Home Electronics Reducing Energy Use

SOURCES:

CNET Energy Efficiency Guide

NRDC, Lowering the Cost of Play, Nov., 2008

Some perspective . . .

- California: TV-related energy use tripled in last 10 years
- California: **10 percent** of household power use is devoted to TV-related activity.
- Game consoles=16 billion kw hours

Television Power Usage

Depends on:

- Screen size
- Technology: Plasma, LCD, Rear Projection, Cathode-Ray-Tube
- Brightness of picture

Screen Size

- Simple: bigger screen = more energy
- A 32-inch LCD uses about half as much power as a 52-inch LCD.
- Older (cathode-ray-tube) TV's: smaller, less power

Technology Type

- Plasmas (about 200-500 watts) use two to three times more electricity to produce an image of the same brightness as LCD.
- Rear Projection HDTV's are most efficient but rarely sold now
- What's coming: one brand of LED backlit TV (47 inches) uses 50-90 watts of power

Picture settings

- More light = more power use
- Many TVs (esp. before 2009) are bright by default. Calibrate to improve picture quality and save energy. Reducing the light output of your TV can cut power use by as much as half.
- LCD TV – backlight can be adjusted to save energy

Energy Star

- Early Energy Star rating based only on standby power
- Nov., 2008 rating based on standby/active modes, but still not strict
- May, 2010 EnergyStar 4.0, first more meaningful rating
- May, 2012 rating will be even more strict

Tips

- Use your old TV
- If you buy, get smaller screen, find out about energy usage
- Watch TV together
- Turn off the TV when not watching – don't use for background noise or to go to sleep.
- Turn off the quick start option. This uses more standby power when TV is off.
- Turn on the "power-saver" mode
- Use a power strip

Power Consumption Compared

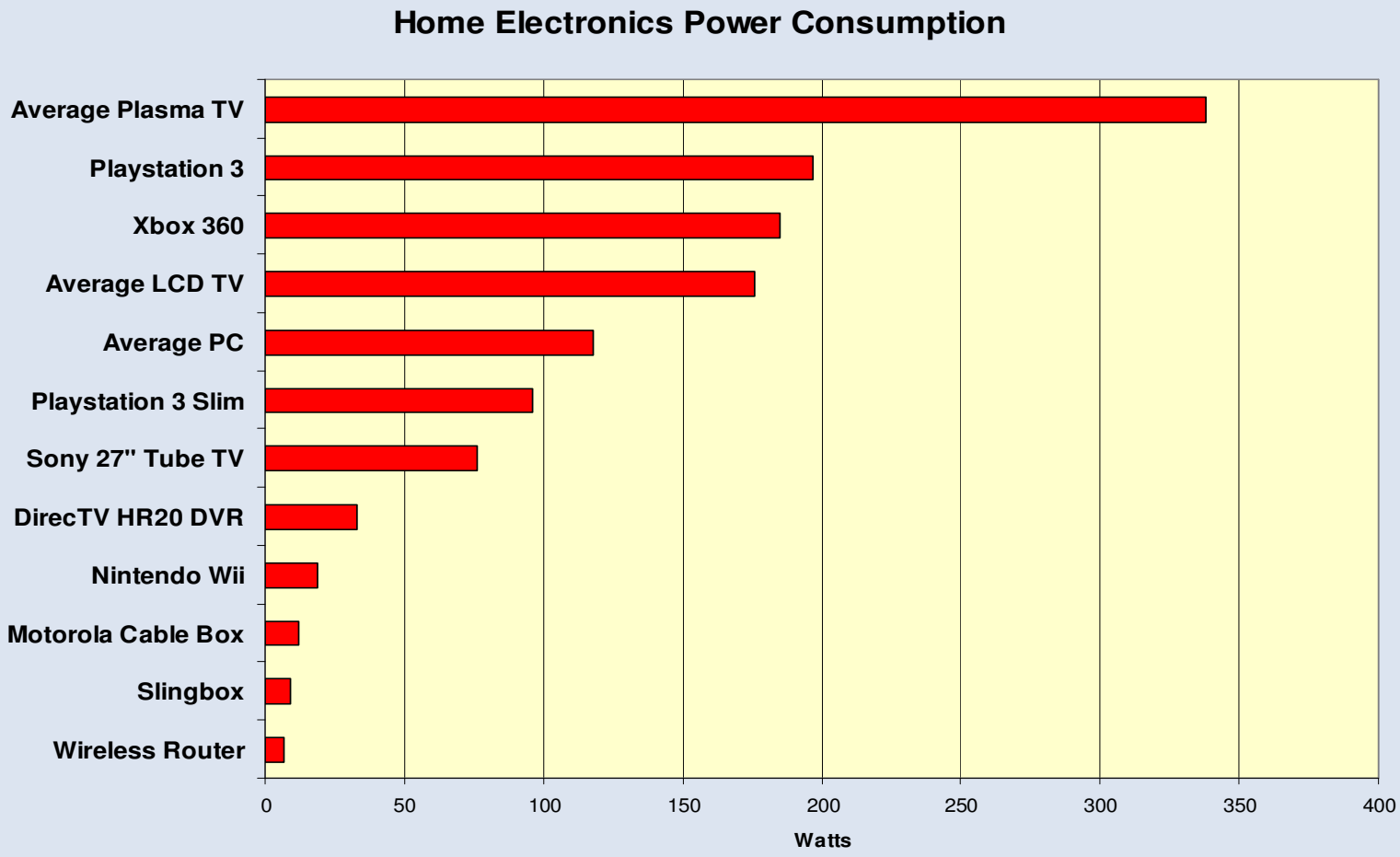
Information from CNET

- TVs (1):
  Average plasma: 338 watts
  Average LCD: 176 watts

- Other gear2:
  PlayStation 3: 197 watts
  PlayStation 3 Slim: 96 watts
  Xbox 360 Elite (2007): 185 watts
  Nintendo Wii: 19 watts
  Xbox 360: 187 watts
  Average PC: 118 watts
  DirecTV HR20 DVR: 33 watts
  Nintendo Wii: 19 watts
  Slingbox: 9 watts
  Wireless router: 7 watts

  (1) *Among 2008 and 2009 models tested.*
  (2) *Tested in typical usage states (playing a game, running software)*
  http://reviews.cnet.com/green-tech/tv-power-efficiency/

Power Consumption



Gaming Devices

Did you know…

- Consoles use almost as much power in idle mode as they do in active playing
- PlayStation3 and Xbox360 use **7-9 times** more power than Wii (19 watts)
- Consoles use **4-7 times** more power than Blu-Ray player to play the same movie (up to 24 times more power than DVD player).
- PlayStation3 left on continuously can cost

Simple tips

- Just turn it off! When done, save game and turn off game console (TV and game console must each be turned off)
- PlayStation 3 left on = $250/year
- PlayStation 3 turned off=$27/year
- Set automatic power-down feature
- Don’t use the game console to watch movies