

GREENWorks

Ideas for a Cleaner Environment

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What's increasing your electric bill? – The Phantom Knows!

I have yet to meet the person who is happy immediately after opening their electric bill. My reaction is usually a mix of disbelief and disgust. So it is no surprise that I seek out ways to save a buck or two. I don't mind paying for the electricity that I need, but I am tired of paying for electricity that powers appliances or electronics that are not in use.

Energy used to power small household appliances and home electronics is one of the fastest growing energy loads in the home. Unfortunately, most idle small appliances and equipment, like TVs, DVD and CD players, cable boxes, computers, microwaves, and cordless phones, cell phone chargers--all battery chargers for that matter--continue to draw energy when not in use. This phenomenon is referred to as "standby power," "leaking electricity," or "phantom loads." According to the Lawrence Berkley National Laboratory, a typical home has as many as 40 appliances on standby power that are consuming electricity 24 hours a day, and may be responsible for 10 percent to 15 percent of the average home's electricity costs.

The amount of electricity that one of these phantom load appliances uses can vary. But for argument's sake, let's take a look at the average New Hampshire house and its possible phantom/standby power load costs for a year. Our power is provided to us in watts. Converting power into energy, we will assume that a device drawing 1 watt constantly for a year (24 hours a day, 365 days a year) uses approximately 8.765 kilowatt hours (kWh) per year. To estimate the cost of that power to the homeowner, we will multiply the product's annual kWhs times \$0.17 (PSNH's current charge per kWh) using figures from <http://standby.lbl.gov/summary-table.html>.

Average appliance standby load (Note: all appliances are not in use):

TV (rear projection) (off)	6.97 Watts
Cable box (off)	17.83 Watts (with DVR: 36-43 Watts)
DVD player (on, not playing)	7.54 Watts
CD player (off)	5.04 Watts
Cordless power tool charger	1.74 Watts
Central heating system	4.21 Watts
Stove/range	1.13 Watt
Microwave	3.08 Watts
Coffee maker	1.14 Watts
Computer, monitor, modem & printer	14.53 Watts
Cordless phone with answering machine	4 Watts
Cell phone charger	0.26 Watts
Clock radio (on)	2.01 Watts
Total	69.48 Watts X 8.765kWh X \$0.17 = \$103.53

One hundred dollars a year to power things you're not using. Plus, I would venture to guess that many of us have more than one TV, cable box, clock radio and so on, so you can see how this phantom load can easily sneak up on you and attack your annual electricity costs. In addition, while these phantom loads can be detrimental to our wallets, this unnecessary demand for power contributes to the negative environmental effects from power plants, including greenhouse gasses, respiratory problems and acid rain.

The good news is that there are ways to fight back and reduce these phantom loads in your home. First, inspect for electrical devices that have a clock, need a remote control, charge a battery, are plugged into the wall with a wall cube or transformer, or don't have an "off" switch. Next, unplug products that are used infrequently. For those appliances where unplugging them would be inconvenient, consider using a power strip to control numerous items or consider controlling them using outlet timers to shut off power to items when you are sleeping. Remember to consider which devices you can afford to lose programming on.

If you want to explore how much electricity you are using or to calculate your phantom load, go to your local library and sign out a "Cut the Carbon Kit". The kits feature a Kill A Watt™ energy detector that homeowners can use to assess the efficiency of their appliances and make changes to lower their energy usage.

You can also make a difference by considering the phantom load when purchasing a product. Always buy Energy Star products, overall they are more efficient, and the U.S. Environmental Protection Agency is beginning to include standby power limits in its qualifications for the Energy Star program.

For more information about phantom loads/standby power, visit the US Department of Energy website at www.energy.gov. For more information about energy efficiency, see the New Hampshire Department of Environmental Services website at www.des.nh.gov.

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