BILL'S HOME TECH
Home & Small Business Tech Solutions

BILL'S COMPLETE MANUALS

Home Energy Monitoring

Smart plugs, whole-home monitors and your electric bill — explained in plain English, one step at a time

A plain-English guide for seniors and families

Take your time — you can't break it

Written for you by Bill — Bill's Home Tech

(330) 200-8042 · BillsHomeTech.com

Smart plugs, Emporia & Sense, utility data · facts current November 2026

What's Inside

This is your home energy monitoring manual. Read it in any order and at your own pace — there is no test, and you can't fall behind. It explains the numbers on your electric bill, shows you how to measure single appliances with energy-tracking smart plugs or a simple plug-in meter, and explains whole-home monitors such as the Emporia Vue 3 — including why their installation belongs to a licensed electrician. Every feature comes with what it actually does *for you*, and slow, step-by-step directions anyone can follow. If an app looks a little different on your phone, the idea is still the same.

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PART 1

Getting Started

What energy monitoring is, what it can honestly do for you, and the four ways to see where your electricity goes. Start here.

CHAPTER 1

A Note from Bill

Hello, and welcome. If you've ever opened the electric bill, looked at the total, and wondered *where on earth did all that go?* — this guide is for you. And if you've ever wished you could tell whether the old freezer in the basement is costing a fortune, or whether Mom's coffee maker went on this morning like it always does, it's for you too.

I'm Bill. I've spent more than 30 years working with technology, and these days I help folks here in Portage County feel at home with theirs. I wrote this guide the way I'd explain it sitting at your kitchen table: slowly, in plain English, and without trying to sell you anything. When a word like "kilowatt-hour" comes up, I'll stop and explain it right then.

What this guide will do for you

- Explain watts, kilowatt-hours and amps so the numbers on your bill and your apps finally make sense.
- Show you how to find what you pay for each unit of electricity, right from your own bill.
- Walk you through energy-tracking **smart plugs** — small plugs that measure one appliance at a time.
- Explain **whole-home monitors** such as the Emporia Vue, and what Sense owners should know now that Sense has stopped selling its monitor.
- Show you the free usage information your electric company may already have for you.
- Help you turn the numbers into real savings — and steer you away from the scams that ride along with high electric bills.

The big promise: you can't break anything by looking

Almost everything in here is about *watching* — plugging in a small gadget, opening an app, reading a chart. You can take your time and undo anything you change. The one truly dangerous job in this whole subject is working inside your electrical panel, and I'll mark that clearly as a job for a licensed electrician. I'm a technology helper, not an electrician, and I'll always tell you honestly which is which.

WHAT THIS DOES FOR YOU

Why this matters

Electricity is one of the few bills most of us pay without ever seeing what we bought. A little monitoring turns that mystery into plain facts: which appliance is the big spender, what the TV costs when it's "off," and whether a change you made actually helped. Facts let you spend where it matters to you — and stop worrying about the rest.

And I'm only a phone call away

If anything in this guide leaves you unsure, call me at **(330) 200-8042**. There's no such thing as a silly question, especially where electricity is involved.

Let's start with what monitoring can — and can't — honestly do.

— Bill

CHAPTER 2

What Energy Monitoring Can (and Can't) Do

Energy monitoring simply means measuring how much electricity something uses, and when. The gadgets and apps in this guide do the measuring and turn it into numbers and charts you can read. Here's an honest picture of what that gets you.

What it does well

- **Finds the energy hogs.** Plug an old refrigerator, a dehumidifier or a second freezer into a monitor for a few days, and you'll know exactly what it uses. No more guessing.
- **Reveals the "always on" load.** Many things draw a little power around the clock, even when they look off. Monitoring shows you that hidden baseline.
- **Shows whether a change worked.** Turned the thermostat down, replaced an old appliance, or unplugged the spare TV? The numbers before and after tell you if it mattered.
- **Gives peace of mind.** Seeing that the sump pump or the freezer is running normally — or noticing that it stopped — can be reassuring.
- **Can show a daily rhythm.** If a family member agrees, the usage pattern of a coffee maker or a TV can gently confirm that their day started as usual. Chapter 21 covers how to do this kindly and honestly.

What it can't do

- **It doesn't save energy by itself.** A monitor only measures. The savings come from what you decide to do with what you learn.
- **It isn't your electric company's meter.** Your bill is based on the utility's meter. A plug or monitor is very useful for comparison, but its totals won't match your bill to the penny.
- **It can't tell you about gas.** If your furnace, water heater or stove burns natural gas or propane, an electricity monitor sees only the electric parts (such as the furnace blower), not the gas.
- **It isn't a safety device.** A monitor won't trip a breaker or stop a fire. Breakers, smoke alarms and good wiring do that job.

GOOD TO KNOW

Gas or electric heat makes a big difference

In a home with electric heat or a heat pump, heating usually dominates the winter bill and shows up clearly on a whole-home monitor. In a home with gas heat, the electric bill is mostly lights, appliances, electronics and air conditioning — and smart plugs can explain a larger share of it.

WHAT THIS DOES FOR YOU

What this does for you

Knowing the limits up front keeps expectations realistic. You'll spend a little money and a little time, and in return you'll know your home's electricity the way you know your checkbook.

CHAPTER 3

Four Ways to See Where Your Electricity Goes

There are four main tools, from simplest to most complete. Most people start with the first two and never need more. You don't have to pick just one — they work well together.

Tool	What it measures	App needed?	Who installs it
Your utility's online account	The whole house, usually by day or by hour if you have a smart meter	A website or app from your electric company	Nothing to install
Plug-in meter (no app)	One appliance, shown on a small screen	No	You — just plug it in
Energy-tracking smart plug	One appliance, with charts over time	Yes, the plug maker's app	You — plug in and set up on Wi-Fi
Whole-home monitor	The whole house, and often individual circuits, in real time	Yes	A licensed electrician, inside the breaker panel

Which one should you start with?

1. **First, look at what you already have.** Your electric company's website may show your usage by day or even by hour, for free. Chapter 18 shows you where to look.
2. **Next, measure a suspect.** If you have one appliance you wonder about — an old fridge, a space heater, a dehumidifier — a plug-in meter or an energy-tracking smart plug answers the question in a few days. Chapters 9 through 13 cover these.
3. **Only then, consider a whole-home monitor.** If you want to watch everything at once, or you have solar panels or an electric car, a whole-home monitor is the complete picture. Chapters 14 through 17 explain them — including why the installation is an electrician's job.

TIP

Start free, then spend a little

Your utility account costs nothing. A single energy-tracking smart plug is a modest purchase. A whole-home monitor plus an electrician's visit is a bigger investment. Climb the ladder only as far as your questions need.

WHAT THIS DOES FOR YOU

What this does for you

Instead of buying the most impressive gadget first, you answer your real question with the least money and fuss — and you only go further if you're curious for more.

PART 2

The Numbers in Plain English

Watts, kilowatt-hours, amps, your electric bill and your price per kilowatt-hour — plus simple math you can do on the back of an envelope.

CHAPTER 4

Watts, Kilowatt-Hours and Amps

Every energy app and every electric bill uses the same handful of words. Once these three click, everything else in this guide is easy. Let's take them one at a time.

Watts: how hard something is working right now

A **watt** (W) measures how much power something is drawing *at this moment*. Think of it like the speedometer in your car: it tells you how fast you're going right now, not how far you've gone. A small LED bulb might draw around 10 watts; a hair dryer or space heater can draw well over 1,000. A **kilowatt** (kW) is simply 1,000 watts.

Kilowatt-hours: how much you actually used

A **kilowatt-hour** (kWh) measures energy used *over time* — like the odometer in your car. It's what your electric company charges you for. One kilowatt-hour is 1,000 watts running for one hour.

This much power…	…for this long…	…uses this much energy
1,000 watts	1 hour	1 kWh
100 watts	10 hours	1 kWh
10 watts	100 hours (about 4 days)	1 kWh
1,500 watts	2 hours	3 kWh

The formula is simple: **watts × hours ÷ 1,000 = kWh**. A small thing running all the time can add up to as much as a big thing running briefly.

Amps and volts: what matters for safety

You'll see **amps** (A) on plugs, breakers and power strips. Amps measure how much current flows. Ordinary U.S. household outlets supply about **120 volts**. Multiply the two and you get watts: **volts × amps = watts**. So a plug rated for 15 amps can handle about 120 × 15 = 1,800 watts at most.

HEADS UP

A rating is a maximum, not a target

Electrical safety guidance says to stay comfortably below a rating for anything that runs a long time. Eaton, a major maker of power equipment, advises staying about 20% under the limit — around 12 amps on a 15-amp circuit. That's why this guide keeps heaters and other big loads off smart plugs.

GOOD TO KNOW

Volts on your apps

Some smart plugs also show **voltage** and **current** (amps). Voltage normally wanders a few volts around 120 during the day. That's normal; you don't need to watch it.

WHAT THIS DOES FOR YOU

What this does for you

With watts for "right now" and kilowatt-hours for "how much," you can read any energy chart — and you'll know which number your bill actually charges you for.

CHAPTER 5

Reading Your Electric Bill

Your electric bill already holds the most important number in this guide: how many kilowatt-hours you used. Bills differ by company, but the same pieces appear on nearly all of them. Have a recent bill in front of you — paper or the PDF from your online account — and let's find them.

Who your electric company is

For many homes in Portage County, the electric company is **Ohio Edison**, which is part of **FirstEnergy**. Some homes are served by a municipal utility or a rural electric cooperative instead. The company name and logo at the top of your bill settle the question.

The pieces to look for

On the bill	What it means
Billing period	The dates this bill covers, often about 30 days. Longer or shorter periods change the total, so compare usage per day when you can.
Meter readings	The starting and ending readings, and the difference between them.
Usage (kWh)	How many kilowatt-hours you used this period. **This is the number to write down.**
Usage history	Many bills include a small bar chart of the last 12 or 13 months — a free, quick way to see your seasons.
Delivery or distribution charges	What the local utility charges to bring power over its wires to your home. Often several lines.
Generation or supply charges	The cost of the electricity itself. In Ohio this can come from the utility's standard offer or from a competitive supplier you've chosen.
Fixed customer charge	A set monthly amount you pay no matter how much you use.
Taxes and riders	Smaller lines added by law or regulators.

Supplier or standard offer?

Ohio lets you buy the electricity itself (the "generation") from a company other than your utility. Look on your bill for a **generation** or **supplier** line. If a supplier's name appears there, you've signed up with one at some point — perhaps after a mailing or a knock on the door. If not, you're on the utility's standard offer. This matters for two things in this guide: your price per kWh (Chapter 6), and whether you can choose FirstEnergy's time-of-day rate (see "Ways Energy Monitoring Can Make Life Easier").

TIP

Keep twelve bills, or one screenshot

Your monthly usage over a full year is the best baseline you'll ever have. If your bill shows the 12-month chart, that's enough. Otherwise, your utility's online account usually lets you download the history (Chapter 18).

SCAM ALERT

Never show your bill to a stranger at the door

Your account number is printed on your bill. Door-to-door salespeople sometimes ask to "just see your bill" to check your rate. Keep it private. If you're curious about a different supplier, you can look at offers on your own time and decide at the kitchen table, not on the porch. Chapter 24 has more.

WHAT THIS DOES FOR YOU

What this does for you

Once you know where the kWh number lives, every monitor in this guide has something to be compared against — and you'll spot a strange month right away.

CHAPTER 6

Finding Your Price per Kilowatt-Hour

To turn any kWh number into dollars, you need one figure: roughly what you pay for each kilowatt-hour, all charges included. Bills split this into many lines, so the simplest honest method is to work out your **all-in average** yourself.

The two-number method

1. Find the **total electric charges** for one billing period. Use the electric charges for that period only — leave out any past-due amount, payments, or charges for something else.
2. Find the **kWh used** for the same period.
3. Divide the dollars by the kWh. The answer is your average price per kWh.
4. Write it on the Cheat-Sheet (Chapter 26) and in your energy app if it has a place for a rate.

A worked example (made-up numbers)

Suppose a bill shows electric charges of **$142.50** for **950 kWh**. Then $142.50 ÷ 950 = **$0.15**, or **15 cents per kWh**. That example rate is used throughout this guide only to keep the math easy. **Your own rate will be different** — use the number from your bill.

TIP

Do it for a summer bill and a winter bill

The fixed monthly charge gets spread over more kWh in a high-use month, so your average can shift a little with the seasons. Working it out twice and taking the middle gives you a good everyday number.

Why not just use the rate printed on the bill?

Many bills print a generation price per kWh, but that's only one piece. Delivery charges and riders are often charged per kWh too. Your all-in average captures everything, which is what you really pay when an appliance runs.

GOOD TO KNOW

Rates change

Standard-offer prices in Ohio are reset from time to time, and supplier contracts end and renew. Recheck your rate once or twice a year, and any time you switch suppliers or plans.

WHAT THIS DOES FOR YOU

What this does for you

With your own price per kWh, "the dehumidifier used 3 kWh yesterday" becomes "the dehumidifier cost about 45 cents yesterday." Dollars are much easier to make decisions with.

CHAPTER 7

Quick Math: What Things Cost to Run

You don't need to be good at math for this — a phone calculator does the work. Every example below uses the made-up rate of **15 cents per kWh** from Chapter 6. Swap in your own rate for real answers.

Recipe 1: from watts and hours

watts × hours ÷ 1,000 × your rate = cost

Example	Math	Cost at the example rate
A 1,500-watt space heater for 4 hours	1,500 × 4 ÷ 1,000 = 6 kWh	6 × $0.15 = $0.90
A 60-watt TV for 5 hours a day, for 30 days	60 × 150 ÷ 1,000 = 9 kWh	9 × $0.15 = $1.35 a month
A 10-watt gadget that never turns off, for a year	10 × 8,760 ÷ 1,000 = 87.6 kWh	87.6 × $0.15 = about $13 a year

Recipe 2: from a monitor's daily kWh

This is easier, because a smart plug or plug-in meter already counts kWh for you. Let it run for a few full days, then:

1. Divide the total kWh by the number of days to get **kWh per day**.
2. Multiply by 30 for a month, or by 365 for a year.
3. Multiply by your rate.

Example: an older refrigerator measures 7.5 kWh over 3 days. That's 2.5 kWh a day, about 75 kWh a month, and at the example rate about **$11.25 a month** — about $137 a year. Those numbers are illustrations only; your appliance will be different.

TIP

Measure whole days

Refrigerators, freezers and dehumidifiers cycle on and off. Measuring for an hour can mislead you. Three to seven full days, including a weekend, gives a fair number.

Recipe 3: is a replacement worth it?

1. Measure the old appliance's yearly cost (Recipe 2).
2. Look up the new model's yearly energy use. In the U.S., refrigerators, freezers and many other appliances carry a yellow **EnergyGuide** label showing an estimated yearly kWh.
3. Subtract to get the yearly savings, then divide the new appliance's price by that savings to see how many years it takes to pay back.

GOOD TO KNOW

Savings aren't the only reason

A long payback doesn't mean "don't buy." If the old freezer is failing, noisy, or hard to use, those reasons count too. The math just helps you see the money side clearly.

WHAT THIS DOES FOR YOU

What this does for you

Five minutes with a calculator turns a vague worry ("is that old thing eating money?") into a clear answer — and keeps you from spending on changes that won't pay off.

CHAPTER 8

Standby Power: The Things That Sip All Day

Standby power — sometimes called "phantom" or "vampire" load — is electricity used by things that seem to be off or idle. A TV waiting for its remote, a cable box keeping its clock, a game console ready to download updates, chargers left in the wall, a microwave's glowing display: each sips a little, all day and all night.

Why it's worth a look

Each one is small, but they never stop. As the quick math in Chapter 7 showed, a gadget drawing just 10 watts around the clock uses close to 88 kWh a year. A home with a dozen such things can have a noticeable "floor" of usage that never goes away — even while everyone is asleep.

How to find your baseline

1. If you have a whole-home monitor, look at the lowest point on the power chart overnight. That's your always-on baseline.
2. If you don't, look at your utility's hourly usage (if it offers it) between about 2 and 4 a.m., when little is running on purpose.
3. To measure a single spot, plug a power strip with the TV, cable box and sound bar into an energy-tracking smart plug or a plug-in meter, turn everything "off" with the remotes, and read the watts.

What to do about it — sensibly

- **Put a cluster on a switch.** A power strip with a switch, or a smart plug on a schedule, can cut power to a spare-room TV and its boxes overnight.
- **Look for power-saving settings.** Many TVs and game consoles have an energy-saving or "instant-on" setting; choosing the lower-power option can reduce standby use.
- **Unplug the forgotten things.** The old TV in the guest room, the second fridge that holds three sodas, the charger with no phone.

HEADS UP

Some things should stay on

Don't cut power to your internet modem and router (you'll lose Wi-Fi, and possibly your home phone), medical equipment, a refrigerator or freezer, a sump pump, a security system, or anything that needs to stay updated or charged. Some cable and satellite boxes take a long time to restart after losing power, too. When in doubt, leave it plugged in.

WHAT THIS DOES FOR YOU

What this does for you

Trimming standby power is one of the few savings that's completely painless: you don't give anything up, you just stop paying for electricity that wasn't doing anything for you.

PART 3

Energy-Tracking Smart Plugs

Small plugs that measure one appliance at a time: which ones actually track energy, how to set one up, how to read its charts, what never to plug into one — and a no-app alternative.

CHAPTER 9

Choosing an Energy-Monitoring Smart Plug

A **smart plug** goes between the wall outlet and an appliance's cord, so you can turn the appliance on and off from your phone. Only *some* smart plugs also measure energy. The box usually says "energy monitoring" right on the front. If it doesn't say so, assume it doesn't.

GOOD TO KNOW

Our Smart Plugs & Switches guide covers the basics

This guide focuses on the energy-measuring side. For the everyday basics — schedules, voice control, and which brands to skip — see our Smart Plugs & Switches guide.

Plugs that measure energy (as of November 2026)

Plug	App for the energy charts	Maximum rating	Notes
Kasa Smart Plug Slim with Energy Monitoring (KP125M)	Kasa app	15 A, 1,800 W (resistive load)	Matter-certified; 2.4 GHz Wi-Fi only
Kasa Smart Plug Slim with Energy Monitoring (EP25)	Kasa app	Check the label or box	Wi-Fi; energy charts in the Kasa app
Tapo P110M	Tapo app	15 A, 1,800 W (resistive load)	Matter-certified; 2.4 GHz Wi-Fi only
Eve Energy (Matter)	Eve app, or a Matter home app that shows energy	15 A at 120 V	Uses Thread, not Wi-Fi — needs a Thread-capable hub
Emporia Smart Plug	Emporia app	15 A peak; 10 A continuous	2.4 GHz Wi-Fi; works alongside an Emporia Vue

How to choose

- **Already have Kasa or Tapo plugs?** Stay with the same family so everything is in one app.
- **Mostly an iPhone and Apple Home household?** Eve has long built for Apple Home, and Eve Energy also works with other Matter systems; its energy readings can appear in the Eve app.
- **Have, or plan to get, an Emporia Vue?** Emporia's own plugs show up in the same app, which keeps the whole-house and single-appliance numbers side by side.

- **Need it to handle a heavier load?** Read the continuous rating, not just the peak. Emporia, for example, lists 15 amps peak but 10 amps for continuous use.

HEADS UP

Matter doesn't always carry the energy numbers

Matter is a shared smart-home standard that lets one plug work with Apple Home, Alexa, Google Home and others. But on some plugs, Matter carries only on/off control. TP-Link says the KP125M's energy monitoring is **not** available in the Apple Home app — you'll see the charts in the Kasa app. Plan to keep the maker's app for the energy side.

TIP

Buy one first

Get a single plug, live with it for a week, and see if you like the app. Then buy more of the same kind. Prices vary by store and by pack size, so compare a single plug and a multi-pack before buying.

WHAT THIS DOES FOR YOU

What this does for you

The right plug answers "what does this appliance really use?" with a chart on your phone, for the price of a nice lunch — and keeps working as an ordinary smart plug afterward.

CHAPTER 10

Setting Up a Smart Plug to Track Energy

Every brand's app is a little different, but the pattern is the same. Set aside about 15 minutes, have your Wi-Fi name and password handy, and stand near your router for the first one if your Wi-Fi is weak in that room.

Before you start

- Your phone needs Bluetooth turned on — several brands, including Tapo, use it to find a new plug.
- Know your Wi-Fi password. Most energy plugs (Kasa, Tapo and Emporia among them) use the **2.4 GHz** Wi-Fi band. Most routers broadcast it automatically, often under the same name as the faster band.
- Keep the plug's box until you're done. The **setup code** (and Matter QR code) is often printed on the plug and on a card in the box. Take a photo of it.

The steps (any brand)

1. Install the maker's app from the App Store or Google Play: **Kasa**, **Tapo**, **Eve** or **Emporia**. Check the publisher name so you get the real one.
2. Open the app and create an account (or sign in). Use a strong password you don't use anywhere else, and write it on the Cheat-Sheet in Chapter 26.
3. Plug the smart plug into a wall outlet. Its light will blink to show it's ready.
4. In the app, tap the **+** (add device) button and choose your plug model, or scan the code on the plug.
5. Follow the prompts to choose your home Wi-Fi network and enter its password.
6. Give the plug a clear name, like **Basement Freezer** or **Living Room TV**. Good names make the charts much easier to read later.
7. Allow the app to install any update it offers.
8. Plug the appliance into the smart plug, make sure the plug is turned **on** in the app, and look for the energy or usage section on the plug's screen.

TIP

Turn off "away" and random modes

Some apps offer features that switch the plug on and off by themselves. For a plug that's measuring a refrigerator or freezer, make sure no schedules or timers are set. You want it to measure, not to switch.

Adding it to Alexa, Google Home or Apple Home

If the plug is Matter-certified, you can also add it to your favorite home app by scanning its Matter code. That gives you voice control. Remember the point from Chapter 9: the detailed energy charts usually stay in the maker's own app, so keep both.

HEADS UP

Name it, then leave it alone

Moving a measuring plug from appliance to appliance is fine — but rename it each time, and note the date. Otherwise, next month you'll be looking at a chart that mixes a freezer and a fan.

WHAT THIS DOES FOR YOU

What this does for you

Fifteen calm minutes once, and from then on the plug quietly keeps a diary of everything that appliance uses — day and night, no effort from you.

CHAPTER 11

Reading a Smart Plug's Energy Charts

Open the plug in its app and you'll usually find two kinds of numbers: what the appliance is drawing *right now*, and how much it has used over time. Here's how to make sense of each.

The "right now" number

Shown in **watts** (W). It jumps around as the appliance works. A refrigerator might show a modest number while its compressor runs, then almost nothing when it pauses. A TV shows a steady number while on, and a few watts — or less — when "off."

The "over time" numbers

Shown in **kilowatt-hours** (kWh) — today, the past 7 days, the past 30 days, or by month. TP-Link describes its Tapo energy screens as showing detailed statistics with charts, and Emporia's app shows usage in real time and by the hour, day, week or month.

Five things to look for

1. **The daily total.** Write down kWh per day after a few full days. That's the number that turns into dollars (Chapter 7).
2. **The standby level.** What does it draw when it's "off"? Anything more than a few watts, all day, is worth a thought.
3. **Long stretches of running.** A fridge or freezer that runs almost constantly may have a door seal, dusty coil or temperature setting worth checking.
4. **Changes over time.** A steady climb in a freezer's daily kWh can be an early hint that something is wearing out.
5. **The daily rhythm.** When things go on and off tells a story about habits — useful for timing, and, with permission, for checking on a loved one (Chapter 21).

Putting dollars on the chart

Some apps can show an estimated cost if you enter your price per kWh. TP-Link says its Kasa and Tapo energy features can estimate bills from the electricity rate you set, including time-of-use rates. Use the all-in average you worked out in Chapter 6. The walkthrough in "Ways Energy Monitoring Can Make Life Easier" goes through it step by step.

GOOD TO KNOW

Why the plug won't match your bill exactly

The plug sees only one appliance, it measures a little differently from the utility's meter, and the dates rarely line up with your billing period. Use plug numbers to compare and decide, not to audit your bill.

WHAT THIS DOES FOR YOU

What this does for you

A glance at one chart tells you whether an appliance is a big spender or a bit player — so you put your effort where it actually pays.

CHAPTER 12

What Not to Plug Into a Smart Plug

Smart plugs are safe, ordinary devices when used sensibly. A few rules matter even more for energy monitoring, because the appliances people most want to measure are often the hungriest ones.

Keep heat-makers off smart plugs

Space heaters, portable air conditioners, toaster ovens, coffee makers with heating plates and similar appliances draw a lot of current for long stretches. The U.S. Consumer Product Safety Commission says to plug space heaters **directly into a wall outlet** — never into a power strip or extension cord. Treat a smart plug the same way: don't put a space heater on one.

STAY SAFE

Want to know what the space heater costs? Do the math instead

You don't need to measure a space heater. Its label lists its watts (often 1,500 on the high setting). Use Recipe 1 in Chapter 7: 1,500 watts for 4 hours is 6 kWh. That's your answer — without putting a heater on a plug that might overheat.

Mind the ratings

- Read the plug's rating on its label or box, and the appliance's rating on its label.
- Stay well under the plug's limit for anything that runs a long time. Eaton advises staying about 20% under a circuit's limit (about 12 amps on a 15-amp circuit).
- If the plug lists a separate **continuous** rating (Emporia's is 10 amps), that's the one that counts for a long-running appliance.
- Plug smart plugs straight into a wall outlet. Don't stack them on power strips, extension cords or other plugs.

Don't let the plug switch critical things off

Measuring a refrigerator, freezer or sump pump for a few days is fine. But turn off all schedules, timers and "away" features first, and consider removing the plug when you're done. A plug that gets switched off by accident, a glitch or a stray voice command could spoil food or flood a basement. Never put medical equipment such as an oxygen concentrator on a smart plug.

HEADS UP

Warm plug? Unplug it

If a smart plug, outlet or cord feels hot, smells of burning plastic, or the plug's case looks discolored, unplug the appliance and stop using that plug. Have an electrician look at the outlet if it was hot.

WHAT THIS DOES FOR YOU

What this does for you

These few rules let you learn everything you want about your appliances without trading a lower bill for a fire risk or a thawed freezer.

CHAPTER 13

Plug-In Meters: The No-App Option

Not everyone wants another app, another account or another thing on the Wi-Fi. A **plug-in electricity usage meter** does the measuring with none of that. Kill A Watt is one well-known name, and several other makers sell similar meters at hardware stores and online.

How it works

The meter plugs into the wall, and the appliance plugs into the meter. A small screen shows the watts right now, and — if you leave it in place — the kilowatt-hours used since you plugged it in, along with how long it has been counting. Some models let you enter your price per kWh and show cost.

Measuring an appliance, step by step

1. Plug the meter into a wall outlet, then plug the appliance into the meter.
2. Press the button that shows **watts** to see the draw right now. Note it.
3. Leave it in place for three to seven full days for anything that cycles (fridge, freezer, dehumidifier).
4. Press the button that shows **kWh**, and the one that shows elapsed time. Write both down.
5. Divide kWh by the number of days to get kWh per day, then use Recipe 2 in Chapter 7.

> **TIP**
>
> **Write the numbers before you unplug**
>
> Many simple meters forget their totals when unplugged. Jot down the kWh and the elapsed time first.

Plug-in meter or smart plug?

	Plug-in meter	Energy-tracking smart plug
App or account	None	Yes
Wi-Fi	Not needed	Needed
Charts over time	No — totals only	Yes, by day, week and month
Can turn things on and off remotely	No	Yes
Best for	A quick check of one appliance; people who'd rather skip apps	Watching over time, or checking from afar

GOOD TO KNOW

Same safety rules apply

A plug-in meter has a maximum rating, just like a smart plug. Check the label, and keep space heaters plugged straight into the wall.

WHAT THIS DOES FOR YOU

What this does for you

A plug-in meter answers "how much does this use?" with nothing to install and nothing to log into — a perfect loaner to pass around the family.

PART 4

Whole-Home Monitors

Monitors that watch the whole house at once: how they work, the Emporia Vue 3, what Sense owners should know now, and why the installation belongs to a licensed electrician.

CHAPTER 14

How Whole-Home Monitors Work

A smart plug watches one appliance. A **whole-home monitor** watches everything — the furnace blower, the well pump, the electric dryer, the water heater, the lights — all at once, in real time, on your phone.

The parts

- **The monitor itself** — a small box that sits inside or right beside your breaker panel and connects to your home Wi-Fi.
- **Main sensors** — two clamp-on rings, called **current transformers** or **CTs**, that clip around the big wires coming into the panel. They measure everything the house uses.
- **Circuit sensors** (on some monitors) — smaller clamps that go around the wires of individual circuits, so you can see the dryer, the air conditioner or the kitchen separately.
- **The app** — where all the numbers and charts show up.

The clamps don't cut or connect to any wire; they sense the current flowing through it. But to put them on, someone has to remove the panel's cover and work right next to live, high-power wiring. That's why Chapter 17 matters so much.

What a whole-home monitor shows you

- Your whole home's power use right now, updated every few seconds.
- Daily, weekly and monthly totals, which you can compare with your bill.
- Your always-on baseline (Chapter 8) at a glance.
- With circuit sensors: which circuits use the most — often the clearest answer to "where does it all go?"
- If you have solar panels: how much you're producing as well as using (Chapter 19).

Is it right for you?

A whole-home monitor makes most sense if…	You can probably skip it if…
You have electric heat, a heat pump, a well pump or other big electric loads you want to understand	Your questions are about one or two appliances — a smart plug or plug-in meter will do
You have, or are adding, solar panels or an electric car	Your utility's online account already shows hourly usage and that's enough detail for you
You enjoy charts and want the full picture	You'd rather not pay for an electrician's visit

WHAT THIS DOES FOR YOU

What this does for you

Instead of testing appliances one at a time, you see the whole house at once — and the big spenders simply stand out on the chart.

CHAPTER 15

The Emporia Vue 3

The **Emporia Vue 3** is Emporia Energy's current whole-home monitor, introduced in 2024. It's a popular choice for homes because it can watch many individual circuits for a modest price.

What comes in the box

- The Vue 3 monitor.
- Two main sensors that clamp around the incoming service wires (Emporia sells versions with 200-amp main sensors).
- In the popular kit, **16 circuit-level sensors** rated for 50-amp circuits, so you can watch individual circuits such as the furnace, dryer, range or air conditioner.

What it costs (as of November 2026)

Emporia's own store listed the **Vue 3 with 16 circuit sensors at $199.99** when this guide was checked in November 2026 — the same price Emporia announced at launch. Emporia also sells a bundle that adds a four-pack of its smart plugs. Store prices change, and other retailers may differ. On top of the monitor, budget for an **electrician's visit** to install it; ask a local electrician for a quote.

HEADS UP

Pick the right version

Emporia also sells a **3-phase** Vue 3, which costs more. Three-phase power is used in commercial buildings, not ordinary houses. A typical Portage County home needs the standard (single-phase) Vue 3. Your electrician can confirm.

How it gets set up

1. A licensed electrician mounts the monitor and installs the sensors in your panel (Chapter 17).
2. You — or the electrician — install the free **Emporia** app on your phone and create an account.
3. The app connects the monitor to your home Wi-Fi.

4. In the app, you name each circuit to match your panel's labels: **Furnace**, **Dryer**, **Kitchen outlets**, and so on. Good names now make the charts readable later.
5. Let it run a week before drawing conclusions.

TIP

Fix the panel labels first

If your breaker panel's labels are faded, guessed, or say "misc," ask the electrician to help confirm them during the visit. A monitor is only as clear as the names you give its circuits.

Emporia's smart plugs and the Vue

Emporia's energy-monitoring smart plugs show up in the same app as the Vue. Emporia says that, used together, you can see what share of a circuit's energy a plugged-in device is using — for example, how much of the "living room outlets" circuit is really the TV setup.

WHAT THIS DOES FOR YOU

What this does for you

For a couple of hundred dollars plus an electrician's visit, you get a live picture of every major circuit in the house — the clearest answer there is to "where does our electricity go?"

CHAPTER 16

Sense Monitors: What Owners Should Know Now

Sense was one of the best-known whole-home monitors. It was famous for trying to recognize individual appliances — "the dryer just turned on" — from the main wires alone, without a sensor on each circuit. If you already have one, here's what has changed.

Sense stopped selling its monitor

Sense announced that it would stop selling the **Sense Home Energy Monitor** on **December 31, 2025**, or when its inventory ran out, whichever came first, and said the decision is permanent. The company is moving its technology into next-generation **smart meters** that utilities install.

If you already own one

Sense says existing monitor owners continue to get:

- App and firmware updates.
- Ongoing improvements to device detection.
- Access to their energy data.
- Security patches.
- Customer support.

TIP

Keep it running — and keep your data

If your Sense is working, there's no reason to rip it out. Keep the app updated, make sure the monitor stays on your Wi-Fi, and if the app offers a data export, save a copy of your history now and then.

Sense and Kasa smart plugs

Sense can use certain Kasa energy-monitoring plugs to see appliances it can't identify on its own. Sense's help page lists the Kasa **KP125**, **KP125M** and **EP25** as compatible, and notes that the Matter-enabled KP125M must be set up with TP-Link's **Tapo** app to work with Sense.

Sense in smart meters

Sense says its software will only be available to a household if that household's utility has adopted next-generation meters that support it. As this guide was written, we could not confirm any such program for FirstEnergy customers in Ohio. If one arrives, your utility will announce it.

HEADS UP

Buying a used or "new old stock" Sense

You may still see Sense monitors for sale secondhand or as leftover stock. Sense says it's supporting existing monitors, but a used one may have no warranty and may still be tied to the previous owner's account. For a new installation, a currently sold monitor such as the Emporia Vue 3 is the simpler choice.

WHAT THIS DOES FOR YOU

What this does for you

Knowing where Sense stands lets current owners keep enjoying their monitor with confidence — and keeps new buyers from paying for a product that's no longer sold new.

CHAPTER 17

Safety First: The Breaker Panel Is an Electrician's Job

This is the most important chapter in this guide. Every whole-home monitor installs inside or beside your **breaker panel** — the gray metal box with the switches. And the inside of that box is the most dangerous place in your home.

STAY SAFE

Never open the breaker panel yourself

Behind the panel's cover are the main wires from the utility. They stay **live even when the main breaker is off**, and they carry enough power to kill instantly or start a fire. There is no safe way for an untrained person to work in there. Please don't remove the cover, don't let a handy neighbor do it, and don't let any online video convince you otherwise. Hire a **licensed electrician**.

What the manufacturers say

Emporia's help center says that in many places a professional isn't legally required, but that some jurisdictions require a licensed electrician for any work inside a service panel, and that professional installation is sometimes simply the right call. Emporia's Vue 3 installation guide recommends that installation be done by a licensed electrician or other qualified professional, following the local electrical code. Our advice is simple: for anyone reading this guide, the right call is an electrician.

How to hire an electrician for a monitor

1. Buy the monitor first, or tell the electrician exactly which model you plan to buy.
2. Call a licensed local electrician and say: "I'd like a home energy monitor installed in my panel. Can you send me a quote?"
3. Send them the maker's installation guide ahead of time, so they can plan.
4. Ask whether a permit is needed in your community, and whether it's included.
5. Ask them to confirm or fix the panel labels while they're there — it makes the app far more useful.
6. Be home for the visit. Have your phone, Wi-Fi password and the app ready, so setup can be finished before they leave.

TIP

Combine visits

If you're already planning electrical work — a new circuit, an EV charger, a generator transfer switch — ask to add the monitor to the same visit. It can save a separate trip charge. For EV chargers, see our Home EV Charging guide.

HEADS UP

Things you *can* safely do

You can read the labels on the panel door, flip a breaker that has tripped back on (once — if it trips again, call an electrician), and keep the area in front of the panel clear. Anything that involves removing a cover or touching wires is not a do-it-yourself job.

WHAT THIS DOES FOR YOU

What this does for you

An electrician's visit costs money, but it buys a safe, code-correct installation and readings you can trust — and it keeps the riskiest part of this hobby out of your hands entirely.

PART 5

Your Utility's Own Data

The free usage information your electric company may already keep for you, and a brief look at solar panels and electric cars.

CHAPTER 18

Your Smart Meter and Your Online Account

Before buying anything, look at what your electric company already measures. Many homes now have a **smart meter** — a digital meter that sends readings to the utility automatically, instead of someone walking up to read the dial. Those readings can feed a usage chart in your online account, often free.

Do you have a smart meter?

- A smart meter has a digital display rather than spinning dials.
- FirstEnergy installs smart meters for its Ohio customers, and some of its programs, such as the time-of-day rate, require one. If you're not sure, your bill or a call to the utility will tell you.

Finding your usage online (FirstEnergy customers)

1. On a computer or phone, type **firstenergycorp.com** into the address bar yourself. Don't follow a link from an unexpected email or text.
2. Sign in to your account, or choose to register one. Have a paper bill handy; registering usually asks for your account number.
3. Look for **Analyze Usage** in your account.
4. Switch between views by month and by day, and by hour if it's offered for your meter.
5. Compare this year with last year, and look for days that stand out.

> TIP
> **If you're served by a different utility**
> Co-ops, municipal utilities and other companies offer their own portals. Look on your bill for the website, sign in, and look for words like **usage**, **energy use**, or **analyze**.

What to look for in the utility's charts

- **Season by season:** a big winter bump suggests electric heat or a heat pump; a summer bump is usually air conditioning.
- **Day by day:** a spike on a day you were away points to something running without you.
- **Hour by hour** (if offered): the overnight low is your always-on baseline (Chapter 8).

GOOD TO KNOW

Utility data is the official number

Your bill is calculated from the utility's meter, so its charts are the ones that match your bill. Smart plugs and whole-home monitors add the detail of *which* appliance; the utility gives you the official total.

SCAM ALERT

"Your smart meter is faulty — pay for a replacement"

Your utility owns the meter. If someone calls, texts or knocks saying you must pay them to replace or "upgrade" your meter, it's a scam. FirstEnergy employees carry photo identification. Close the door and call the number on your bill.

WHAT THIS DOES FOR YOU

What this does for you

Five minutes in your online account can show your whole year at a glance — for free — and tells you whether you even need a monitor to answer your question.

CHAPTER 19

Solar Panels, Electric Cars and Big Changes

A few big changes make energy monitoring especially worthwhile. This chapter is a brief orientation; the details belong to your installer, your utility and our other guides.

If you have solar panels

With solar, two questions matter: how much are the panels making, and how much is the house using? Your solar system usually has its own app for production. A whole-home monitor set up for solar — Emporia lists solar and net metering among the Vue 3's uses — can show production and use side by side. Setting this up means more sensors in the panel, so it's a job for the solar installer or an electrician.

HEADS UP

Read solar savings claims carefully

Monitoring can help you check whether a solar system is performing as promised. Be wary of any salesperson who promises a specific bill amount or "free electricity" — ask for everything in writing and take a few days to decide.

If you have, or are getting, an electric car

Charging a car at home can become one of the largest loads in the house. A whole-home monitor with a circuit sensor on the charger's circuit shows exactly what the car costs to fuel, and when. If your utility offers a time-of-day rate, charging overnight may cost less — FirstEnergy's Ohio option is covered in "Ways Energy Monitoring Can Make Life Easier." For chargers, plugs and scheduling, see our Home EV Charging guide.

If you've just made a big change

- **New heat pump or furnace:** compare this winter's kWh with last winter's, keeping in mind that a colder winter uses more.
- **New smart thermostat:** its own app shows heating and cooling run-time. See our Smart Thermostats guide for using those reports.
- **New appliance:** measure it for a week and compare with the old one's numbers.
- **Someone moved in or out:** expect usage to change, and give it a month before drawing conclusions.

TIP

Compare like with like

Weather drives so much of home energy use that comparing a mild month with a harsh one can mislead. When you can, compare the same month year over year, or kWh per day during similar weather.

WHAT THIS DOES FOR YOU

What this does for you

Big purchases deserve proof. A little monitoring tells you whether the solar panels, the new heat pump or the car's charging schedule are delivering what you paid for.

PART 6

Putting the Numbers to Work

A weekend plan for finding your energy hogs, checking on a loved one's routine kindly and honestly, and keeping your energy data private.

CHAPTER 20

Finding Your Energy Hogs: A Weekend Plan

Here's a simple, unhurried plan that works with one smart plug or plug-in meter. Spread it over a week or two if you like — there's no rush.

Step one: make a short suspect list

These are the usual suspects in many homes. Tick the ones you have:

- A second refrigerator or chest freezer, especially an older one in a garage or basement.
- A dehumidifier that runs much of the summer.
- A space heater used every evening (do the math from its label — don't put it on a plug).
- A waterbed heater, aquarium heater, or heated pet bed.
- The entertainment center: TV, cable or satellite box, sound bar, game console.
- A computer and printer left on around the clock.
- An electric water heater, well pump or sump pump (these are on their own circuits; a whole-home monitor or the utility's hourly data is the way to see them).

Step two: measure, one at a time

1. Start with your biggest suspect. Plug it into the smart plug or meter.
2. Leave it for three to seven full days.
3. Write down kWh per day.
4. Turn it into dollars per year with Recipe 2 in Chapter 7.
5. Move the plug to the next suspect, rename it in the app, and repeat.

Step three: write up your results

Appliance	kWh per day	Cost per year (your rate)	Idea
Example: garage freezer	2.0	about $110 at 15 cents	Is it needed all year?

The example row uses made-up numbers. Fill in your own.

Step four: choose the easy wins

- **Unplug or retire** things you don't really need, like a nearly empty second fridge.
- **Schedule** things that don't need to run all the time (a smart plug on a timer for the spare-room TV setup).
- **Adjust** settings — a dehumidifier set drier than necessary, or a freezer set colder than the maker recommends.
- **Maintain** — clean refrigerator coils and check door seals as the owner's manual suggests.
- **Replace** only when the math (Recipe 3) or the appliance's condition says it's time. ENERGY STAR certified models are a sensible place to look.

TIP

Heating and cooling are the giants

In most homes, heating and cooling use more energy than anything you can plug in. If you have a smart thermostat, a sensible schedule usually saves more than chasing small gadgets. Our Smart Thermostats guide covers that.

WHAT THIS DOES FOR YOU

What this does for you

A week or two of patient measuring gives you a short, clear list of what's worth changing — and peace of mind about everything that isn't.

CHAPTER 21

Checking on a Loved One's Routine — Kindly and Honestly

Families sometimes use energy monitoring as a gentle, low-tech way to know that a parent who lives alone is up and about. If the coffee maker comes on around 7 most mornings, seeing that it did can be a quiet reassurance from miles away. Done well, it respects independence. Done carelessly, it can feel like spying. Here's how to do it well.

Start with a conversation, not a gadget

- Ask first. Explain exactly what you'd see ("just when the coffee maker turns on") and what you wouldn't (no cameras, no microphones, no conversations).
- Let them choose the appliance. It's their kitchen.
- Agree on what happens if the pattern looks unusual — usually just a friendly phone call.
- Agree that they can say "stop" any time, and mean it.

Setting it up

1. Choose an appliance they use at a predictable time — a coffee maker, an electric kettle, a lamp they switch on each morning, or the TV.
2. Set up an energy-tracking smart plug for it (Chapter 10), using an account you both can sign in to, or using the app's sharing feature if it has one.
3. Make sure no schedules or timers are set — you're only watching, not switching.
4. Glance at the plug's chart once a day: you're looking for the usual morning bump.

HEADS UP

This is not an emergency system

An energy chart can't call for help, and a quiet morning has many innocent explanations: they slept in, went out for breakfast, or the plug lost Wi-Fi. Don't rely on it for safety. If falls or medical emergencies are a concern, a medical alert device with a help button, or a smartwatch with fall detection, is designed for that job.

TIP

Pair it with a daily call

The kindest use of a chart is as a reason to call, not a substitute for calling. "I saw the coffee pot was on early — couldn't sleep?" is a nice way to start a conversation.

WHAT THIS DOES FOR YOU

What this does for you

With honesty and permission, a single plug can ease a family's worry while letting a parent live exactly as they choose.

CHAPTER 22

Privacy and Your Energy Data

Energy data seems harmless — it's just numbers. But detailed usage can reveal when people are home, asleep or away. A little care keeps that information in the right hands.

What your energy data can reveal

- When the house is usually empty (low use during the day, or for a week while you travel).
- When people wake up and go to bed.
- Which appliances you own and how often you use them.

Sensible habits

1. Use a **strong, unique password** for each energy app and your utility account, and turn on two-step verification wherever it's offered.
2. Share access thoughtfully. Use an app's sharing feature, if it has one, rather than handing out your main password.
3. Read the app's privacy settings once. Turn off any data sharing or marketing you don't want.
4. Be careful about posting energy charts on social media; they can hint at when you're away.
5. When you sell or give away a monitor or plug, remove it from your account and factory-reset it first.

SCAM ALERT

"Verify your energy account" messages

Scammers send emails and texts pretending to be your utility or an app company, claiming your account is locked, a payment failed, or a refund is waiting — with a link to "verify." Don't click. Open the real app, or type the utility's address yourself, and check there.

GOOD TO KNOW

Who else sees your data

Your utility already has your meter data; that's how it bills you. Apps from plug and monitor makers store your data on their servers so you can see it on your phone. If you'd rather keep everything offline, a plug-in meter (Chapter 13) stores nothing anywhere.

WHAT THIS DOES FOR YOU

What this does for you

These small habits let you enjoy all the insight without broadcasting your daily routine to strangers.

PART 7

When Things Go Wrong

Plugs that go offline, numbers that look wrong, and the scams that target people worried about their electric bill.

CHAPTER 23

Plug Offline or Numbers Look Wrong

Energy gadgets are usually set-and-forget, but now and then a plug drops off the Wi-Fi or a chart shows something that can't be right. Work through these in order — most problems are fixed by the first two or three steps.

When a plug shows "offline" or "not responding"

1. Check that the appliance and the plug actually have power — is the outlet controlled by a wall switch that someone turned off? Did a breaker trip?
2. Check your internet. If other devices are offline too, restart your modem and router: unplug them, wait 30 seconds, plug the modem in, wait two minutes, then plug in the router.
3. Unplug the smart plug from the wall, wait 10 seconds, and plug it back in. Give it a minute to reconnect.
4. Close the app completely and reopen it. Make sure the app is up to date.
5. If you changed your Wi-Fi name or password recently, the plug won't know. You'll need to set it up again in the app (Chapter 10).
6. If the plug is far from the router, try a closer outlet to see if it's a Wi-Fi strength problem.
7. As a last resort, remove the plug from the app, factory-reset it using the maker's instructions, and set it up fresh. You'll lose its stored history, so only do this when nothing else works.

GOOD TO KNOW

Lost Wi-Fi means lost readings — sometimes

While a plug is offline, the app may show a gap in the chart. Some plugs catch up when they reconnect; others don't. A gap in the chart doesn't mean the appliance stopped.

When the numbers look wrong

What you see	Likely reason	What to do
The plug's total doesn't match the bill	It measures one appliance, not the house, and the dates differ	Compare with your bill's kWh only for the whole house (utility account or whole-home monitor)
Zero watts while the appliance is running	The plug is switched off in the app, or the appliance is plugged into a different outlet	Check the plug's on/off state and the cord
Cost estimate seems far off	The rate entered in the app is wrong or missing	Enter your all-in rate from Chapter 6
A whole-home monitor shows negative use with no solar	A sensor is clamped the wrong way round or is assigned wrongly	Call the electrician who installed it — don't open the panel
A circuit shows nothing	The sensor isn't assigned to the right circuit in the app, or the breaker is off	Check the app's circuit names; ask the installer if it persists
Sudden jump in a fridge or freezer's daily kWh	Door left ajar, a full load of warm food, or a failing part	Check the door and seal; if it stays high, have it looked at

STAY SAFE

Whole-home monitor problems: no panel work

If a whole-home monitor needs a sensor moved, flipped or re-seated, that's work inside the breaker panel. Call the electrician who installed it. Never remove the panel cover yourself.

TIP

Take a screenshot

Before you call anyone for help — the maker, the electrician or me — take a screenshot of the odd chart. It saves a lot of explaining.

WHAT THIS DOES FOR YOU

What this does for you

A calm checklist turns "the app is broken" into a two-minute fix most of the time — and tells you clearly when it's time to call someone.

CHAPTER 24

Energy Scams: Shutoff Threats, Door-Knockers and "Power Saver" Boxes

When electric bills are on people's minds, scammers follow. The good news: the tricks are predictable. Knowing them in advance is most of the protection you need.

SCAM ALERT

"Pay now or your power gets shut off today"

A caller, text or email says you're behind on your electric bill and the power will be cut within the hour unless you pay right now — often with a prepaid card, gift card or payment app. That's a scam. FirstEnergy says customers who are behind receive **written notices**, its representatives won't call or email demanding immediate payment to avoid a same-day shutoff, and it never requires a prepaid card. Hang up, and call the number on your bill.

SCAM ALERT

The fake utility worker at the door

Someone says they're from the electric company and needs to come inside to check the meter, test your wiring, or install an "energy upgrade." Don't let anyone in unless you scheduled the visit and they show company photo ID. FirstEnergy employees carry photo identification. When in doubt, keep the door locked and call the company yourself using the number on your bill.

SCAM ALERT

Plug-in "power saver" boxes

Ads promise a small box that plugs into any outlet and cuts your electric bill dramatically. Independent testers, including UK trading-standards officials and the consumer group Which?, found these devices don't do what they claim; some contain little more than a light. Your energy monitor can prove it: nothing you plug into one outlet can reduce what your other appliances use.

Door-to-door and phone sales for electricity suppliers

Ohio allows you to buy electricity from competitive suppliers, and many make honest offers. But some sales pitches at the door or on the phone use pressure, confusion, or a claim that they're "from the utility." Protect yourself:

- Don't show your bill or read out your account number to anyone who contacts you first.
- Ask for the offer in writing — the price per kWh, how long it lasts, what it becomes afterward, and any cancellation fee.
- Never sign on the spot. Compare the offer with your current rate (Chapter 6) at your own pace.
- If you're not sure whether you've been switched, look at the generation or supplier line on your bill (Chapter 5).

"Free energy audit" pitches

Some sales calls and door-knockers offer a "free energy audit" that turns into a high-pressure pitch for windows, insulation, solar or a mystery device. A real energy assessment can be useful — but book it yourself, with a company you looked up, and never agree to a large purchase the same day.

If you think you've been caught

1. If you paid with a gift card or prepaid card, call the card company right away using the number on the back of the card, and keep the card and receipt.
2. If you paid by credit or debit card, call your bank's fraud number.
3. Call your electric company at the number on your bill to confirm your account is fine.
4. Report it to the Federal Trade Commission at **ReportFraud.ftc.gov**.
5. Call me or a trusted family member. Talking it through helps, and there's nothing to be embarrassed about.

WHAT THIS DOES FOR YOU

What this does for you

Knowing that your real utility sends written notices, carries ID and never wants a gift card takes the power out of every scary call — and keeps your money where it belongs.

PART 8

Help and Quick Reference

When a hand is worth it, and a one-place summary of everything that matters.

CHAPTER 25

When to Call Bill

Plenty of people set up an energy-tracking plug on their own with this guide, and I'm glad when they do. But sometimes a second pair of hands — or eyes — makes the whole thing easier. Here's my honest list.

Good times to call

- You'd like energy-tracking plugs set up on the right appliances, named clearly, with your rate entered so the app shows dollars.
- The app won't find the plug, or a plug keeps dropping off your Wi-Fi.
- You want help reading the charts and turning them into a short list of real savings.
- You'd like to see your utility's usage history online but can't get signed in.
- Your family wants to set up a gentle check-in on a parent's routine, with the right sharing and privacy settings.
- An electrician has installed a whole-home monitor and you'd like help with the app, circuit names and alerts.
- You got a call, text or knock about your electric bill and want a second opinion before doing anything.

What I don't do

I don't open breaker panels or install whole-home monitor sensors — that's a licensed electrician's job, and I'll tell you so. I'm happy to help you prepare for the electrician's visit and finish the app setup afterward.

What working with me is like

I serve Portage County, Ohio, and I've spent more than 30 years working professionally with technology. We go at your pace. I explain what I'm doing as I do it, I write down anything you'll want to remember, and I never make you feel rushed or silly for asking. I can help remotely, or come to your home.

FROM BILL

Energy Monitoring Setup with Bill

$49 remote · $99 in your home. Call **(330) 200-8042** or book at **billshometech.com/book**. Tell me which plugs or monitor you have (or are thinking of buying), and we'll get them measuring the things you care about.

GOOD TO KNOW

Who answers the phone

When I'm with another client, my AI receptionist, **Sophie**, may answer the phone or the chat on my website. She can take your details and book a time for us to talk or meet.

WHAT THIS DOES FOR YOU

What this does for you

An hour of help often turns a drawer of gadgets and a confusing app into a clear, working setup — and a short list of changes that actually lower your bill.

CHAPTER 26

Your Energy Monitoring Cheat-Sheet

Everything that matters, in one place. Keep it handy.

The essentials

Item	Remember
Watts (W)	How hard something is working right now. 1,000 watts = 1 kilowatt.
Kilowatt-hour (kWh)	Energy used over time — what your bill charges for. 1,000 watts for 1 hour = 1 kWh.
Volts × amps = watts	120 volts × 15 amps = 1,800 watts. Stay well under a plug's rating.
Cost of anything	watts × hours ÷ 1,000 × your rate.
Your price per kWh	Electric charges for one period ÷ kWh used that period.
Standby power	What things draw while "off." Find it overnight on a whole-home monitor or hourly utility data.
Never on a smart plug	Space heaters and other heat-makers; medical equipment. Space heaters go straight into the wall.
Breaker panel	Never open it. Whole-home monitors are installed by a licensed electrician.
Sense	Monitor no longer sold new (since end of 2025); existing monitors still supported.
Your real utility	Sends written shutoff notices, carries photo ID, never asks for gift cards.
Report a scam	ReportFraud.ftc.gov

Write it down once

What	Mine
Electric company	_____
Account number (keep private)	_____
Phone number from my bill	_____
Supplier (if any)	_____
My price per kWh	_____ cents (worked out on ____/____)
Typical monthly kWh, summer / winter	_____ / _____
Energy app(s) I use	_____
App account email	_____
Electrician (name and phone)	_____

When something's wrong, in order

1. Is the outlet and appliance getting power? Check wall switches and breakers.
2. Is the internet working? Restart the modem and router if not.
3. Unplug the smart plug for 10 seconds and plug it back in.
4. Close and reopen the app; update it.
5. Changed your Wi-Fi? Set the plug up again.
6. Numbers odd? Check the rate in the app and the plug's name and on/off state.
7. Whole-home monitor problem? Call the electrician — no panel work.
8. Still stuck? Call Bill at (330) 200-8042.

WHAT THIS DOES FOR YOU

What this does for you

One page of reminders means you never have to hunt through the whole guide for the one fact you need.

— Bill