

# Chapter Seven 第七章

## CORPORATE ENVIRONMENTAL PROTECTION

### Environmental policy and objectives

In support of the Government's commitment to set a good green example in environmental protection, DH set up the Green Manager Scheme in November 1993 to enhance green housekeeping measures in the workplace.

In June 1996, DH issued a policy statement on environmental protection and assigned a Departmental Green Manager to promote corporate green culture within the department, remind staff of the department's environmental policy, enhance their awareness in green housekeeping practices, encourage their participation in green management programmes, initiate new action plans where appropriate in supporting the Government's long-term strategy on environmental protection and monitor the implementation of various green measures. Major green management initiatives and performance have also been incorporated in the annual departmental report since 1998.

### Staff participation

To enable various green measures to be effectively implemented, staff support and vigorous participation are of particular importance. In this regard, members of staff are encouraged to give suggestions and put forth new initiatives on green management through

## 企業環境保護

### 環保政策及目標

為支持政府承諾成為環保典範，衛生署於一九九三年十一月推行「環保經理計劃」，在工作場所加強落實環保措施。

衛生署於一九九六年六月發表環保政策聲明，並委任部門環保經理，推廣署內的企業環保文化，提醒員工本署的環保政策，加強其環保管理意識，並鼓勵他們參與環保管理活動；亦在適當地方發起新的行動計劃，以支持政府的長遠環保策略，並監察各環保措施的落實推行。自一九九八年起，各項主要環保管理提案及其成果均載述於年報內。

### 員工參與

為能有效地落實各項環保措施，員工的支持及積極參與尤其重要。在這方面，署方鼓勵同事透過公務員建議書計劃提出有關環保管理的新建議。一些切實可行的環保建議亦已被採用。

the Staff Suggestion Scheme and practicable green proposals have been adopted.

Energy wardens are assigned by heads of Service units to monitor energy consumption in workplace and facilities under their purview and to remind their staff to implement various green measures. Up to the end of 2005, a total of 248 energy wardens have been assigned.

## Waste management

To enhance public awareness in separate waste recycling, DH has participated in the “Waste Separation and Recycling Campaign” since 2002. Waste separation bins are placed in 23 DH clinics and office floors to enable separate collection of waste paper, aluminium cans and plastic bottles by waste collectors for recycling. In 2005, a total 14 150 kg of waste papers for recycling were collected. In addition, empty toner cartridges of colour printers and laser printers are separately collected for recycling.

DH follows the guidelines of the Environmental Protection Department (EPD) in the segregation, packaging, labelling and storage of clinical wastes. Clinical wastes arising from clinics or laboratories are segregated from domestic wastes in such a way that sharps boxes, dressings/swabs and wastes caked with blood as well as other potentially infected wastes are placed in red plastic waste bags whereas domestic wastes are placed in normal black plastic waste bags. Red plastic waste bags containing clinical wastes are properly labelled, securely fastened and temporarily stored in a designated location before being carried away for disposal. The clinical wastes storage area is also provided with visibly clear warning sign, protected from water and rain, always kept clean and dry and secure from unauthorised persons.

各服務單位主管指派同事擔當能源管理員，以監察其管理範圍內的工作間及設施的耗電情況，以提醒其員工去落實各類環保措施。截至二零零五年年底，共有248位同事被委任為能源管理人。

## 廢物管理

為加強公眾對廢物分類回收的意識，本署於二零零二年開始參與「廢物分類及回收運動」，在23間診所及辦公室樓層內設置廢物分類回收箱，以便廢物收集商能分類回收廢紙、鋁罐及膠樽作循環再用。於二零零五年，回收作循環再用的廢紙總數量為14 150公斤。另外，亦有分別回收用完的彩色打印機墨盒及鐳射打印機碳粉盒，作循環再用。

衛生署依照環保署發出的指引去將醫療廢料分隔、包裝、標籤及儲存。診所或實驗室產生的醫療廢料，與家居廢物分開處理。利器盒、敷料/拭子、沾滿血液的醫療廢料及其他可能受污染的廢物，均放進紅色塑料廢物袋內。至於家居廢物，則放進一般黑色塑料廢物袋內。盛載醫療廢料的紅色塑料廢物袋須貼上適當標籤，袋口須妥為紮緊，並在移走棄置前，在指定地點暫時存放。用作存放醫療廢料的地方，亦要提供清晰可見的警告標誌，防水防雨，並經常保持清潔乾爽，及嚴禁未經授權人士進入。

DH follows EPD's guidelines in the segregation, packaging, labelling and storage of chemical wastes. To comply with the Waste Disposal (Chemical Waste) (General) Regulation, chemical wastes arising from clinics or laboratories are segregated from domestic wastes and collected by the EPD's licensed collectors for disposal.

## Economical use of paper

DH has adopted the following green measures to economize the use of paper:

- use blank side of used papers for printing or writing to reduce paper consumption;
- reuse envelopes and file jackets;
- double-sided copying and use both sides of a paper for drafting;
- rollout e-Leave system for staff with electronic mail account to replace printed leave application form since mid-2004;
- avoid using fax leader page as far as possible;
- encourage staff to make better use of electronic means in disseminating health messages such as uploading publications onto DH website and more frequent use of CD-ROM so as to keep departmental paper publication materials to the minimum; and
- maximize the use of Internet and electronic mail facilities for communication to replace hard copies.

Since 2005, DH has ceased printing hardcopies of some publication materials such as clinic time table and departmental headquarters telephone directory

衛生署依照環保署發出的指引將化學廢料分隔、包裝、標籤及儲存。為遵守《廢物處置(化學廢物)(一般)規例》，診所及實驗室所產生的化學廢料要與家居廢物分開處理，並由環保署發牌的化學廢物處理承辦商收集棄置。

## 節約用紙

衛生署採取了下列環保措施，以節約用紙：

- 利用已用過紙張的空白一面作打印或書寫用途，以減少用紙量；
- 信封及檔案夾再用；
- 雙面影印及紙張雙面使用；
- 自二零零四年年中起，持有電郵戶口的同事逐步採用電子處理假期申請系統，以取代紙張印製的假期申請表；
- 傳真時盡量避免附加面頁；
- 鼓勵同事多利用電子方式發布健康信息，例如在衛生署網站上載刊物及較多採用製作光碟方式，以減少出版紙本刊物的數量；以及
- 增加互聯網的使用和以電子郵件通訊，取代紙張文件傳閱。

自二零零五年起，衛生署已停止印製一些以往須大量印製以供同事傳閱的印刷品，例如診所時間表及部門總部電話名冊。

which used to be produced in large quantity for circulation.

To step up efforts in paper saving, DH has increased electronic mail users from 160 in early 2001 to 1 500 by the end of 2005. It is expected that the number of electronic mail users will further increase in 2006.

DH supports the use of recycled papers. In 2004, recycled papers contributed less than 30% of the total paper consumption while about 60% of the total paper consumption in 2005 was recycled papers. It is expected that the percentage of recycled paper consumption will further increase in 2006. Accordingly, less non-recycled wood-free papers have been consumed.

## Green purchase

DH supports the use of recycled papers over non-recycled wood-free papers. As compared to 2004, the procurement of wood-free papers was significantly reduced by 60% whereas the procurement of recycled papers increased by 22% in 2005.

In addition, DH has implemented various green procurement initiatives to support the use of environmental friendly products which include the followings:

- fax machines using plain paper to replace thermo fax machines so that making a second copy of the thermo fax for filing purpose is no longer required;
- photocopiers with double-side copying feature;
- clinical waste bags and sharps boxes which are not made from polyvinylchloride (PVC) materials and are capable of safely incineration;

為加強節約用紙，衛生署的電子郵件用家人數由二零零一年年初的160人，增至二零零五年年底的1 500人。預計於二零零六年，電子郵件用家人數會進一步增加。

衛生署支持多採用可循環再造紙張。於二零零四年，可循環再造紙張佔整體的用紙量不足30%。但至二零零五年，可循環再造紙張已佔整體的用紙量已接近60%。預計於二零零六年，可循環再造紙張的使用率會進一步上升。非循環再造的林木製紙張的使用量也相應減少。

## 環保採購

衛生署支持採用可循環再造紙張取代非循環再造的林木製紙張。與二零零四年度比較，林木製紙張的採購數量已於二零零五年期間大幅下跌60%，而可循環再造紙張的採購數量則上升22%。

另外，衛生署亦有推行各類別的環保物料採購建議，以支持使用較具環保效益的產品，包括如下：

- 採用普通紙張傳真機來取代熱能紙張傳真機，因此無須把傳真本再影印作存檔用途；
- 採用有雙面影印功能的影印機；
- 採用不含PVC塑膠物料並可安全焚化的醫療廢物袋及盛載利器箱；



- mercury-free blood pressure monitors and thermometers;
- LCD monitors to replace old CRT monitors which are due for replacement for more effective energy saving; and
- recycled and reusable stationery and other office supplies such as refillable ball-pens, reusable toners and printer cartridges etc.
- 採用不含水銀的血壓計及溫度計；
- 採用更具節能效益的液晶顯示器來更換老化極射線顯像管顯示器；以及
- 採用可回收及循環再用的辦公室文具物資，如可更換筆芯的原子筆、可循環再用的打印機墨盒及鐳射打印機碳粉盒等。

## Environmental design in new projects

DH takes into consideration environmental protection elements in the design of new clinics such as reducing the use of materials which could have adverse environmental impact and increasing the use of energy efficient plant and equipment. The Public Health Laboratory Centre designed by the Architectural Services Department (Arch SD) has achieved excellent rating in terms of environmental performance in the building design based on assessment of the Business Environment Council, in accordance with the Hong Kong – Building Environment Assessment Method (HK-BEAM) for New Office Designs. Credits of good environmental design of the Public Health Laboratory Centre include:

- fitting with energy saving luminaries, heat recovery systems and energy efficient air-conditioning electricity consumption to reduce electricity energy consumption;
- adopting non-ozone depleting refrigerants and thermal insulation materials for building fabrics to avoid ozone depletion; and
- providing designated facilities and area for the storage and collection of recyclable materials.
- 配備節能照明系統、熱能循環再用系統及有能源效益的空調系統，以減低耗電量；
- 採用不損耗臭氧層的雪種及隔熱建築材料，以免損耗臭氧層；以及
- 提供特定設施及地方，供存放與回收可循環再用的物料。

## 新建築項目的環保設計

衛生署在設計新診所時，亦會考慮注入環保元素，包括減少使用對環境有害的物料和增加使用具能源效益的設備及器材。本署的公共衛生檢測中心由建築署負責設計；經商界環保協會按照香港建築環境新辦公大樓設計評估法，作出環保設計評估後，該中心獲評定為最高優秀級別的環保設計建築物。該中心的出色環保設計包括：

## Energy conservation

DH has adopted the following green measures to save energy:

- de-lamping lights to the minimum required for illumination and switching off lights and non-essential electrical appliances while not in use;
- conducting energy audit survey for individual clinic buildings of high energy consumption to identify practical and effective energy saving measures;
- modifying group lighting switches to individual switches;
- installing air curtains at clinic entrances to prevent infiltration of un-treated hot and cold air from outside;
- replacing magnetic ballasts by electronic ballasts and change T8 fluorescent tubes by the more efficient T5 fluorescent tubes;
- replacing conventional illumination signs of emergency exit in clinics by LED signs to step up measures in achieving energy saving; and
- maintaining indoor temperature at 25.5°C during summer months for general offices and public areas equipped with air-conditioning facilities provided that the normal operation of essential medical services will not be affected.
- To further enhance energy saving, the following improvement works have been carried out in 2005 to the Public Health Laboratory Centre which accounts for approximately one-third of the energy consumption of DH:

## 節約能源

衛生署採取了下列環保措施，以節省能源：

- 將燈光調配至最低照明水平；在無需使用時，關掉非必要的電燈及電器設備；
- 為個別耗電量大的診所大樓進行能源審核調查，確定有效可行的節能措施；
- 將分組式燈光開關改為獨立式開關設計；
- 在診所入口加裝風閘，以防止滲入未經處理的外來熱及冷空氣；
- 以電子鎮流器取代用電量較高的磁鎮流器，並以效能較高的T5螢光管取代T8螢光管；
- 為加強節約能源，增多採用耗電量較低的發光二極管(LED)指示燈取代現時裝置在診所內的傳統緊急逃生指示燈；以及
- 在不影響重要醫療服務正常運作的情況下，把一般辦公室及公眾地方，在夏季月份的室內空調溫度，保持於25.5°C的水平。
- 公共衛生檢測中心的用電量約佔衛生署整體三分之一。為進一步節能，衛生署於二零零五年度為該中心大樓進行以下的改善工程：

- installing separate A/C on/off and temperature controls in the conference room and the multi-functional hall;
- replacing tungsten halogen lamps at conference rooms with cool light type energy saving lamps;
- installing solar filtering films to interior of window glass panels for critical areas facing sunshine to reduce indoor temperature due to solar heat load; and
- rescheduling and optimising the operation of chiller plant and E&M plant.
- 為會議室及多用途會堂裝置獨立的空調開關及室溫控制；
- 採用較省電的冷光類節能燈泡，取代會議室內的鹵素燈泡；
- 在面向陽光照射的玻璃窗內側加裝濾陽光片，以減低太陽熱能的室溫效應；以及
- 調校製冷及機電機組，以達至最佳的運作效益。

Progress of major energy saving projects is listed in Table G below:

下表G列出主要節能項目的進展：

**Table G : Progress of major energy saving projects of the Public Health Laboratory Centre**  
**表G : 公共衛生檢測中心主要節能項目的進展**

Description of energy saving measures 主要節能措施	Expected completion date 預計完成日期	Status as at end 2005 於二零零五年年底的情況
Adjustment of indoor A/C temperature to 25.5°C in the summer time for DH buildings equipped with central A/C facilities (except there are special operational reasons to maintain a lower indoor temperature such as drug stores, mortuaries etc.) 把設有中央空調的衛生署建築物的夏季室內空調溫度，調校至不高於25.5°C的水平(一些因特殊運作理由須保持較低室溫的服務單位如藥物儲存倉及殮房等除外)	September 2005 二零零五年九月	Implemented 已實行
T5 lighting retrofit 裝設效能較高的T5螢光管	December 2005 二零零五年十二月	Project completed 項目已完成
Optimisation of chiller plant and rescheduling E&M plant at Public Health Laboratory Centre 調校公共衛生檢測中心大樓製冷及機電機組，以達至最佳的運作效益	December 2005 二零零五年十二月	Project completed 項目已完成

Source : Electrical and Mechanical Services Department.  
 資料來源：機電工程署。

In 2004, the electricity consumption of the Public Health Laboratory Centre was 20 947 501kWh. After implementation of a series of energy saving measures, the electricity consumption recorded in 2005 dropped to 19 394 782kWh which was equivalent to a 7.4% reduction as compared to 2004.

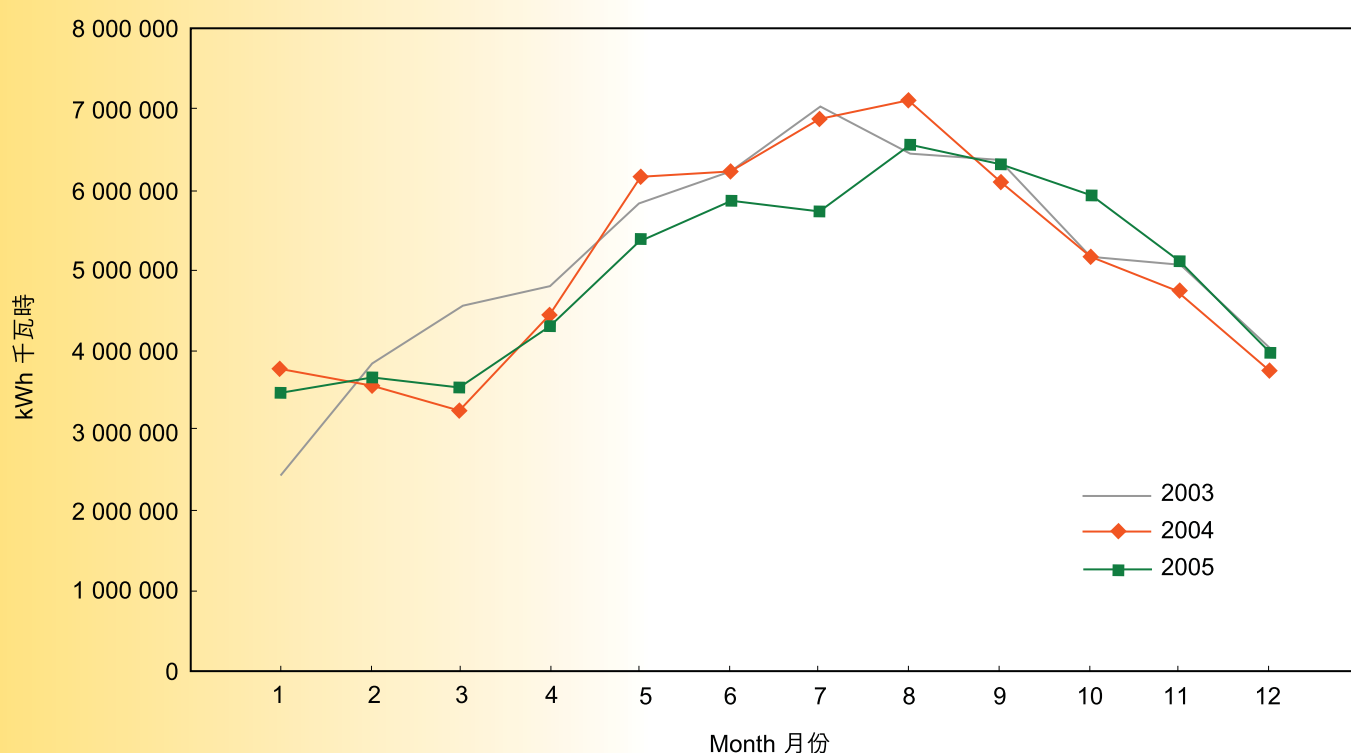
於二零零四年，公共衛生檢測中心的總用電量是20 947 501kWh。當一連串的節約能源措施落實後，該中心於二零零五年度所錄得的總用電量下降至19 394 782kWh。與二零零四年度比較，所得減幅相等於7.4%。

The overall energy consumption profile of DH from 2003 to 2005 is illustrated in Figure 17.

圖17展示由二零零三至二零零五年衛生署總用電情況。

**Figure 17 : Electricity Consumption Profile - DH Venues, 2003 - 2005**

**圖17 : 二零零三至二零零五年用電趨勢 - 衛生署轄下樓宇場地**



Source : Electrical and Mechanical Services Department.  
資料來源：機電工程署。

The diagram indicates a decreasing trend in electricity consumption in 2005 during summer months from April to September as compared to previous years. Upon the completion of all retrofit projects for enhancing energy efficiency and with the implementation of green housekeeping measures, it is expected that further energy saving can be achieved.

圖表顯示於二零零五年度夏季四至九月份整體的用電量趨勢與往年比較，是有下降趨勢。當完成所有可提高能源效益的裝設項目，並配合其他環保管理措施的推行，預計可進一步節省本署整體的電力消耗。



## Air quality improvement

Being the Government's health adviser, DH has been taking a leading role in the smoke-free workplace policy since 1982. This policy has been applied to all DH institutions since 1996.

From both the green management and the infection control aspects, adequate fresh air ventilation in the working environment of clinics and health centres is important for protecting the health of staff and the public. Since 1999, Indoor Air Quality (IAQ) tests and cleaning of air-duct of A/C systems have been conducted by EMSD periodically for DH clinics and offices to enhance the operational efficiency of A/C systems and to ensure adequate fresh air ventilation. By the end of 2003, IAQ tests and air-duct cleaning works were completed for all offices and clinic units once. In 2004 and 2005, IAQ tests have been conducted again in 23 and 19 venues respectively.

In addition, DH has taken the following measures in support of minimising air pollution caused by exhaust emissions by vehicles:

- encouraging staff to make use of public transport while performing outdoor duties; and
- advising all DH drivers to switch off the car engine while waiting and issuing circular at regular intervals to remind them of this.

## 改善空氣質素

作為政府的衛生事務顧問，衛生署率先自一九八二年起推行無煙工作間政策。此項政策亦由一九九六年起在本署轄下所有服務單位執行。

在環保管理及感染控制方面，診所及健康中心的工作環境內須有足夠鮮風流通量，這對保障員工及市民的健康十分重要。自一九九九年開始，機電工程署已分階段為本署轄下診所及辦公室，定期進行室內空氣質素測試及空調系統的風槽清潔工程，以提高空調系統的操作效能，並確保鮮風流通量充足。截至二零零三年年底，所有辦事處及診所服務單位已完成一次室內空氣質素測試及風槽清潔工程。於二零零四及二零零五年間，分別為23及19個地點再進行室內空氣質素測試。

另外，衛生署已採取以下措施，支持減低因汽車排放廢氣所產生的空氣污染：

- 鼓勵外勤工作人員盡量使用公共交通工具，以及
- 指示衛生署所有司機停車熄匙，並定時發出通告提醒各司機職系同事。