

How much energy is your TV guzzling?



In the last decade energy use from TVs has changed dramatically.

New technologies such as Plasma and LCD TVs, along with increased screen size and standby power have transformed the humble TV from a small appliance to one of a household's biggest energy guzzlers. In fact energy consumption from televisions is predicted to double between 2004 and 2014.¹



According to the Wilkenfeld 2008 report, television now ranks behind fridges, space heating & cooling, together with water heating, as major contributors to greenhouse gas emissions from the stationary household sector.²

A new report, *Energy Use in the Australian Residential Sector 1986-2020* forecasts a 56% increase in energy usage from the residential sector by 2020. According to this report, TV energy usage is projected to have grown from 3 PJ in 1986 to exceeding 45 PJ by 2020, without the introduction of Minimum Energy Performance Standards (MEPS) and energy labelling.³

Plasma and LCD TVs

Industry experts predict that by 2012 over 90% of new televisions sold will be LCD or plasma types.⁴ The problem is these new technologies in general use more energy than the older cathode ray tube (CRT) TVs. Some TVs on sale are consuming up to 700 kWh each year or almost twice the mandatory maximum allowance of a small family sized refrigerator.⁵

In general terms CRT TVs are more efficient than LCD's which are more efficient than plasma. However, actual energy use varies widely between brands and without energy labelling it is difficult to know how energy efficient the TV actually is.

Screen size

Size certainly does matter when it comes to TV energy use and the bigger the screen the greater the environmental impact and also running costs. Newer technologies such as plasma and LCD have been driving a trend towards a larger screen sizes, resulting in a rapid rise in energy consumption. A 46 inch LCD screen for example can use up to three times as much energy as a 23 inch screen.

According to latest research, the average energy consumption of a switched on TV has grown from approximately 65W in 1986 to 100W in 2005 and will continue to grow to an estimated 230 W by 2020.⁶ Larger plasma screens also come with additional features such as speakers and surround sound systems further adding to the energy bill.

Standby power

The increased use of standby power is another important factor in TV energy usage and means that the TV is always drawing energy even when not in use. Some models can use up to 19.7 watts while on standby which is the equivalent of leaving a CFL light running all day and all night.

Appliances such as TVs can spend more than 60% of their time on standby, so simply turning the TV off at the switch can result in a significant reduction in energy use and also electricity costs over a year.⁷

New energy rating for TVs

The wide range of brands, models and sizes and the current lack of energy labelling all contribute to making it difficult for consumers to judge how energy-efficient a TV is and to know which model will be the most greenhouse and cost effective option for them in the long run.

This however is about to change. On World Environment Day 2008, Federal Minister for the Environment, Peter Garrett announced a new television labelling scheme to enable consumers to identify the most energy efficient sets at point of sale. The television energy label, which will initially be voluntary, is similar to the energy label used on fridges, washing machines, clothes dryers and air conditioners and are expected to become mandatory in 2009.⁸

This is great news for consumers as it will be easier for them to make more informed choices and also give manufacturers an extra incentive to produce energy efficient televisions.

Over its lifetime a TV uses considerable amounts of energy which makes a good case for investing in a very energy efficient one and switching it off when you are done.

Further information:

Energy use: Plasma, LCD and CRT TVs

<http://renovate.realestate.com.au/home-living/home-entertainment/tips-and-guides/lcd-and-plasma-tv>

Recent television labelling announcement:

www.environment.gov.au/events/wed/index.html

Energy labelling and rating:

www.energyrating.gov.au/

www.energystar.gov.au/about/

Energy use reports:

Wilkenfeld (2008) Victoria's Greenhouse Gas Emissions: 1990, 1995, 2000 & 2005: End Use Allocation of Emissions.

www.climatechange.vic.gov.au/summit/Resources/GW%20Report%20-%20Victorias%20Greenhouse%20Gas%20Emissions.pdf

Energy Use in the Australian Residential Sector 1986-2020

www.environment.gov.au/settlements/energyefficiency/buildings/publications/energyuse.html

Sources

¹ Cubby, B. (2008) *The Plasma is about to get an energy rating*, Sydney Morning Herald Feb 20

² Wilkenfeld (2008), *Victoria's Greenhouse Gas Emissions 1990, 1995, 2000 and 2005: End Use Allocation of Emissions*, Sydney

³ Department of the Environment, Water, Heritage and the Arts, (2008) *Energy Use in the Australian Residential Sector 1986-2020*

⁴ Equipment Energy Efficiency Committee, *Television Energy Performance Standards and Comparative Energy Labels* <http://www.energyrating.gov.au/library/pubs/2007-factsheet-tv.pdf>

⁵ Angela Erini, (2007) LCD and Plasma TV energy use: <http://renovate.realestate.com.au/home-living/home-entertainment/tips-and-guides/lcd-and-plasma-tv>

⁶ Department of the Environment, Water, Heritage and the Arts, (2008) *Energy Use in the Australian Residential Sector 1986-2020*

⁷ Equipment Energy Efficiency Committee, *Television Energy Performance Standards and Comparative Energy Labels* <http://www.energyrating.gov.au/library/pubs/2007-factsheet-tv.pdf>

⁸ Australian Government, Energy Efficiency- televisions fact sheet, www.environment.gov.au/events/wed/index.html