



An Extended Guide · No. 1377

Managing Loads on a Full-Panel Interlock

Running within your
generator, the easy way

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

A generator interlock kit is installed inside your home's electrical panel, and panel work is among the most dangerous jobs in any house. The power inside a panel can injure or kill even with the lights off, and a wiring mistake can start a fire or push deadly voltage back onto the lines outside, where a utility crew may be working. Adding an interlock — the sliding plate, the generator breaker, and the inlet it connects to — is a licensed electrician's job, almost always with a permit and an inspection. It is never a do-it-yourself project, and it is never something I do myself. This guide is here to help you understand, choose, and safely use an interlock — not to wire one. And please, never try to shortcut all this by backfeeding a generator through a wall or dryer outlet with a double-ended cord; that shortcut kills people, and an interlock kit is the safe, legal way to do the very thing it tempts you to do. An interlock hands you access to your whole panel, so the one job it gives you is managing how much runs at once — and that is exactly what this guide makes easy.

You're the one who manages the power

An interlock's great strength is that it reaches every circuit in your panel. The small trade is that you decide, moment to moment, how much of it runs — and this guide shows you how, gently.

I'm Bill. Unlike a switch with a few pre-chosen circuits, an interlock lets you run any breaker in the house on generator power. That flexibility is lovely, but it means the generator can be asked for more than it can give if you turn on too much at once. Managing the load is simply making sure you don't.

Don't worry — this isn't math or memorizing wattages. It's a few easy habits: biggest thing first, one at a time, and a listen to the generator now and then. Once you've done it once, it's second nature.

★ Want help making a load plan?

Tell me what you'd most want to run in an outage and I'll help you sketch a simple plan that stays within your generator. Call or text (330) 200-8042.

Managing the load, on one page

If you remember only these, you'll keep your generator happy.

- ❑ An interlock reaches your whole panel, so you manage how much runs at once — don't ask for more than the generator can give.
- ❑ Motors need a big jolt to start (surge) and less to keep running — the starting surge is what to plan around.
- ❑ Bring the biggest surging load up first, let it settle, then add smaller loads one at a time.
- ❑ Listen to the generator — a strain or bog-down when something starts means shed a load.
- ❑ Keep the fridge and freezer closed; they coast for hours and don't need to run constantly.
- ❑ In a long outage, rotate loads — run what you need, then move the power to the next thing.

✓ It's habits, not math

You don't need to count watts. Biggest first, one at a time, and a listen now and then will carry you through almost any outage.

Why the load is yours to manage

This follows straight from what makes an interlock special.

With some transfer switches, an electrician picks a handful of circuits ahead of time, and you can't easily exceed the generator because only those are wired in. An interlock is different: it puts your entire panel on generator power, so every breaker in the house is available. That's wonderful flexibility — and it's why the job of not overloading gently shifts to you. It's an easy job, but it's a real one.

✓ Flexibility with a little responsibility

Reach-any-breaker freedom is the interlock's gift. The small price is keeping an eye on how much you run at once. Manageable, and well worth it.

Starting power versus running power

One idea makes all of load management click: things need more power to start than to keep running.

Anything with a motor — a furnace blower, a well pump, a fridge compressor, an air conditioner — needs a brief, larger jolt of power at the instant it starts, then settles to a smaller steady draw once it's going. That starting surge is short, but it's the moment your generator has to be able to cover. Plain heat and light, like a bulb or a space heater, don't surge — they draw the same steady amount the whole time.

✓ Plan around the starts

It's the starting surges, not the steady running, that trip up a generator. Manage the moments things kick on, and the rest takes care of itself.

Bring the biggest surging load up first

There's a reason we always start big and work down.

When you bring up the biggest surging load first — often the furnace blower, or a well pump on a rural home — its large starting jolt happens while the generator is fresh and has the most to give and nothing else competing for power. Once it's running steadily on its smaller draw, there's room to add your lighter loads. Do it the other way around, with lots of small things already on, and a big motor's surge can be the straw that overloads the generator.

✓ Big motor, clear runway

Give your biggest motor a clear runway to start on — nothing else kicking on at the same instant. Then add the small stuff.

Turn things on one at a time

The simplest habit of all, and maybe the most useful.

Rather than flipping several breakers together, turn them on one at a time, pausing a moment between each. That way only one thing starts at any instant, so only one starting surge lands on the generator at a time — which is exactly what it's sized to handle. Pausing also lets you hear the generator steady out before you add the next load, so you always know where you stand.

✓ Pause between each

One breaker, a breath, then the next. That little pause is what keeps two surges from ever stacking up at once.

Let the generator tell you

Your ears are the best load meter you own — and they're free.

A healthy generator runs at a steady hum. When you switch something on and it bogs down, groans, or the lights dim and hang low, that's the generator telling you it's near or past its limit. The fix is simple: shed a load — turn something off — and let it recover before you try again. Over an outage or two you'll come to know your generator's comfortable working range just by sound.

✓ A bog-down means back off

If the generator labors or the lights sag when a motor starts, you've asked for too much. Turn something off and let it catch its breath.

Keep the fridge and freezer closed

Some of your biggest loads don't actually need to run all the time — and that's a gift.

A fridge and freezer hold their cold for hours if you keep the doors closed, so they only need power now and then to top back up, not constantly. The same idea helps all over the house: thermal mass and buffers mean you rarely need everything running at the same minute. Keep those doors shut, open them briefly and with a plan, and you free up your generator's power for whatever else needs it right then.

✓ Closed doors buy you room

Every hour the freezer coasts on its own cold is an hour its power can go to the furnace or pump instead. Keep it closed and let it work for you.

Two kinds of homes, two sets of needs

Managing loads is the same idea everywhere, but how busy the juggling gets depends a lot on whether you're in town or out on a well.

If you live in town or the suburbs

In town, with city water still flowing, your must-run list is usually short — furnace, fridge, some lights, maybe the internet — so managing it is relaxed. You can often bring those up and leave them running with room to spare.

- A short list means little juggling — bring up the furnace first, then add the fridge and lights.
- No well pump to work around, so your biggest surge is usually just the furnace blower.
- Watch out for the occasional big extra — a window air conditioner or a space heater — and add it thoughtfully.
- Keep the fridge and freezer closed and you'll rarely feel the generator working hard.

If you are out in the country on a well

Out on a private well, there's more to juggle: the well pump, the furnace, and often a sump pump can all want power in the same storm. The interlock reaches them all — your job is to cycle them so they don't all start at once.

- The well pump is a big 240-volt motor with a large surge — bring it up on its own, never while the furnace or sump is starting.
- Cycle the three big ones: run the pump to refill water, then hand the power to the furnace, then let the sump catch up as needed.
- The pressure tank and the fridge both coast, which gives you room to rotate without anyone going without.
- A little planning keeps a modest generator covering a long rural list comfortably. Our well-pump and sump-pump guides go deeper.

★ On a well? Let's plan the juggle

I'll help you work out a simple rhythm for cycling the pump, furnace, and sump so nothing ever overloads. Call (330) 200-8042.

Cycling loads through a long outage

If your list is bigger than your generator likes all at once, cycling is your best friend.

You rarely need everything running every minute. Run the well pump to refill your water, then turn that circuit off and run the furnace and fridge for a while. Let the freezer coast, then give it a turn. This gentle rotation lets a modest generator cover a long list comfortably — you're simply pouring the generator's power where it's needed most, moment to moment. Our sizing guide explains how much capacity you're working within.

✓ Rotate, don't overload

Think of your generator's power like a pitcher you pour where it's needed right now. Cycling keeps everyone's needs met without ever straining it.

Make a simple priority list

A minute of thinking ahead makes every outage calmer.

Before storm season, jot down what truly must run — heat, the fridge, water on a well, a sump if you have one, medical equipment if anyone depends on it — and what's merely nice to have. In an outage you start with the must-runs and add the nice-to-haves only if the generator has room. Having the order decided in advance means you're never standing at the panel in the dark, guessing what matters most.

★ I'll help you sort the list

Tell me about your household and I'll help you put your circuits in a sensible order, so an outage runs itself. Call (330) 200-8042.

Know your hungriest loads

A few things in every house ask for a lot of power. Knowing them helps you plan.

The biggest eaters are usually things that make heat or move water and air: electric water heaters, electric ranges and ovens, clothes dryers, central air conditioning, and electric furnaces or heat pumps. Some of these can be more than a portable generator wants to run at all, so many folks simply leave them off during an outage and manage without. The motors — pumps, blowers, the fridge — are the ones you cycle. I won't quote numbers, because they vary; our sizing guide shows how to learn yours.

! Some loads are just too big

Don't assume a portable can run everything. Big electric heat and large appliances may simply stay off during an outage — and that's a normal, sensible choice.

Managing loads means the generator is running

Everything in this guide happens while the generator is going, so the biggest generator danger is always in the picture.

! Read this first — carbon monoxide is the real danger

A running generator's exhaust contains carbon monoxide — an invisible, odorless gas that can kill in minutes. Never run a generator indoors, in a garage, in a shed, or on a porch, not even with the door open and a fan going. Run it outside only, well away from the house — the safety agencies say at least 20 feet — with the exhaust pointed away from every window, door, and vent. Put battery-backup carbon-monoxide alarms on each floor and outside the bedrooms. If an alarm sounds, or anyone feels dizzy, sick, or sleepy, get everyone into fresh air first and ask questions later. No amount of careful load-juggling changes where the generator belongs — outdoors only, well away from the house, exhaust pointed away, with carbon-monoxide alarms on inside.

If a breaker trips or the generator strains

Now and then you'll ask for a touch too much. Here's the calm response.

- **A breaker tripped.** You drew more than that circuit or the generator wanted. Turn a load or two off, reset it, and bring things up more slowly.
- **The generator bogged down.** Shed a load right away, let it recover to a steady hum, then add loads one at a time.
- **The lights dimmed and stayed low.** Something big is straining it. Turn off a hungry load and see if they brighten.
- **It keeps happening.** Your list may be bigger than your generator — lean harder on cycling, or see our sizing guide.

✓ Shed first, think second

When the generator complains, the first move is always to take a load off. It's quick to add things back once it's steady again.

Your generator's size sets the ceiling

Load management is really just living comfortably within one number — your generator's capacity.

How much you can run at once is set by the generator you have. A bigger generator means more running together and less juggling; a modest one means more cycling. Neither is wrong — plenty of folks run a whole outage happily on a modest generator by cycling well. If you find yourself juggling more than you'd like, that's a sign to look at sizing. Our sizing guide walks through matching a generator to your list, with no invented numbers.

✓ Manage first, upsize only if needed

Good load habits stretch a modest generator a long way. If it still feels tight after you've cycled well, then it's worth talking sizing.

Practice your load routine in daylight

The best way to learn your generator's comfortable range is to try it when nothing's at stake.

On a calm day, run through bringing your loads up in order — biggest first, one at a time — and notice how the generator sounds as you add each one. You'll quickly learn where its comfortable ceiling is and which combinations it likes. That relaxed familiarity is worth its weight in gold when you're doing the same thing by flashlight during a storm.

★ Let's do a practice run together

I'm glad to come stand at the panel with you and help you learn your generator's comfortable range. Call (330) 200-8042.

Common load-management mistakes

A few habits cause most overloads. Sidestep these and you'll rarely trip a thing.

- **Flipping everything on at once** — stacks several starting surges together and overloads the generator.
- **Starting small loads before the big one** — leaves no headroom for the big motor's surge.
- **Ignoring the bog-down** — pushing on when the generator's laboring instead of shedding a load.
- **Leaving the fridge or freezer open** — makes them run harder and more often than they need to.
- **Trying to run the whole house** — an interlock reaches every circuit, but your generator can't power them all at once.

! The interlock reaches it all — you set the limit

The plate lets you touch every breaker, but the generator still has a ceiling. Reaching a circuit and being able to run it at that moment are two different things.

Label your panel and keep a plan by it

Two small bits of paper make load management almost automatic.

First, make sure your panel breakers are clearly labeled, so you know at a glance which one is the furnace, the pump, the fridge, and the generator breaker. Second, tape a short load plan right by the panel: your must-run circuits in the order you bring them up, biggest first. With the breakers labeled and the order written down, you're never guessing in the dark — you're just following your own good plan.

★ I'll help you label and plan

I'm glad to help you label your panel clearly and write a big-print load plan to tape beside it. Call or text (330) 200-8042.

Common Questions

The questions I hear most about managing loads on an interlock.

Q: How do I know if I'm running too much at once?

Listen to the generator. A steady hum means you're fine; a strain, bog-down, or lights that dim and stay low mean you've asked for too much. Turn something off and it should recover.

Q: What should I turn on first?

The biggest surging load — usually the furnace blower, or a well pump on a rural home — while the generator is fresh. Then add smaller loads one at a time.

Q: Can I just run my whole house on the interlock?

The interlock reaches every circuit, but your generator has a limit, so you run within it — often by cycling loads rather than running them all at once. Big electric heat and large appliances may stay off.

Q: Do I have to count watts to do this?

No. Biggest first, one at a time, keep the fridge closed, and listen to the generator. If you'd like to know your real numbers, our sizing guide shows how to find them.

★ More questions about loads?

Call or text (330) 200-8042 — helping folks run a calm, well-managed outage is one of my favorite things to do.

How I help you manage it with ease

Load management sounds technical, but with a little help it becomes a comfortable habit.

I'll help you sort your circuits into a sensible order, label your panel clearly, write a big-print load plan to tape beside it, and stand with you for a practice run so you learn your generator's comfortable range by ear. I don't touch the wiring — that's a licensed electrician's job — but making the day-to-day of running an interlock feel easy is exactly what I'm here for.

★ Let's make it second nature

Call or text (330) 200-8042 and we'll turn load management into a simple habit you barely have to think about.

The short version to carry with you

If the details blur, hold onto these.

- ❑ An interlock reaches your whole panel, so you keep the total within the generator's capacity.
- ❑ Biggest surging load first, then smaller loads one at a time, pausing between each.
- ❑ Listen to the generator — a bog-down means shed a load and let it recover.
- ❑ Cycle loads through a long outage, and keep the fridge and freezer closed so they coast.

✓ Keep this guide handy

A quick look at this before storm season, and a load plan taped by the panel, will carry you through almost any outage.

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 managing loads on your interlock kit 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.

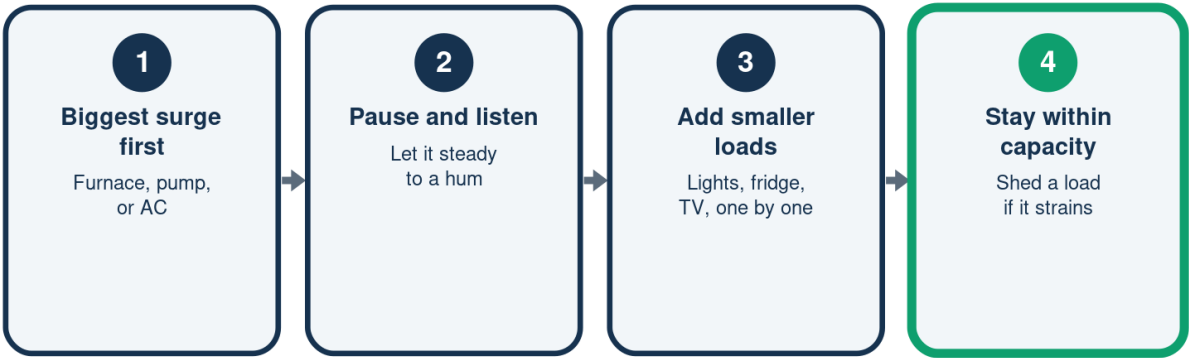
When you'd rather have a hand, that's exactly what I do. I come to your home, work at your pace, and never make you feel rushed or silly for asking. A first visit is a flat \$99, and for the parts that don't need me on-site I can often help right on your screen for \$49. Every visit comes with a 30-day, 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.

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Bring Loads Up in Order

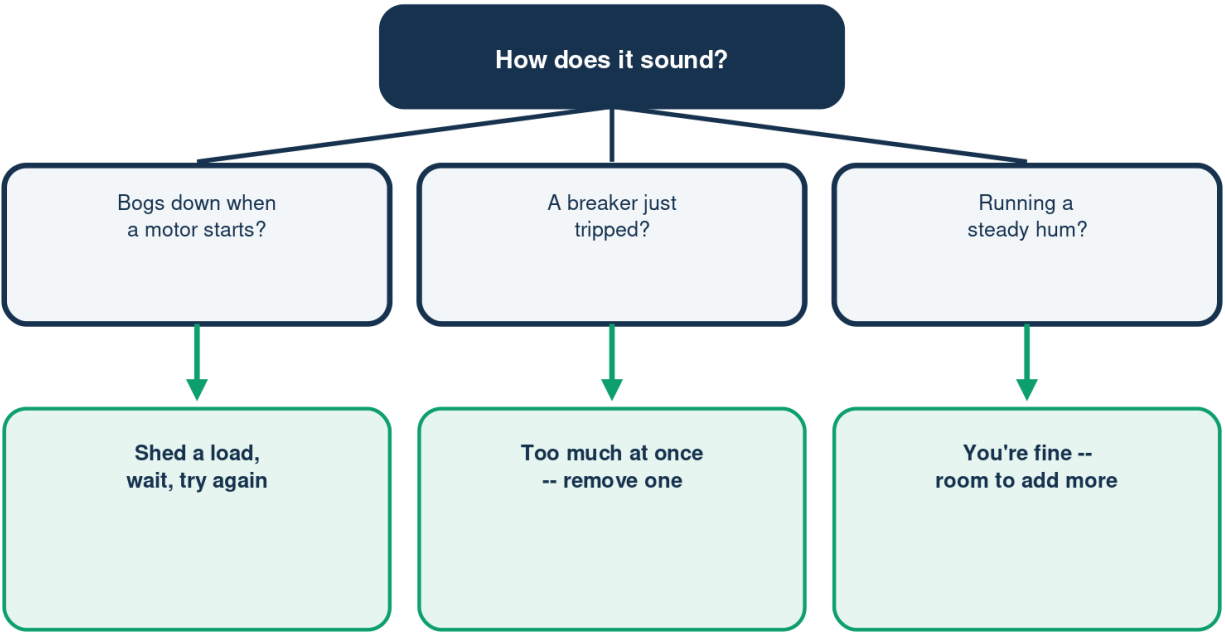
Biggest surge first, then add the rest



Only one motor starts at a time -- what your generator is sized for.

Is the Generator Overloaded?

Let your ears be the meter

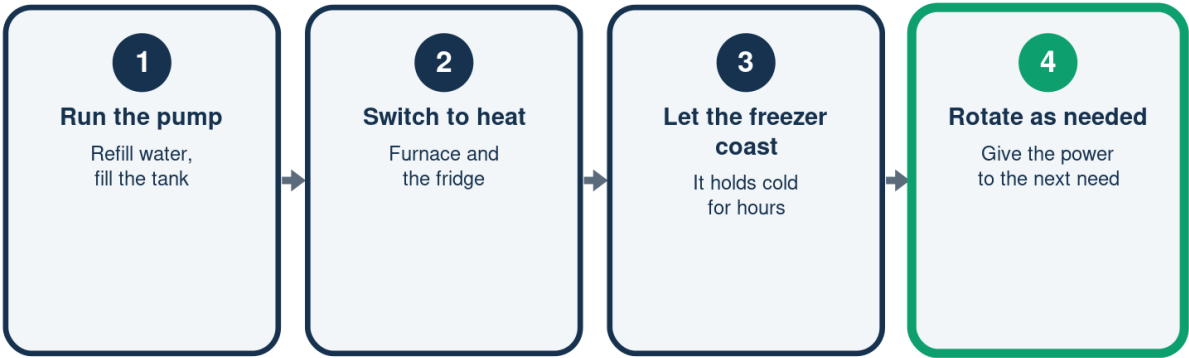


When in doubt, run less -- it's quick to add loads back.

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

Cycle Loads in a Long Outage

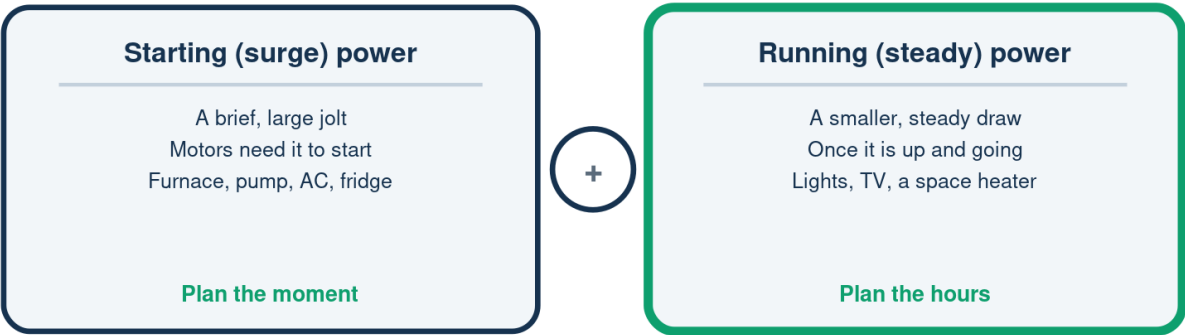
Pour the power where it's needed now



A modest generator covers a long list by taking turns.

Two Kinds of Load

Why we bring the big motors up first



Bring up the big surging loads first, then add the steady ones.

It's the starting surges, not steady running, that overload a generator.



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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.

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