



## Phantom loads

### Phantoms revealed

Did you know you may have phantoms in your home? Not the ghosts you see in movies and during Halloween, but energy phantoms. A phantom load is any device that consumes electricity when turned off but still plugged into an outlet. These electronic devices provide the modern-day conveniences we rely on, but they also waste energy and cost money. The U.S. Department of Energy says on average, 75 percent of the electricity used to power home electronics is consumed while the products are turned off.

### Member household phantom load example<sup>1</sup>

Product type	Total phantom loads <sup>2</sup>	Monthly phantom load - energy use (kWh) and cost		Annual phantom load - energy use (kWh) and cost	
Plasma TV (<40")	3 Watts	2.19	\$0.20	26.28	\$2.37
DVR	37 Watts	27.01	\$2.43	324.12	\$29.17
DVD player	1 Watt	0.73	\$0.07	8.76	\$0.79
Audio system	8 Watts	5.84	\$0.53	70.08	\$6.31
Cordless phone	2 Watts	1.46	\$0.13	17.52	\$1.58
Desktop Computer, monitor and speakers	8 Watts	5.84	\$0.53	70.08	\$6.31
Computer modem	5 Watts	3.65	\$0.33	43.80	\$3.94
Multi-function printer	6 Watts	4.38	\$0.39	52.56	\$4.73
Power tool charger	4 Watts	2.94	\$0.26	35.04	\$3.15
<b>Totals</b>	<b>74 Watts</b>	<b>54.04 kWh</b>	<b>\$4.87</b>	<b>648 kWh</b>	<b>\$58.35</b>

Totals shown only reflect the device's use when turned off. Many electronic devices use significantly more energy when on, and on but not running. The above scenario is just an example, your actual phantom loads and total electronics use may be more or less depending on the amount of electronics in your home and how often they are used. If you have more than one of any device, multiply the monthly or yearly totals by the amount of your devices to get your totals.

*\*Costs based on an average rate of 9 cents per kilowatt-hour*

### Finding the phantoms

To find the phantoms lurking in your home, take a closer look at your appliances. Phantom loads can be found in almost every room of a home, though a common spot is the entertainment center.

When the television is turned off, it isn't really off. It's sitting there, waiting for someone to press the on button of the remote, and waiting uses energy. TVs also use energy to remember channel line-ups, language preferences and the time. DVD players, DVRs, video game consoles, cable or satellite boxes and stereos also use energy when turned off.

Home office equipment such as desktop computers, monitors, printers and anything with a digital display such as microwaves and coffee machines are also working against your electric bill. And many of those chargers around the house that keep cell phones, power tools and MP3 players at the ready constantly draw power when plugged in.

<sup>1</sup>For informational purposes only. Check with your product's manual for specifications, as some devices need to stay in standby mode to work properly. Convenience and lifestyle will dictate how you use this information.

<sup>2</sup>Source: American Council for an Energy-Efficient Economy (ACEEE); [www.aceee.org/consumerguide/electronics.htm](http://www.aceee.org/consumerguide/electronics.htm) and Lawrence Berkeley Nation Laboratory; [www.standby.lbl.gov/summary-table.html](http://www.standby.lbl.gov/summary-table.html)

## Banish your phantoms

The best way to get rid of your phantom load is to unplug appliances and electronic devices every night or when not in use, but that isn't convenient or easy to remember. **And some devices need to stay on in a standby mode to work properly.** Here are some additional ideas on how to reduce your phantoms:



- Group appliances and electronics together on power strips and switch on only when needed, however be careful not to overload your power strip.
- Unplug unneeded night lights.
- Screen savers do not reduce energy use by monitors; automatic switching to sleep mode or manually turning

monitors off is a better energy-saving strategy.

- Turn off your computer when not in use for 20 minutes or more and both the computer and monitor if away for two hours or more.
- Unplug battery chargers when the batteries are fully charged or the chargers are not in use.
- Buy ENERGY STAR equipment, in which standby power use may be lower than one watt.
- Purchase and use “smart strips,” which are explained below.

## Take Control & Save with smart strips

Smart strips are advanced power strips that allow you to plug an appliance into a master outlet, which controls the other outlets. For example, you can plug your computer into the master outlet (shown here in blue), and plug speakers, printers and monitors into “automatic” outlets (shown here in white) on the strip. When you turn off your computer (master outlet) all the appliances plugged into the “automatic” outlets will turn off as well. Smart strips usually also have one or two “constant” outlets, shown here in red, which allow for appliances plugged into those to always stay on unless manually turned off.

For more ideas on how to Take Control & Save, contact your local electric cooperative or visit [www.TakeControlAndSave.coop](http://www.TakeControlAndSave.coop).

## Biggest users

### *Battle of the phantoms*

When trying to eliminate your phantoms, you'll get the most energy savings by going after the biggest users first. Here are a couple of the culprits:

**DVRs/TiVos** – DVRs and TiVos use 37 watts even when turned off, which equals 324 kilowatt-hours (kWh) and \$29.17 a year for each DVR or TiVo device you own.

**Home offices** – In many home offices you will find a desktop computer, monitor, speakers, multi-function printer and computer modem. All these devices use a total of 19 Watts, which equals 166 kWh and almost \$15 a year just to keep the equipment plugged in. Your use and cost increases the more that the equipment is on and functioning.

*\*See chart on front page for references.*



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