



An Extended Guide · No. 1542

# Ground-Mount vs Roof-Mount Solar

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On the roof, or on  
a frame in the yard?

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**! Read this first — two honest truths about ground-mount solar**

Two honest truths before we start, because they surprise a lot of good folks. First, a ground-mounted solar array is a professional job. It takes a licensed installer, real foundation work in your yard, building and electrical permits, and your utility's approval to connect (that approval is called interconnection). This guide is here to help you understand, plan for, and evaluate a ground mount; it is not a do-it-yourself project, and I never want you digging footings, wiring an array, or opening an electrical panel. Second, a plain grid-tied solar system — roof or ground, without a battery — shuts itself off during a power outage, even in bright sunshine. That is a required safety feature, so the system cannot put electricity onto the lines while the crews are repairing them. If keeping the lights on during an outage matters to you, you will need a battery, and we will talk about that plainly. Whether your panels belong on the roof or on a frame in the yard is one of the very first choices — and for a lot of country homes, the yard is honestly the better spot.

## On the roof, or out in the yard?

Most folks picture solar panels up on a roof, and for good reason — it's the common choice. But panels can also stand on a sturdy frame in the yard, and for plenty of homes that's the smarter option. Let's weigh the two honestly, with nothing to sell you.

I'm Bill, and I run Bill's Home Tech here in Portage County, Ohio. I've spent 30-plus years helping folks get comfortable with the gear in their homes, patiently and in plain words. Neither a roof mount nor a ground mount is 'right' in the abstract — it depends on your roof, your land, your budget, and how easy you want the system to be to live with.

This whole set of guides is about the ground-mount side of that choice: what it is, how it's built, and how to judge whether it fits your property. We'll start right here, by setting a ground mount honestly against the familiar roof mount.

**★ Not sure which way to lean?**

Tell me about your roof and your yard and I'll help you think it through for your place — calmly, and with nothing to sell you either way. Call or text me at (330) 200-8042.

## Roof or ground, on one page

If you read nothing else, read this. Here's the heart of the choice in a handful of plain points.

- ❑ Roof mounts use space you already have and usually cost less to build.
- ❑ But they're tied to your roof's direction, its shade, and its age.
- ❑ Ground mounts need open, sunny land and usually cost more to build.
- ❑ But they can be aimed and tilted ideally and kept clear of shade.
- ❑ Ground mounts are far easier to clean, clear of snow, and service.
- ❑ Rural homes with land often favor the ground; tight town lots favor the roof.
- ❑ Either way it is a licensed, permitted, professional install — never DIY.

### ✓ Let the sun and your roof decide

If you've got a sunny, sound roof, mounting there is often simplest. If your roof falls short but you have open land, the yard may serve you far better. It's less about preference than about what your property offers.

## The case for a roof mount

The familiar choice: panels fastened to your roof on a low metal framework. Here's what makes it appealing.

A roof mount uses space you already own and aren't using for anything else, keeps the panels up out of the way, and generally costs less to build than a ground mount — there's no separate structure, no footings to pour, and usually no long trench. For a home with a good roof, it's the natural pick.

The trade-off is that you're tied to whatever your roof offers: its direction, its pitch, the shade that falls on it, and its condition and age. And once the panels are up, cleaning, clearing snow, or servicing them means getting on the roof — which is a job for professionals, not for you or me.

### ✓ Great when the roof cooperates

If your roof faces a good direction, gets midday sun, and has years of life left, a roof mount is usually the simplest, most economical way to go. It's the ground mount's job to win you over when the roof doesn't.

## The case for a ground mount

The other option: panels on a strong frame anchored in the ground, standing in a sunny part of your property.

A ground mount frees you from your roof entirely. The installer can point the panels in the ideal direction and set them at the best angle, regardless of how your house happens to sit. And because the array stands at a reachable height, cleaning, snow clearing, and service are all far easier — no ladders, no roof.

The trade-offs are space and cost. You need a suitable patch of open, sunny land, and building a ground mount usually costs more — there's a whole support structure, footings set in the ground, and often a trench to carry the wiring back to the house. For homes with land, though, it's frequently worth every bit of it.

### ✓ The country favorite

Ground mounts shine on rural properties with open, sunny acreage. If your roof isn't ideal but you've got a good spot in the yard, don't overlook this option — it may be your best path to solar.

## How much land does a ground mount need?

A ground array needs its own open, sunny footprint — plus a bit of breathing room around it. Not every yard has the space, but many rural ones do.

You need a patch of ground that gets good sun through the day, clear of the shadows of the house, the trees, and the outbuildings. The array also needs some clearance around it for access, and in many townships it must sit back a certain distance from your property lines. A cramped town lot may not have the room; a country property usually does.

Think, too, about where the spot sits relative to your electrical panel, because the wiring has to travel back to the house. Closer is simpler and cheaper; a far corner of a big lot means a longer trench. Our siting guide and our trenching guide go deeper on both.

### ✓ Picture the footprint and the path

When you consider a ground mount, imagine two things: the sunny footprint for the panels, and the path the wiring takes back to the house. Both shape whether — and where — it makes sense.

## The aiming advantage of a ground mount

Here's a real perk of going to the ground: you're no longer at the mercy of how your roof happens to face.

On a roof, the panels largely follow the roof's direction and pitch. On a ground mount, the installer builds the frame to aim the panels the ideal way and tilt them to suit our latitude. If your roof faces a poor direction, the ground lets you correct that completely.

That freedom can mean better production from the very same panels, and it's part of why a ground mount can make sense even for a home that technically has a roof option. When the roof faces wrong, the yard can face right.

### ✓ Wrong-facing roof? The ground fixes it

If your only roof space points a poor direction or is oddly cut up with dormers and vents, a ground mount sidesteps the problem — the frame simply aims the panels the right way. That alone tips some homes toward the yard.

## Cleaning, snow, and service

Day-to-day life with the system is far easier when you — or a technician — can actually reach it. This is where ground mounts quietly win.

Panels on a reachable ground frame can be rinsed, cleared of light snow with the right long-handled tool, and serviced without anyone getting on a roof. Roof panels, by contrast, mean professional roof access for any hands-on work — which is safer left to pros and can cost more each time.

For most homes cleaning is occasional, and our Ohio rain does much of it regardless. But for snow, or if a panel ever needs attention, the ease of a ground mount is a genuine comfort — especially as we get older and ladders lose their appeal.

### **! Either way, don't do roof work yourself**

A ground mount you can tend from the grass. A roof mount you cannot — please never climb up to clean or clear panels. Falls are far too serious. For a roof array, always call a professional for any hands-on work.

## A ground mount spares your roof

One underrated benefit of going to the ground: your roof stays exactly as it is, penetrations and all.

Roof mounts are attached through the roofing, and while a skilled installer seals every point properly, some folks simply prefer not to put any holes in a roof at all. A ground mount avoids that entirely — nothing is fastened to your house.

It also sidesteps the roof-age problem. If your roof might need replacing before too long, a ground mount lets you go solar now without worrying about taking panels down to reroof later. The array and the roof live independent lives.

### ✓ No roof holes, no reroof headache

If you're uneasy about roof penetrations, or your roof is aging, a ground mount neatly avoids both concerns. That peace of mind is worth weighing right alongside the higher upfront cost.

## Two kinds of homes, two sets of needs

This is a choice where town and country homes often land in different places, simply because of how much land they have and what their roofs offer.

### If you live in town or the suburbs

In town or the suburbs, lots are smaller and the roof is usually the practical spot. There may not be room in the yard for a ground array, and the neighbors sit close by.

- Limited yard space often makes the roof the only real option.
- A sound, sunny roof keeps a roof mount simple and economical.
- A small ground mount can still work in a sunny back corner — ask.
- Check your HOA and township rules before counting on a yard array.

### If you are out in the country on a well

Out in the country, open sunny land is common, and the roofs on farmhouses and older homes vary. A ground mount is frequently the better fit — especially if the roof is old, shaded, or wrong-facing.

- Open acreage makes a ground mount practical and easy to aim.
- A ground array spares an old farmhouse or barn roof from carrying panels.
- Reachable panels help with our Ohio snow all winter long.
- Mind the trench distance from a far corner back to the house.

#### ★ Got land but an iffy roof?

That's the classic case for a ground mount. Tell me about your property and I'll help you weigh whether the yard beats the roof for your home. Call (330) 200-8042.

## What actually holds a ground mount up

A ground array isn't just leaning against the fence. It's a real little structure, and it's worth knowing the pieces at a plain level.

Underneath it all are foundations — posts driven into the soil, or concrete footings, or in some cases heavy ballast that weighs the frame down without digging. On top of those sits the metal racking that holds the panels at their angle. The wiring then travels, usually underground in conduit, back to your house.

You don't need to engineer any of this yourself — that's exactly the installer's job, and it's why a ground mount is a permitted, professional build. But understanding the parts helps you follow a proposal and ask good questions. Our foundations guide and our anatomy guide break each piece down further.

### ✓ You're the evaluator, not the builder

Your job isn't to pour footings or pull wire — it's to understand enough to choose a good installer and a good plan. These guides aim to make you a confident evaluator, nothing more and nothing less.

## Why a ground mount usually costs more

You'll generally pay more to build a ground mount than to put the same panels on a roof. Understanding why helps you weigh it honestly.

A roof already provides the structure to hang panels on. A ground mount has to create that structure from scratch — posts or footings, a frame, and usually a trench to carry the wiring underground back to your panel. That's simply more materials and more labor.

I won't put numbers to it, because it depends on your soil, your distance from the house, and the design — and honest ranges only come from a real quote. But expect a ground mount to land above a comparable roof install, and let the other benefits justify the difference if they matter to you. Our cost-versus-roof guide frames this without guessing figures.

### ✓ Weigh cost against the lifetime perks

The extra cost is upfront; the benefits — better sun, easier upkeep, no wear on your roof — last for decades. For the right property, that's a trade many folks are glad they made.

## Getting the power back to the house

A ground array stands apart from your home, so its power has to travel back. That usually means a trench, and it's worth picturing.

The wiring from a ground mount typically runs underground, inside conduit, through a trench dug from the array to your electrical panel. The farther the array sits from the house, the longer that trench — and the more it adds to the job.

Your installer handles all of it to code, buries it at the proper depth, and restores the ground afterward. But it's why the array's distance from the house matters, and why a spot closer to your panel is generally cheaper and simpler than a far corner of the property.

### ✓ Closer to the house is usually cheaper

If two sunny spots would both work, the one nearer your electrical panel likely means a shorter trench and a lower cost. Balance that against which spot gets the best, most shade-free sun.

## Permits and property-line setbacks

Like any solar install, a ground mount is permitted and inspected. It may also have to respect setbacks from your property lines.

A ground array is a small structure, so local rules often require it to sit a certain distance from property lines, and the job usually needs building and electrical permits. Some townships have limits on height or on how the array is screened from the road. Your installer knows the local requirements and handles the paperwork.

This isn't a hurdle so much as the normal, safe process — the same reason any solar install is a professional job. Our permits-and-setbacks guide walks through what to expect, and our interconnection guide covers the utility's separate approval to connect.

### ✓ Rules vary by township

Setbacks and permit details differ from one township to the next, so there's no single answer. A good local installer already knows your area's rules — another reason to choose one with a real local track record.

## Pole mounts and sun-trackers, in brief

You may hear about a couple of fancier ground options. Here's the plain, honest take so you're not dazzled by them.

A pole mount puts the panels up on a single stout post rather than a low frame — handy for keeping them above deep snow or livestock, or on uneven ground. A tracker adds motors that turn the panels to follow the sun across the day, aiming to squeeze out extra production.

Pole mounts have their place, and we give them their own guide. Trackers, though, add moving parts, cost, and maintenance, and for most homes the extra production doesn't justify the complication. I'd generally steer folks toward simple, fixed mounts unless there's a specific reason not to.

### **! More moving parts, more to go wrong**

A big appeal of solar is having almost nothing that moves or breaks. A tracker trades that simplicity for a bit more output. For most homes, the simpler fixed mount is the wiser, lower-worry choice.

## Appearance and the neighbors

Panels are visible either way, and how they look — and how the neighbors feel — is a fair thing to weigh.

Some folks prefer roof panels tucked up out of sightlines; others don't mind a tidy ground array and rather like being able to see their system at work. On a ground mount, thoughtful placement can sometimes tuck the array where it's less prominent, though it does occupy part of the yard.

If you're in a neighborhood with an association, or simply close to others, it's worth a thought and perhaps a friendly heads-up. Most people are perfectly fine with it, but a little courtesy goes a long way.

### ✓ A tidy install is a good-neighbor install

Whichever you choose, a clean, well-planned layout looks intentional and cared-for. That, more than anything, keeps panels from becoming a neighborly sore point.

## Roof versus ground, side by side

The whole comparison on one page, to keep or photograph.

|               | Roof mount        | Ground mount    |
|---------------|-------------------|-----------------|
| Uses          | Existing roof     | Open yard space |
| Cost to build | Usually lower     | Usually higher  |
| Aiming        | Follows roof      | Ideal direction |
| Cleaning/snow | Needs roof access | Reachable       |
| Roof wear     | Attaches to roof  | None on roof    |
| Room to grow  | Limited by roof   | Easier to add   |

Neither wins across the board. Roof mounts trade some flexibility for lower cost and no extra land; ground mounts trade higher cost for ideal aiming, easy upkeep, and a roof left untouched.

## Which one fits your home?

A quick way to see where you likely land.

### Lean roof-mount if...

You have a sunny, sound roof facing a good direction, a smaller lot, and you'd rather keep the cost down and the yard clear.

### Lean ground-mount if...

Your roof is poor, shaded, or aging, you have open sunny land, and you value ideal aiming plus easy cleaning and snow removal enough to spend a bit more.

#### ✓ Sometimes the property just tells you

For many homes the answer is obvious once you look: a great roof says 'roof,' a poor roof beside a sunny field says 'ground.' The in-between cases are where a good installer — or a chat with me — helps most.

## Can I do some of each?

Occasionally the best answer is a bit of both, and that's perfectly possible.

If your roof has some good space but not enough, an installer can combine a roof array and a ground array to reach the size you need. It adds a little complexity, but modern systems handle panels in different spots and directions gracefully.

This mostly comes up on larger homesteads with big electricity needs, or where a barn roof covers part of it and a ground array finishes the job. For most homes, one or the other is simpler — but know that mixing is an option if your situation calls for it.

### ✓ Ask if a mix makes sense for you

If neither your roof nor a single ground spot quite covers your needs, ask whether combining them is worthwhile. It's not common, but for the right property it can be the tidy solution.

## Snow and our Ohio winters

Since we get real winters here, it's worth a word on how each mount handles snow — one of the ground mount's quiet strengths.

Panels are smooth and tilted, so snow often slides off on its own once the sun warms them. On a ground mount, if it doesn't, you can clear it safely from solid footing with the right long-handled tool. On a roof mount, you simply wait for it to shed — because nobody should be up there clearing snow.

Either way, a snowy spell just means less production until the panels clear, which is normal and already figured into the whole-year picture. Our snow-and-winter guide covers seasonal expectations in full.

### **! Never climb up to clear snow**

Clearing snow off a roof array is not worth a fall — let it slide off on its own. A ground array can be cleared from the ground with a proper soft tool. When in doubt, just wait for the sun to do the work.

## Questions to ask an installer

Bring these to an installer to sort out roof versus ground for your specific home.

**Q: Given my roof and my yard, which would you recommend, and why?**

A good installer weighs your roof's sun and condition against your available land and gives a reasoned recommendation — not just whichever is easiest for them.

**Q: If ground-mounted, where would it go and how far is the trench?**

The spot's sun and its distance from your electrical panel both matter. You want to understand where the array would sit and what the wiring run involves.

**Q: What are the local permit and setback rules for a ground mount here?**

A local installer should know your township's requirements off the top of their head. That familiarity is a good sign; a blank stare is not.

**✓ Ask for both options priced**

If your home could go either way, ask to see roof and ground both quoted. Seeing the cost difference next to the benefits makes the choice concrete instead of abstract.

## Common Questions

The questions I hear most about roof versus ground mounting.

### **Q: Is a ground mount really more expensive?**

Usually, yes — it needs its own structure, footings, and often a trench, where a roof already provides the support. Whether the extra cost is worth it depends on your roof, your land, and how much you value easy access and ideal aiming.

### **Q: Do ground mounts make more power?**

They can, because the panels are aimed and tilted ideally rather than following your roof, and they're easy to keep clean and snow-free. On a poor-facing roof, that advantage can be real.

### **Q: I have a great roof. Any reason to go ground?**

If your roof is sunny, sound, and well-facing, a roof mount is usually the simpler, cheaper choice. Ground mainly wins when the roof falls short, or when you strongly prefer easy access and no roof holes.

### **Q: Is a ground mount something I could build myself?**

No — and I'd never want you to try. It involves foundations, code wiring, permits, and a utility connection. It's a licensed professional's job from start to finish; your job is to understand and evaluate it.

#### **★ Torn between the two?**

Roof versus ground is one of my favorite things to help sort out, because the right answer is so tied to your specific property. Call or text me at (330) 200-8042 and we'll figure it out together.

## 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 the choice between a roof and a ground mount 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 sell solar and I don't do the licensed electrical work or the install itself — I help you understand it all, ask the right questions, and line up a trustworthy local solar installer, so you never feel talked into anything.

### ★ 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

## Roof Mount vs Ground Mount

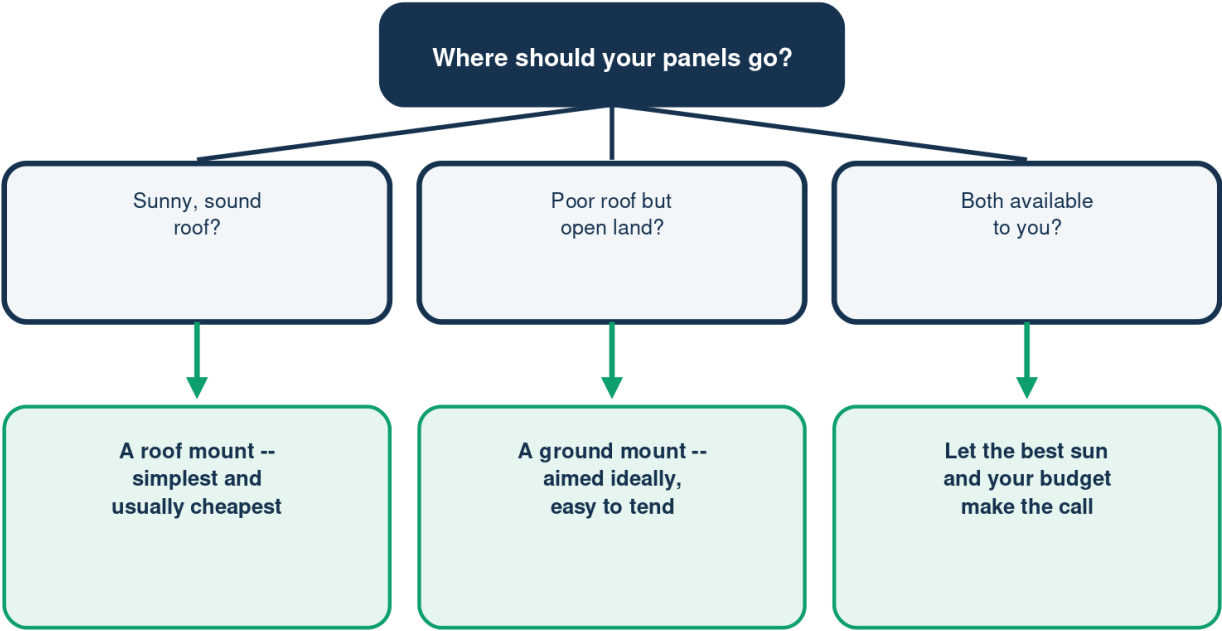
Neither wins across the board -- it depends on your home

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| Aiming        | Follows roof  | Ideal direction |
| Cleaning/snow | Roof access   | Reachable       |
| Roof wear     | Attaches on   | None            |

Great roof? Lean roof. Poor roof but open land? Lean ground.

# Roof or Ground for You?

Your property usually points the way



Never climb up to clean or clear a roof array -- call a pro for that.

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

## What a Ground Mount Gives You

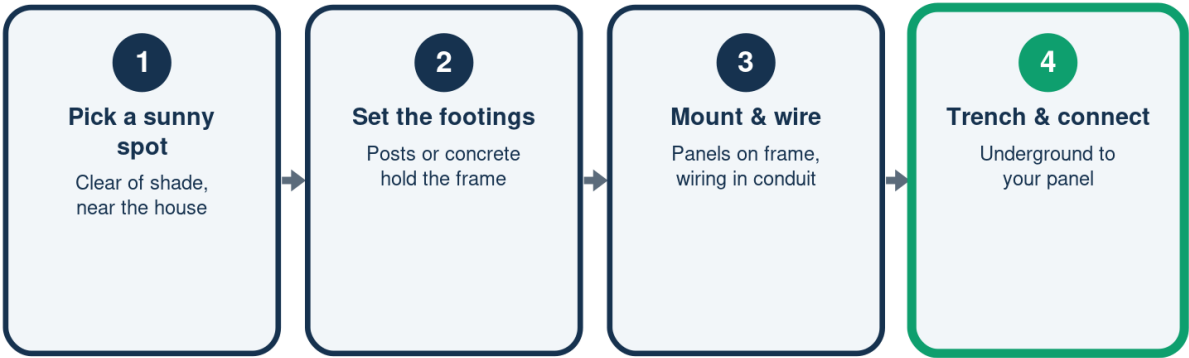
The upsides, and what you trade for them

|                | Upside          | Trade-off       |
|----------------|-----------------|-----------------|
| Ideal aiming   | Best sun        | Costs more      |
| Easy cleaning  | From the ground | Uses yard space |
| No roof holes  | Roof untouched  | Needs a trench  |
| Room to expand | Add later       | Needs open land |

For rural homes with land and an iffy roof, it's often the winner.

# Putting In a Ground Mount

The extra steps beyond a roof install



Your installer handles permits, setbacks, and the trench to code.



## 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.

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

— Bill

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### 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*



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