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Reducing Standby Power Consumption

What is standby power?

Standby power is the electricity consumed by an appliance when it is not performing its primary functions, but plugged into a power source and ready to be used. For example: a television continues to draw a little power to maintain the control function after the user switches it off with the remote control device. Standby power is expressed in watts (W).

How much energy is consumed in standby mode? Why is it so important?

The electricity consumption of different electric appliances in standby mode varies. Assuming that the standby electricity consumption for an appliance is 1 Watt and a family normally has about 10 to 20 electrical appliances* in standby mode, switching off all such standby appliances may reduce household electricity consumption by up to 3%.

* The appliances include broadband modem; Wi-Fi router; cordless telephone; computer; computer monitor; printer; charger for mobile phone, tablet, notebook and backup battery pack; television; video player; digital video recorder; video game console; radio; electric fan; electric toothbrush and electric shaver.

How to identify products with standby power consumption

- With remote control. For example, TVs, VCRs, electric fans, and audio equipment.
- With continuous digital display. For example, washing machines, microwave ovens, VCRs and audio equipment.
- With external power supply such as transformer. For example, mobile phone chargers, laptops.
- With rechargeable battery and charging device. For example, cordless telephones, battery charger. These products continue to use standby power even after the battery is fully charged.

How Standby Power Creeps Away

- Appliance with Remote Control Circuit or Continuous Digital Display
Even the main load circuit of the appliance is switched off via the remote control device or internal control, standby power is still required to maintain the function of the secondary load, such as remote control circuit or continuous digital display circuit.
- Appliance with External Power Supply
Even the main load device of the appliance is switched off, the external power supply unit of the appliance is still consuming the standby power.
- Appliance in OFF mode
In off mode, the appliance is disconnected from the power source.

Intelligent Power Bar

Intelligent power bar is a convenient device to reduce Standby Power usage. It consists of a Master socket and several Slave sockets. When the main device which is plugged into the master socket switches off or changes to standby or hibernate mode[^], it automatically switches off all the

peripheral devices (see Table 1) which are plugged into the slave sockets. Thus it prevents the peripheral devices left on standby from wasting energy.

^ The main appliances/devices still consume small amount of electricity at standby or hibernate mode.

Table 1: Main device and Peripheral devices

Main device	Peripheral devices
Television	Blu-ray/DVD player, VCR, audio equipment, video game console, etc.
Desktop Computer/ Laptop	Printer, Monitor, Scanner, Broadband modem, Speaker, etc.

Tips for reducing standby power

A) Office Practices

1. Establish companywide energy efficiency policy

- Establish an Energy Efficiency Policy and Measures to indicate top management's commitment.
- Purchase electrical appliances with "low standby power" and ENERGY LABEL.
- Purchase equipment with automatic low power mode or energy saving mode.
- Plug the main device and peripheral devices to switchable multi-socket power bars or intelligent power bars.
- Get staff to understand and commit to good energy saving practices by providing continuous training and communication; setting up of housekeeping practices such as assigning designated officers to inspect workplace; and having discussion sessions for identifying areas of improvement, etc.

2. Equipment setting and staff training

- Inform staff of the power management features of office equipment.
- Ask supplier to pre-set power management features and provide training to staff.

3 Use of office equipment

i) During office hours

- Switch computers to sleep or hibernation mode and switch off monitors, printers when leaving office for long time (e.g. during meetings, lunchtime, etc.)

ii) When leaving office

- Switch off the power sources to computers and the connected peripheral devices, such as monitors and printers, etc.
- Switch off the power sources to individual equipment at the power outlets.
- Arrange the last-man-out to check and switch off the power source to all AC, lighting and those office equipment that are not in use.
- Keep the number of switched on equipment that has to perform its primary function during non-office hours to a minimal, such as forward all fax lines to one fax machine, group computer servers and switch off non-essential servers.
- Where applicable, use a 7-day timer to help in energy management for shared office equipment

B) Home Practices

- Purchase electrical appliances with “low standby power” and ENERGY LABEL.
- Switch off the power source to those appliances and devices with low usage rate immediately after used.
- Switch off the power source to the computer and printer when not in use.
- When leaving home for a long vacation, switch off or even unplug the electrical appliances from the power sources.

The best and simple way to

Reduce the Standby Power Consumption is:

Switch off or Plug off Appliances and Devices After Use.

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