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低碳生活 電器選購指南

Low Carbon Living Appliances Guide

氣候變化 由你扭轉
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低碳生活 - 電器選購指南

世界自然基金會「氣候正能量」為你獻上《低碳生活 - 電器選購指南》。

世界自然基金會「氣候正能量」是一個公開平台，旨在推動香港市民及團體機構以行動對抗氣候變化。

任何人都可加入低碳生活行動，請瀏覽 www.climateers.org。

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Low Carbon Living Appliances Guide

This "Low Carbon Living Appliances Guide" is brought to you by WWF Climateers.

WWF Climateers is a platform created to empower individuals and organisations in Hong Kong to tackle climate change.

Join us and be part of the Low Carbon Living movement. Please visit our website: www.climateers.org.

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甚麼是低碳生活？

低碳生活是從個人出發，選擇排放較少二氧化碳(CO₂)的生活模式，從而減輕對氣候變化的影響。生活中無論衣、食、住、行，都有實踐低碳生活的方法，包括家居照明、乘搭飛機、外出購物等，全部息息相關。實踐低碳生活比你想像簡單得多，只需在日常生活稍作改變，你便可以成為協助對抗氣候變化的一份子！

甚麼是「個人碳足印」，它與氣候變化有何關連？

低碳生活中所指的「碳」是指二氧化碳，是造成氣候變化的主要溫室氣體。我們日常生活和耗用資源的方式，包括使用由木材製成的紙張，或處理廢物的過程，都會產生二氧化碳並排放到大氣層，這些個人碳排放量便是你的「碳足印」。碳足印愈大，代表你排放到大氣層的二氧化碳愈多，受到二氧化碳影響，大氣層吸收過多紅外線輻射，導致地球平均氣溫上升，我們的氣候亦愈趨反常。簡單而言，我們的日常生活也會直接引致氣候變化。

我可以如何實踐低碳生活？

精明的香港消費者，深明選擇得宜可以改變生活模式之道。世界自然基金會「氣候正能量」助你實踐低碳生活。請參考以下簡單三個C，並立即行動：

1. 計算(Calculate)

到「氣候正能量」項目網站(www.climateers.org)，使用首個為香港而設的碳足印計算器，量量你的碳足印，記錄它的變化。



2. 減少(Cut)

參考www.climateers.org網站的建議，為自己訂立目標，在日常生活中採取行動減少碳排放。



3. 溝通(Communicate)

利用www.climateers.org網站的平台，表達你對氣候變化的關注，並與他人分享你減少碳足印的經驗。



想知道有誰已經在香港實踐低碳生活及他們的經驗，請瀏覽：www.climateers.org。

What is Low Carbon Living?

Low Carbon Living is about making lifestyle choices that help reduce your personal carbon emissions and subsequently, your impact on climate change. It embraces every aspect of your daily life, from lighting your home, taking a flight, to shopping. To live a low carbon life, you only need to make a few simple changes in your personal habits to make you part of a community of leaders that are tackling climate change!

What is carbon footprint and how does it relate to climate change?

Carbon refers to carbon dioxide (CO₂), which is the major greenhouse gas contributing to climate change. The way you live and consume resources on the Earth adds to your carbon emissions into the atmosphere, such as using paper made out of timber or generating waste which needs disposal treatment. Your personal carbon emissions are generally described as your "carbon footprint". The larger your footprint, the more greenhouse gases are emitted into the atmosphere. Affected by the increase of carbon dioxide, the atmosphere is absorbing excessive infra-red radiation, which results in a rise in the average air temperature of the Earth, making our climate more and more abnormal. Simply put, everyone of us contributes directly to the problem of climate change.

How can I adopt a Low Carbon Lifestyle?

Hong Kong is home to many prolific and sophisticated consumers, and there are numerous options everyone can take to make a positive lifestyle change possible. WWF Climateers was created to support your low carbon way of living. Simply follow the 3 "C"s below and act now:

1. Calculate

Go to WWF Climateers website (www.climateers.org) and use the first Hong Kong specific carbon calculator to measure your carbon footprint, and then track it over time.



2. Cut

Find the suggested solutions at www.climateers.org; set targets for yourself and start making changes to reduce your carbon footprint.



3. Communicate

Share your personal experience of your carbon footprint reduction or your concerns regarding climate change at www.climateers.org.



To learn more about who is taking action and what their experiences are, please go to www.climateers.org.

這本電器選購指南如何幫助我實踐低碳生活？

精明使用能源是低碳生活的重要一環。在香港，超過60%的溫室氣體由發電廠排出，而香港人對電力的需求則不斷上升；在1990年至2005年間，住宅平均用電量已經攀升了34%。

《低碳生活 - 電器選購指南》由世界自然基金會「氣候正能量」出版。指南介紹了香港9類低碳排放的家庭電器及流行電子產品。選擇節能電器除了可以節省你的電費，更重要的是可以減少你的碳足印，從而拯救氣候！以下圖表舉例說明一個家庭如果根據這本指南，精明選擇低碳電器，所節省到的電費及減少的碳排放量*：

電器	每年節省電力 (度)	每年節省電費 (\$)	每年減少碳排放 (公斤)
冷氣機 - 1匹	366	321.9	237.9
照明**	197.1	173.3	128.1
雪櫃 - 170公升	247.9	218	161
電飯煲	109.5	96.3	71.2
LCD 電視機 - 42"	146.7	129	95.4
電腦**	616.7	542.4	400.9
總共節省	1,683.9度	\$1,481	1,094.5公斤 碳排放
減少幅度 (%)	↓46.1%		

* 有關電費節省和碳排放減少的結果，乃比較中電智電學堂電器產品的能源數據和本指南內相應類別中表現最佳的電器計算所得。

** 如要達到這個照明節省幅度，必須將一個60瓦的鎢絲燈泡轉為一個15瓦的慳電膽。電腦方面，則須以一台高能源效益的手提電腦取代一台桌面電腦。

這本指南和其他電器測試報告有何不同？

這本《低碳生活 - 電器選購指南》並非一般電器測試報告，而是全港第一本比較電器能源效益表現和二氧化碳排放資料的購物指南。本指南希望向消費者灌輸「低碳消費」的概念，並協助大家智選愛護氣候的產品。透過篩選、整理並分析市面上流行家庭電器及電子產品的資料，消費者將會在本指南發現，市面上低碳排放的電器產品，其實不乏選擇！

這本指南如何選出各類電器產品作介紹？

在技術伙伴的協助下，我們首先透過調查，了解市面上流行的電器種類及品牌。各種獲選電器的耗電數據，主要來自兩個途徑：本港及國際能源標籤的數據庫，以及生產商自行提供的資料。

經過整理及分析後，這本指南會挑選各個電器類別中，最符合能源效益的首20%至50%產品（視乎搜集到的電器型號數目而定）作介紹。本指南訂立20%至50%較闊的範圍，目的是為消費者提供更多的電器產品。隨著全球關心氣候變化的人士日漸增多，這本指南就為了有興趣接收更多低碳消費資訊的人士而設。

另一方面，我們亦鼓勵生產商繼續製造並推出更多低碳電器產品。本指南的網上版會隨著市面產品變動而更新，屆時會向消費者介紹更多符合能源效益的產品。

How can this Guide help?

Smart energy usage is a vital part that defines Low Carbon Living. In Hong Kong, over 60% of greenhouse gases are emitted from electricity generation, and the demand on electricity is ever-growing. Between 1990 to 2005, average electricity consumption in the residential sector has surged by 34%.

The "Low Carbon Living Appliances Guide", produced by WWF Climateers, introduces nine categories of low carbon electronic and electrical appliances available in Hong Kong. Choosing energy saving appliances can help save on your electricity bill, and more importantly, reduce your carbon emissions and hence contribute to saving the climate! The following table shows an example of a household's financial and carbon savings by using low carbon appliances introduced by this Guide*:

Appliances	Annual electricity reduction (kWh)	Annual bill saving (\$)	Annual carbon reduction (kg)
Air conditioner - 1 Horsepower	366	321.9	237.9
Lighting**	197.1	173.3	128.1
Refrigerator - 170 L	247.9	218	161
Rice cooker	109.5	96.3	71.2
LCD TV - 42"	146.7	129	95.4
Computer**	616.7	542.4	400.9
Total saving	1,683.9 kWh	\$1,481	1,094.5 kg of CO2
Reduction in %		↓ 46.1%	

* Financial and carbon savings are calculated by comparing the energy data of appliances from CLP's PowerU to the electricity consumption of the best performer introduced in this Guide under the same category.

** The mentioned electricity reduction on lighting requires switching from a 60W incandescent bulb to a 15W CFL (Compact Fluorescent Lamp). The electricity saving on computer requires switching from a desktop computer to an energy efficient laptop.

How is this Guide different from other appliances testing reports?

This "Low Carbon Living Appliances Guide" is not an appliances testing report but the first of its kind shopping guide in Hong Kong, comparing appliances according to their energy efficiency and carbon emissions data. This Guide is created to instill the concept of low carbon shopping and help consumers choose more climate-friendly products. By selecting popular appliances in the market, collating and analysing the information, we hope to demonstrate in this Guide that consumers are not short of options!

How are the appliances selected in this Guide?

With the help of WWF's technical partner, a survey was conducted to identify the popular appliance types and brands available in the market. The available energy data of the selected products was therefore collected through two channels: local and international energy labelling scheme databases and self-declared energy data provided by the manufacturers.

After thorough analysis of the collated data, the top 20% to 50% (varies from the number of models available) most energy efficient products in each category have been selected and introduced in this Guide. The broad range of 20% to 50% is intentional to include more choices for consumers to select. Only energy efficient products with relatively low carbon emissions are included in this Guide to meet with the demand for such information from an ever growing population who cares about our planet.

Meanwhile, we encourage manufacturers to produce more low

耗電量低的電器，是否就是對氣候影響最小的電器？

視乎個別電器產品而定。個別電器產品，例如冷氣機、慳電膽、雪櫃、熱水爐及打印機，部分型號可能相對耗電較多，但同時合乎能源效益。

這是由於低耗電量的電器不一定效能好。假設一部打印機可能較另一部打印機的用電量少一半，但要用三倍時間，去完成相同的打印工作，當它完成打印時，實際消耗更多能源，亦即向大氣層排放出更多二氧化碳。

因此，消費者選擇電器時，應該同時考慮電器的用電量和效能，不宜只著眼電器的用電量是否低。為了反映電器的真實性能，這本指南按電器的能源效益，或每年用電度數作為挑選電器的準則。如果想進一步了解各電器能源效益或用電度數的計算方法，請參考內文圖表。

氣候變化 - 對我們有影響嗎？

我們都感受到氣候變化對香港的影響。2008年10月香港的平均氣溫為攝氏26.5度，是天文台自1884年有紀錄以來最暖和的10月。香港天文台形容，「今次的高溫紀錄在一定程度上反映香港變暖的長期趨勢。」2007年的農曆新年亦創歷來最暖的紀錄。天文台還預計，本港在攝氏12度以下的日子，最早會在2030年消失，代表冬天不再。

二氧化碳是導致全球氣候變化的主要溫室氣體。發電廠燃燒化石燃料、砍伐樹林均會釋放大量二氧化碳。換言之，我們耗電愈多，排放出來的二氧化碳便愈多，造成不尋常氣候並帶來各種天災，例如海平面上升、物種滅絕、疾病、氾濫及旱災等。

不少國際著名科學家已經警告，我們必須立即採取行動，將全球平均氣溫升幅對比工業革命以前的氣溫水平維持在攝氏2度之內。否則的話，不可挽回的氣候災難，將會在我們有生之年內發生。

現在，全球平均溫度相比工業革命以前，已經上升了攝氏0.7度。我們必須立即行動，否則為時已晚！

carbon appliances and make them available in the market. We will update the online version of this Guide to keep consumers informed of the latest energy efficient products.

Is the low energy consuming appliance the most climate-friendly too?

The answer is Yes and No depending on each product. Some appliances, such as air conditioners, CFLs, refrigerators, water heaters and printers, could be energy efficient but still use more electricity overall.

It is because low energy consumption does not always guarantee high performance. For example, a low energy consuming printer might use half the energy per hour than another printer, but if it takes three times longer to print the same number of pages, it will be less energy efficient. In other words, when the printing task is done, more energy has been used and hence carbon emitted into the atmosphere.

That is why consumers should always consider both the level of energy consumption and the performance of the appliances instead of merely choosing low energy consuming products. Therefore, in this Guide we selected products by either energy efficiency ratio or annual energy consumption where appropriate to reflect the true performance of the products. Please refer to the appliances listings for additional information on the definition of energy efficiency ratio and annual energy consumption for specific appliances.

Climate Change – Can We Feel It?

Can we feel the impact of climate change in Hong Kong? Yes, for example, the monthly mean temperature of October 2008 was 26.5°C, the warmest since records began in 1884. According to the Hong Kong Observatory, "this record-breaking temperature reflects to some extent the long-term warming trend in Hong Kong." The 2007 Chinese New Year was also the hottest in record and the Observatory has predicted that days below 12°C will eventually disappear by 2030 earliest.

Carbon dioxide is one of the major greenhouse gases contributing to the problem of climate change. It is released from the burning of fossil fuels for power generation and from deforestation. That means our increasing use of electricity is releasing more carbon into the atmosphere, which may lead to catastrophic consequences, including the rising of sea levels, species extinction, diseases, flooding or drought associated with abnormal climatic changes.

Renowned scientists worldwide have already warned that if no imminent action is taken to prevent a 2°C global average temperature rise from the pre-industrial level, irreversible climate catastrophes will probably occur within our lifetime.

Right now, the average global temperature has already risen by 0.7°C from the pre-industrial level. We only have very little time to act, so we have to act fast!

怎樣使用本指南

《低碳生活 - 電器選購指南》一共涵蓋9類低碳家庭電器及電子產品。在這本指南，你可以找到：

- 至醒消費建議

切記：我們並非呼籲大家立刻棄掉所有舊電器，為家居大翻新！不過，當你打算購置新家電時，請參照本指南，選購低碳電器產品，並請妥善棄置舊電器。此外，不少慈善團體(如明愛、救世軍)亦會回收舊電器，再轉贈有需要家庭。

- 簡易查閱

9類家庭電器和電子產品各按其性能再分類，方便各位輕鬆找出心頭好。

- 精明低碳貼士

除了作出正確的低碳購物選擇，如何使用電器對實踐低碳生活同樣重要。本指南逐一介紹如何精明使用電器的低碳貼士，協助你從日常生活習慣入手，展開低碳生活。

- 網上完整版本：www.climateers.org

想查看更多低碳電器產品的資料，或與親友分享本指南的內容？請到網站www.climateers.org，下載完整版本，透過電郵、網頁或網誌繼續宣揚低碳生活的信息。

How to use this Guide

This "Low Carbon Living Appliances Guide" covers a total of nine categories of low carbon home appliances. In this Guide you will find:

- **Wise shopping advice for necessities**

We are not asking you to dump all your old appliances and start a home make-over. What we are suggesting is, whenever you decide to replace any old gadgets, you can refer to this Guide and do some low carbon shopping. When you are going to do so, think about donating the old appliances to the charitable organisations such as Caritas and The Salvation Army, or disposing of them carefully.

- **Easy navigation**

The nine types of home appliances are divided into different sub-categories according to their attributes, to help you navigate through the list of products easily.

- **Smart low carbon tips**

To achieve a Low Carbon Lifestyle, how you use your appliances is as important as making the right purchase decision. Tips are provided in this Guide on the smart usage of these appliances and the behavioral changes that will help towards Low Carbon Living.

- **Full version is available online at www.climateers.org**

Want to see more appliances or share this Guide with your families and friends? Download the full list of low carbon appliances at www.climateers.org and spread the message via e-mail, on your homepage or in your blogs.

冷氣機

佔住宅用電量：34%

香港的住宅用電量中，冷氣機用電最多。

選擇合適的冷氣機

冷氣機的體積和匹數愈大，不代表其效益愈好。建議大家按照房間的面積，來決定冷氣機的匹數。右表列出房間面積的建議匹數：

房間面積 (平方呎)	製冷量(匹)
90以下	$\frac{3}{4}$
90至120	1
120至180	1 $\frac{1}{2}$
180至250	2
250至300	2 $\frac{1}{2}$

* 以上資料僅供參考。冷氣機所需的製冷量受家庭成員人數和房間的座向所影響。

低碳貼士



1. 冷氣機配合電風扇使用：每調低冷氣機攝氏1度，電費便增加6%。相反，使用電風扇10小時，電費只是6毫。
2. 以冷氣機來說，分體式較窗口式省電，因為分體式有較大的外置機身來散熱。
3. 使用窗簾遮蓋窗戶：最有效減少冷氣費的方法，是利用窗簾避免房間直接受到曝曬。
4. 每隔六個星期清洗冷氣機濾網，保持機組空氣流通。這可保持冷氣機運作正常，維持良好性能。

氣候正能量話你知

製造冷氣機時使用氯氟碳化合物(CFCs)會損耗臭氧層，這種有害化學物質已經逐漸由氫氟碳化合物(HFCs)取替。不過，氫氟碳化合物亦是溫室氣體，一樣導致全球暖化。在完全不損害環境的冷氣機面世之前，請適當善用你家中的冷氣機。

Air Conditioner

Electricity consumption in the residential sector: 34%

Air conditioning consumes the most electricity in Hong Kong households.

Choosing the right air conditioner

Bigger is not always better for air conditioners to reach their optimal efficiency. The cooling capacity of an air conditioner should be determined by room size. The table on the right shows the recommended cooling capacity and its room size. Start by choosing the right horsepower for the room you are cooling.

Room size (sq. ft.)	Cooling capacity (HP – horsepower)
Below 90	$\frac{3}{4}$
90 to 120	1
120 to 180	1 $\frac{1}{2}$
180 to 250	2
250 to 300	2 $\frac{1}{2}$

* The above is for reference only. The required cooling capacity of the air conditioner can be affected by the family size and the location of the room.

Low Carbon Tips



1. Alternate use of air conditioner and fan. Air conditioners consume an extra 6% of electricity for every degree lower in temperature while it only costs 60 cents to run a fan for 10 hours.
2. For air conditioning, split type is in general more energy efficient than window type, as it has a bigger external body to disperse the accumulated heat.
3. Use curtain and blinds. The most efficient way to reduce your cooling cost is to reduce the heat in your home.
4. Clean the air conditioning unit filters every six weeks to allow free flow air. This improves the operation efficiency of the air conditioner.

Climateers Talk

The use of CFCs (Chlorofluorocarbons) in air conditioner production — the gases that cause ozone depletion, has been gradually replaced by HFCs (Hydrofluorocarbons). However, HFCs are also greenhouse gases that contribute to global warming. Before an environmentally harmless air conditioner becomes available, use your existing air conditioner(s) wisely.

1匹窗口式冷氣機 1HP Window Type Air Conditioner

品牌 (型號)	能源效益比率	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Energy Labels	Reference Price (\$)
樂信 Rasonic (RCXC96J)	11.25	800	520	703.6	⊕	4,080
樂聲 Panasonic (CWXC96JA)	10.23	880	572	773.96	⊕	4,080
飛歌 Philco (PAC095B5C)	10.11	890	578.5	782.76	⊕	2,190
格力 Gree (G09M)	10.11	890	578.5	782.76	⊕	2,298
約克 York (YC9E1)	10	900	585	791.55		1,980
菱電 Ryoden (RW09AC)	9.89	890	578.5	782.76	⊕	2,000
開利 Carrier (CHK09LA)	9.8	918	596.7	807.38	⊕	1,720
開利 Carrier (CHK09EC)	9.8	918	596.7	807.38	⊕	3,380
開利 Carrier (CHK09SC)	9.8	918	596.7	807.38	⊕	2,500
德國寶 German Pool (KC25C1)	9.77	921	598.65	810.02		3,390

備註 Remarks

能源效益比率：代表產品的製冷量(Btu/hr)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。

Energy Efficiency Ratio: It refers to the cooling capacity (Btu/hr) to power consumption (W) ratio. Higher ratio means higher efficiency of the product.

每年用電：假設1台冷氣機每年運作1,000小時。

Annual Energy Consumption: It is assumed that an air conditioner operates 1,000 hours annually.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

1匹分體式冷氣機 1HP Split Type Air Conditioner

品牌 (型號)	能源效益比率	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Energy Labels	Reference Price (\$)
大金 Daikin (RW25J)	12.86	700	455	615.65		4,200
樂信 Rasonic (RSC9EK)	12.22	740	481	650.83	⊕	2,700
樂信 Rasonic (RSXC9EK)	12.21	760	494	668.42	⊕	5,998
日立 Hitachi (RAS10C9KS)	11.43	875	568.75	769.56	⊕	2,752
三菱 Mitsubishi (MSDDB09VC)	11.09	800	520	703.6		3,370
聲寶 Sharp (AHAP9GSA)	10.98	820	533	721.19	⊕	2,900
三菱 Mitsubishi (MSHA09YV)	10.9	798	518.7	701.84		6,380
樂信 Rasonic (RSXC9DK)	10.85	785	510.25	690.41		4,280
大金 Daikin (FTW25J)	10.4	865	562.25	760.77		3,080
LG (HS-C96QPA2)	10	900	585	791.55		3,090

備註 Remarks

能源效益比率：代表產品的製冷量(Btu/hr)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。

Energy Efficiency Ratio: It refers to the cooling capacity (Btu/hr) to power consumption (W) ratio. Higher ratio means higher efficiency of the product.

每年用電：假設1台冷氣機每年運作1,000小時。

Annual Energy Consumption: It is assumed that an air conditioner operates 1,000 hours annually.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

2匹窗口式冷氣機 2HP Window Type Air Conditioner

品牌 (型號)	能源效益比率	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Energy Labels	Reference Price (\$)
樂信 Rasonic (RCC186E)	9.56	1,830	1,189.5	1,609.49	⊕	3,080
樂聲 Panasonic (CWC184EA)	9.56	1,830	1,189.5	1,609.49	⊕	4,064
樂聲 Panasonic (CWC186EA)	9.56	1,830	1,189.5	1,609.49	⊕	4,680
樂聲 Panasonic (CWXC186EA)	9.56	1,830	1,189.5	1,609.49	⊕	4,680
樂聲 Panasonic (CWXC184EA)	9.56	1,830	1,189.5	1,609.49	⊕	4,680
日立 Hitachi (RA18JDF)	9.33	1,830	1,189.5	1,609.49	⊕	3,850
日立 Hitachi (RA18JF1)	9.33	1,830	1,189.5	1,609.49	⊕	3,470
TCL (TAC18CW)	9.23	1,950	1,267.5	1,715.03		2,880
LG (W18LCB)	9.09	1,925	1,251.25	1,693.04	⊕	3,980
飛歌 Philco (PAC185B5C)	9.01	2,020	1,313	1,776.59	⊕	4,998

備註 Remarks

能源效益比率：代表產品的製冷量(Btu/hr)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。

Energy Efficiency Ratio: It refers to the cooling capacity (Btu/hr) to power consumption (W) ratio. Higher ratio means higher efficiency of the product.

每年用電：假設1台冷氣機每年運作1,000小時。

Annual Energy Consumption: It is assumed that an air conditioner operates 1,000 hours annually.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

2匹分體式冷氣機 2HP Split Type Air Conditioner

品牌 (型號)	能源效益比率	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Energy Labels	Reference Price (\$)
大金 Daikin (FT50B)	10.96	1,650	1,072.5	1,451.18		6,830
樂信 Rasonic (RSC18EK)	10.95	1,680	1,092	1,477.56	⊕	4,800
樂聲 Panasonic (CSC18EKA)	10.95	1,680	1,092	1,477.56	⊕	6,370
LG (HS-C1865DA3)	10.71	1,680	1,092	1,477.56		-
樂聲 Panasonic (CSA18DKA)	10.52	1,720	1,118	1,512.74		6,370
樂信 Rasonic (RSC18EW)	9.78	1,780	1,157	1,565.51	⊕	5,900
樂聲 Panasonic (CSC18EWA)	9.78	1,780	1,157	1,565.51	⊕	7,480
樂聲 Panasonic (CUC18EWA)	9.78	1,780	1,157	1,565.51	⊕	7,780
三菱 Mitsubishi (MSD19BV)	9.71	1,950	1,267.5	1,715.03		6,280

備註 Remarks

能源效益比率：代表產品的製冷量(Btu/hr)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。

Energy Efficiency Ratio: It refers to the cooling capacity (Btu/hr) to power consumption (W) ratio. Higher ratio means higher efficiency of the product.

每年用電：假設1台冷氣機每年運作1,000小時。

Annual Energy Consumption: It is assumed that an air conditioner operates 1,000 hours annually.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳
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照明

佔住宅用電量：22%

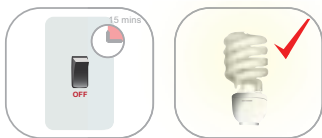
照明是香港住宅耗電量排名第二的電器。

選擇合適的慳電膽 (CFL)

慳電膽的能源效益一般比鎢絲膽高75%。即是說，慳電膽能以較低的用電量，發出相同的光度。當你將家中的鎢絲膽改為慳電膽時，請參考右表：

鎢絲膽 (瓦)	慳電膽 (瓦)
45	9
60	11
75	15
100	20
125	23

低碳貼士



1. 把燈光調暗可以節省能源，請選擇可調較光暗的照明或照明組合來取替單一光源。
2. 你的房間是否太光？請檢查能否減少燈膽或其他照明使燈光變得柔和。
3. 假如離開房間多於15分鐘，請把燈關掉。
4. 慳電膽雖然有較高的能源效益，但含有水銀，水銀的毒性對人類及環境構成損害。建議選擇較耐用的慳電膽（壽命約8,000小時至10,000小時），並且正確地棄置舊的慳電膽，以免危害人類及環境。不少商場、屋苑均設有慳電膽回收站，詳情可瀏覽：www.wastereduction.gov.hk/chi/household/flrp_detail.htm

氣候正能量話你知

歐盟「生態標籤」(Eco-label)評估產品對環境整體的影響。以慳電膽來說，產品需要有效節能及含極微量水銀，才可獲得該標籤。

Lighting

Electricity consumption in the residential sector: 22%

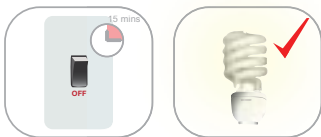
Lighting is the 2nd highest electricity consuming appliance in Hong Kong households.

Choosing the right Compact Fluorescent Lamp (CFL)

CFLs are generally 75% more energy efficient than traditional incandescent light bulbs. In other words CFL produces the same level of brightness at lower wattage rating. Refer to the chart on the right when you decide to replace incandescent light bulbs with CFLs:

Incandescent Light Bulb (watts)	CFL (watts)
45	9
60	11
75	15
100	20
125	23

Low Carbon Tips



1. Dimming the lights is a way to conserve energy. Opt for dimmable lightings or a flexible combination of light fixtures instead of a single light source.
2. Is the lighting in your room too bright? Check whether you can install softer light settings by reducing the amount of light bulbs or light sources.
3. Switch off the lights if you are leaving the room for more than 15 minutes.
4. Despite its energy efficiency, the use of CFLs is still environmentally controversial as it contains mercury vapour which is toxic to human and the environment. Choose longer

lasting CFLs (around 8,000 to 10,000 hours of life time), and please dispose of unwanted CFLs properly. Otherwise it could be harmful to both humans and the environment. Learn more about where you can recycle the CFLs: www.wastereduction.gov.hk/en/household/flrp_detail.htm

Climateers Talk

The European Eco-label assesses the overall environmental impact of products. In the case of CFL, it has to be energy saving and contain very little mercury to be awarded the label.

11-15瓦慳電膽 11-15W CFL

品牌 (型號)	能源效益比率	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	瓦特數(瓦)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Wattage (W)	Energy Labels	Reference Price (\$)
星威 Starwise (SH13W-27C)	61.54	56.94	37.01	50.08	13		-
飛利浦 Philips (PLEU15WWWES)	60	65.7	42.71	57.78	15	⊕	-
曼佳美 Megaman (MU111i)	57.27	48.18	31.32	42.37	11		98
曼佳美 Megaman (W315DC12)	57	65.7	42.71	57.78	15		85
飛利浦 Philips (PLEU15WCDLES)	56.67	65.7	42.71	57.78	15	⊕	-
曼佳美 Megaman (MU115i)	56.67	65.7	42.71	57.78	15		100
曼佳美 Megaman (W1514)	54.29	61.32	39.86	53.93	14	⊕	32
曼佳美 Megaman (GSU415)	54	65.7	42.71	57.78	15	⊕	60
曼佳美 Megaman (CSU415)	54	65.7	42.71	57.78	15	⊕	60
飛利浦 Philips (SLED15WWWES)	53.33	65.7	42.71	57.78	15	⊕	-
飛利浦 Philips (SLE15WCDLES)	53.33	65.7	42.71	57.78	15	⊕	-
曼佳美 Megaman (GSU115)	53.33	65.7	42.71	57.78	15		-

備註 Remarks

能源效益比率：代表產品的流明相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。
 Energy Efficiency Ratio: It refers to the Lumen to Wattage (W) ratio. Higher ratio means higher efficiency of the product.
 每年用電：假設1個慳電膽每天運作12小時。
 Annual Energy Consumption: It is assumed that a CFL operates 12 hours per day.
 能源標籤：⊕ 香港能源效益標籤計劃
 Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

16-20瓦慳電膽 16-20W CFL

品牌 (型號)	能源效益比率	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	瓦特數(瓦)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Wattage (W)	Energy Labels	Reference Price (\$)
星威 Starwise (SH18W-27A)	66.67	78.84	51.25	69.34	18		-
曼佳美 Megaman (MU120i)	61.75	87.6	56.94	77.04	20		112
飛利浦 Philips (PLEU20WWWES)	60	87.6	56.94	77.04	20	⊕	-
曼佳美 Megaman (WL220)	57.55	87.6	56.94	77.04	20	☆	48
曼佳美 Megaman (3U220s)	57.55	87.6	56.94	77.04	20		168

備註 Remarks
 能源效益比率：代表產品的流明相對耗電量(瓦)的比率·比率愈高顯示該產品的能源效益愈高。
 Energy Efficiency Ratio: It refers to the Lumen to Wattage (W) ratio. Higher ratio means higher efficiency of the product.
 每年用電：假設1個慳電膽每天運作12小時。
 Annual Energy Consumption: It is assumed that a CFL operates 12 hours per day.
 能源標籤：⊕ 香港能源效益標籤計劃·☆ 美國能源之星。
 Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme, ☆ US Energy Star

綠色字體表示產品在該項目表現最佳
 Green text indicates the best performer in the column

雪櫃

佔住宅用電量；14%

雪櫃是香港住宅耗電量排名第三的電器。

選擇合適的雪櫃

購買雪櫃時，雪櫃的容量當然是主要考慮因素。不過，你的正確選擇可以幫助減低你的二氧化碳排放量。右表列出選購雪櫃的參考程式：

家庭成員數目	雪櫃容量*(公升)
兩名成員	200 至 230
每多一名成員	+ 25

* 只顯示冷藏箱容量，未包括冰箱的容量。

使用一個大雪櫃較兩個小雪櫃更有效節能。假如你的廚房夠大，選擇一個符合你需要的大雪櫃，避免日後添加小雪櫃。

低碳貼士



1. 雪櫃太滿會阻礙雪櫃內的空氣流通，影響效能並使食物變壞，但空的雪櫃比放滿東西的雪櫃需要更多電力來製冷。如果雪櫃長期騰空，可以在雪櫃內擺放數瓶水，以保存冷氣。
2. 蓋好食物及飲品。沒蓋好的食物或飲品會令雪櫃內的濕度上升，使雪櫃需要耗用更多能源來製冷。
3. 把熱的食物放進雪櫃，會令雪櫃需用更多電力來製冷，加重雪櫃的負荷。建議先把食物放在室溫冷卻後，才放進雪櫃。
4. 雪櫃的冷藏箱最好調較溫度於攝氏3度。每調低1度，便會多消耗5%能源。
5. 擺放雪櫃時，預留空間來讓機組散熱。

氣候正能量話你知

就如冷氣機一樣，雪櫃所用的氯氟碳化合物(CFCs)，已廣泛地被氫氟碳化合物(HFCs)取替。至2000年，以全球總排放量計算，氫氟碳化合物(HFCs)仍然是第5位最主要的溫室氣體。

Refrigerator

Electricity consumption in the residential sector: 14%

Refrigerators are the 3rd highest electricity consuming appliance in Hong Kong households.

Choosing the right refrigerator

The size of refrigerator is a choice of your lifestyle. However you can reduce your carbon emissions by choosing the right one. The general rule of thumb is shown in the table on the right:

Family size	Capacity of the fridge* (Litre)
Two-member	Between 200 to 230
Every additional member	+25

* It shows the fridge capacity only. Freezer space should be added on top of that.

It is more efficient to run one big refrigerator instead of two small ones. If your kitchen space allows, get a bigger refrigerator matching the capacity you require and avoid adding a smaller one later.

Low Carbon Tips



1. A packed refrigerator will block the interior air circulation thus lower the efficiency and spoil the food. However, an empty refrigerator will need more power to cool its interior than a full one because an appropriate amount of fillings will help trap coolness. You can simply keep jugs with water in your fridge if it is always empty.
2. Keep all food and liquid covered. Uncovered food and drink add moisture to the air, and more energy is consumed to cool the interior.

3. It takes more power to cool the interior of the refrigerator when heated things are put inside. It is recommended that food should be cooled down before being put into the refrigerator.
4. It is most efficient to run the fridge section of a refrigerator at a constant 3°C. Every degree cooler will increase the energy consumption by 5%.
5. When placing your refrigerator, leave some room for ventilation.

Climateers Talk

Similar to air conditioners, the use of CFCs in refrigerators has been widely replaced by HFCs. In 2000, HFCs were still ranked as the fifth most significant greenhouse gases in terms of total emissions globally.

101-200公升雪櫃 101-200L Refrigerator

品牌 (型號)	能源效益比率	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Energy Labels	Reference Price (\$)
西門子 Siemens (KK27N00HKL)	5.1	339	220.35	298.15	⊕	4,580
西門子 Siemens (KK27N00HKL)	5.1	339	220.35	298.15	⊕	4,580
聲寶 Sharp (SJ-34N)	4.48	368	239.2	323.66	⊕	2,850
日立 Hitachi (R-220A5H)	4.14	328	213.2	288.48	⊕	3,060
西門子 Siemens (KK24N00HKL)	3.902	372	241.8	327.17	⊕	4,580
西門子 Siemens (KK24N00HKL)	3.902	372	241.8	327.17	⊕	4,580
聲寶 Sharp (SJ-30N)	3.899	359	233.35	315.74	⊕	2,680
三洋 Sanyo (SR-F40G)	3.76	434	282.1	381.7	⊕	3,398
樂聲 Panasonic (NR-C27D1H)	3.73	443	287.95	389.62	⊕	3,080
聲寶 Sharp (SJ-298)	3.63	376	244.4	330.69	⊕	2,480

備註 Remarks

能源效益比率：代表冷藏箱的容量(公升)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。冰箱的容量不包括在內。

Energy Efficiency Ratio: It refers to the net capacity of the fridge compartment (L) to power consumption (W) ratio. Higher ratio means higher efficiency of the product. Capacity of the freezer compartment is not included.

每年用電：假設1台雪櫃每天運作24小時。

Annual Energy Consumption: It is assumed that a refrigerator operates 24 hours per day.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

201-300公升雪櫃 201-300L Refrigerator

品牌 (型號)	能源效益比率	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Energy Labels	Reference Price (\$)
西門子 Siemens (KI38LA40IE)	6.41	318	206.7	279.68	⊕ △	14,800
西門子 Siemens (KI38SA50IE)	6.08	310	201.5	272.65	⊕ △	12,980
西門子 Siemens (KD36NA00)	5.95	372	241.8	327.17	⊕ △	6,490
LG (GR-S462)	5.33	438	284.7	385.22	⊕	4,328
西門子 Siemens (KD30NA00)	5.29	343	222.95	301.67	⊕ △	5,490
日立 Hitachi (R-SF47TM)	4.93	522	339.3	459.1	⊕	13,380
日立 Hitachi (R-S37SVH-1)	4.79	449	291.85	394.9	⊕	6,680
西門子 Siemens (KD30NX00)	4.77	380	247	334.21	⊕ △	4,490
三菱 Mitsubishi (MR-CU41S)	4.46	498	323.7	437.99	⊕	5,480
三星 Samsung (RL39EB)	4.33	491	319.15	431.83	⊕	3,980

備註 Remarks

能源效益比率：代表冷藏箱的容量(公升)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。冰箱的容量不包括在內。

Energy Efficiency Ratio: It refers to the net capacity of the fridge compartment (L) to power consumption (W) ratio. Higher ratio means higher efficiency of the product. Capacity of the freezer compartment is not included.

每年用電：假設1台雪櫃每天運作24小時。

Annual Energy Consumption: It is assumed that a refrigerator operates 24 hours per day.

能源標籤：⊕ 香港能源效益標籤計劃，△ 歐盟能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme, △ EU Energy Label

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

電視機

佔住宅用電量：7.3%

電視機是香港住宅耗電量排名第四的電器。

選擇合適的電視機

大電視機未必代表更好的畫面質素，但一定會更為耗電，因為如果觀看距離太近，大電視機的解像度未必理想。要找出最好的選擇，應該參考觀看電視的距離。右表列出建議的電視大小及合適的觀看距離：

16:9 電視屏幕對角尺寸(吋)	最近觀看距離(呎)	最遠觀看距離(呎)
26	3.3	6.5
30	3.8	7.6
34	4.3	8.5
42	5.3	10.5
47	5.9	11.8
50	6.3	12.5
55	6.9	12.8
60	7.5	15
65	8.1	16.2

低碳貼士



1. 新興的平面 LCD 液晶電視機及等離子電視機由於尺寸愈來愈大，它們可以比舊式顯像管電視機消耗多4倍能源。
2. 一般來說，LCD液晶屏幕比等離子屏幕稍為節能及更耐用，LCD液晶屏幕的壽命為20至25年，等離子屏幕則為10至20年。
3. 開著40吋LCD液晶電視機1小時的用電量相等於亮著20個燈泡(約200瓦)。所以，如非觀看，建議不要開著電視來製造「背景聲音」。
4. 調低電視機屏幕光暗度可以省電，卻不會降低畫面質素。
5. 電視機的備用狀態同樣耗電，故請把電視機完全關掉。

Television

Electricity consumption in the residential sector: 7.3%

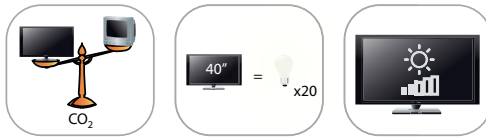
TV is the 4th highest electricity consuming appliance in Hong Kong households.

Choosing the right television

A large TV certainly consumes more electricity but it may not necessarily offer a better viewing experience. The resolution of the images from a large screen may not be as crisp compared to a smaller one. The best choice should be made according to the appropriate viewing distance. The table on the right shows the recommended TV sizes and viewing distances:

16:9 TV diagonal screen size (inch)	Min. viewing distance (ft)	Max. viewing distance (ft)
26	3.3	6.5
30	3.8	7.6
34	4.3	8.5
42	5.3	10.5
47	5.9	11.8
50	6.3	12.5
55	6.9	12.8
60	7.5	15
65	8.1	16.2

Low Carbon Tips



1. Trendy flat-screen LCD and plasma TV can consume up to four times more energy than the old CRT (cathode ray tube) as people are buying TVs with bigger screens.
2. In general, LCD is slightly more energy efficient than plasma and more durable (lifespan of 20 to 25 years) than plasma (lifespan of 10 to 20 years).
3. Running a 40" LCD for an hour is equal to lighting up 20 light bulbs in terms of energy use (about 200 watts). So it is not recommended that you leave the TV on to produce "background" music in your room.
4. Turn down the intensity of the backlights of your TV. Reducing the screen brightness can cut down power consumption without lowering any image quality.
5. Switch off the TV completely. The "stand-by" mode is also using electricity.

26" 液晶電視 26" LCD TV

品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	高清播放	解像度	HDMI 輸入	能源標籤	參考價格 (\$)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	HDTV	Resolution	HDMI Input	Energy Labels	Reference Price (\$)
LG (26LG30R)	197.1	128.12	173.35	✓	1366x768	✓		5,800
新力 Sony (KLV26U300A)	197.1	128.12	173.35	✓	1366x768	✓		5,980
日立 Hitachi (L26A01A)	208.05	135.23	182.98	✓	1366x768	✓	⊕	6,280
蒂雅克 TEAC (LCD2680DT)	208.05	135.23	182.98	✓✓	1366x768	✓		6,980
東芝 Toshiba (26AV300C)	234.33	152.31	206.09	✓	1366x768	✓		5,080
樂聲 Panasonic (TX26LX60M)	238.71	155.16	209.95	✓	1366x768	✓		6,500
LG (26LC7R)	240.90	156.59	211.87	✓	1366x768	✓		6,080
LG (26LX2R)	240.90	156.59	211.87	✓	1366x768	✓		7,800
東芝 Toshiba (26A3000C)	240.90	156.59	211.87	✓	1366x768	✓		4,980
飛利浦 Philips (26PF5320)	240.90	156.59	211.87	✓	1366x768	✓		8,300

備註 Remarks

每年用電：假設1台電視機每天運作6小時，其餘18小時電視機是完全關機，而不是處於備用狀態。

Annual Energy Consumption: It is assumed that a TV operates in on-mode 6 hours per day. For the rest of the 18 hours, the device is assumed to be in off-mode without stand-by.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

高清播放：✓ 可收看高清或全高清，但不設內置解碼器，✓✓ 可收看高清或全高清，並設有內置解碼器，✗ 不能播放高清

HDTV: ✓ HD ready or Full HD without internal decoder, ✓✓ HD ready or Full HD with internal decoder, ✗ HDTV feature unavailable

HDMI 輸入：✓ 設有高清多媒體介面輸入，✗ 不設高清多媒體介面輸入

HDMI Input: ✓ HDMI input available, ✗ HDMI input unavailable

綠色字體表示產品在該項目表現最佳
Green text indicates the best performer in the column

32" 液晶電視 32" LCD TV

品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	高清播放	解像度	HDMI 輸入	能源標籤	參考價格 (\$)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	HDTV	Resolution	HDMI Input	Energy Labels	Reference Price (\$)
聲寶 Sharp (LC32G1H)	256.23	166.55	225.35	✓	1366x768	✓		8,980
聲寶 Sharp (LC32G2H)	256.23	166.55	225.35	✓	1366x768	✓		8,980
飛利浦 Philips (32PF7320)	262.8	170.82	231.13	✓	1366x768	✓		12,300
聲寶 Sharp (LC32AX3H)	269.37	175.09	236.91	✓	1366x768	✓		10,600
JVC (LT-32EX18SAT)	282.51	183.63	248.47	✓	1366x768	✓		6,980
LG (32LG60UR)	284.7	185.06	250.39	✓	1366x768	✓		9,800
LG (32LG30RA)	284.7	185.06	250.39	✓	1366x768	✓		7,980
飛利浦 Philips (32PFL5203/98)	284.7	185.06	250.39	✓	1366x768	✓		7,790
三星 Samsung (LA32A350C1)	284.7	185.06	250.39	✓	1366x768	✓		6,999
聲寶 Sharp (LC-32A33H)	291.27	189.33	256.17	✓	1366x768	✓		6,150

備註 Remarks

每年用電：假設1台電視機每天運作6小時，其餘18小時電視機是完全關機，而不是處於備用狀態。

Annual Energy Consumption: It is assumed that a TV operates in on-mode 6 hours per day. For the rest of the 18 hours, the device is assumed to be in off-mode without stand-by.

高清播放：✓ 可收看高清或全高清，但不設內置解碼器；✓✓ 可收看高清或全高清，並設有內置解碼器；✗ 不能播放高清

HDTV: ✓ HD ready or Full HD without internal decoder, ✓✓ HD ready or Full HD with internal decoder, ✗ HDTV feature unavailable

HDMI 輸入：✓ 設有高清多媒體介面輸入；✗ 不設高清多媒體介面輸入

HDMI Input: ✓ HDMI input available, ✗ HDMI input unavailable

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

37" 液晶電視 37" LCD TV

品牌 (型號)	每年用電 (度)	每年碳排放量 (公斤)	每年電費 (\$)	高清播放	解像度	HDMI 輸入	能源標籤	參考價格 (\$)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	HDTV	Resolution	HDMI Input	Energy Labels	Reference Price (\$)
聲寶 Sharp (LC37AX3H)	321.93	209.25	283.14	✓	1366x768	✓		14,800
東芝 Toshiba (37WL67J)	335.07	217.8	294.69	✓	1366x768	✓		11,100
新力 Sony (KLV-37U300A)	339.45	220.64	298.55	✓	1366x768	✓		11,800
新力 Sony (KLV-S310A)	341.64	222.07	300.47	✓	1366x768	✓		7,800
聲寶 Sharp (LC37G1H)	343.83	223.49	302.4	✓	1366x768	✗		9,980
聲寶 Sharp (LC37G2H)	343.83	223.49	302.4	✓	1366x768	✗		8,990
東芝 Toshiba (37CV500E)	343.83	223.49	302.4	✓	1366x768	✓		8,880
樂聲 Panasonic (TX-37LX80H)	346.02	224.91	304.32	✓	1366x768	✓		7,980
東芝 Toshiba (37WL66E)	350.40	227.76	308.18	✓	1366x768	✓		12,300
日立 Hitachi (L37X01A)	365.73	237.72	321.66	✓	1920x1080	✓	⊕	14,280

備註 Remarks

每年用電：假設1台電視機每天運作6小時，其餘18小時電視機是完全關機，而不是處於備用狀態。

Annual Energy Consumption: It is assumed that a TV operates in on-mode 6 hours per day. For the rest of the 18 hours, the device is assumed to be in off-mode without stand-by.

能源標籤：⊕ 香港能源效益標籤計劃

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme

高清播放：✓ 可收看高清或全高清，但不設內置解碼器；✓✓ 可收看高清或全高清，並設有內置解碼器；✗ 不能播放高清

HDTV: ✓ HD ready or Full HD without internal decoder, ✓✓ HD ready or Full HD with internal decoder, ✗ HDTV feature unavailable

HDMI 輸入：✓ 設有高清多媒體介面輸入；✗ 不設高清多媒體介面輸入

HDMI Input: ✓ HDMI input available, ✗ HDMI input unavailable

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

42" 液晶電視 42" LCD TV

品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	高清播放	解像度	HDMI 輸入	能源標籤	參考價格 (\$)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	HDTV	Resolution	HDMI Input	Energy Labels	Reference Price (\$)
JVC (LT-42S90BSAT)	400.77	260.5	352.48	✓	1920x1080	✓		13,500
JVC (LT-42S90B)	400.77	260.5	352.48	✓	1920x1080	✓		12,300
新朗 Cinetron (42LT810HDI)	405.15	263.35	356.33	✓✓	1920x1080	✓		13,800
飛利浦 Philips (42PFL7403/98)	438.00	284.7	385.22	✓✓	1920x1080	✓	☆	16,990
日立 Hitachi (L42X01A)	438.00	284.7	385.22	✓	1920x1080	✓	⊕	21,800
飛利浦 Philips (42PFL5403/98)	438.00	284.7	385.22	✓	1920x1080	✓		13,990
東芝 Toshiba (42CV500E)	442.38	287.55	389.07	✓	1366x768	✓		12,380
東芝 Toshiba (42RV500E)	457.71	297.51	402.56	✓	1920x1080	✓		13,980
東芝 Toshiba (42CV500C(HD))	457.71	297.51	402.56	✓	1920x1080	✓		15,980

備註 Remarks

每年用電：假設1台電視機每天運作6小時，其餘18小時電視機是完全關機，而不是處於備用狀態。

Annual Energy Consumption: It is assumed that a TV operates in on-mode 6 hours per day. For the rest of the 18 hours, the device is assumed to be in off-mode without stand-by.

能源標籤：⊕ 香港能源效益標籤計劃 · ☆ 美國能源之星

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme, ☆ US Energy Star

高清播放：✓ 可收看高清或全高清，但不設內置解碼器 · ✓✓ 可收看高清或全高清，並設有內置解碼器 · ✗ 不能播放高清

HDTV: ✓ HD ready or Full HD without internal decoder, ✓✓ HD ready or Full HD with internal decoder, ✗ HDTV feature unavailable

HDMI 輸入：✓ 設有高清多媒體介面輸入 · ✗ 不設高清多媒體介面輸入

HDMI Input: ✓ HDMI input available, ✗ HDMI input unavailable

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

熱水爐

佔住宅用電量；5.7%

熱水爐是香港住宅耗電量排名第五的電器。

選擇合適的熱水爐

香港最常見有兩種電熱水爐，其操作原理及用電量各有分別。

1. 儲水式：即備有儲水缸的熱水爐。開啟熱水爐後，水會燒熱及儲在水缸內，一般而言，一個15至20公升儲水式熱水爐足夠4人家庭使用。
2. 即熱式：即熱式熱水爐有較先進的裝置，開掣後會即時把水燒熱，新落成的住宅單位的電力裝置一般都容許安裝即熱式熱水爐。它們的用電量可以高達20,000瓦，代表如果長開熱水洗澡半小時，電費接近9元。煤氣熱水爐一般為即熱式。

低碳貼士



1. 改用低量式花灑頭可節省電費，更可每年為4人家庭節省36,500公升的用水。
2. 請在和暖季節調低熱水爐的恆溫器。將熱水爐的溫度由攝氏60度調低至49度，每年可減排200公斤二氧化碳。

Water Heater

Electricity consumption in the residential sector: 5.7%

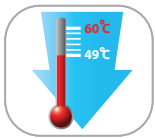
Water heaters are the 5th highest electricity consuming appliance in Hong Kong households.

Choosing the right water heater

There are two common types of electric water heaters available in Hong Kong, each employing distinctive functionalities and energy consumption.

1. Storage type: This type of heater contains a water tank. Water is heated up and stored when the heater is switched on. Generally speaking, a 15 to 20 litres storage type heater is sufficient for a family of four.
2. Instantaneous type: This type of heater heats up water instantly and is more popular in new built houses due to more advanced power generation setups. It operates at a power rate as high as 20,000 watts, equivalent to paying nearly \$9 if you take a shower for half an hour. Gas water heaters are normally instantaneous type.

Low Carbon Tips



1. Replace your shower head with low-flow type as it can save heating cost and about 36,500 litres of water per year for a family of four.
2. Turn down the thermostat of your water heater in warm weather. Reducing the temperature of your water heater from 60°C to 49°C will save 200 kg of CO₂ per year.

25公升儲水式電熱水爐 25L Electric Storage Water Heater

品牌 (型號)	能源效益比率	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	儲水量 (公升)	能源標籤	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Capacity (L)	Energy Labels	Reference Price (\$)
朗高 Deutschooner (DN-603T)	0.5478	46	29.9	40.46	25.2	⊕	1,399
慧莎 Esaar (DNP-25W)	0.453	49	31.85	43.1	22.2	⊕	2,480
OPAL (DNP-25)	0.453	49	31.85	43.1	22.2	⊕	2,270
德國寶 German Pool (GPN-6)	0.444	50	32.5	43.98	22.2	⊕	2,190
電寶 Hotpool (HPU-6.5)	0.4286	56	36.4	49.25	24	⊕	2,550
朗高 Deutschooner (DNP-6)	0.3982	56	36.4	49.25	22.3	⊕	2,280
氣霸 Hibachi (HY-U6.5)	0.3951	61	39.65	53.65	24.1	⊕	1,590
Select (SWP-P25L)	0.3903	62	40.3	54.53	24.2	⊕	-
Select (SWH-N25T)	0.3903	62	40.3	54.53	24.2	⊕	-
德漢寶 Techamburg (DN603T)	0.3903	62	40.3	54.53	24.2	⊕	2,450
真寶電 General Elect (DN603T)	0.3903	62	40.3	54.53	24.2	⊕	2,450
德寶 German Goal (DN603T)	0.3903	62	40.3	54.53	24.2	⊕	2,450

備註 Remarks

能源效益比率：代表產品的儲水量(公升)相對備用狀態耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。

Energy Efficiency Ratio: It refers to the storage capacity (L) to standby power consumption (W) ratio. Higher ratio means higher efficiency of the product.

每年用電：假設1台儲水式電熱水爐每年有75天處備用狀態，並未有將電熱水爐在燒水時的耗電量計算在內。(數據來自香港能源效益標籤計劃登記名冊)

Annual Energy Consumption: It is assumed that an electric storage water heater operates in stand-by mode 75 days per year. Energy consumption of the water heater in on-mode is not factored in. (Data obtained from the registration records of the Hong Kong Energy Efficiency Labelling Scheme)

能源標籤：⊕ 香港能源效益標籤計劃

Energy Label: ⊕ Hong Kong Energy Efficiency Labelling Scheme

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

煤氣熱水爐 Gas Water Heater

品牌 (型號)	能源效益比率	每年用煤氣 (兆焦耳)	每年排碳量 (公斤)	每年煤氣費 (\$)	每分鐘熱水供應量 (公升)	參考價格 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (MJ)	Annual Carbon Emissions (kg)	Annual Gas Cost (\$)	Hot Water Supply Per Minute (L)	Reference Price (\$)
TGC (NSW160RFL)	8.0255	9,096.03	545.76	1,937.45	16.8	6,800
TGC (TSTW168SFR)	7.648	9,545.04	572.7	2,033.09	16.8	10,380
TGC (TGW168)	7.648	9,545.04	572.7	2,033.09	16.8	7,780
TGC (TGW168D)	7.648	9,545.04	572.7	2,033.09	16.8	8,880
TGC (TGW168L)	7.648	9,545.04	572.7	2,033.09	16.8	9,380
能率 Noritz (NR24DQF)	7.6474	9,545.76	572.75	2,033.25	24	16,650
TGC (TGW128)	7.6418	9,552.73	573.16	2,034.73	12.8	6,980
TGC (TGW128D)	7.6418	9,552.73	573.16	2,034.73	12.8	8,080
TGC (TGW128L)	7.6418	9,552.73	573.16	2,034.73	12.8	8,680
TGC (TSTW128SFR)	7.6418	9,552.73	573.16	2,034.73	12.8	9,580
備註 Remarks						
能源效益比率：代表產品的熱水供應量(公升)相對最高煤氣耗用量(兆焦耳)的比率。比率愈高顯示該產品的能源效益愈高。 Energy Efficiency Ratio: It refers to the hot water supply (L) to maximum gas consumption (MJ) ratio. Higher ratio means higher efficiency of the product.					綠色字體表示產品在該項目表現最佳 Green text indicates the best performer in the column	
每年用煤氣：假設1台恆溫煤氣熱水爐每日供應200公升熱水，足夠四人家庭使用。 Annual Energy Consumption: It is assumed that a gas water heater supplies 200L hot water per day for a family of four.						

注意：上表有關煤氣熱水爐和電熱水爐的數據不可直接比較，因為煤氣熱水爐的數據包括燒水所用的能源，但電熱水爐的數據只包括保暖熱水（即處於備用狀態）時所用的能源。

Note: The data provided within these two pages cannot be used to compare the performance of gas versus electric water heaters. The figures for gas water heaters include the energy required to heat the water up for use, while the figures for electric heaters only include the energy to keep the water hot after being heated, i.e. standby mode.

電飯煲

佔住宅用電量: 2.1%

電飯煲是香港住宅耗電量排名第七的電器。

選擇合適的電飯煲

電飯煲的容量是以杯來量度。一般來說，一杯生米大約煮出1½杯熟飯。要達致最佳效益，建議你根據家庭大小和各家庭成員的胃口，選擇合適的電飯煲。

低碳貼士



1. 煲飯時，不要打開煲蓋，因為這樣會延長煮飯時間，浪費能源。
2. 善用隨飯煲附送的蒸籠來烹調蔬菜及魚肉，這種健康的烹調方法既省時又省電，更可減少你體內的脂肪及碳足印，一舉兩得！
3. 電飯煲本身是一種高能源效益的電器。不過，當烹調需時較長的菜式，如燉煮、煲粥或熬湯時，請考慮改用壓力煲。

Rice Cooker

Electricity consumption in the residential sector: 2.1%

Rice cookers are the 7th highest electricity consuming appliance in Hong Kong households.

Choosing the right rice cooker

The capacity of a rice cooker is measured by cup. In general, one cup of raw rice approximately yields 1 ½ cups of cooked rice. For optimal efficiency, it is recommended that you use the rice cooker to its fullest capacity according to your family size and your appetite.

Low Carbon Tips



1. Do not open the cooker's cover during cooking as this wastes energy and increases the energy needed to cook the rice.
2. Make good use of the steam basket that usually comes with the rice cooker to steam vegetable, fish and meat. This way of healthy cooking not only saves time but helps slim down both your body figure and carbon footprint!
3. Rice cookers themselves are energy efficient appliances. However, when you are preparing stew, congee or soup that requires longer cooking hours, consider using a pressure cooker instead.

3-4人用電飯煲 3-4 Persons Rice Cooker

品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	容量(公升)	參考價格 (\$)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Capacity (L)	Reference Price (\$)
樂聲 Panasonic (SRTEG10HO)	328.5	213.53	288.92	1	368
樂聲 Panasonic (SRTEG10SP)	328.5	213.53	288.92	1	368
飛利浦 Philips (HD4723)	335.8	218.27	295.34	1	340
樂聲 Panasonic (SRTMB10)	357.7	232.51	314.6	1	598
樂聲 Panasonic (SRTMG10MB)	357.7	232.51	314.6	1	444
樂聲 Panasonic (SRTMH10BL)	357.7	232.51	314.6	1	658
樂聲 Panasonic (SRTMH10S)	357.7	232.51	314.6	1	-
威馬 Goodway (GRC10075)	365	237.25	321.02	1	258
Kenwood (RJ400)	365	237.25	321.02	1	278
忠臣 Loyola (PK809)	365	237.25	321.02	1	138
飛利浦 Philips (HD4724)	365	237.25	321.02	1	298
樂信 Rasonic (SRAFH10A)	365	237.25	321.02	1	248

備註 Remarks

每年用電：假設1個電飯煲每天運作2小時。

Annual Energy Consumption: It is assumed that a rice cooker operates 2 hours per day.

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

5人或以上用電飯煲 >5 Persons Rice Cooker

品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	容量(公升)	參考價格 (\$)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Capacity (L)	Reference Price (\$)
忠臣 Loyola (PK808)	365	237.25	321.02	1.8	198
飛利浦 Philips (HD4733)	401.5	260.98	353.12	1.5	435
樂信 Rasonic (RAFH152MH)	438	284.7	385.22	1.5	378
威馬 Goodway (GRC13051HK)	452.6	294.19	398.06	1.5	398
樂聲 Panasonic (SRTEG18HO)	459.9	298.94	404.48	1.8	416
樂聲 Panasonic (SRTEG18SP)	459.9	298.94	404.48	1.8	416
飛利浦 Philips (HD4728)	467.2	303.68	410.9	1.8	378
飛利浦 Philips (HD4738)	467.2	303.68	410.9	1.8	473
威馬 Goodway (GRC18075)	474.5	308.43	417.32	1.8	298
威馬 Goodway (GRC150S1HK)	474.5	308.43	417.32	1.8	596
樂聲 Panasonic (SRTMG18P)	474.5	308.43	417.32	1.8	587
備註 Remarks 每年用電：假設1個電飯煲每天運作2小時。 Annual Energy Consumption: It is assumed that a rice cooker operates 2 hours per day.				綠色字體表示產品在該項目表現最佳 Green text indicates the best performer in the column	

手提電腦

現在的電腦具備多種功能，人們使用電腦的時間也大大增加，令到電腦成為日常生活中最耗電器材之一。建議使用高能源效益的手提電腦，它們比桌面電腦少耗80%電量。

選擇合適的手提電腦

購買前可以先查看手提電腦的主要功能，功能愈繁複，手提電腦的耗電便會愈多。

1. 一般功能：支援基本功能，如音樂下載、影片觀看及文字處理工具。
2. 媒體主導：通常結合高速處理器、闊屏幕，以及容量大的磁碟機供高像數圖片及影片編輯。這款電腦比較昂貴，用電量也較高。
3. 輕巧手提式：機身輕巧，設小屏幕及小鍵盤，支援基本文字處理及網上瀏覽。

低碳貼士



1. 屏幕保護裝置並不能節省電腦的用電量，建議不要使用。
2. 如果電腦閒置30分鐘或以上，把系統調至備用／休眠狀態。
3. 把屏幕的光度調暗，最光較最暗的屏幕多用2倍電量。
4. 把所有電子產品插在一個設獨立電源開關的拖板；用完電腦後，關掉拖板的電源。

氣候正能量話你知

隨著電子儀器的使用愈來愈普遍，含有毒化學物及重金屬的電子廢物亦隨之上升，對環境構成威脅。請支持電腦回收計劃 (www.wastereduction.gov.hk/chi/workplace/crp_intro.htm)，確保電子零件獲得妥善處理。

Laptop

Nowadays, as computers offer various functionalities, people tend to spend a lot more time with them. They have become one of the highest energy consuming gadgets in our everyday life. Energy efficient laptops are recommended because they consume up to 80% less electricity compared to desktop PCs.

Choosing the right laptop

Check out the key features of the various types of laptops before making your purchase decision, as the more complex the functionalities of the laptop, the more energy consuming it is:

1. General purpose: It supports basic functionalities such as music downloading, video watching and word processing tools.
2. Media centre: It usually comprises speedy processors, a wide screen and a large hard drive for high definition images and video editing. It is relatively more expensive and consumes more energy.
3. Ultraportable: It is extremely light and tends to have smaller screen and keyboard to support basic word processing and web surfing.

Low Carbon Tips



1. Do not use screen saver as it does not help save energy.
2. Set the system to standby/ sleep mode if it is idle for 30 minutes or more.
3. Turn the brightness of your screen lower as the brightest setting can double the power use of the dimmest setting.
4. Plug all your electronics onto one power strip and turn the strip off when you finish using your computer.

Climateers Talk

The increased consumption on electronic products has also caused a dangerous growth of electronic waste containing toxic chemicals and heavy metals. Make sure electronic items are properly disposed of by supporting the Computer Recycling Programme (www.wastereduction.gov.hk/en/workplace/crp_intro.htm).

手提電腦				
品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)	屏幕面積 (吋)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)	Screen Size (inch)
蘋果 Apple (MacBook Air)	31.54	20.50	27.74	13.3
蘋果 Apple (MB940ZP/A)	31.54	20.50	27.74	13.3
蘋果 Apple (MB543ZP/A)	31.54	20.50	27.74	13.3
蘋果 Apple (MB466ZP/A)	31.54	20.50	27.74	13.3
惠普 HP (HP Compaq 2710p)	37.67	24.48	33.13	12.1
惠普 HP (HP Compaq 2510p)	38.10	24.77	33.51	12.1
蘋果 Apple (MB467ZP/A)	39.86	25.91	35.06	13.3
惠普 HP (HP Compaq 6520s)	40.91	26.59	35.98	14.1
惠普 HP (HP Compaq 6720s)	40.91	26.59	35.98	15.4
惠普 HP (HP Compaq 6820s)	40.91	26.59	35.98	15.4

備註 Remarks
 每年用電：假設1台手提電腦每天處閒置狀態(即開機後電腦自動運作的基本程式)12小時。
 Annual Energy Consumption: It is assumed that a laptop operates in idle mode (running the basic applications that the system starts by default) 12 hours per day.
 能源標籤：☆ 美國能源之星
 Energy Labels: ☆ US Energy Star

Laptop

中央處理器	隨機存取記憶體	硬碟容量 (GB)	能源標籤	參考價格 (\$)
CPU	RAM	Size of Harddisk (GB)	Energy Labels	Reference Price (\$)
Intel Core 2 Duo	DDR2 2x1GB	80	☆	14,900
Intel Core 2 Duo 1.86GHz	DDR3 2x1GB	128	☆	19,800
Intel Core 2 Duo 1.6GHz	DDR3 2x1GB	120	☆	14,338
Intel Core 2 Duo 2.0GHz	DDR3 2x1GB	160	☆	10,520
Intel Core 2 Duo mobile 1200MHz	DDR2 1x1GB	80	☆	14,780
Intel Core 2 Duo mobile 1.2GHz	DDR2 1x1GB	100	☆	14,380
Intel Core 2 Duo 2.4 GHz	DDR3 2x1GB	250	☆	12,500
Intel Core Duo mobile 1.8 GHz	DDR2 1x1GB	120	☆	6,900
Intel Core Duo mobile 1.8 GHz	DDR2 1x1GB	80	☆	6,040
Intel Core Duo mobile 1.8 GHz	DDR2 2x1GB	160	☆	7,800
			<p>綠色字體表示產品在該項目表現最佳 Green text indicates the best performer in the column</p>	

打印機

打印機是很普遍的電腦外置設備，它雖然未必是最耗電的電器，但如果打印機長時間在備用狀態，小數怕長計，耗電量可以同樣驚人。

選擇合適的打印機

噴墨及鐳射打印機是市面上兩種最普遍的打印機。兩者有何分別？

噴墨打印機：機身較小，售價較低，用電量比鐳射打印機少90%，適合家用或規模較小的辦公室使用。

鐳射打印機：用電量較高，但勝在打印速度快，適合需要大量打印的辦公室使用。

低碳貼士



1. 把打印機預設成「草稿品質」，以加快打印速度。
2. 離開辦公室前，請確定打印機已完全關掉。打印機在備用狀態仍然耗電，每年電費可高達100元。
3. 使用紙張及碳粉盒除了增加你的開支，亦會加大你的碳足印，以下是幾項減碳心得：
 - 善用打印機的功能雙面打印。
 - 有測試報告指出，即使打印機亮起「低碳粉」提示燈，碳粉盒中其實仍然有高達40%的碳粉。你可試試取出碳粉盒後，輕力來回搖動碳粉盒再放回打印機繼續打印。(但切忌猛力搖晃，否則碳粉會沾污雙手及衣物!)

氣候正能量話你知

據估計，香港人每年丟棄約500,000個碳粉盒，每一個碳粉盒則需要450年來分解。請支持各類組織如綠領行動(www.greener-action.org)推行的回收舊碳粉盒計劃，或者選擇「無紙生活」 - 列印前請先三思。

Printer

Printers are a common peripheral device of a computer. They may not be the most energy draining appliances, but when switched on around the clock the story may be different.

Choosing the right printer

Inkjet and laser printers are the most common types of printers in the market. How do they differ from each other?

Inkjet: It is smaller in size, cheaper in cost, and uses 90% less energy than a laser printer. It is suitable for home use or small office setup.

Laser: It consumes more energy but takes less time to print. It is suitable for office operations that require large quantities of printing.

Low Carbon Tips



1. Set your printing default to "draft quality" to speed up printing.
2. Turn off the printer completely when you leave the office. The standby mode can still consume energy and can cost up to \$100 on your electricity bill annually.
3. The consumption of paper and toner cartridge not only costs but also swells your carbon footprint in the longer run. A few carbon saving tricks include:
 - Utilize the duplex feature of your printer to print paper double-sided.

- Tests have found that as much as 40% of toner can still be left in the cartridge when the "toner low" signal is on. You may take out the cartridge and slowly rock it end-to-end a few times before reinserting it back into the printer to try printing again. (But do not shake it vigorously or you will find your hands and clothes soiled with toner!).

Climateers Talk

It is estimated that Hong Kong people dispose of about 500,000 toner cartridges a year, and it takes 450 years to decompose one cartridge. Remember to recycle used cartridges properly by supporting the recycling schemes, such as the one offered by Greeners Action (www.greeners-action.org), or simply opt for a paper-less living – think before you print.

桌面鐳射打印機

品牌 (型號)	能源效益比率	每年用電 (度)	每年排碳量 (公斤)	每年電費 (\$)
Brand (Model)	Energy Efficiency Ratio	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)	Annual Electricity Cost (\$)
佳能 Canon (LBP5100)	28.33	12.41	8.07	10.91
佳能 Canon (LBP-1120)	25	9.13	5.93	8.03
惠普 HP (Color LaserJet 1515n)	24.58	10.77	7	9.47
惠普 HP (Color LaserJet CM1312nfi)	24.58	10.77	7	9.47
惠普 HP (Color LaserJet 1215)	24.17	10.59	6.88	9.31

備註 Remarks

能源效益比率：代表產品的黑白打印速度(ppm)相對耗電量(瓦)的比率。比率愈高顯示該產品的能源效益愈高。

Energy Efficiency Ratio: It refers to the black and white printing speed (ppm) to power consumption (W) ratio. Higher ratio means higher efficiency of the product.

每年用電：假設1台打印機每天運作6分鐘。

Annual Energy Consumption: It is assumed that a printer operates in printing mode 6 minutes per day.

能源標籤：⊕ 香港能源效益標籤計劃 · ☆ 美國能源之星

Energy Labels: ⊕ Hong Kong Energy Efficiency Labelling Scheme, ☆ US Energy Star

Desktop Laser Printer

黑白打印速度 (ppm)	彩色打印速度 (ppm)	能源標籤	參考價格 (\$)
Black and White Printing Speed (ppm)	Colour Printing Speed (ppm)	Energy Labels	Reference Price (\$)
12	10	⊕	3,988
10	-		1,400
12	8	☆	3,288
12	8	☆	4,988
12	8	☆	2,488

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

電視遊戲機

電視遊戲機是香港很普遍的家庭娛樂產品。各款遊戲機除了在價錢及功能上有分別外，你可知道不同遊戲機的用電量又有何不同？

電視遊戲機的用電量

根據2008年澳洲CHOICE組織的實驗研究，市面上3款最受歡迎的遊戲機——任天堂Wii、微軟Xbox 360及新力PlayStation 3(PS3) - 各有不同的用電量。以下是其中一些研究結果：

1. PS3在3款遊戲機中最耗電，假設連續操作一星期，平均用33度電，但Wii在相同模式和操作時間下只耗3度電。兩者用電量的差距，等於26.4元電費及19公斤二氧化碳。
2. 即使僅把PS3的電源開啟而沒有操作，所需要的電費每年高達1,456元，所耗用的電力足夠一部一級能源標籤的雪櫃操作3年之久。

低碳貼士



1. 玩遊戲機時最有效的節能方法是儲存進度後，徹底關掉電源。
2. 如果遊戲機具備自動關機功能，請善用。



Game Console

Game consoles are a common household entertainment appliance in Hong Kong. Game savvys compare their prices and functionalities – but do you have any idea about the different levels of energy these gadgets consume?

Energy consumption of game consoles

According to a laboratory test conducted by CHOICE of Australia (www.choice.com.au) in 2008, the three most popular game consoles – Nintendo Wii, Microsoft Xbox 360 and Sony PlayStation 3 (PS3) – consume vastly different amounts of electricity. Here are some of their findings:

1. The most energy hungry PS3 burns an average of 33 kWh with a game playing non-stop for a week; whereas Nintendo Wii uses 3 kWh under the same setting. Their energy consumption difference over the same period is equivalent to \$26.4 of electricity cost and 19.5 kg of CO₂.
2. Leaving the power of a PS3 turned on without playing for a year can also cost as much as \$1,456! This amount of energy is enough to operate a Grade 1 energy efficient refrigerator for 3 years.

Low Carbon Tips



1. The most effective way to save energy is to turn it off completely after saving your game.
2. Activate the auto power-off feature if it is available.



電視遊戲機

品牌 (型號)	每年用電 (度)	每年排碳量 (公斤)
Brand (Model)	Annual Energy Consumption (kWh)	Annual Carbon Emissions (kg)
任天堂 Nintendo (Wii)	77.55	50.41
微軟 Microsoft (Xbox 360)	614.41	399.37
新力 Sony (PlayStation 3)	827.6	537.94

備註 Remarks

每年用電：假設1台遊戲機每天處閒置狀態(電源已開但不在使用中)運作12小時。

Annual Energy Consumption: It is assumed that the device operates in idle mode (i.e. turned on but not in use) 12 hours per day.

Game Console

每年電費 (\$)

參考價格 (\$)

Annual Electricity Cost (\$)

Reference Price (\$)

68.21

1,800

540.37

2,499

727.87

3,600

綠色字體表示產品在該項目表現最佳

Green text indicates the best performer in the column

低碳生活知多些 — 輕鬆一小步，影響深而遠

有這本指南在手，你現在可以精明消費，選擇低碳電器 - 即能源效益高及碳排放量低的電器。

除了精明消費之外，生活中其實還有不少低碳選擇，幫助大家輕鬆對抗氣候變化。

食物 — 認識食物里程

你知道我們的食物選擇也會對氣候有所影響嗎？「食物里程」這個概念在全球低碳生活熱潮中愈來愈備受重視。它是指食物由生產開始，直至到達消費者手上的運輸距離，是一個量度我們每人的「食物碳足印」的常用單位。香港是極度依賴進口資源的地方，我們日常食物中，95%都是從外地入口。

除了運輸之外，食物的生產及包裝過程也是造成碳足印的重要一環。請看看可以怎樣透過小行動，作出大改變：

- 非當造食物的生產過程，需要利用溫室來調節農作物的生長氣候，耗用額外能源。請緊記「不時不食」，食用季節合宜的當造食物。
- 少肉多菜：生產肉類需要大量能源，其生產過程所釋放的二氧化碳較蔬菜多。減少肉食對身體好，也對氣候好。
- 購買食物時，請盡量避免食物的包裝，並向即棄餐具說不。



More on Low Carbon Living — small steps that bring great impacts

With this Guide in hand you can now shop smart by choosing low carbon appliances that are energy efficient and have lower carbon emissions.

Apart from shopping smart, let's see what other little things you can do to adopt a Low Carbon Lifestyle and help tackle climate change.

Food – Knowing the food miles on your plate

Did you know that our food choices have an impact on the climate? The concept of food miles is gaining momentum in the Low Carbon Living movement. It refers to the calculation of the distance food has to be transported from its point of production to its point of consumption. It is a common currency that shows the amount of CO₂ generated from your food consumption. In Hong Kong, we heavily depend on external resources – 95% of the foods we consume are imported.

Apart from transportation, the production and packaging processes of food can also add up to our collective culinary carbon footprints. Let's have a look at what little things you can do to make a difference:

- Select food based on season. Seasonal food does not require the greenhouse heating needed for off-season production.
- Eat less meat and more greens. With energy generation being a major source of carbon emissions, the energy-intensive meat production process is thus much more carbon-heavy than that of vegetables.
- Buy food with no or minimal packaging. Say no to disposable cutlery.

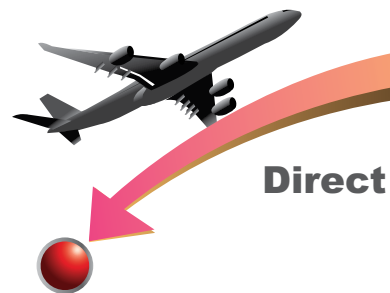


飛行 — 旅遊要精明

對於飛機常客而言，乘搭飛機是他們碳足印的主要來源。以香港往返倫敦為例，每個乘客在12小時的長途航程平均排放約5.7噸二氧化碳，差不多等於本港每年每人的 6.5噸平均碳足印（不包括飛行）。

航空公司指出，航空工業只佔全球碳排放量的2%。不過，不少研究指出，飛機在高空排放的氣體如氮氧化物(NO_x)及蒸氣，是造成更嚴重的暖化問題的元兇。在「無碳飛行」面世之前，我們應該盡量減低我們的飛行碳足印：

- 選擇直航班機，因為飛機起飛及降落時，都會耗用很多燃油。
- 攜帶輕便行李上機，有助減低飛機的重量及所需之燃油。
- 經常出國公幹的人士可考慮採用視像會議，這樣更免卻時差的煩惱。
- 選擇往鄰近的國家渡假。
- 享受「無機旅程」的樂趣：試試多用雙腳、用車輪，感受各地的風土民情。



加入「氣候正能量」

世界自然基金會推出「氣候正能量」項目 (www.climateers.org)，為愈來愈多關心氣候問題的人士提供平台，實踐低碳生活模式。

「氣候正能量」是一個公開的平台，讓香港人及團體分享拯救氣候的資訊及途徑，配合專為香港生活模式而設計的碳足印計算器，開創亞洲先河。只需5分鐘，在www.climateers.org登記便可成為「氣候正能量」- 加入對抗氣候變化的行列！

作為「氣候正能量」的一份子，你不單可以掌握香港和全世界在氣候變化方面的最新消息，更重要的是可以使用我們為香港度身訂造的碳足印計算機，評估並記錄自己的二氧化碳排放量，然後找出生活中哪個範疇可減少碳排放，保持「步履輕盈」，回復氣候的健康。另外，你同時可以與其他志同道合的知名人士、廣大群眾、企業和機構聯繫起來，共同努力對抗氣候變化。

現在便加入「氣候正能量」，我們每個人也可對抗氣候變化。

氣候變化，由你扭轉！





Flights – Travel smart

For those who fly frequently, aviation emissions are the biggest contributor to one's carbon footprint. Take the return flight between Hong Kong and London as an example, every passenger is responsible for 5.7 tonnes of carbon dioxide emissions during the 12-hour long return flight. This is almost the same as the average non-flight carbon emissions produced per person in Hong Kong – 6.5 tonnes.

Flight

According to the airlines industry, aviation is responsible for only two percent of global carbon emissions. However, such a statement has been widely challenged by many research findings as an increased warming effect is brought by other aviation emissions such as nitrogen oxides (NO_x) and water vapour at higher altitudes. Until future technology allows us to fly carbon free, here are a few tips you can consider when you decide to travel by air:

- Choose direct flights. Taking-off and landing burn a lot of fuel.
- Travel light as it helps reduce the overall weight of the plane and consequently less fuel consumption.
- Before you decide to fly for business, consider jet-lag free 'video conferencing'.
- Choose somewhere close to home for your vacation and explore your neighboring countries.
- Go for flightless travel. Enrich your travel experience with your feet or on wheels.

BE A "CLIMATEER"

To encourage Low Carbon Living in Hong Kong, WWF launched the "Climateers" programme (www.climateers.org) to meet the needs of an ever growing population who care about climate issues and are ready to pursue a Low Carbon Lifestyle in Hong Kong.

Supported by a Hong Kong specific carbon calculator, "Climateers" is the first of its kind platform in Asia that brings together climate-saving information and solutions by active individuals and organisations. Simply spend five minutes to register at www.climateers.org and you will become a "Climateer" – a member of the climate-friendly movement in Hong Kong!

As a "Climateer", not only can you stay on top of the global and local news about climate change, you can also make use of our carbon calculator to track the changes of your carbon footprints; identify areas in your life in which you can go low carbon, and get connected to the growing mass of celebrities, individuals, businesses and organisations, who share the same climate concern as yours.

Every one of us can make this climate-friendly movement bigger by joining "Climateers".

CLIMATE CHANGE, SO CAN YOU!



附錄

詞彙解釋

每年碳排放量 (電器)	<ul style="list-style-type: none"> ● 假設：每度電力平均在本港排放0.65公斤二氧化碳 ● 每年碳排放量 = 每年用電量 (度) × 0.65公斤
每年電費	<ul style="list-style-type: none"> ● 以中電和港燈的住宅電費計算(中電首400度電：每度為0.875元；港燈首150度電：每度為0.884元)，平均電價則是每度為0.8795元 ● 每年電費 = 每年用電量 (度) × 0.8795元
每年碳排放量 (煤氣熱水爐)	<ul style="list-style-type: none"> ● 假設：每千兆焦耳平均在本港釋放60公斤二氧化碳 ● 每年碳排放量 = 每年煤氣用量 (千兆焦耳) × 60公斤
每年煤氣費	<ul style="list-style-type: none"> ● 以煤氣公司提供的平均煤氣收費(首2,500兆焦耳，每兆焦耳0.21元)計算 ● 每年煤氣費 = 每年煤氣用量 (兆焦耳) × 0.21元
參考價格	<ul style="list-style-type: none"> ● 電器價格資料由零售商及生產商網站提供(資料在2008年10月及11月取得)，價格僅供參考，隨市場轉變而有所調整

技術伙伴

天祥公證行有限公司為《低碳生活 - 電器選擇指南》的技術伙伴。天祥是全球規模最大的公證行之一，為消費產品測試、檢定及驗證服務。其安全及效能測試涵蓋範疇眾多，如家庭電器、影音器材、照明、電力供應、電子通訊、程式安裝、科技及煤氣品。

Notes

Terminology

Annual Carbon Emissions (Electrical Appliances)	<ul style="list-style-type: none"> ● Assumption: Every kWh used emits 0.65kg of carbon dioxide on average in Hong Kong ● Annual Carbon Emissions = Annual Energy Consumption (kWh) x 0.65kg
Annual Electricity Cost	<ul style="list-style-type: none"> ● Based on the average domestic tariff from CLP (\$0.875 per kWh for the first 400 units) and HK Electric (\$0.884 per kWh for the first 150 units) = \$0.8795 per kWh ● Annual Electricity Cost = Annual Energy Consumption (kWh) x \$0.8795
Annual Carbon Emissions (Gas Water Heaters)	<ul style="list-style-type: none"> ● Assumption: Every GJ emits 60kg of carbon dioxide on average in Hong Kong ● Annual Carbon Emissions = Annual Energy Consumption (GJ) x 60kg
Annual Gas Cost	<ul style="list-style-type: none"> ● Based on the average tariff from Town Gas (\$0.21 per MJ for the first 2,500 units) ● Annual Gas Cost = Annual Energy Consumption (MJ) x \$0.21
Reference Price	<ul style="list-style-type: none"> ● Product prices were collected from retailers' and manufacturers' websites in October and November 2008. They are for reference only and are subject to market fluctuation.

Technical Partner

Intertek Testing Services Hong Kong Limited was commissioned to be the technical partner of the "Low Carbon Living Appliances Guide". Intertek is one of the world's largest consumer product testing, inspection and certification organisations. It provides safety and performance testing to a wide range of products, including household appliances, audio & video products, lighting, power supply, telecom, installation accessories, IT and gas appliances.

資料來源

指南內所列出的電器，均是本港的常用家庭電器。電器的能源資料來自：

- 多項主要的能源效益標籤計劃：香港能源效益標籤計劃、歐盟能源標籤、歐盟生態標籤及美國能源之星
- 澳洲CHOICE組織(只提供電視遊戲機數據)：www.choice.com.au
- 生產商提供的數據

聲明

1. 這本《低碳生活 - 電器選擇指南》所用之能源數據由天祥公證行有限公司收集及整理，並已盡量確保這本指南所載內容為準確無誤。然而，世界自然(香港)基金會並不會就使用本指南而引致的任何損失或破壞，承擔任何責任。
2. 電器產品的使用建議，乃來自第三方。技術伙伴在市面上進行的流行電器產品調查是有限度的，並只能根據收集到有關各電器的資料作出篩選，然後載入本指南內。世界自然(香港)基金會在整個挑選過程均保持中立，並不偏袒任何一方。
3. 請到www.climateers.org瀏覽指南的完整版本，如有任何資料更新，以網上版本為準。
4. 世界自然(香港)基金會擁有這本《低碳生活 - 電器選擇指南》印刷版和網上版的版權。如欲翻印本指南任何部分或全部內容，必須引述資料來自本會。

Sources of Data

The appliances presented in this Guide are some of the popular products available in Hong Kong. Energy data for the appliances was collected from the following sources:

- Databases of the major energy labelling schemes: Hong Kong Energy Efficiency Labelling Scheme, EU Energy Label, EU Eco-label and US Energy Star
- CHOICE of Australia (game consoles only): www.choice.com.au
- Self-declared data from manufacturers

Disclaimer

1. Energy data used in "Low Carbon Living Appliances Guide" were collected and processed by Intertek Testing Services Hong Kong Limited. All reasonable endeavours have been used to ensure the accuracy of the content of this Guide. However, no warranty is given to that effect, nor is any liability accepted by World Wide Fund For Nature Hong Kong (WWF) for any loss or damage arising from the use of this Guide.
2. Opinions on the smart usage of the appliances were adapted from third party sources. The survey of popular products available in the market is not exhaustive. The appliances were selected according to the results of the available data collected. WWF holds a neutral position throughout the selection process and is not in favour of any parties involved.
3. A full version of this Guide is available online at www.climateers.org, which shall prevail for any updates of the content in this Guide.
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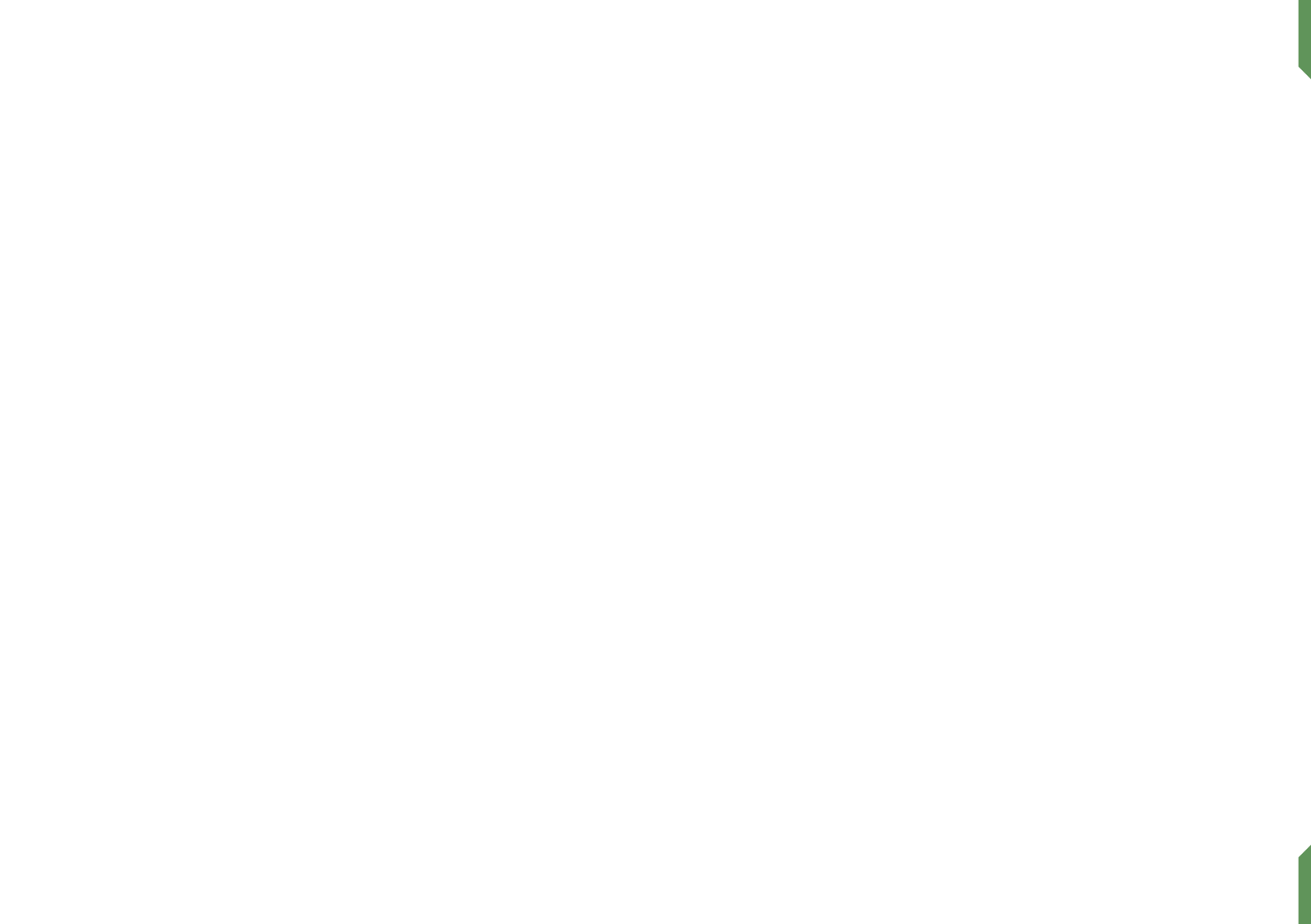
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- 保護地球的生物多樣性
- 確保可再生的自然資源獲得善用
- 宣揚減少污染和避免浪費

WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- Conserving the world's biological diversity
- Ensuring that the use of renewable natural resources is sustainable
- Promoting the reduction of pollution and wasteful consumption



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