什麼是備用狀態能耗？

備用狀態能耗是當電器不在執行它們的主要功能下的能量消耗，即連接著電源而處於準備運作的狀態。例如：以遙遠控制器關閉電視機後，電視機仍會持續消耗微量的電力以維持控制功能。備用狀態能耗的單位是瓦特 (W)。

備用狀態下消耗了多少能量？為何備用狀態能耗這麼重要？

大多數的電器在備用狀態的耗能雖然少，但一般也有0.5到10瓦特*。然而，由於備用狀態耗能電器設備的數量很多，因此累積的備用狀態能耗便會很大。

在住宅、商業和工業方面的總用電量中，備用狀態耗能約佔總能耗百分之5至10。整體來說，備用狀態能耗約佔全球二氧化碳排放的百份之1，並且有上昇的趨勢。

* 在一些低效能的設計，備用狀態耗能可高達15至20瓦特。

What is standby power?

Standby power is the electricity consumed by an appliance when it is not performing its primary functions, but plugged in to a source of power 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?

Standby power consumption for most electrical appliances is small, typically ranging from 0.5 to 10 watt*. However, with large number of devices all drawing standby power, the accumulated power consumption will be large.

Standby power accounts for about 5–10% of total electricity use in residential, commercial and industrial sectors. Altogether, it is roughly responsible for 1% of global CO₂ emissions and will continue to grow.

* For low energy efficiency design, the standby power use can range from 15 to 20 watts.
怎樣辨識具有備用狀態耗能的產品

辨識備用狀態耗能的產品最佳方法是使用電錶（功率錶）。但在日常生活中，我們也可從產品一些特徵，來辨別電器產品是否具有備用狀態耗能：

- 附有遙控裝置，例如：電視、錄影機、電風扇、音響設備等。
- 附有連續的電子顯示，例如：洗衣機、微波爐、錄影機、音響設備等。
- 附有外置供電裝置如變壓器等，例如：移動電話充電器、手提電腦等。
- 附有可再充電電池裝置，例如：室內無線電話、電池充電器等。此等產品在電池充電完畢後仍消耗一定電力。

How to identify products with standby power consumption

The best way to ascertain if a product consumes standby power is to measure it with a watt-meter. However, here are a few clues to help identify products with standby power:

- 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 consume standby power even after the battery is fully charged.
備用狀態能耗怎樣溜走

雖然電器裝置經「電能管理」自動或被遙遠控制器關上內部主要負荷的功能，然而，次級負荷（即遙控裝置或連續的電子顯示）仍須要耗用電能以維持在備用狀態下自動或遙控的功能運作。

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.

在停用狀態下，電器裝置完全與電源脫離。

In off mode, the appliance is disconnected from the power source.
智能插座

智能插座是一種減少備用狀態耗能的簡易產品。它包含一個主插座及數個從員插座。當由主插座提供電源的主設備装置（參照表一）被關掉或轉為備用/休眠狀態時，便會自動切斷從員插座電源而關掉所有外圍設備裝置（參照表一）。從而阻止外圍設備裝置因停留在備用狀態而浪費能源。

^ 在備用/休眠狀態下，主電器或主設備裝置仍消耗微量電能。

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 (see Table 1) 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 stops leaving the peripheral devices on standby to waste energy.

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

表一：主設備裝置及外圍設備裝置
Table 1: Main device and Peripheral devices

<table>
<thead>
<tr>
<th>主設備裝置</th>
<th>Peripheral devices</th>
</tr>
</thead>
<tbody>
<tr>
<td>電視 Television</td>
<td>藍光/數碼影碟機、錄影機、音響設備，電子遊戲機等。Blu-ray/DVD player, VCR, audio equipment, video game console, etc.</td>
</tr>
<tr>
<td>座枱電腦/手提電腦 Desktop Computer / Laptop</td>
<td>打印機，顯示屏，掃描器，寬頻數據機，揚聲器等。Printer, Monitor, Scanner, Broadband modem, Speaker, etc.</td>
</tr>
</tbody>
</table>
減少備用狀態能耗小貼士

辦公室守則

1 確立公司節能政策
- 確立節能政策和措施，顯示公司管理層對節能的支持。
- 購買具備「低備用狀態能耗」及有能源標籤的產品。
- 購買有自動轉至低能耗和省電模式的產品。
- 將主設備装置和外圍設備裝置，接駁至設有開關控制的多孔電源插座或智能插座。
- 透過訓練和溝通，建立內務管理手則，例如指派員工作定期的工作間巡察並進行節能經驗交流和討論等，使員工明白和承諾執行省電措施。

2 設備的設定與員工訓練
- 使員工了解辦公室設備的省電設定。
- 要求供應商預設省電設定和訓練員工怎樣有效操作設備。

3 使用辦公室設備

甲）辦公時間內
- 利用電腦的「電源管理」功能使系統進入待命或休眠狀態，並於離開工作崗位稍長時間時，例如開會或午膳時間，把屏幕和打印機等的電源關掉。

Tips for reducing standby power

Office Practices

1 Establish company wide 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

A) 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)
B) 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

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 from power source after use.**

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