your loads; for a generator, on its fuel. Press for a plain answer tied to your must-run list, not a best-case number.

Q: If I have solar, will it work during an outage?

Only with a battery and the right equipment to island your home. Ask specifically — a plain grid-tied array shuts off in an outage, as our safety page explains.

Q: Can this be paired with a generator, and how would they work together?

A good installer can explain the hand-off — battery instant, generator for the long haul — and design it to switch safely without backfeeding the grid.

Q: What happens on a cloudy day or at night?

It's the question that separates hype from honesty. Solar does little at night; a battery runs down; a generator keeps going on fuel. Make sure the plan covers the hours you'll actually face.

✓ There's no silly question

This choice touches money, safety, and comfort all at once. Ask until you're sure — a good salesperson, or I, should welcome every question.

Common Questions

The questions I hear most from folks weighing a generator against a battery or solar, answered plainly.

Q: Is a home battery or a standby generator better?

Neither, in the abstract — they're built for different jobs. A battery is best for short, silent, instant backup; a generator for long, heavy, whole-home coverage. Many homes are best served by pairing them.

Q: Can I run my whole house on a battery through a long outage?

Usually not. A battery's charge is finite, so heavy, whole-home loads over several days will outlast it. That's exactly where a generator's fuel-fed endurance takes over.

Q: If I install solar, do I still need a generator or battery?

For outage backup, yes — solar alone shuts off when the grid goes down. A battery lets solar help in an outage; a generator covers the long, heavy stretches solar and a battery can't.

Q: Do a battery and generator really work well together?

They do. The battery covers the instant, silent, short stretch and bridges the seconds before the generator starts; the generator carries the long haul and can recharge the battery. It's a strong pairing.

Q: Which makes the most sense out in the country?

For long rural outages and a well pump, a generator's endurance is usually the anchor, often with a battery to bridge the start silently. Solar can help stretch things in daylight, but fuel wins the long game.

★ Still weighing your options? That's what I'm here for

Sorting out backup power before you spend is exactly the kind of thing I love to help with, with nothing to sell you. Call or text me at (330) 200-8042 and let's talk it through.

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 weighing a standby generator against a home battery 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

Home Battery vs. Standby Generator

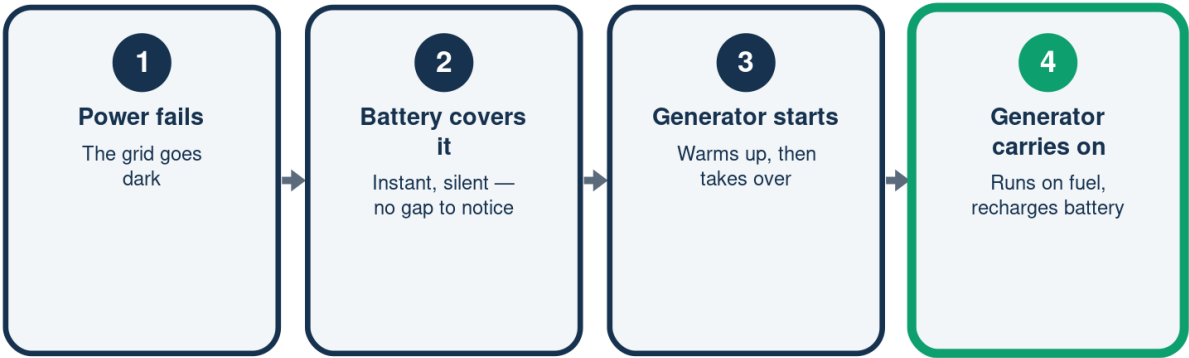
Built for different jobs, not rivals

	Home battery	Standby generator
Starting up	Instant	A few seconds
Noise	Silent	An engine
How long	Finite charge	As long as fuel
Best for	Short outages	Long, heavy loads
Refilling	Recharge	Gas or propane

Neither is 'better' — and together they cover each other's gaps.

How a Paired Setup Rides Out an Outage

Battery for the instant, generator for the long haul



Add solar and it helps recharge the battery during daylight.

Which One Shines When

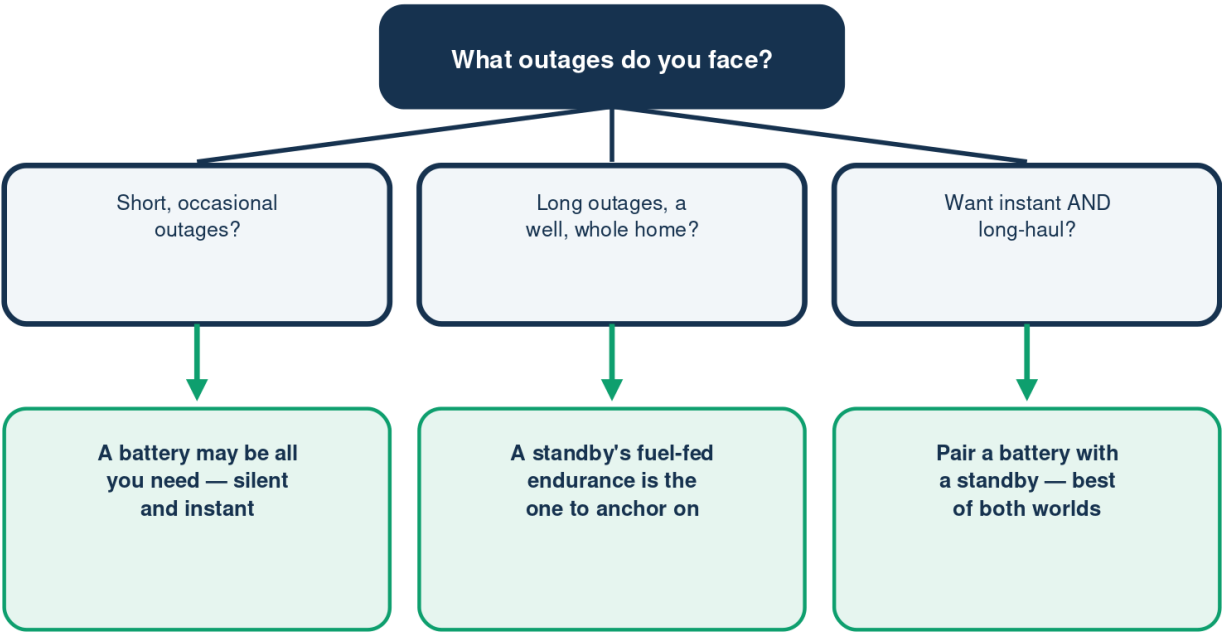
Each has moments it clearly leads

	Home battery	Standby generator
A brief blip	Ideal	More than needed
Quiet at night	Silent	Hums along
Multi-day outage	Runs down	In its element
Whole house, well	Limited	Built for it

Match the tool to the outage you actually fear.

Battery, Generator, or Both?

Let your outages point the way



Solar alone shuts off in an outage — it needs a battery and the right gear.

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



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A Note From Bill

A quick note from Bill.

I write these guides to make home tech a little less frustrating, and I do my best to keep every step accurate and up to date. Still, every home, device, and setup is a bit different, so I can't promise a guide will match yours exactly or fix your particular problem. These guides are for general information only — they're not professional, legal, or financial advice, and they don't replace your device's own manual or the manufacturer's instructions. Please go slow, use your own good judgment, and use everything here at your own risk. If a step involves electrical wiring, a gas appliance, a water heater, plumbing, or climbing a ladder — or if anything just doesn't feel safe — please stop and call a licensed professional (or give me a call at 330-200-8042). Bill's Home Tech and Bill Davis can't be responsible for any damage, data loss, or injury that comes from using these guides. Thanks for reading, and stay safe out there.

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