



# Energy Efficiency: Phantom Power

(General)

## What is Phantom Power?

- This is the electricity consumed by electrical devices when they are switched off but they are still connected to an electrical outlet.
- This is also referred to as standby power or vampire power.
- The average Canadian household contains approximately 25 or more devices constantly drawing power.
- This can account for up to 10% of the home's energy use and costs approximately \$150 a year in electricity.
- This electricity is used to provide functions such as remote control, clock displays, and timers
- In other cases, it is simply wasted power as a result of leaving an electronic device or power adapter plugged in.

## Advantages

- Phantom power allows the device to be switched on quickly.
- Phantom power can power functions such as LED clock displays, timers, and remote control receivers.
- With phantom power, battery-powered devices can remain fully powered as well.

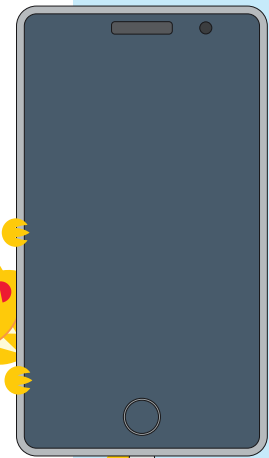
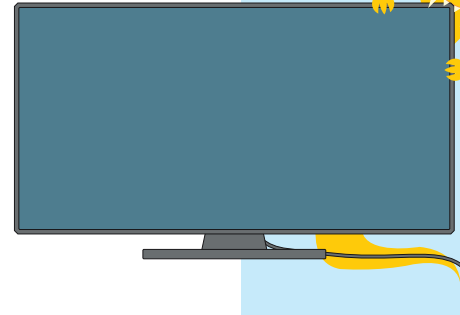
## Disadvantages

- Homeowners waste electricity and therefore money.
- Since electricity is often generated by the combustion of hydrocarbons (oil, coal, gas); this, waste harms the environment and accelerates global warming.
- Devices that consume greater amounts of phantom power may overheat and become

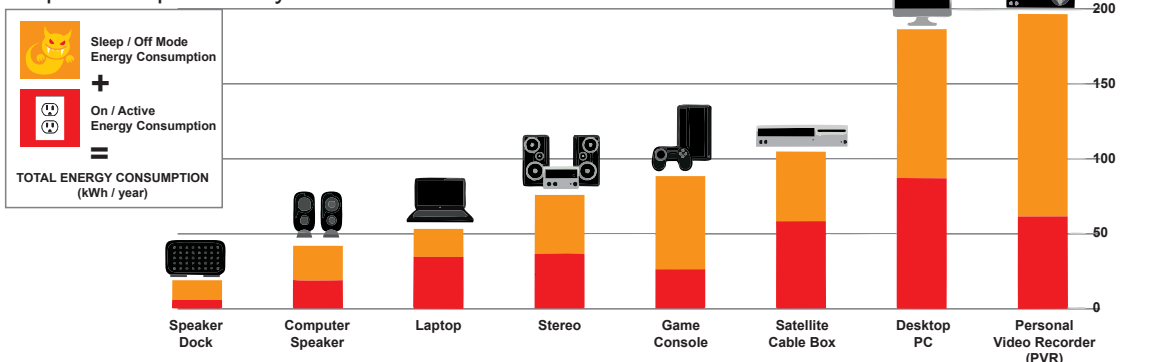
## Examples of Phantom Power

Greatest users of phantom power:

- Quick switch on devices
  - speaker systems
  - stereo systems
  - satellite cable boxes
  - laptops
  - computer monitors
  - video game consoles
  - televisions
  - PVR
  - DVD, etc.
- LED displays / timers
  - clocks
  - microwaves
  - toasters
  - coffee makers
  - stand mixers, etc.
- Remote control receivers
  - air conditioners
  - ceiling fans
  - televisions
  - video game consoles
  - bluetooth devices, etc.
- Other hidden users
  - phone chargers (even if they are not plugged in to your phone)
  - routers & modems
  - cordless phones
  - printers
  - electric toothbrushes
  - nightlights (especially those with sensors)
  - etc.



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Source: [www.energy.gov.on.ca/en/empowerme/phantom-power](http://www.energy.gov.on.ca/en/empowerme/phantom-power)

# You Can Prevent Phantom Power Consumption

## Just Unplug

Individuals can directly prevent phantom power consumption by simply unplugging devices when not in use; however, there is technology that can make this process more convenient.

## Use Smart Outlets

- Smart outlets are a great option to evade phantom power.
- These outlets can be turned on and off using an application on a smartphone to prevent phantom power energy use.
- They can be used in small areas and are especially effective in hard-to-reach places.
- Example, a homeowner could connect their television, speakers, DVD player, stereo, satellite cable, and gaming console to this outlet to save great amounts of energy.
- If the homeowner used these devices for 5 hours a day, on average the smart outlet would save approximately 286.2 kilowatt hours each year (numbers may vary depending on the model of the device).

## Or Use Power Bars

- Power bars are another method to combat phantom power.
- There are three main types:
  - timer power bars
  - auto-shutoff power bars
  - motion sensor power bars.

Power Bar Options		
With Timer	With Auto Shut-off	With Motion Sensor
Automatically turns power bars on/off at set times	Shuts off power to devices plugged in	Automatically detects your presence to turn on/off
<b>Useful for:</b>	<b>Useful for:</b>	<b>Useful for:</b>
Charging stations, floor lamps	Computers, TVs, game consoles	Lights, home offices

## For More Information:

Standby Power - Energy Education

[https://energyeducation.ca/encyclopedia/Standby\\_power](https://energyeducation.ca/encyclopedia/Standby_power)

Standby Power - Natural Resources Canada

[https://www.nrcan.gc.ca/sites/oeo.nrcan.gc.ca/files/files/pdf/residential/personal/Standby-Power\\_E\\_Jan2013.pdf](https://www.nrcan.gc.ca/sites/oeo.nrcan.gc.ca/files/files/pdf/residential/personal/Standby-Power_E_Jan2013.pdf)

Phantom Power - Hydro One

<https://www.hydroone.com/saving-money-and-energy/residential/tips-and-tools/phantom-power>

What's phantom power and how can you track it? - Save On Energy

<https://saveonenergy.ca/en/For-Your-Home/Advice-and-Tips/Phantom-power>

What are energy vampires and what can I do about them? - Energy Star

<https://energystar.zendesk.com/hc/en-us/articles/212112277-What-are-energy-vampires-and-what-can-I-do-about-them->

Phantom Power - Eyedro

<https://eyedro.com/phantom-power/>

Canadian Standby Power Study of Consumer Electronics - ACEEE

[https://www.aceee.org/files/proceedings/2008/data/papers/9\\_305.pdf](https://www.aceee.org/files/proceedings/2008/data/papers/9_305.pdf)

The Cost of Leaving Appliances On Standby -

Canstar Blue

<https://www.canstarblue.com.au/electricity/cost-leaving-appliances-standby/>

15 Home Appliances That Use Energy When Turned Off - Home Stars

<https://blog.homestars.com/common-phantom-energy-appliances/>

How much can you save by unplugging appliances? - How Stuff Works

<https://money.howstuffworks.com/personal-finance/budgeting/how-much-save-unplugging-appliances.htm>

## Videos

Phantom Power - Save On Energy Bills by Unplugging Devices - AEPowerHouseTV

<https://youtu.be/VACJdcgUpmY>

Reduce Phantom Power To Increase Energy Efficiency - Monkey See

<https://www.youtube.com/watch?v=kZpjLg4knLQ>



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