

# Tune in to Big Screen Energy Savings

The days of large console televisions with their wood grain exteriors and antenna wires or rabbit ears are long gone.

And there's no more using needle nose pliers to change channels after the knob breaks or fiddling endlessly to adjust the horizontal and vertical holds. Today's televisions offer larger, thinner screens and, thanks to digital cable or satellite connections, provide a virtually unlimited number of channels.

However, some models require a tremendous amount of energy to operate—almost as much as a refrigerator. And the average American household owns 2.93 TVs, according to a 2010 Nielsen report.

All of this energy use adds up. The Natural Resources Defense Council found that U.S. televisions use more than 46 billion kilowatt hours per year, or about 4 percent of residential electricity use.

In response to consumer concerns, TV manufacturers are designing sets that use less energy without sacrificing screen size or resolution.

If you're in the market for a new TV, these tips will help you tune in to big screen energy savings.

Although a high-definition TV (HDTV) transforms the latest blockbuster movie into a theater-like living room experience, these sets generally use more power because of better picture clarity. Also, energy consumption often relates to screen size. The larger the screen, the more electricity required.

Four types of TVs are currently available: plasma, liquid-crystal display (LCD), rear-projection, and cathode ray tube (CRT). CRT televisions are the most difficult to find because they employ old technology and screen sizes rarely top 40 inches.

Plasma screens often are cited as the largest energy user—mainly because their large 42- to 65- inch screens typically draw between 240 to 400 watts. Most consume electricity even when turned off.

LCD TVs don't need much power to operate—111 watts on average. Most LCD screens range in size from 21 inches to 49 inches. These TVs fall into two categories: those with cold-cathode fluorescent lamps to illuminate

the screen and backlit models employing a light-emitting diode (LED).

LED units offer several benefits, notably better picture quality and thinner and lighter screens. They also use slightly less energy, at 101 watts.

Rear-projection televisions tend to be the most energy efficient and boast the largest screen sizes. However, due to their overall weight, rear-projection sets are not as readily available as plasma and LCD models.

Shopping for an energy-efficient television can be difficult. Television manufacturers rarely advertise energy consumption, and it almost never appears on in-store labels, though new ENERGY STAR requirements may change that in 2012.

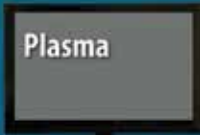
Faced with these difficulties, consumers need to conduct their own energy use research through unbiased online sources such as CNET.com, an online journal for the technology industry. Look for specific model numbers, which you can take to the store. ■

## High-Definition Television Comparison Guide


The power used by an active television is determined by three factors: screen size; technology type, such as plasma or LCD; and picture brightness, which nearly always depends on user-selected picture settings.

Type of TV	Typical Size	Typical Price	Average Energy Used
 Liquid Crystal Display (LCD)	13-65 inches	\$200 to \$8,000	111 watts (standard)
			101 watts (LED)

LCDs are the most popular HDTVs, mainly because they're flat and available in a tremendous range of sizes and prices.

 Plasma	42-65 inches	\$800 to \$7,000	301 watts
--	--------------	------------------	-----------

Available in a limited range of sizes (mostly big), plasma TVs outperform LCDs in tests comparing overall picture quality.

 Rear-projection	50-73 inches	\$1,000 to \$3,500	N/A
---	--------------	--------------------	-----

Rear-projection TVs are the most efficient but are getting hard to find because flat-panel models are often cheaper.

Source: CNET.com (April 2010)