



# 20 WAYS TO SAVE THE PLANET

An AmCham publication, September 2007



AmCham




## **You can help clean the environment, today!**

If you are concerned about making a difference in the environment, there are several simple things you can do as an individual that can make a big difference. Best of all, you will save money too!

### **Energy conservation and air pollution**

Let's face it, the power companies provide a critical service to all of us – we all need energy to live in the modern world. That said, did you know that virtually 100% of the electricity consumed on Hong Kong Island is produced by burning coal?<sup>1</sup> Coal energy is generally accepted as the single most polluting source of electrical energy in the world. Production of electricity from coal produces more carbon dioxide per kilowatt of energy than any other form of electricity produced. Approximately half of the total air pollution produced in Hong Kong comes from coal energy production.






Due to use of coal in the electricity production for Hong Kong Island, for each kilowatt hour of energy produced, approximately one kilo of carbon dioxide and other pollutants are put into the atmosphere.<sup>2</sup>

The typical expatriate or executive family household in Hong Kong uses approximately 10,000 kilowatts of electricity per annum. This means that each of our households puts some 10 metric tons of carbon dioxide pollution into the atmosphere every year.





# How can you make a difference in your home? It's easy.

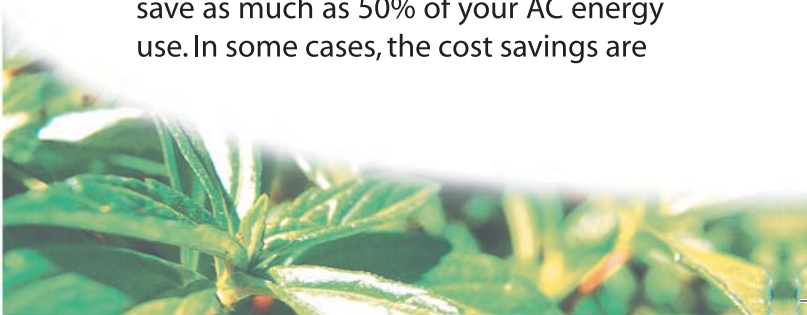
## Air-conditioning and energy efficiency


Arguably, the single biggest use for electricity in expatriate households in Hong Kong is air conditioning. Electricity consumption during hot months can easily quadruple normal household consumption. Managing the temperature of your apartment or house during the hotter months can make the fastest and easiest improvements to your family's rate of pollution, its impact on climate change and, yes, the size of your electricity bill. This is what you can do :

04

### 1) Buy new efficient air conditioners for your home

Energy efficient air conditioners can save as much as 50% of your AC energy use. In some cases, the cost savings are





so substantial it will pay for that air conditioner's replacement within two years.<sup>3</sup> If you assume a 2400 watt AC unit, you could save \$2,000 per year just by replacing your old air conditioner.

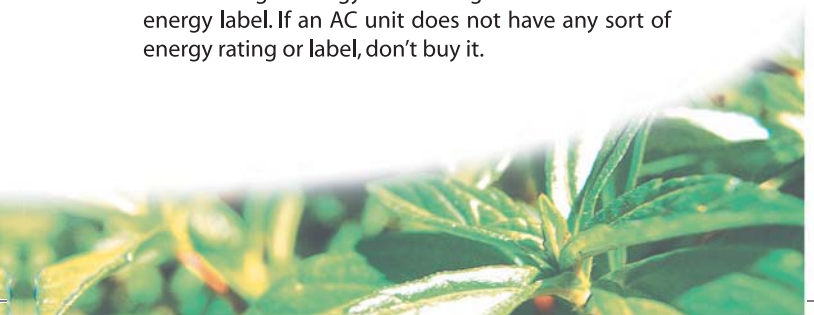
kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
1,700	\$2,000	1,700 kilos

---

<sup>1</sup> The analysis for this document assumes a customer on Hong Kong Island only.

<sup>2</sup> CLP, which primarily supplies customers in the New Territories, provides power from three sources : coal, liquid natural gas or LNG, and from its nuclear power plant. This means CLP customers in the New Territories will produce approximately 0.5 kilos of carbon dioxide per kilowatt hour consumed.

<sup>3</sup> Make sure that when you buy a new air conditioner, it has a high Energy Star rating or a "Grade One" energy label. If an AC unit does not have any sort of energy rating or label, don't buy it.





## 2) Raise the thermostat on your air-conditioning during the summer

For each degree that you increase the thermostat, you will reduce energy consumption by approximately 3%. That means if you change your thermostat from 20°C to 25°C, you reduce kilowatt consumption by 15%, and you save almost 1,000 kilowatts of electricity per year for an average expatriate household in Hong Kong :

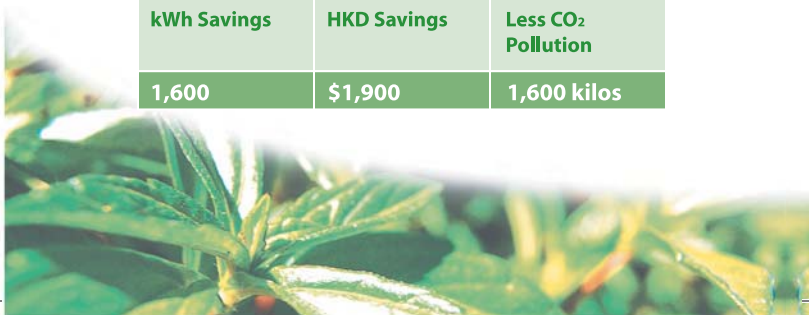
kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
1,000	\$1,100	1,000 kilos

06

## 3) Close the curtains in summer !

According to the US Department of Energy, leaving curtains open in summer can make your AC work two to three times harder. It suggests that you close all south and west facing curtains during the day to keep out heat. Resultant savings can be dramatic for an expatriate household in Hong Kong :

kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
1,600	\$1,900	1,600 kilos





## 4) Use a ceiling fan or an oscillating fan

By circulating air, the use of a fan in conjunction with an air conditioner can drastically improve the general comfort of your home. Fans are substantially more efficient than AC units. If you increase the thermostat in the summer, the fan will help improve comfort in the warmer temperatures.


## 5) Clean your air conditioner's filter and cooling coils regularly

Dirty air filters can make your air conditioner work harder... a lot harder. In some cases it can make your AC unit work two to three times harder than if it had a clean air filter.

According to [stopglobalwarming.org](http://stopglobalwarming.org) you can reduce your energy usage by approximately 500 kilowatts per year :

kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
500	\$600	500 kilos





## 6) Be sure the windows in your flat or house are properly sealed with weather-stripping

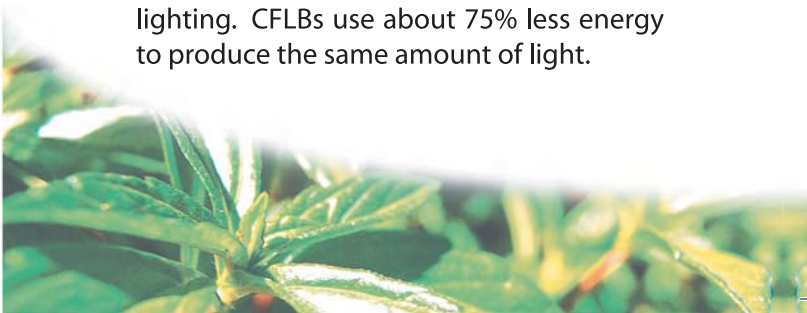
Most flats in Hong Kong use old-fashioned aluminum window frames, which have no sealing whatsoever. Make sure your windows are properly caulked and weather stripped. The savings in AC use in summer and less heater use in winter can be dramatic. Best of all, weather-stripping and caulk is cheap. The average home user can install these themselves. According to *stopglobalwarming.org* you can reduce your energy usage by approximately 1,000 kilowatts per year :


08

kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
1,000	\$1,100	1,000 kilos

## 7) Compact fluorescent light bulbs

Compact fluorescent light bulbs (CFLBs) are nothing like old-fashioned fluorescent lighting: they turn on immediately and the quality of light is as good as incandescent lighting. CFLBs use about 75% less energy to produce the same amount of light.





If every household in Hong Kong replaced two incandescent light bulbs with CFLBs, Hong Kong would cut its total energy usage by 2%!

If you replace two bulbs in your house, you will save enough money within a year to pay for those light bulbs :

kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
130	\$150	130 kilos

## 8) Replace old refrigerators


Replacing old appliances with new energy efficient appliances can drastically reduce the amount of electricity they use. The refrigerator is a very good place to start.

09

It is the one appliance that is on 24 hours a day, 365 days a week. According to the National Resources Defense Council, modern efficient refrigerators will use as much as 75% less energy than a comparable unit made in the 1970s and 1980s.

kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
620	\$720	620 kilos





## 9) Unplug your TV, DVD player, stereo, cable box and computer

All of these machines still use electricity when you turn them off. That's right, almost all modern electrical equipment does not shut down completely when turned off, typically with a remote control. It is estimated that most equipment will use from 15kWh to 50 kWh of electricity a year in the standby "off" mode.

According to the Energy Systems Research Unit at University of Strathclyde, in Glasgow, the average household will use approximately 525 kilowatts per year to keep equipment on in standby mode :


10

kWh Savings	HKD Savings	Less CO <sub>2</sub> Pollution
525	\$600	525 kilos

TIP : You can usually buy a switch adaptor that will fit in the wall plug. Use the switch to turn everything off.

## 10) Buy new energy efficient appliances

New washers, dryers, dishwashers and heaters are typically more efficient than old units. Make a special effort to seek out and purchase appliances that meet the Energy Label #1 standard.





## Transportation

Hong Kong has an excellent public transport system and tends to be one of the best cities in the developed world when it comes to miles driven per capita. These are areas in which you can make a difference :

### 11) Use the MTR and Tram

Electrified public transportation tends to be the most energy efficient and has less effect on global warming than diesel buses when moving about town.

Think about it : when an electric tram is at a stop, it uses very little electricity, whereas buses stuck in traffic still burn a significant amount of fuel to keep engines idling.

11

---

### 12) Don't drive an SUV

SUVs are exceptionally wasteful. They tend to be the heaviest vehicles on the road and 4-wheel drive systems can reduce fuel efficiency by as much as 35% over a standard 2-wheel drive car.





### **13) If you must drive somewhere, take a taxi**

Hong Kong's taxi fleet runs on liquid petroleum gas. Vehicles that run on LPG can reduce greenhouse gas emissions by 15% to 25% per mile driven, over similarly equipped gasoline vehicles. Rather than driving your car to run an errand, take a taxi instead. It's cleaner !

## **Water Conservation**

Hong Kong has experienced regular and severe droughts over the last 100 years. Most recently Hong Kong suffered drought conditions in 2003 and 2004. Because 70% to 80% of the fresh water consumed in Hong Kong comes from the DongJiang river in Guangdong, water restrictions were not imposed at that time.

12

Because Hong Kong has an inadequate supply of domestically-sourced water, the Water Supplies Department has one of the most advanced water systems in the world. Over 80% of the flushing water supply is sourced directly from sea water.

We should do everything possible to conserve water use in Hong Kong. These are some simple things you can do to save water, and money :

### **14) Shorten your morning shower by one to two minutes.**



**Save 32,000 liters of water per year!**





## 15) Don't wash dishes by hand

Scientists who studied the issue at the University of Bonn, in Germany, found that a fully loaded dishwasher uses only half the energy, one-sixth of the water, and less soap than hand-washing an identical set of dirty dishes.

**Liters Saved  
per year**

**14,000 liters  
per family**

## 16) Use a low flow toilet

Modern low flow toilets use between 4 and 6 liters per flush. Traditional toilets use as much as 15 liters per flush.

**Liters Saved  
per year**

**7,000 liters  
per family**

## 17) Don't run the water when brushing your teeth or shaving

A family of four can save up to three gallons of water per day by only filling one cup at a time when brushing their teeth and shaving.

**Liters Saved  
per year**

**4,000 liters  
per family**



## Waste Management

Hong Kong residents and businesses throw away 6,500,000 metric tons of garbage per year. The OECD average amount of waste produced per year, per person, is approximately 570 kilos per year.

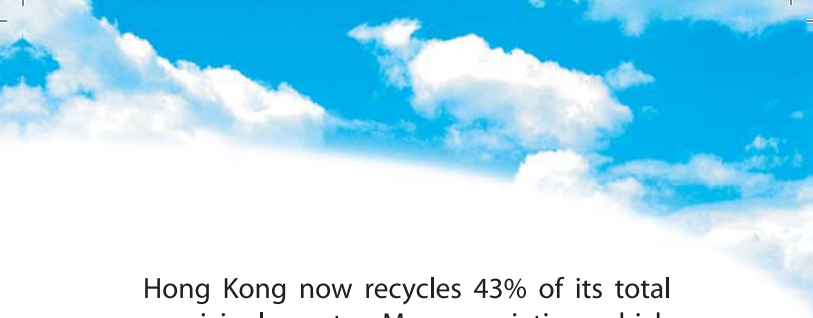
For an average family of four, we will produce more than two metric tons of trash a year. All of that has to go somewhere – mostly to a landfill. How you can make a difference :

### 18) Recycle

This is the single biggest thing you can do to reduce waste. Virtually all trash is recyclable. If you only focus on obvious items – paper, cans and bottles – you can reduce your waste by over half. Hong Kong's Environment Protection Department has an excellent recycling information program, which can help you get started:

[http://www.epd.gov.hk/epd/english/environmentinhk/waste/prob\\_solutions/waste\\_super3r.html](http://www.epd.gov.hk/epd/english/environmentinhk/waste/prob_solutions/waste_super3r.html)





Hong Kong now recycles 43% of its total municipal waste. Many societies which focus on recycling get this percentage up to 70%. California most recently exceeded a 50% recycling rate, benefiting mostly from efforts to separate items for recycling at the source – in the home.

## **19) Re-use shopping bags and use biodegradable / recyclable bags**

Several grocery stores now sell reusable shopping bags. Most plastic bags used in Hong Kong are neither biodegradable nor recyclable, and will therefore end up in the landfill for a very long time.

15

---

## **20) Avoid unnecessary printing of hard copies**

The “Information Age” that electronic communications’ tools have ushered in has resulted in more paper use rather than less. Adopt measures such as double-sided printing or printing two pages onto one sheet to reduce the amount of paper used and recycle the back sides of paper sheets no longer needed.





**Booklet Sponsors :**

---



仲量聯行



Morgan Stanley

Time Warner

ExxonMobil