

# EnergyWits

## 智能

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# 16

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# 明報集團 同心合力 做好節能

## Ming Pao Holding Limited Work Together for Energy Saving

### 推動節能 分享經驗

多年來，政府都致力推動各界推行節能項目和管理。明報集團在其柴灣的明報工業中心，雖以全日24小時運作，仍能找到有節能成效的機遇，值得作為參考。2009年11月13日，在本署助理署長(電力及能源效益)薛永恆先生帶領下，與同事拜會了明報集團有限公司的行政經理胡志光先生及高級行政主任林奕輝先生。介紹了在過去一年，明報所進行的節能措施，分享他們的成果以及未來的節能方向。

### 節能措施 成效顯著

胡先生表示在全球關注氣候暖化的大前提下，明報管理層開始有計劃地推行節能項目及管理，認為集團可以為節能減排出一分力。首先，集團於2008年委托了香港生產力促進局為其擁有的五層辦公室進行了能源審核，從而為集團找出了多個可分為三種類別的「能源管理機會」。於是管理層立即推動實施第一和第二類型的「能源管理機會」，主要是為照明及空調設備作出改善措施，再配合辦公室內的節能管理，已明顯地提升了集團的節能成效。在室內照明方面，經過審核小組到現場勘察，參考有關燈具的特性數據，並實地測量辦公室內的照明度，然後分析收集到的數據，從而發現辦公室的照明度屬於偏高，管理層於是採取了以下的改善措施：

- 第一：為原本裝有2000多支光管的辦公室，拆除了近500支光管；
- 第二：改用慳電膽及較低火數的射燈；
- 第三：張貼告示，提醒員工離開工作間時把電燈及電腦設施等關掉。

在空調方面，由於空調的使用佔整體的總耗電量約四成，大概是每年約百多萬度電。除透過從空調系統的管理著手，也嘗試採用以下的技術方案：

- 第一：按不同時段的工作人數，調節空調開關時間表；
- 第二：保持室內空氣溫度正常下，調升製冷機的冷凍水溫度及減少機組同步使用；
- 第三：加裝「冷凍水流量控制器」，調節致空調機供水量，減少浪費；
- 第四：張貼太陽隔熱膜於窗戶，減少輻照熱力的傳入。

在過去數月，管理層親力親為，親自到辦公室巡查及向同事公報節能措施的成效。胡先生說：「管理層都好高興看見同事努力，為節能走多一步，所以得到很好的成績。」

### 未來節能的的方向

胡先生和林先生繼而向我們介紹公司未來的節能方向，考慮多採用有能源效益的技術。他們在印刷房正試用一款以T5替換T8的節能光管，透過與服務承辦商簽定3年的「零成本」績效表現合約，由承辦商墊支更換和回收節能光管，其後在節省的電費中扣除。除此之外，也曾考慮把已使用多年的風冷式製冷機組轉為水冷式，但對投資成本及使用水冷式冷卻塔的技術都表示關注。有見及此，我們更鼓勵他們參考本署2006年版的「水冷式空調系統實務守則」- 第一及第二部，以達到節能目標之餘，並同時考慮環保及使用須知。

薛先生聽了明報的分享也回應說：「明報能因時制宜，把節能效益發揮到最大的效用。」胡先生強調這次成功是得到同事的支持，他們上下一心。他也分享其中一個成功要訣，由管理層公報節能成效，出通告讚揚同事的積極參與。胡先生更作出鼓勵：「節能實在不難，不管多與少，最緊要做，就可以聚沙成塔。」

### 在業界的成就

明報於2008年7月成為唯一的傳媒機構，簽定了環保署二氧化碳減排約章。



專訪在開放和坦誠的氣氛下進行，探討節能措施的推行及機電工程署出版的能源效益相關刊物  
The interview was held in an open and frank atmosphere, discussing implementation of energy saving measures and EMSD publications related to energy efficiency

### Promote Energy Saving with Experience Sharing

Over the years, the government is actively promoting energy saving projects and energy management to public. Although Ming Pao Holding Limited in their Ming Pao Industrial Centre at Chai Wan is in 24-hour operation, a number of energy saving opportunities has been identified. Many of them are worth considering. On 13 November 2009, Assistant Director/Electricity and Energy Efficiency of EMSD, Ir. Alfred SIT and his colleagues paid a visit to Ming Pao Holding Limited and conducted an interview with Mr. John WOO, the Administration Manager and Mr. Scott LAM, the Senior Administration Officer. During the interview, Mr. WOO elaborated on the implementation of energy efficiency measures during last year and shared their achievement and insight for the energy saving.

### Energy Saving Measures with Significant Outcome

Mr. WOO stated that at the pervasive impact of global warming everywhere across the globe, the management of Ming Pao had started to plan the implementation of energy saving projects on the buildings so as to achieve building energy saving and reduce carbon emission. Firstly, the management had entrusted Hong Kong Productivity Council to carry out an energy audit to Ming Pao in 2008. Then a number of energy management opportunities (EMOs) grouped in three categories, were identified. The management of Ming Pao had implemented Cat I and Cat II EMOs progressively. Most of them are improvement works of lighting and air-conditioning installations. With cooperated contribution from energy saving measures being taken for offices, the achievement on energy saving had been significant.

Through the site survey conducted by the audit team for the lighting installation, they obtained the system performance data of the luminaries. With the measuring instruments, they took the reading of luminance level of the office for analysis. The survey result indicated that the luminance level in the offices was relatively high. The management then adopted the following improvement measures:

- 1) Disconnect 500 nos. of fluorescent tubes out of the 2000 nos. of fluorescent tubes at the office areas;
- 2) Replace lamps with compact fluorescent lamps and small power spot lights;
- 3) Post notice to remind staff to switch off the light and computer at the working place when not in use.

For air conditioning aspect, about 40% of total electricity consumption, which is approximately at 1,000,000 kWh per annum, was used for air conditioning. Apart from the management of air conditioning system, the following energy saving technologies had also been attempted:

- 1) Regulate the air conditioning operation schedule based on various occupancy schedule;
- 2) Maintain a suitable indoor temperature with raising the chilled water temperature set point and minimize simultaneous operation of chiller plants;
- 3) Add Chilled Water Control Valves to optimize the chilled water supply to air conditioning system so as to reduce energy wastage;
- 4) Affix the solar control window film at the window to reduce solar radiation transmission.

In the past months, the management of Ming Pao actively participated into energy saving, especially the inspection of progress on energy savings measures and announcement of outcomes so achieved. "The management is delighted to see that the colleagues have contributed actively to energy saving that leads to a very good achievement." said Mr. WOO.

### Future Direction in Energy Saving

Mr. WOO and Mr. LAM further elaborate their future direction in energy saving. They considered adopting more energy efficiency technologies. Retrofitting of T8 fluorescent tube by T5 type is under trial in their printing room. Ming Pao has engaged a 3-year "No-cost" performance contract service based on energy saving. The service provider would bear the cost of the lighting retrofit and contract service charge would be rebated amounting to a certain percentage of the energy saved. Besides, they had considered to replace the aged air-cooled chiller plants by water-cooled type. However, the beneficial of investment and technologies in use of fresh water cooling tower were their major concerns. In this connection, they were recommended to make reference to the **Code of Practice for Water-cooled Air Conditioning Systems – Part 1 and Part 2, 2006 Edition**, issued by EMSD, in order to meet the energy efficiency objective with due consideration of the environment and practice notes.

Mr. SIT appreciated to have Ming Pao's experience sharing and said, "Ming Pao has taken appropriate measures at good opportunity, resulting in great achievement on energy efficiency." Mr. WOO emphasized that the success in energy saving is certainly due to the collaboration and perseverance of their colleagues. The management expressed their appreciation on notice to staff for the achievement of energy saving and staff contribution. Mr. WOO further encouraged saying "To save energy is not difficult, it is no matter how much we can save, the saving can be significant if we actually do it."

### Achievement

In July 2008, Ming Pao Holding Limited is the only press media signed with the Carbon Reduction Charter of Environmental Protection Department.



明報集團有限公司的行政經理胡志光先生(左)及高級行政主任林奕輝先生(右)  
Mr. John WOO, the Administration Manager (Left) and Mr. Scott LAM, the Senior Administration Officer (Right) of Ming Pao Holding Limited



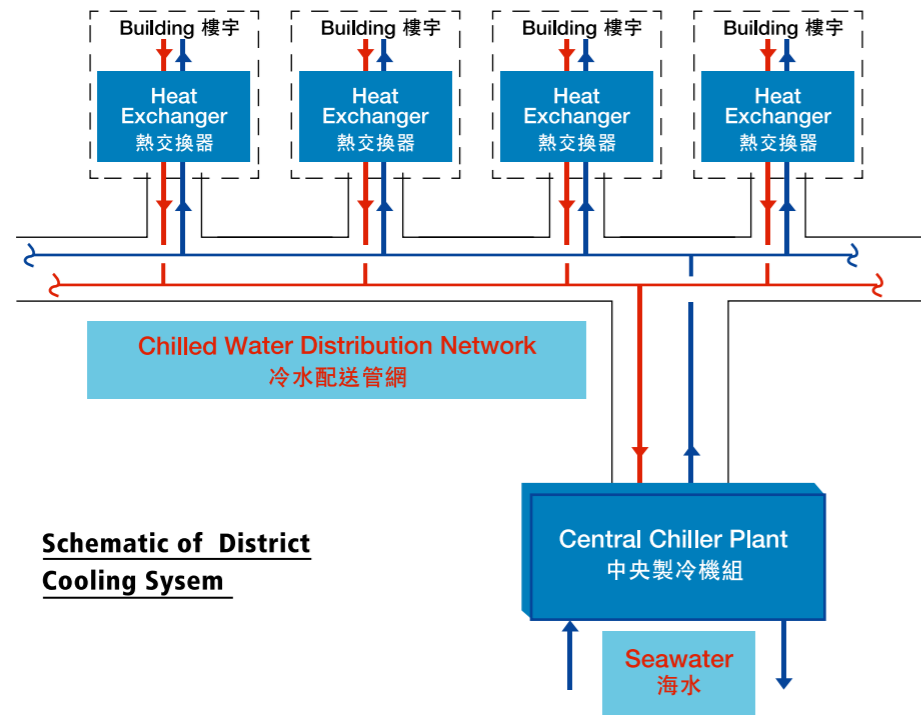
明報辦公室 Ming Pao Office

# 啟德發展區 區域供冷系統的最新進展

## Updated Progress of the District Cooling System at the Kai Tak Development

於2008-09年度施政報告中，為推動能源效益和節約，政府計劃於啟德發展區設立區域供冷系統，為新發展區內非住宅建築物提供冷凍水，以作空調之用。該系統主要包括以下部份：北部供冷站、南部地下供冷站及地下海水泵房、海水入水及排水管道、冷凍水配水管道網絡及用戶樓宅接駁設施（包括熱交換器）。

As announced in the Policy Address 2008-09, to promote energy efficiency and conservation, the Government has planned to implement a District Cooling System (DCS) at the Kai Tak Development (KTD) to supply chilled water to non-domestic buildings in the area for centralised air-conditioning. The DCS at the KTD mainly consists of the following: a northern chiller plant, a southern underground chiller plant cum underground seawater pumphouse, seawater intake and discharge pipelines, chilled water distribution pipe networks, and connection facilities (including heat exchangers) at user buildings.

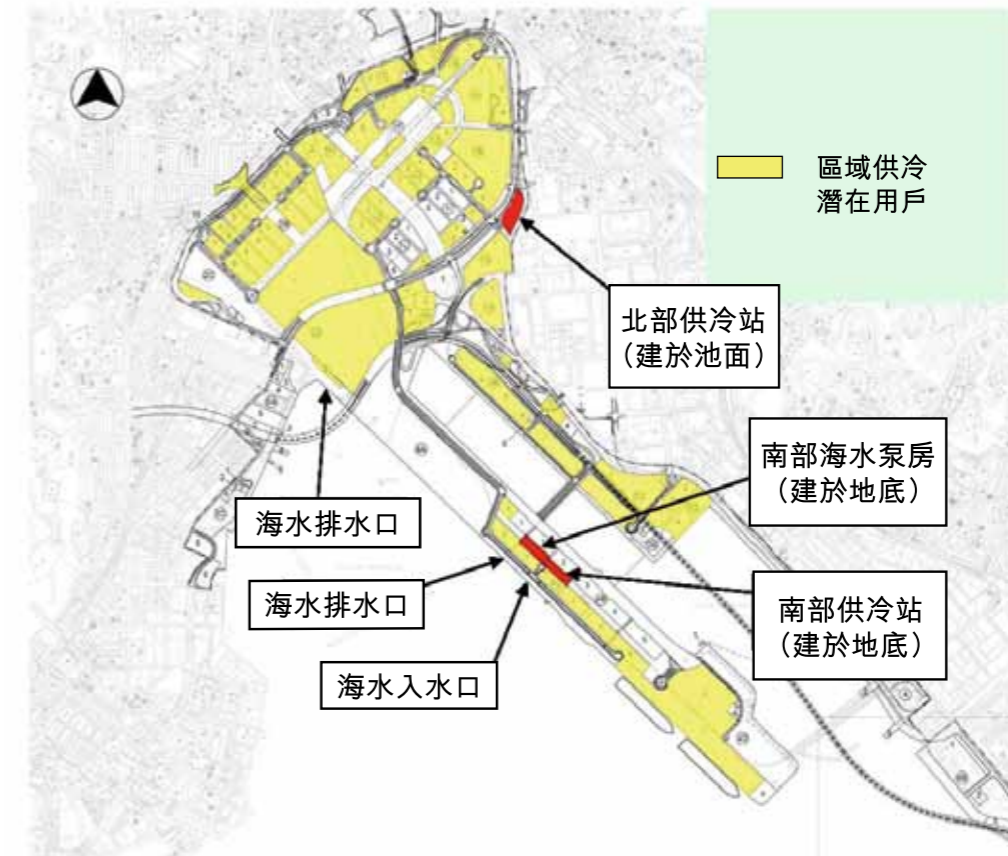


**Schematic of District Cooling System**

整個項目共分三個階段發展及投入運作，工程合約預計於2010年年初展開，第一階段預計於2012年底完成並於2013年開始運作，以配合啟德發展區的初期發展。而第二階段和第三階段則預計分別在2016年及2021年投入運作，以配合在啟德發展區內相應的發展計劃。為了充分利用資源，設備及配水管道網絡的施工和安裝時間表將作適當調整，以配合實際發展的時間表。

The project will be developed and commissioned for operation in three phases. The contract for the works is expected to commence in early 2010. The first phase is expected to be completed by end 2012 for operation from 2013 onward to match the early developments at KTD. The second and third phases for the project are targeted to be commissioned for operation by 2016 and 2021 respectively to match the schedule of respective packages of developments at KTD. For optimal use of capital cost, the construction and installation schedule of the component equipment and distribution networks will be suitably adjusted to suit the actual development schedules of KTD.

### 在啟德發展區採用區域供冷系統



相比起傳統的風冷系統和個別的冷卻塔系統，區域供冷系統可分別節省高達約35%和20%的電力。隨著啟德發展區區域供冷系統的實施，每年最高可節省電力達8千5百萬度電，相當於約18000個家庭的每年用電量或減排約59500公噸的二氧化碳。

此外，區域供冷系統的實施，可令建築物中安裝中央冷凍機組的空間，包括大廈天台安裝冷卻塔的位置得以減小，以作其他用途如綠化。以一個典型的辦公室大廈為例，大約可節省70%的機房空間。而因操作冷凍機組或冷卻塔對鄰近樓宇居民所產生的滋擾例如熱及噪音也可以減少，在啟德發展區內的“熱島效應”亦會因減小大廈傳統的中央冷凍機組散熱裝置而得以舒緩。

When comparing with traditional air-cooled system and individual cooling tower system, DCS can consume up to 35% and 20% less electricity respectively. With the implementation of DCS at KTD, the maximum annual saving of electricity is up to 85 million kWh, equivalent to the annual electricity consumption of around 18000 families. The saving is also equivalent to the emission of 59000 tones of carbon dioxide per annum.

Moreover, with the connection to DCS, much of the central air-conditioning plant space in user buildings including roof-top area for cooling towers can be saved for other purpose such as greening. Taking a typical office building as an example, around 70 % of plant space can be saved. Further, the nuisance to occupants of adjacent buildings such as heat and noise generated from the cooling towers or air-cooled condensers of the plant in the user building can also be eliminated. The "heat island" effect at Kai Tak Development can also be alleviated following removal of the heat rejection sources of the conventional air-conditioning plants from individual buildings.

# 可變風量空調系統的靜壓重調控制

## VAV System Static Pressure Reset Control

### 引言

可變風量空調系統是大型中央空調系統常用的配風設計。控制器令系統因應不同的冷量需求配風，令在部份負載的情況下效果更佳，從而降低操作成本。

送風風扇是可變風量空調系統其中一件主要元件，其全年耗電量佔整個系統耗電量的20%至30%，因此改善送風風扇的操作方式可節省能源及操作成本。

### 可變風量空調的靜壓重調控制

傳統的可變風量空調系統是按送風管道內的靜壓調節風量，而可變風量空調的靜壓重調控制則是更先進的控制系統，作用是調節送風風扇的靜壓設定點，從而作進一步節能。在這控制系統中，「關鍵區」內可變風量空調箱風閘的位置會受到監察。「關鍵區」是指需要最高靜壓才能送風的區域。這控制系統的目標是在維持這個可變風量空調箱風閘的開啟幅度在預設範圍內（如70%至90%之間）的情況下，盡量調低靜壓設定點。

### 節能潛力

如實施得宜，靜壓重調控制可節省可變風量空調系統送風風扇所需的能源。所節省的能源可以相當多，但數量須視乎地點及系統而定。例如本署在一幢辦公大樓進行試驗時，發現與傳統的固定靜壓控制器比較，靜壓重調控制全年可節省風扇用電量大約17.5%，而回本期估計為大約3年。

欲知詳情，請參閱本署最近出版的「可變風量空調系統的靜壓重調控制」小冊子。

### Introduction

Variable air volume (VAV) system is a common design for air distribution of a large central air conditioning system. The control enables the air distribution system to react according to the cooling demand and hence lower the operating cost during part-load operations.

As one of the main components of VAV system, the supply air fan can account for 20 – 30% of the whole air conditioning system's year round electricity consumption. Thus optimizing the supply air fan operation saves both energy and operating cost.

### Static Pressure Reset Control for VAV

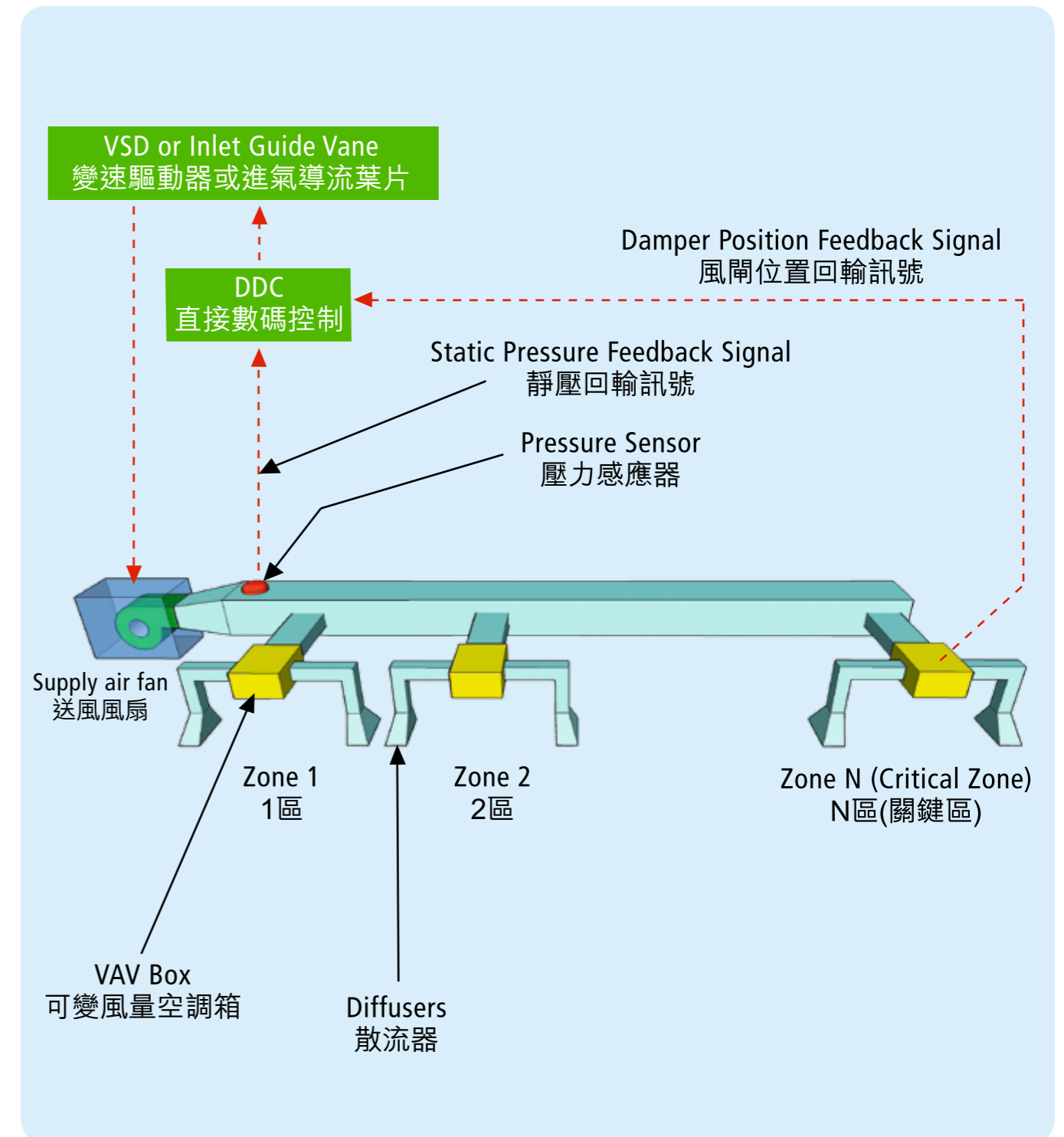
Conventional VAV system varies the air supply to maintain a constant static pressure in the air duct. Static pressure reset control is an advanced VAV control scheme that can vary the static pressure set point for further saving of fan energy. In this control scheme, the damper position of the VAV box in the "critical zone" is monitored. The critical zone is defined as the zone that requires the highest static pressure for supply air delivery. The objective of the control is to maintain a lower static pressure set point as far as the damper of this VAV box is kept open within a pre-determined range, say between 70% and 90%.

### Energy Saving Potential

Static pressure reset control saves VAV supply fan energy, if properly implemented. The energy saving can be remarkable. However, the saving is site and system specific. For illustration, in our trial project for an office building, the year round saving was found to be about 17.5% fan electricity consumption with conventional constant static pressure control as the base for comparison. The payback period was estimated to be around 3 years.

For details, please refer to our recently published pamphlet titled "VAV System Static Pressure Reset Control".

圖1. 採用靜壓重調控制器的系統  
Fig 1. System with static pressure reset control



# 可再生能源在香港的應用

## Application of Renewable Energy in Hong Kong

政府一向致力鼓勵可再生能源在香港的應用。機電工程署最近便完成了5項在市政場地的可再生能源工程，用以示範可再生能源在本地的應用及提高市民對這方面的認知。

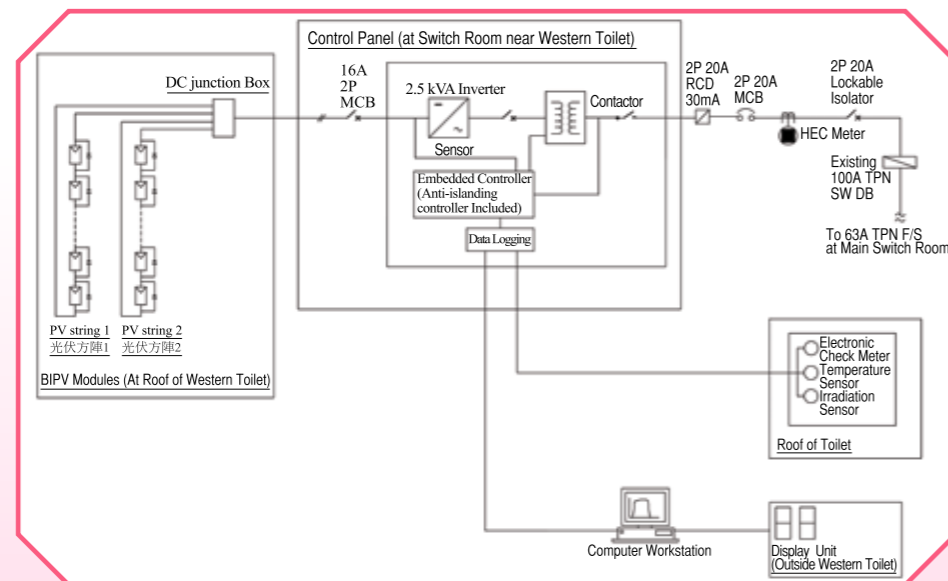
今次選擇了一些受市民歡迎及容易到達的市政場地作為可再生能源裝置的安裝地點，而這些場地亦分佈於全港不同區域，包括在香港島的香港公園，九龍半島的尖沙咀海濱花園和九龍公園，以及在新界的沙田大會堂的水池花園和屯門大會堂等。

由眾多適合本地採用的可再生能源技術中，光伏技術（如太陽能燈和附設於建築物的光伏系統）被選擇採用在這次工程中，主要原因是市民會比較容易明白太陽能電池把光能轉化成電能的技術，日常生活看到的類似例子便是一些沒有使用電池的太陽能計算機。在安裝方面，因上述受歡迎的市政場地附近或會有高樓大廈，在安裝位置上須在陽光不易被建築物遮蔽和容易被遊人看到等因素上取得平衡。

The Government is committed to the application of renewable energy in Hong Kong. Recently EMSD has completed 5 renewable energy projects in municipal venues with a view to demonstrating the local application of renewable energy and raising the awareness of the general public on deployment of renewable energy in Hong Kong.

Popular municipal venues in urban area were selected for the above renewable energy projects in order that these renewable energy installations could easily be reached by the general public. In addition, the sites selected are distributed in different geographical regions in the territory including one in Hong Kong island (i.e. Hong Kong Park), two in Kowloon peninsular (i.e. Tsim Sha Tsui Promenade and Kowloon Park) and another two in New Territories (i.e. Aviary Garden of Shatin Town Hall and Tuen Mun Town Hall).

Among all the locally suitable renewable energy technologies in Hong Kong, photovoltaic (PV) technology, such as solar lighting and building integrated photovoltaic (BIPV) system, has been selected since PV cells can directly convert solar light energy into electricity which should be easier understandable by the public. PV cell used in battery-free electronic calculators is an example of this kind. As these popular municipal sites are located in areas with high-rise buildings nearby, a balance has been made that the installation locations were chosen free from solar shading in the near vicinity and the installations could be easily accessible for viewing by the visitors and enjoyment by the public.



在香港公園附設於建築物的光伏系統線路圖  
Schematic block diagram of the BIPV installation at Hong Kong Park.



6枝安裝在水池花園的太陽能發光二極管草坪燈  
6 sets of solar-powered LED bollards installed in Aviary Garden



光伏系統裝置的相片如下：  
Photos of the PV installations are shown below:



安裝在尖沙咀海濱花園近龍頭噴泉的2.2千瓦與電網接駁附設於建築物的光伏系統，其光伏玻璃取代了原有簷篷，並示範了如何把可再生能源技術溶入現有海濱花園的設計上。  
A 2.2kW BIPV system installed at Tsim Sha Tsui Promenade to replace the existing glass roof of the pavilion near the Dragon Head Fountain to demonstrate renewable energy can be used in blending with the existing scheme design of the Promenade.



安裝在香港公園近紅棉道婚姻登記處的2.4千瓦與電網接駁附設於建築物的光伏系統，洗手間和資訊站上蓋的光伏玻璃取替了原有玻璃簷篷。  
A 2.4kW grid-connected BIPV system installed in Hong Kong Park (next to the Cotton Tree Drive Marriage Registry) to replace the existing glass canopy of the toilet and information kiosk.



3枝安裝在香港公園的太陽能發光二極管草坪燈。  
3 sets of solar-powered LED bollards installed in Hong Kong Park.



4枝安裝在屯門大會堂一樓的太陽能發光二極管燈柱。  
4 sets of solar-powered LED lamp poles installed on 1/F of Tuen Mun Town Hall.

# 「強制性能源效益標籤計劃」全面實施

## Mandatory Energy Efficiency Labelling Scheme

### Already Commenced

根據《能源效益（產品標籤）條例》（第598章）推行的強制性能源效益標籤計劃（強制性標籤計劃），18個月寬限期已經完結，計劃的首階段由2009年11月9日起已全面實施。從該日起，在本港供應的3類訂明產品（即空調機、冷凍器具及慳電膽）均須貼上能源標籤。能源標籤載有該產品的能源效益表現說明。

業界向機電工程署呈交產品資料十分踴躍，截至11月中為止，已有超過2,000個產品型號獲編配參考編號。機電工程署現已開始於各零售商店進行巡查，以監察有關產品是否附合條例的規定。

為配合推行強制性標籤計劃，政府已舉辦了一連串宣傳活動，向市民及業界推廣計劃，包括在電視台、電台、巴士和電車作廣告宣傳、在政府網站推廣、派發宣傳小冊子和海報、舉辦業界研討會、探訪零售店鋪作宣傳，以及舉辦傳媒簡報會等。

The Government has introduced the Mandatory Energy Efficiency Labelling Scheme (MEELS) through the Energy Efficiency (Labelling of Products) Ordinance, Cap. 598. With the expiry of the 18-month grace period, the MEELS initial phase has commenced full enforcement from 9 November 2009. From that date onwards, energy labels are required to be shown on three types of prescribed products (i.e. room air conditioners, refrigerating appliances and compact fluorescent lamps) for supply in Hong Kong. The energy efficiency performance of these products is shown on the energy labels.

The trade has been very enthusiastic in submitting product information to EMSD. Up to mid-November, more than 2,000 product models have been assigned with reference numbers. EMSD has also begun to conduct inspections at retail shops in order to ensure compliance with the statutory requirements.

To facilitate the implementation of the MEELS, the Government has launched a series of publicity activities to promote the scheme to the public and the trades, including announcements on TV and radio, bus and tram advertisements, Government website announcements, pamphlets and posters, trade seminars, publicity visits to retailers and press briefing.



「強制性能源效益標籤計劃」巴士車身廣告  
Bus Advertisement on MEELS



「強制性能源效益標籤計劃」電車車身廣告  
Tram Advertisement on MEELS



「強制性能源效益標籤計劃」傳媒簡報會  
Press Briefing on MEELS

「能源標籤」的好處：  
第一級能源標籤 能源效益最高

具能源效益的產品不但消耗較少能源，更可幫助消費者節省金錢，並且有助保護環境。能源標籤把同一類產品的能源效益分為五級，方便消費者選擇具能源效益的產品。產品如獲得第一級能源標籤，表示該產品的能源效益最高。

Benefits of Energy Labels:  
Grade 1 Energy Label Being Most Energy Efficient

Energy efficient products not only consume less energy, they also save consumers money and help protect the environment. To help consumers choose energy efficient products, the energy labelling system classifies the energy performance of a product type into five grades. A product with Grade 1 energy label means that it is the most energy efficient.

就計劃涵蓋的三類訂明產品而言，第一級比第三級及第五級分別可節省的耗電量，大約如下表所示：

For the three types of prescribed products, Grade 1 energy-labelled products may approximately save the following percentages of energy as compared to Grade 3 and Grade 5 energy-labelled products, as follows:



空調機 Room Air Conditioner		冷凍器具 Refrigerating Appliance		慳電膽 Compact Fluorescent Lamps	
第一級比第三級 grade 1 vs grade 3	第一級比第五級 grade 1 vs grade 5	第一級比第三級 grade 1 vs grade 3	第一級比第五級 grade 1 vs grade 5	第一級比第三級 grade 1 vs grade 3	第一級比第五級 grade 1 vs grade 5
15%	29%	35%	49%	14%	18%

至於慳電膽，比一般鎢絲膽慳電75%，壽命也平均是鎢絲膽的6-8倍或以上；而「第一級」及「第二級」慳電膽，平均電燈壽命更可達8,000小時或以上。

Compact fluorescent lamps (CFLs) save around 75% of electricity compared to incandescent lamps and on average last up to 6 to 8 times longer or more. Grade 1 and Grade 2 CFLs have an average life of 8,000 hours or above.

公眾及業界可於機電工程署的網站，參閱已獲編配參考編號的表列型號及下載有關強制性標籤計劃的其他資料。如有查詢，可致電機電工程署能源效益事務處。

The public and the trade may visit the EMSD website for the listed models assigned with reference numbers (website: [http://www.emsd.gov.hk/emsd/chi/pee/eels\\_mreg.shtml](http://www.emsd.gov.hk/emsd/chi/pee/eels_mreg.shtml)) and download other information about the MEELS. For enquiry, please contact Energy Efficiency Office of EMSD.

[http://www.emsd.gov.hk/emsd/chi/pee/eels\\_mandate.shtml](http://www.emsd.gov.hk/emsd/chi/pee/eels_mandate.shtml)  
電話 Tel : 2808 3465

### 能源標籤樣式 Energy Label



空調機  
Room Air Conditioner



冷凍器具  
Refrigerating Appliance



慳電膽  
Compact Fluorescent Lamps

強制性標籤計劃第二階段建議  
Proposed Second Phase of the MEELS

政府已建議擴大強制性標籤計劃的涵蓋範圍，在第二階段加入洗衣機和抽濕機。修訂法例建議已經提交立法會。The Government has proposed to extend the coverage of the MEELS by including washing machines and dehumidifiers in the second phase. The proposed legislative amendments have been submitted to the Legislative Council.

# NEW 2009 新版香港能源最 終用途數據

edition of the Hong Kong Energy End-use Data 已經發行!  
has been published!

這數據庫記錄全港在2007年間一共使用了 294,107 太焦耳。當中四大類別 - 住宅、商業、工業及運輸業分別使用了18%，38%，9%和35%。和往年比較，按人口平均計算的能源最終用途量在2007年間錄得約1%的升幅，由2006年間的每人42.02千兆焦耳升至2007年間的42.46千兆焦耳。但從本地生產總值來看，每十億港元生產總值所需的能源使用量近年則持續下降，由2006年的190太焦耳下跌至2007年的182太焦耳。有興趣的讀者可由下列網址免費下載更加詳細的數據。



In 2007, 294,107 TJ were consumed by the end uses in Hong Kong. The consumption was split among the Residential, Commercial, Industrial and Transport Sectors in the proportion of 18%, 38%, 9% and 35%. Compared with the previous year, the consumption per capita recorded a slight increase of 1%. It increased from 42.02 TJ/capita in year 2006 to 42.46 TJ/capita in year 2007. However, from the gross

domestic product perspective, the consumption continued to decline in the recent years. It dropped from 190 TJ/ Billion HK dollar in year 2006 to 182 TJ/ Billion HK dollar in year 2007. Interested readers can seek further information from various tables, graphs and charts displayed in the following website:

[http://www.emsd.gov.hk/emsd/e\\_download/pee/HKEEUDB2009.pdf](http://www.emsd.gov.hk/emsd/e_download/pee/HKEEUDB2009.pdf)

## 《建築物能源效益守則》最新消息 Update on Building Energy Code

《建築物能源效益條例草案》已提交立法會

Buildings Energy Efficiency Bill introduced into Legislative Council

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8. 能源效率	C107
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10. 能源效率	C109
11. 能源消耗	C110
12. 能源效率	C111
13. 能源消耗	C112
14. 能源效率	C113
15. 能源消耗	C114
16. 能源效率	C115

我們已於2008年第一季就強制實施《建築物能源效益守則》完成一個為期三個月的公眾諮詢。完成公眾諮詢後，所收到絕大多數的意見都支持有關建議，我們繼續循不同途徑收集有關立法建議執行細節的意見，包括兩個專責小組、多個工作小組及多個與相關持份者之組織舉行的諮詢會議等等。建議隨後獲得環境諮詢委員會、能源諮詢委員會轄下的能源效益及節約小組委員會、以及方便營商諮詢委員會支持。立法會環境事務委員會對建議亦無異議。

在各方努力下，旨在強制實施《建築物能源效益守則》的《建築物能源效益條例草案》已如期完成，隨即於2009年12月4日刊登憲報，並於2009年12月9日提交立法會展開審議程序。

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8. 能源效率	C107
9. 能源消耗	C108
10. 能源效率	C109
11. 能源消耗	C110
12. 能源效率	C111
13. 能源消耗	C112
14. 能源效率	C113
15. 能源消耗	C114
16. 能源效率	C115

We concluded a three-month public consultation on the proposed mandatory implementation of the Building Energy Code in the first quarter 2008. The vast majority of the views received in the consultation supported the proposal. After the consultation, we continued to gauge views on the detailed arrangements of the legislative proposal through various channels, including two taskforces, a number of working groups

and a number of consultation meetings with various stakeholders' organisations etc. The proposal was then supported by the Advisory Council on the Environment, the Energy Efficiency and Conservation Sub-committee of the Energy Advisory Committee, and the Business Facilitation Advisory Committee. The Legislative Council Panel on Environmental Affairs also raised no objection to the proposal.

Under the efforts of all parties, the Buildings Energy Efficiency Bill for mandatory implementation of the BEC had been completed on schedule. It was then published in the Gazette on 4 December 2009 and was introduced into the Legislative Council on 9 December 2009 to commence the vetting procedures.