



by Schneider Electric

## FAQ

# 8 Facts That Will Change How You Think About Smart Home Energy Monitors

As energy costs continue to rise, calls for reducing carbon consumption grow louder, and homeowners look for ways to save on their electric utility bills, demand will continue to grow for tools and solutions that give residential customers better visibility into how they use energy — and how they can better manage it.

Home energy monitors represent one of the most powerful tools for accomplishing those goals. Let's take a look at what they are, how they work, and the peace of mind they can give your customers.

### What are smart home energy monitors?

Like the name implies, smart home energy monitors are installed at a home's load center to monitor energy consumption and provide real-time load data to homeowners. The energy consumption data can be delivered in many forms, from an intuitively designed in-app dashboard that's accessible on any mobile device to alerts that can make the homeowner aware of abnormal operating conditions.

### Who would benefit most from a smart home energy monitor?

Although anyone could use more insight into their energy usage, at present, homeowners with solar photovoltaic (PV) systems will likely get the most out of a smart home energy monitor. Solar systems are large investments, and thus, anyone who has one likely wants to know that they're getting a good return on that investment. And the easiest way to do that is with detailed information about how efficiently their PV system is running.

Not only do smart home energy monitors track energy consumption, they can also provide real-time insight into how much energy a PV system is generating. It's the kind of easy-to-understand data that can give homeowners the peace of mind they need to know that they're managing their power generation and consumption most efficiently.

And as more states follow California, which recently passed a law requiring all new homes built in 2020 to be equipped with a solar PV system, demand for smart home monitors will only rise.

**Do you need a solar system to have one installed?**

Not at all. Everyone could benefit from detailed insight into their energy usage — not to mention better awareness of how their appliances are functioning and if a potential equipment failure could be in their future. With energy prices seemingly always on the rise, the ability to track usage in detail can be the difference between a manageable utility bill and an end-of-the-month surprise. And who wouldn't appreciate the peace of mind that comes with being able to make sure you didn't leave the oven on — no matter where you are.

**How do they work?**

Once installed, the energy monitor leverages machine learning to identify and distinguish each device or appliance in the home based on its unique electrical signature. Consumption, power anomalies, outages — all relevant data — is captured, optimized for the homeowner's use, and distributed to their laptops, tablets, or smartphones via the home's already in-place Wi-Fi network.

**How difficult are they to install?**

In most cases, installation of the energy monitoring hub and power line adapter at the load center is a breeze. And a commissioning app for contractors and installation professionals allows for the virtual identification and labeling of circuits and the safe and easy pass-off of monitoring control to the homeowner.

**How does the homeowner receive the data?**

Charts, graphs, clear and concise numbers — the real-time data collected by smart home energy monitors — are meant to convey the most important and actionable information to homeowners about their energy usage. Best of all, it's all accessible via a customizable dashboard that can be viewed on any laptop, tablet, or smartphone on the home's Wi-Fi network.

And that's just the data they seek out themselves. Homeowners can also be notified of power abnormalities by customizable alerts.

### What kind of data do they get?

The better question might be, what kind of data *won't* they get? From consumption to generation, homeowners will know —wherever they are, thanks to real-time access to data in the cloud — how efficiently their home's electrical power system and its devices are functioning. Which appliances are on, which appliances are functioning properly, which appliances may need maintenance soon — relevant, actionable data is available and accessible at any time via the app.

Not only that, homeowners can create budgets based on past energy consumption levels and optimize usage of high-consumption, non-critical appliances during high pricing periods (if they're operating under a time-of-use rate plan), giving them the confidence to better manage all their devices and appliances for their unique energy needs. The system can even detect if an electric car is plugged into the home's charging station and provide real-time information on its performance.

### How specific can the data get?

Very specific. Some smart home energy monitors can identify appliances right down to the make and model. And as more homes are equipped with these energy monitors, the resulting network effect will only strengthen the monitors' machine learning capabilities, making the data that much more detailed.

In more practical terms, though, the already powerful data available can give homeowners the power to predict their monthly electric bill so they can budget accordingly.

Whether a customer is trying to go green or just save money on their next energy bill, smart home energy monitors are a valuable tool for giving them visibility into how efficiently their home's energy system is operating.