Standby power

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Many household appliances are switched on 24 hours a day, all year around. These appliances include televisions, stereos, video and DVD players, microwave ovens and mobile phone re-chargers.

Standby power is the energy consumed by an appliance when it's not performing its primary function. Standby is often called 'vampire', 'phantom' or 'leaking' electricity.

A standard microwave oven will use approximately 26 kWh per year just to display the digital clock, compared to 97 kWh per year used for cooking food (based on an average 10 minutes use per day).

Have you ever noticed that a mobile phone recharger stays warm even when you are not charging your phone? Generally only five per cent of the energy used by rechargers actually recharges the phone. The rest of the time it is simply turned on and wasting electricity.

See page 2 for more examples of common household appliances and their corresponding standby consumption rates.

The energy used to maintain standby power can contribute up to 10 per cent of your household electricity use. Studies have shown that energy used in standby mode contributes to one per cent of world CO_2 emissions. To put that in perspective, all the air travel on earth contributes three per cent of emissions.

Turning off appliances at the switch is an easy way to increase your energy efficiency and reduce CO_2 emissions.

Remember: check with all members of the household before switching appliances off at the power point.

The 1 watt initiative

The Australian government has introduced a policy that stipulates that by 2012 all new appliances with a standby mode use no more than 1 watt (w) of electricity for the standby component.

For more information visit: www.energyrating.gov.au/library/pubs/200209-standby.pdf

Common appliances that use standby power

Any appliance that doesn't have an on/off switch is generally using electricity when it's plugged into an electrical socket.

Examples are charging devices for mobile telephones, electric razors, toothbrushes and power tools.

The following website provides virtual tours through homes in different countries, that show the different appliances that consume standby power and how much they use.

http://standby.lbl.gov/hometours/hometours.html

Glossary

Volts

The unit of electrical pressure. High voltage requires more insulation and clearances than low voltage.

Watt

This is the rate at which energy use is measured. A watt is defined as the number of joules per second, that is, 1 W = 1 j/s.

The following table provides examples of 'Passive standby', 'Active standby' and 'Delay start'.

Appliance	Off (W)	Passive Standby (W)	Active Standby (W)	Delay Start (W)
Air conditioner	0.2	1.7		3
Clothes dryer	0.2		2.4	3.8
Dishwasher	0.6		2.7	3
Front loading washing machine	0.9		3.5	4
Top loading washing machine	1.2		3	3.5
Dual clothes washer/dryer	2.3		4.5	5.5
Heater - electric portable	0.3	1.7		1.4
Heater - gas	0.6	6.9		8.2
Gas water heater		6.9		
Breadmaker			1.8	
Hand-held vacuum cleaner		1.1	7.4	
Microwave oven		3		
Espresso machine	0.9	3.6		
Portable fan	0.1	0.4		
Juicers	0.3			
Toaster	0.3			
Multi function device	3.1	5.3	8.6	
Hard drive / cpu box	1.5	4.2		
Laptop	1.4			
Computer monitor	0.9	1.9		
Computer speakers	4.2		7.5	
Home theatre box	4.8	5.4		
Inkjet printer	0.8	3.8		
Laser printer		8.2		
CRT TV		3.4		
LCD TV	0.5	1.6		
Projection TV	0.1	31.4		
Plasma TV	0.6	1.4		
DVD player	0.1	2	8.8	
DVD recorder		7.3	21.5	
Hard disk recorder		5.6	27.8	
Integrated stereo	3.69	4.2	16.5	
Portable stereo	1.6	2.4	6.4	
AV Receiver	0.2	1.8	44.2	
Home theatre system		2.5	24.1	
Subwoofer	2	5.5	11	
Set top box		8.4	13.5	

Source: National Appliance and Equipment Energy Efficiency Program, Appliance Standby Power Consumption Store Survey 2005/06 – Final report; www.energyrating.gov.au/library/pubs/200609-storesurvey.pdf.