



## Office of the Ohio Consumers' Counsel

Your Residential Utility Consumer Advocate

# CONSUMERS' FAQ

### Office of the Ohio Consumers' Counsel

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# FREQUENTLY ASKED QUESTIONS ABOUT VAMPIRE POWER



Even after you turn off household appliances and electronics, devices left plugged in continue to use power and add to your electric bill. The power used by electronic devices while not in use is known as standby power, or “vampire power,” and according to ENERGY STAR the average household spends \$100 every year on vampire power. Devices using vampire power cost Americans \$19 billion annually, according to the National Resources Defense Council. The Office of the Ohio Consumers' Counsel, the residential utility advocate, has answered these common questions about vampire power.

### **Q. Which devices use vampire power?**

A. Many everyday appliances and electronic devices like TVs, microwaves, computers and even clock radios use power while plugged in or in standby mode. Items that have a digital display, charger, key pad or remote control usually use vampire power.

### **Q. What can you do to control or eliminate vampire power?**

- A. You should be aware of the devices that are not in use but may be using vampire power. Consult owners' manuals and product specifications for details about how much vampire power, sometimes called “minimum power,” is used and if it is appropriate to unplug the devices. (Be aware that unplugging a device could erase personal settings or programmed data.) You can also take these steps to use less power:
- ▶ Only connect devices to chargers while they are charging. Many devices have a light or indicator that indicates when batteries are fully charged. For example, a red light may change to green;
  - ▶ Do not leave chargers plugged into an outlet when not charging;
  - ▶ Shut down computers instead of logging off. Turn off monitors instead of leaving them in sleep mode; and
  - ▶ Unplug devices that are rarely used or when away from home for several days.

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**Q. Which devices use the most vampire power?**

A. Devices vary in their vampire power usage. However, the average home has 25 electronic devices, and the combined vampire power usage can be surprising. For example, a computer and monitor use about 22.5 watts of electricity combined while in standby mode. A digital cable box, television, DVD player and video game console use about 30 watts combined.

Experts indicate that in the future you may use more vampire power as more devices are created with microchips and are connected to the Internet.

**Q. Is vampire power necessary?**

A. Some vampire power is necessary for functionality and convenience. Vampire power enables monitoring of refrigerator temperatures, allows use of remote controls, keeps digital clocks running and charges cellular phones. But experts indicate most vampire power is wasteful because of inefficient AC adapters.

**Q. What should you know when purchasing a new appliance?**

A. You should consider energy efficiency when shopping. Devices with the ENERGY STAR logo use less electricity and are energy efficient. ENERGY STAR's website, [www.energystar.gov](http://www.energystar.gov), has a complete list of qualified devices. Ratings for ENERGY STAR devices change so energy efficiency is typically greater in new ENERGY STAR items.

**Q. Can a power strip reduce vampire power?**

A. Power strips are used to plug multiple devices into one wall outlet. Surge protectors serve the same purpose and protect devices from electrical power surges. Regular power strips and surge protectors do not reduce vampire power.

But there are also "smart" power strips, or advanced power strips, that shut down devices in standby mode and eliminate vampire power. According to ENERGY STAR there are three types of advanced power strips: timer-equipped, where power to the power strip is turned on or off at a designated time; occupancy sensing, where the power strip is controlled by a motion detector; or current sensing, where power to the entire power strip is activated when the device plugged into the master outlet is on. Advanced power strips are typically more expensive than other power strips or surge protectors.

**Q. Can you measure the electricity lost to vampire power?**

A. Kilowatt meters can be purchased to measure the power used by a device in use and in standby mode. To calculate electricity usage, plug the meter into a wall outlet and plug the device into the meter. A meter is a great tool for teaching you and your families about your electricity consumption, and it could encourage you to follow power-saving tips.



**VAMPIRE POWER TERMS TO KNOW:**

**Watt**

The unit of measurement for electricity (volts x amps = watts).

**AC adapters**

AC adapters, or chargers, change the electrical current and voltage coming from the outlet so they can be used to charge batteries, cell phones or laptops.

**Standby power**

Another term for vampire power, also called vampire draw, phantom load or leaking electricity.

**Sleep**

A low power mode for devices such as computers, televisions and remote-controlled devices. This mode reduces power when a keyboard or another part of the device has been inactive for a period of time. Sleep typically saves settings in memory and draws a small amount of power.

**Hibernation**

Like sleep, hibernation is a low power mode for devices. Hibernation saves open documents and programs to a hard disk and then turns off the computer. Of all the power-saving states, hibernation uses the least amount of power.

**Ready**

This is an automated system that monitors a printer or other device and "warms up" the device when it is needed.

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The Office of the Ohio Consumers' Counsel (OCC), the residential utility consumer advocate, represents the interests of 4.5 million households in proceedings before state and federal regulators and in the courts.

The state agency also educates consumers about electric, natural gas, telephone and water issues.

For more information, please visit the OCC website at [www.occ.ohio.gov](http://www.occ.ohio.gov).



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**Common household appliances can add up to several dollars per month even when they are turned off**

| Product                            | Average Watts – On            | Average Watts – Off      |
|------------------------------------|-------------------------------|--------------------------|
| Cell phone charger                 | 3.7W (charging)               | 2.2W (charged)           |
| Clock radio                        | 2W                            | 0W                       |
| Computer (desktop)                 | 74W                           | 2.8W (off)/21W (sleep)   |
| Computer (laptop)                  | 30W (charged)/44.3 (charging) | 8.9W (off)/15.8W (sleep) |
| Computer monitor, LCD              | 27.6W                         | 1.13W (off)/1.4W (sleep) |
| Computer speakers                  | 4.1W                          | 1.8W                     |
| Copier                             | 9.6W                          | 1.5W                     |
| Cordless phone w/answering machine | 3.53W                         | 2.9W                     |
| Cordless landline phone            | 1.9W                          | 1W                       |
| Digital cable box                  | 29.6W (TV on)                 | 17.8W                    |
| Digital cable box w/DVR            | 44.4W                         | 43.5W                    |
| DVD player                         | 9.9W                          | 1.6W                     |
| Furnace                            | 339.7W                        | 4.2W                     |
| Home security systems              | 2.7W                          | 0W                       |
| Microwave oven                     | 750W-1100W                    | 3W                       |
| Modem (cable)                      | 6.3W                          | 3.8W                     |
| Modem (DSL)                        | 5.4W                          | 1.4W                     |
| Night light (interior)             | 4.5W                          | 0.1W                     |
| Power tool (cordless)              | 8.34W (ready, charged)        | 1.7W (ready)             |
| Printer (inkjet)                   | 4.9W                          | 1.3W                     |
| Printer (laser)                    | 131.1W                        | 1.6W                     |
| Satellite box                      | 16.2W (TV on)                 | 15.7W                    |
| Satellite box w/DVR                | 31.4W (TV on)                 | 27.8W                    |
| Television – 32" CRT               | 162W                          | 2W                       |
| Wii U / PS4 / Xbox One             | 34W / 137W / 112W             | 0.4W / 8.5W / 15.7W      |

Sources: ENERGY STAR, Lawrence Berkeley National Laboratory, National Resources Defense Council