BILL'S HOME TECH

Home & Small Business Tech Solutions

An Extended Guide · No. 1507

# Backing Up the Fridge & Medical Gear

Keeping food safe and loved ones cared for

**Tech Made Simple — Service Made Personal**

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**! Read this first — two honest truths about home solar**

Two honest truths before we start, because they surprise a lot of good folks. First, home solar is a professional job — it takes a licensed installer, building permits, and your utility's approval to connect (called interconnection). This guide is here to help you understand, plan for, and live with solar; it is not a do-it-yourself project, and I never want you climbing on a roof or opening an electrical panel. Second, a plain grid-tied solar system — one 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. If someone in your home relies on powered equipment, this guide matters most — and a battery is one caring layer of the plan, never the whole plan by itself.

# Keeping the fridge cold and loved ones safe

Two of the most reassuring things solar backup can do are keep your refrigerator cold and help power the equipment someone at home depends on. This guide covers both — honestly, and with the care these things deserve.

I'm Bill, of Bill's Home Tech in Portage County. I'll share the food-safety facts plainly and treat the medical side gently. I'm a tech helper, not a doctor — so for medical equipment, I'll always point you to the makers, your suppliers, and your doctor for the parts that are theirs.

The theme you've seen in these guides holds here too: plain grid-tied solar shuts off in an outage, so on its own it won't keep the fridge cold or a device running. A battery is what changes that — and we'll be clear about what it can and can't do.

**★ Let's plan the essentials together**

Keeping food safe and loved ones cared for in an outage is exactly the kind of planning I'm glad to help with. Call or text me at (330) 200-8042 and we'll think it through calmly, with nothing to sell you.

# The essentials, on one page

The key points for fridge and medical backup.

- ❑ A closed fridge keeps food safe about 4 hours; a full freezer about 2 days.
- ❑ Once the fridge climbs above 40 degrees, toss perishables — when in doubt, throw it out.
- ❑ Plain grid-tied solar won't keep them cold in an outage — only a battery will.
- ❑ A fridge or freezer is an easy load for a battery to back up.
- ❑ For medical equipment, a battery is one layer — not the whole plan.
- ❑ Keep the maker's backups, register with your utility, and know when to call 911.

> **✔ Different needs, different plans**
> A fridge just needs to stay cold, and a battery handles that easily. Medical equipment needs rock-solid redundancy — a battery plus the maker's backups plus a plan. Treat them differently.

# Your fridge and freezer in an outage

Good news first: your fridge and freezer hold their cold for a while on their own, if you help them.

Kept closed, a refrigerator generally keeps food safe for about four hours, and a full freezer for roughly two days (about one day if it's only half full). The single most important thing you can do is keep the doors shut — every peek lets the cold escape.

So even without backup power, a short outage usually isn't a crisis for your food, as long as you resist opening the doors. It's the longer outages — and the freezer full of meat — where backup power earns its keep.

> **✔ Keep the doors closed — it's the whole trick**
> A full fridge and freezer hold cold longer than empty ones, and every time you open the door you lose precious cold. In an outage, decide what you need, grab it fast, and shut the door.

# Food safety: when in doubt, throw it out

A few plain rules keep everyone well when the power's been off a while. These are worth knowing cold, so to speak.

Once your refrigerator has warmed above 40 degrees, perishable foods — meat, poultry, fish, eggs, dairy, and leftovers — become risky and should be thrown out. Frozen food that still has ice crystals or is at 40 degrees or below can be refrozen or cooked. The golden rule is simple: when in doubt, throw it out.

And never taste food to decide if it's safe — some harmful bacteria leave no smell or taste. An inexpensive appliance thermometer in the fridge and freezer takes the guesswork out, showing you at a glance whether things stayed cold enough.

> **! Never taste to check**
> Tasting questionable food is genuinely dangerous — some bacteria give no warning in smell or taste. If perishable food has been too warm too long, discard it. Food is replaceable; a bout of food poisoning at our age is not worth the risk.

# Can solar keep the fridge running?

Here's where our recurring truth applies once more, so no one is caught out.

On its own, plain grid-tied solar won't keep your fridge cold in an outage — it shuts off the moment the grid goes down, sunny or not. So a roof full of panels, by itself, is no help to your food during a blackout.

A battery, though, changes that entirely. A fridge or freezer is an easy, sensible thing to put on a battery's backup circuits — it's not a demanding load, and keeping food safe is exactly the kind of everyday reassurance backup power is for.

> **✔ The fridge is a natural for backup**
> Of all the things you might back up, a fridge and freezer are among the easiest and most worthwhile. If you're adding a battery, these almost always belong on the essential-loads list.

# Backing up a fridge or freezer with a battery

Because refrigeration is a gentle, on-and-off load, a battery handles it gracefully — and the sun helps.

A fridge doesn't run constantly; its compressor cycles on and off to hold temperature, so it sips power over time rather than gulping it. That makes it easy for even a modest battery to keep a fridge and freezer safe through an outage, especially when the sun refills the battery each day.

For a home with a big chest freezer full of a season's meat or garden harvest — common out in the country — backing up that freezer can save real money and effort. It's often near the top of a rural must-run list, and worth mentioning to your installer.

> **✔ A cycling load is a battery's friend**
> Because a fridge only runs part of the time, it's a light burden for a battery to carry — and the sun tops the battery back up between cycles. That combination keeps food safe through even a long daytime outage.

# Two kinds of homes, two sets of needs

How much fridge and medical backup you plan for shifts with where you live and how long your outages tend to run.

## If you live in town or the suburbs

In town or the suburbs, outages are usually short, so your fridge often rides them out on its own cold if you keep the doors shut. Backup here is about comfort and peace of mind — and about any medicine that must stay cold.

- Short outages rarely threaten food if you keep the doors closed.
- A battery is a nice comfort — and important for a medicine fridge.
- Medical equipment users should still plan carefully regardless of outage length.
- A small battery easily covers a fridge through a brief town outage.

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

Out in the country, outages last longer and freezers are often full of a season's food. Longer outages raise both the food stakes and the stakes for anyone relying on powered equipment far from quick help.

- A full chest freezer represents real value worth backing up.
- Longer outages make a battery (and often a generator) more important.
- Medical needs are more urgent when help and power are farther away.
- Layer backup power with stored water and a clear plan for the long haul.

> **★ Someone at home rely on power?**
> If a loved one depends on medical equipment, I'm glad to help you build a careful, layered backup plan around it — gently and without alarm. Call (330) 200-8042.

# When someone depends on powered equipment

This deserves extra care, so let's approach it thoughtfully. If a person at home relies on medical equipment, backup power becomes a matter of real importance — and a real plan.

Oxygen concentrators, CPAP or BiPAP machines, nebulizers, powered wheelchairs, and medication refrigerators all need dependable power. Solar with a battery can be a wonderful, reassuring layer of that dependability — quiet, automatic, and refilled by the sun each day.

But — and this is the heart of it — a battery should be one layer of the plan, never the whole plan. Batteries can run down, systems can have an off day, and life-sustaining equipment deserves more than a single point of failure. Let's build the fuller plan.

> **★ I help set it up; your doctor guides the care**
> I can help you plan and set up the backup power and test it. The medical decisions — what equipment, what backups, what's safe — belong with your doctor and equipment supplier. Together that's a solid plan. Call (330) 200-8042.

# A battery is one layer, not the whole plan

This is the most important page in the guide for anyone with powered medical needs, so let me be very clear and caring about it.

It would be lovely if a home battery were all you needed. But equipment this important calls for redundancy — more than one way to keep it running. A battery is a strong layer, but on its own it can run low in a long outage or falter on a bad day, and that's too much to hang a life on.

So think of the battery as one part of a layered plan that also includes the equipment maker's own backups, your utility's medical program, and a clear plan for what to do if power is failing. No single layer carries the whole weight.

> **! Never rely on a single backup for life-sustaining gear**
> For equipment someone's health depends on, always have more than one backup and a plan to reach power or care if they fail. A battery is wonderful, but it must be one layer among several — never the only one.

# The maker's backups and your utility's list

Two layers cost little and matter enormously. Put these in place regardless of whether you go solar.

First, keep the equipment maker's own approved backups — battery packs, car adapters, and the like — charged and ready, and know how to use them. These are designed for exactly the device and are your first line when the power drops.

Second, register with your electric utility's medical or priority list. Many utilities keep a list of customers who depend on powered medical equipment and give them extra attention and notice during outages. It's usually a simple form, and it's well worth doing.

> **✔ Register with the utility — it's free and quick**
> Ask your electric utility how to get on their medical or priority list. It's typically a short form and costs nothing, and it can mean earlier warning and attention when the power goes out. Do it early.

# For oxygen users especially

Oxygen deserves its own page, because there's a backup that needs no electricity at all.

If someone uses an oxygen concentrator, which runs on power, talk with your oxygen supplier about keeping backup oxygen tanks on hand. Tanks deliver oxygen without any electricity, so they're a vital layer for exactly the moments when power is out and a battery might be stretched.

Also keep any portable concentrator's batteries charged, and know how long each backup lasts. Your supplier can help you work out how much backup to keep for the outages you might face. This is their expertise — lean on it.

> **! Backup oxygen tanks need no power**
> For oxygen, the sturdiest backup of all is tanks, because they work with no electricity whatsoever. Ask your supplier how many to keep and how to use them. That's a layer no outage can switch off.

# CPAP machines and medicine that must stay cold

A couple of common needs worth planning for specifically.

For a CPAP or BiPAP used at night, ask the maker about an approved battery pack that can carry it through an outage, and consider whether it belongs on your home battery's backup circuits. Many are gentle loads a battery handles easily, and clean power suits them well.

For medicine that must stay refrigerated — like some it's kept in a fridge — treat that fridge as an essential load, just like your food fridge, and keep a cooler and ice packs ready as a simple fallback. Ask your pharmacist how long your particular medicine stays good if it warms up.

> **✔ Ask the maker and the pharmacist**
> For any powered medical device, the maker knows its approved backups; for refrigerated medicine, your pharmacist knows how long it keeps. Two quick questions that make your plan far stronger.

# Clean power and a bridge for the gap

Two small technical points that help sensitive equipment stay happy and covered.

Sensitive electronics and some medical devices prefer clean, stable power. A solar system's inverter generally provides that, and it's worth confirming your setup gives the smooth power such devices want — our parts guide touches on this.

For a device that must never blink, a small uninterruptible power supply — a UPS, the kind used for computers — can bridge the split second of any switch-over and keep it running seamlessly. It's an inexpensive extra layer for the most critical gear.

> **✔ A UPS bridges the blink**
> Even an automatic battery switch-over takes a moment. For a device that can't tolerate any interruption, a small UPS smooths that instant. Ask your equipment maker whether one is recommended for the device.

# Adding a generator to the plan

For the longest outages, a generator is a valuable deeper layer under your battery — especially where help is far away.

A battery is quiet, automatic, and refills from the sun, but a very long or very cloudy outage can outlast it. A generator can run as long as you have fuel, making it the dependable backstop for the marathon events that matter most when someone relies on equipment.

Used together, the battery handles the frequent short outages seamlessly and the generator covers the rare long one. For a home with medical needs, that layered resilience is worth serious thought — our generator guides, including the one on medical equipment, cover that side.

> **✔ For critical needs, more layers, not fewer**
> When someone's health depends on power, err toward more backup, not less: the maker's backups, a home battery, a generator for the long haul, and a plan to relocate if needed. Redundancy is the whole point.

# Knowing when to call for help

The most important layer of all isn't a device — it's knowing when the situation has moved beyond backup power and needs real help.

If powered medical equipment fails and your backups are running low, or if the person shows serious signs of trouble — difficulty breathing, chest pain, confusion, or blue-tinged lips — call 911 right away. Don't wait to see if the power comes back. Have a plan, too, to move to somewhere with power, like a relative's home or a facility, if an outage drags on.

No backup system replaces this. Solar, batteries, and generators buy time and comfort; they don't substitute for emergency care when a person is in danger. Knowing that line — and not hesitating at it — is part of a good plan.

> **! When someone's in danger, call 911 first**
> If equipment fails and someone is struggling, or backup is nearly gone, call 911 and get them to power and care — don't wait on the utility. The power plan is to buy time; emergency help is what you turn to when time runs short.

# Fridge and medical backup at a glance

The essentials of each, side by side.

| | Fridge / freezer | Medical equipment |
|---|---|---|
| In an outage | Holds cold a while | Needs power now |
| Keep it going | Battery (easy load) | Battery + backups |
| Golden rule | Doors closed | Never one layer |
| If it warms/fails | When in doubt, toss | Call 911 if in danger |

The contrast says it all: a fridge just needs to stay cold, which a battery handles with ease. Medical equipment needs layered redundancy and a plan — treat it with the extra care it deserves.

# Building the medical backup plan

A good plan comes together from a few conversations and a little preparation. Here's how to assemble it.

- ❑ Ask your doctor and equipment supplier what backup they recommend.
- ❑ Keep the maker's approved battery backups charged and ready.
- ❑ For oxygen, keep backup tanks that need no power.
- ❑ Register with your utility's medical or priority list.
- ❑ Put critical devices and the fridge on your home battery's backup circuits.
- ❑ Know when to call 911 and where you could go for power.

> **★ I'll help you set up and test the power side**
> I can help you set up the backup power, get the right devices on your battery's circuits, and test that it all works — so the plan isn't just on paper. The medical calls stay with your doctor. Call (330) 200-8042.

# Everyday habits that help

A few simple routines make any outage easier on your food and your peace of mind.

- Keep the freezer fairly full — it holds cold longer than an empty one.
- Keep appliance thermometers in the fridge and freezer.
- Keep the maker's medical backups charged, not just stored.
- Keep a cooler and ice packs handy for medicine or key foods.
- Keep phones and battery packs charged when storms threaten.
- Keep your utility's outage number and your plan somewhere easy to find.

> **✔ Small habits, big comfort**
> None of these cost much or take long, but together they turn an outage from a scramble into a manageable inconvenience. A little routine is its own kind of backup.

# Questions to ask about fridge and medical backup

Put these to your installer, and to your doctor or supplier for the medical parts.

### Q: Will my battery keep the fridge and any medical devices running?

For your installer: confirm these are on the backup circuits and the battery is sized for them. A fridge is easy; make sure critical devices are explicitly included.

### Q: What backups does the equipment maker recommend?

For your supplier or the device maker: ask about approved battery packs, car adapters, and — for oxygen — backup tanks. These are the layers only they can specify.

### Q: How do I get on my utility's medical priority list?

For your utility: ask how to register. It's usually a quick form and can mean earlier notice and attention during outages. Do it early, not during a storm.

> **✔ Right question, right expert — gently**
> Power questions to your installer, device questions to the maker or supplier, care questions to your doctor. Matching each to the right person builds a plan you can truly rely on.

# Common misconceptions

A few gentle corrections to the ideas that trip folks up here.

- **'My solar will keep the fridge cold in an outage.'** Only with a battery — plain solar shuts off.
- **'A battery alone is enough for medical equipment.'** It's one layer; always have more.
- **'If food looks fine, it's fine.'** Not so — above 40 degrees too long, toss it; never taste.
- **'Opening the fridge quickly is harmless.'** Every peek lets cold escape — keep it shut.
- **'The utility knows I need power.'** Only if you've registered on their medical list.

> **✔ Assume, then verify**
> Where health and food safety are concerned, don't assume the comforting answer. Keep the doors shut, keep more than one backup, and register with the utility. A little caution here is simply good sense.

# Common Questions

The questions I hear most about backing up the fridge and medical gear.

### Q: How long will my food stay safe without power?

Kept closed, a fridge holds food safe about 4 hours and a full freezer about 2 days (about 1 day if half full). Once the fridge is above 40 degrees, toss perishables — when in doubt, throw it out, and never taste to check.

### Q: Can my solar keep the fridge cold during an outage?

Only with a battery. Plain grid-tied solar shuts off in an outage, so on its own it won't help your food. A fridge is an easy, worthwhile load to put on a battery's backup circuits.

### Q: Is a home battery enough backup for medical equipment?

It's a strong layer, but never the whole plan. Always keep the maker's approved backups (and, for oxygen, tanks that need no power), register with your utility, and know when to call 911. Redundancy is essential for life-sustaining gear.

### Q: Someone here uses oxygen. What's the most important backup?

Backup oxygen tanks from your supplier, because they need no electricity at all — they work no matter what the power does. Keep any concentrator's batteries charged too, and ask your supplier how much backup to keep.

> **★ Planning backup for a loved one?**
> I'm glad to help you set up and test the power side, gently and without alarm, while your doctor and supplier guide the care. Call or text me at (330) 200-8042.

# 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 backing up the fridge and medical equipment 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 rooftop install myself — 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

# Food in an Outage (Doors Closed)

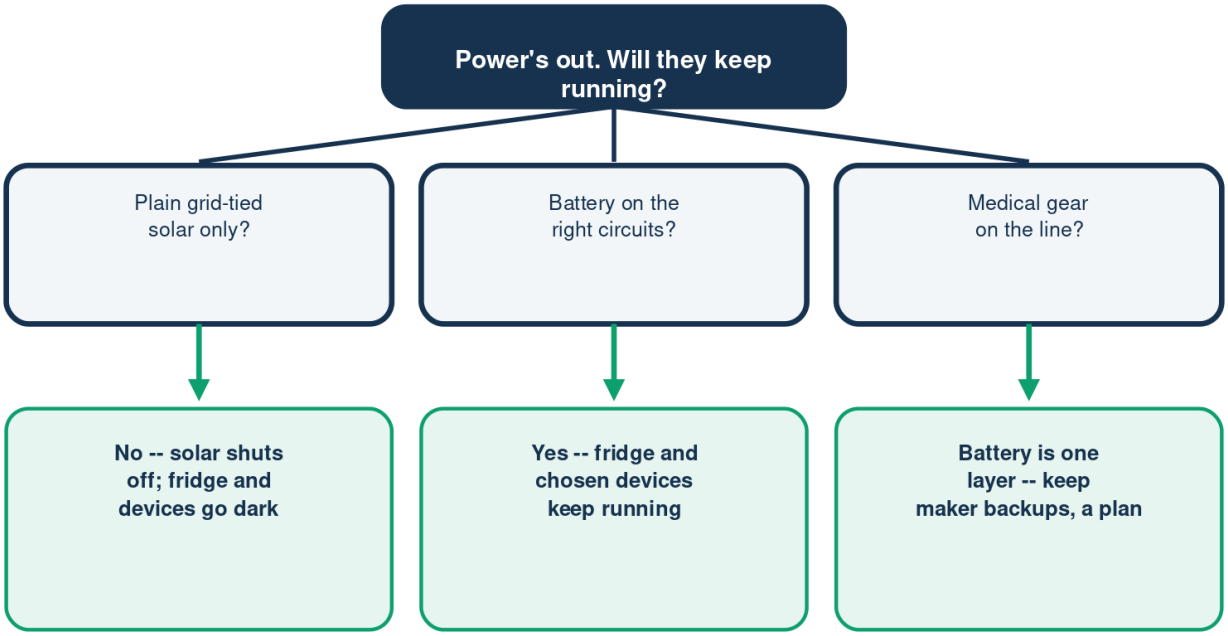
How long it stays safe, and what to do next

| | How long safe | Then |
|---|---|---|
| **Fridge** | About 4 hours | Toss if warm |
| **Full freezer** | About 2 days | Refreeze if icy |
| **Half freezer** | About 1 day | Check crystals |
| **Above 40 degrees** | Too warm | When in doubt, toss |

Keep the doors closed, use a thermometer, and never taste to check.

# Will the Fridge or Devices Stay On?

The same outage truth, with extra care for medical needs

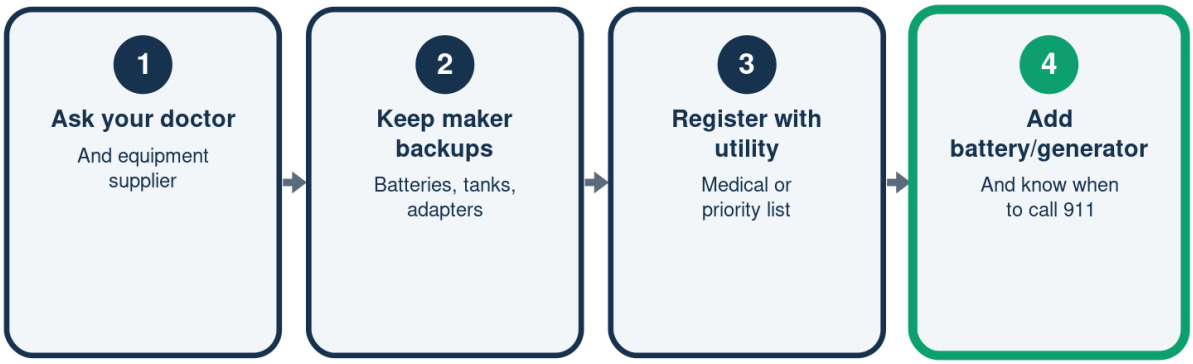



If equipment fails and someone's in danger, call 911 -- don't wait.

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

# A Layered Plan for Medical Power

No single backup carries the whole weight




A battery is one caring layer -- never the whole plan by itself.

# Fridge vs Medical Backup

Treat them differently -- their stakes differ

| | Fridge / freezer | Medical equipment |
|---|---|---|
| **In an outage** | Holds cold hours | Needs power now |
| **Backup** | Easy for a battery | Battery + backups |
| **Golden rule** | Keep doors shut | Never one layer |
| **If it fails** | When in doubt, toss | Call 911 if danger |

A fridge just needs to stay cold; medical gear needs redundancy.

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# 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

**Prefer help without a visit?**

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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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