

Energy Vampires: Fact versus fiction

By Lori Bongiorno



It's well-known that most electronic devices in our homes are sucking up energy even while they are turned off. But for all the information out there, many questions remain. I got hundreds of reader questions after writing the post [What's wasting energy in your home right now](#). Below are answers to the five most common inquiries:

Which electronic devices waste the most energy when they are turned off but still plugged in? Set-top cable boxes and digital video recorders are some of the biggest energy hogs. Unfortunately, there's little consumers can do since television shows can't be taped if boxes are unplugged. It also typically takes a long time to reboot boxes. However, some of the other major consumers of standby power are more easily dealt with: computers, multifunction printers, flat-screen TVs, DVDs, VCRs, CD players, power tools, and hand-held vacuums. The Lawrence Berkeley National Laboratory (LBNL) measured standby power for a long list of products.

While it's true each individual product draws relatively little standby power, the LBNL says that when added together, standby power can amount to 10% of residential energy use.

Why do electronic devices use energy when they are switched off?

Electronics consume standby power for one of two reasons, says Chris Kielich of the Department of Energy. They either have an adapter that will continue to draw electricity, or they have devices (such as clocks and touchpads) that draw power. Anything with a remote control will also draw standby power, she says, since the device needs to be able to detect the remote when it's pushed.

Does everything suck energy when it's plugged in and turned off?

No. If your coffeemaker or toaster doesn't have a clock, then it's probably not using standby power, says Kielich. Chances are your hair dryer and lamps (although they may have a power adapter for the dimmer) are not drawing standby power either, she says. Devices with a switch that physically breaks the circuit don't consume standby power.

Will switching things on and off shorten their life?

Probably not, says Kielich. You'd have to turn devices on and off thousands of times to shorten their lives. The real downside, she says, to unplugging electronics is that clocks and remotes will not work, and you do have to reset everything.

Can you ruin batteries by unplugging battery chargers and causing batteries to completely discharge?

It could be a possibility, says Kielich. Her advice: Don't let batteries get completely drained. But you don't need to have things like hand-held power vacuums and drills plugged into the charger when it's 100% charged, or even 50% charged.

Power Strip FAQs

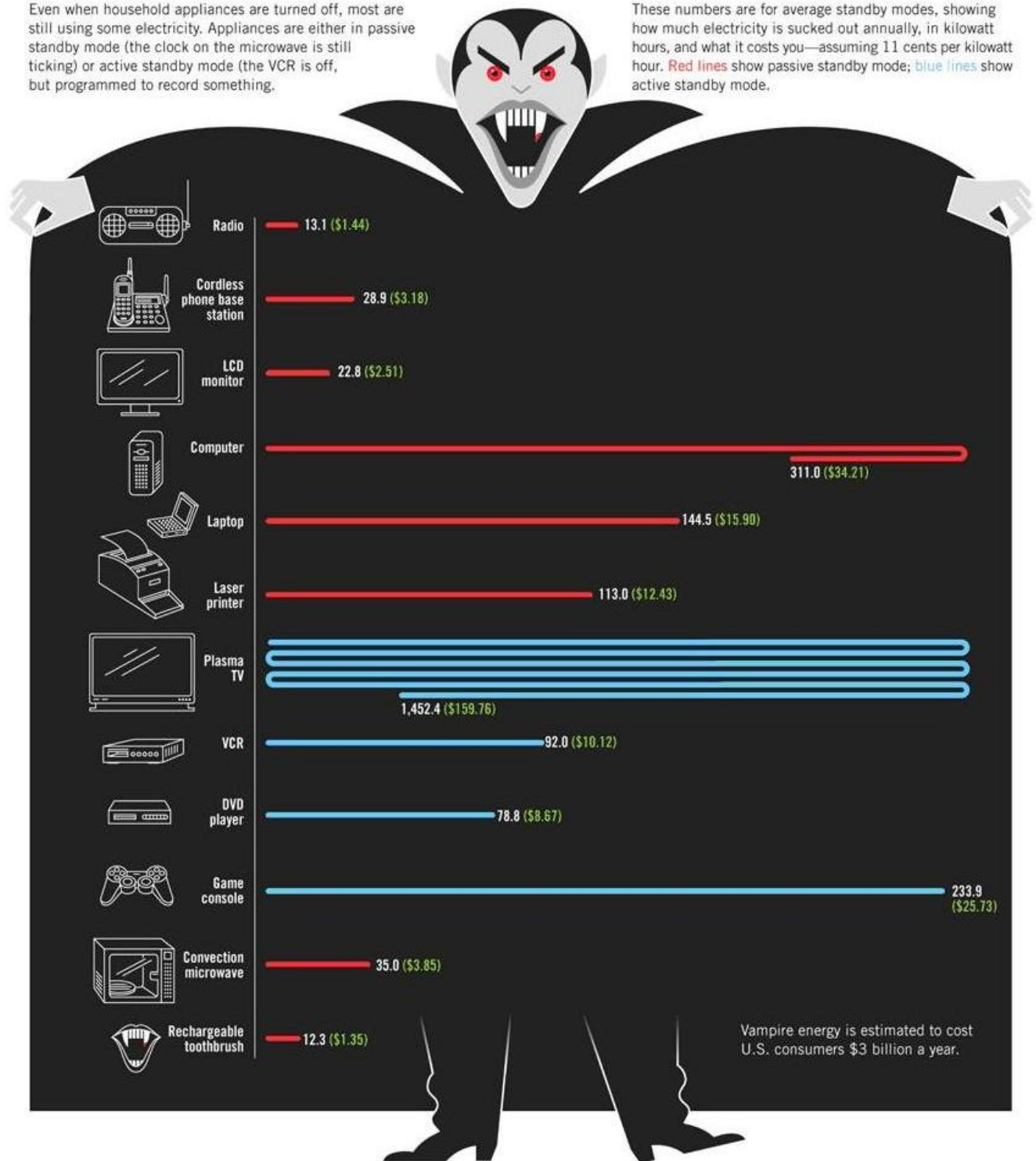
Plugging electronics into a power strip and turning it off when you're not using it is a widely prescribed solution for curbing vampire power. Here are answers to common questions:

- Power strips draw energy when they are turned on, but not when they are switched off.
- Any decent power strip should have surge protection, according to Kielich. Flicking your power strip on and off will not create a power surge capable of damaging electronic devices. In fact, it will protect devices from other surges.
- Several readers were worried about the possibility of fires caused by plugging too many things in at once. If you plug in the allowed number of devices, then power strips are safe, says Kielich. Just don't plug your power strip into another power strip, or you run the risk of creating an overload.

ENERGY VAMPIRE

Even when household appliances are turned off, most are still using some electricity. Appliances are either in passive standby mode (the clock on the microwave is still ticking) or active standby mode (the VCR is off, but programmed to record something).

These numbers are for average standby modes, showing how much electricity is sucked out annually, in kilowatt hours, and what it costs you—assuming 11 cents per kilowatt hour. **Red lines** show passive standby mode; **blue lines** show active standby mode.



SOURCES 2005 Intrusive Residential Standby Service Report; Department of Energy

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