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By Sarah Morgan

How You Can Prevent Electric Bill Shock

Imagine a grocery store with no prices. Shoppers fill their carts, check out without paying, and then receive a bill at the end of the month that simply says “FOOD: \$450.” Sound ridiculous? That’s essentially how electricity bills work now, says Merrilee Harrigan, the vice president for education at the Alliance to Save Energy

But not for long. As the country becomes more energy conscious, utilities are moving to meet regulatory requirements curbing consumption and to avoid building new capacity. To achieve those goals, they are giving consumers more detailed information about how their bills are calculated, and more responsibility for conserving power. In California, Texas and other states, local utilities have started introducing smart meters that capture real-time energy use. In other places, there are plans to introduce pricing systems that charge more for usage during peak demand periods. “We’re in a phase where [utilities are] opening the kimono and giving you a lot more information about how they charge you,” says Teresa Mastrangelo, an analyst with SmartGridTrends.

There are clear benefits here for the consumer, as well. With more information, they have more control over how much they spend each month. Even people who know the general rules of how to [cut electricity bills](#) can be surprised when they see real data about their daily power use. Harrigan, who runs programs that teach K-12 and college students how to understand energy and make their schools more energy-efficient, says that simple devices helped her find a surprising power drain in her own home. “I had no clue that my espresso maker would use so much,” Harrigan says.

In the meantime, “if [consumers] want to be proactive, there are tools available today. They do not have to wait on their utility” to get a clear picture of their energy usage, Mastrangelo says. Here are some strategies that consumers can use to find those hidden power drains in their own homes:

Go online

Many utilities already offer [online tools](#) that help customers understand how much various gadgets and appliances add to their electric bills. Unfortunately, most haven’t done a good job of promoting these tools, Mastrangelo says.

Those whose utilities don’t offer such tools can try others like [Microsoft Hohm](#), which gives users a “Hohm Score” rating their energy efficiency and shows them how their usage compares with their neighbors’. Another free web tool, [EarthAid.net](#), showed Harrigan she wasn’t as frugal as she’d thought when compared to other users of the site.

Take one appliance at a time

For less than \$25, you can buy a [Kill-a-Watt](#), a device which measures the cost of running a given gadget or appliance. Kill-a-Watts are also available free in many public libraries. In addition, [smart power strips](#) can automatically shut down some electronics when they're not in use.

Monitor a whole house

The [Power Cost Monitor](#) captures real-time data on power use without a smart meter, says Jessica Brahaney Cain, director of customer solutions at Connecticut Light & Power. It costs about \$100 and attaches to a consumer's meter. It tends to drain batteries quickly, but is simple to install without professional help, Cain says. Another option, [The Energy Detective](#), must be installed by an electrician and costs between \$200 and \$500. Newer models work with [Google PowerMeter](#), which stores data on power use and helps create a "power budget" to track progress towards conservation goals.

Many utilities offer rebates or other incentives for customers to get [home energy audits](#), Cain says. Auditors will recommend needed improvements and even change lightbulbs.

Make it automatic

More elaborate systems can automatically or remotely adjust a home's temperature and lighting. A custom-designed system from [Control4](#) could create a "green button" on a keypad that would adjust the temperature, turn off the power to certain outlets to minimize standby power drain, and so on. These systems must be installed by a company-approved dealer. Costs will vary but could run around \$1,800, including installation fees.

Some utilities may also start offering gadgets that would track or control home energy use to customers who get smart meters. **GE** ([GE](#): 15.23*, +0.39, +2.62%), for example, has just launched the [Nucleus](#), a device that connects to a PC or smartphone to display smart meter data and eventually allow remote adjustments to smart appliances. It will be sold to utilities initially but should eventually be available retail for about \$150 to \$200. **Cisco** ([CSCO](#): 23.19*, +0.63, +2.79%) has developed a touchscreen [Home Energy Controller](#), also available through utilities initially, that will ultimately communicate with both smart meters and smart appliances and could also connect to the internet. Currently it costs utilities \$900 for the device plus back-end services, but the price should drop before it's available retail.

The idea of utilities providing or selling in-home gadgets may not last beyond pilot programs, however, because it's not a business they've traditionally been in, Mastrangelo says. "I think it helps when a utility provides these initially, but longer term we'd rather see more of a retail model," she says.