能源效益及相關事項通訊
A Newsletter on Energy Efficiency and Related Matters

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EnergyWits 智能

本期內容 Contents

機電工程署
EMSD

第二屆「香港能源效益獎」頒獎典禮表揚傑出能效及節能參賽者

Outstanding Participants Recognized in Awards Presentation Ceremony of "2nd Hong Kong Energy Efficiency Awards"

機電工程署一直致力推廣能源效益及節約能源。從2003年開始，機電署分別為政府部門和私營機構舉辦了「香港能源效益及節能獎（政府機構）」及第一屆「香港能源效益獎」這兩個節能比賽。得獎者除贏得獎項外，更得到社會人士對他們在節約能源方面所作的努力的認同，亦為社會的持續發展樹立良好的榜樣。

機電署於2006年開始籌辦第二屆「香港能源效益獎」節能比賽。

這次比賽的對象是包括所有由香港房屋委員會、香港房屋協會、領匯管理有限公司、市區重建局發展或管理的樓宇。比賽分開兩個獎項類別供參賽者競逐，分別為「住宅樓宇」及「商業樓宇」。而參賽的單位包括了住戶和商戶，辦公室，商場，工廠大廈，停車場和福利用途的樓宇等，範圍非常廣泛。

比賽為期8個月，由2007年1月1日起至2007年8月31日止。

比賽反應熱烈，有逾1,400家機構、團體、住戶及商戶參賽，成績令人鼓舞。

頒獎典禮已於2008年3月10日下午2時30分假九龍鑽石山荷李活廣場一樓明星廣場舉行。頒獎典禮由環境局局長邱騰華主持。

機電工程署署長何光偉在典禮上表示，比賽得到多個參賽單位的踴躍參與，他感到非常鼓舞。並說：「希望獲獎機構能藉着這次比賽，得到節約能源的心得和經驗，日後把節

Electrical and Mechanical Services Department has always taken the lead to spearhead initiatives to conserve energy and promote energy efficiency. Since 2003, the Department had held the "Hong Kong Awards for Energy Efficiency and Conservation in Government" and the "1st Hong Kong Energy Efficiency Awards" for the government and for the private sectors. Apart from winning the awards, the winners of the competition had been recognized by the society on their contribution in energy efficiency and conservation, and had also set good examples for others to follow.

To further promote energy efficiency and conservation, EMSD launched the "2nd Hong Kong Energy Efficiency Awards" in 2006.

The target participants for the competition were the buildings developed or managed by the Hong Kong Housing Authority, Hong Kong Housing Society, the Link Management Limited and the Urban Renewal Authority. There were two categories for the competition, namely "Residential Buildings" and "Commercial Buildings". They covered households, tenants, offices, shopping centres, factory estates, car parks, and social welfare premises, etc.

The competition commenced on 1 January 2007 and completed on 31 August 2007, covering a period of 8 months.

The Awards received very positive response, with more than 1,400 entries from different companies, organizations, households and tenants.

The Awards Presentation Ceremony had been held on 10 March 2008, 2:30pm at Star Atrium, Level 1, Plaza Hollywood, Diamond Hill. The Secretary for the Environment, Mr Edward Yau, was invited to officiate at the ceremony.

The Director of Electrical and Mechanical Services, Mr Ho Kwong-wai, said keen participation in the competition

能工作做得更好。」

比賽的成績優異，其中「公眾地方」組別的優勝單位於比賽期間的耗電量比去年同期減少達百分之三十四。而部分「住戶」及「商戶」的優勝單位，實際節能亦分別超過百分之四十及百分之二十。

除頒獎典禮外，能源效益事務處更藉此機會，與觀眾進行節能問答比賽，將節能訊息與現場觀眾和街坊分享。

was most encouraging. He added, "experience gained through the event will be valuable and beneficial to promoting sustainable energy saving and conservation."

The competition achieved outstanding results. In the "Common Areas" category, energy saving of 34% was resulted when compared with the same period in the preceding year. For the "Households" and "Tenants" categories, a number of winners achieved energy saving of more than 40% and 20% respectively.

Apart from the Awards Presentation Ceremony, the Energy Efficiency Office also had some game quiz on energy savings with the audience and the people in the shopping centre to promote the awareness of energy efficiency and conservation.

住戶金獎得主從局長手中接過獎座
Gold Award Winner for Household receiving the trophy from the Secretary for the Environment

歌星裕美和范萱蔚現場獻唱
Live show by Hiromi Wada and Percy Fan

環境局局長邱騰華主持頒獎典禮
The Secretary for the Environment, Mr Edward Yau, officiated the ceremony

得獎單位與局長、署長、評審及嘉賓大合照
Awards Winners having a group photo with the officiating guests, Judging Panel and other guests

節能問答比賽，將節能訊息和街坊分享
Quiz on energy savings with the audience promoting energy efficiency and saving through games

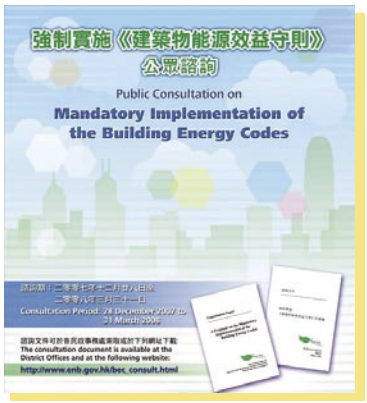
「公眾地方」組別大獎得主頌富商場及停車場從局長手中接過獎座
Grand Award Winner, Chung Fu Shopping Centre & Carpark receiving the trophy from the Secretary for the Environment

HONG KONG 2nd Energy Efficiency Awards 第二屆香港能源效益獎

強制實施
建築物能源效益守則的公眾諮詢
Public Consultation on the Mandatory Implementation of the Building Energy Codes

為了進一步推廣建築物能源效益，香港特別行政區政府於2007年12月28日就強制實施機電工程署制定的「建築物能源效益守則」的建議展開一個為期三個月的公眾諮詢。

To further promote building energy efficiency, the Environment Bureau in conjunction with the Electrical and Mechanical Services Department (EMSD) launched on 28 December 2007 a 3-month Public Consultation on the Mandatory Implementation of the Building Energy Codes as published by EMSD.



是次建議包括下列各項目 The proposal embraces the following items :

對新建建築物 For New Buildings

- 商業樓宇和住宅及工業樓宇的公用地方(包括公私營界別)均須符合《能源效益守則》。
  Commercial buildings and the communal areas of residential and industrial buildings in both the private and public sectors should comply with the BEC.
- 涵蓋的建築物的發展商須在建築事務監督批准建築圖則時向機電署提交由認可專業人士核證的聲明。
  Developers of buildings covered by the proposed scheme are required to submit a self-declaration, certified by recognized professionals, to the EMSD upon the approval of building plans by the Building Authority.
- 發展商須在不超過建築事務監督發出佔用許可證的兩個月內向機電署提交最終聲明，以顯示已符合能源效益標準。
  Developers are required to submit a final self-declaration to EMSD no later than two months of the issue of occupation permits by the Building Authority, to demonstrate compliance with energy efficiency standards.
- 機電署在接獲最終聲明後會發出「遵行規定證明書」。
  Certificate of Compliance will be issued upon receipt of the final self-declaration.
- 機電署會對已完成的裝置進行抽樣檢查，以確保符合《能源效益守則》。
  The EMSD will carry out sample inspections of completed installations to ensure compliance.
- 獲發「遵行規定證明書」的建築物的名單亦將公開予公眾查閱。
  The list of buildings issued with Certificates of Compliance will be made available for public inspection.
- 物業管理公司須代表建築物業主每十年為「遵行規定證明書」續領一次。
  Property management companies, on behalf of the building owners, should seek renewal of the Certificate of Compliance once every ten years.
- 已獲發「遵行規定證明書」的商業樓宇亦須每隔十年進行能源審核。
  Commercial buildings with Certificates of Compliance are required to conduct energy audits once every ten years.

- 為配合建議中的立法計劃，某建築物的能源表現如較最基本能源效益要求高出某個百分比(例如15%或20%)，將可通過一個自願參與計劃，以頒發能源標章的形式作出認可。
  To complement the proposed legislative scheme, for buildings that have exceeded the minimum building energy efficiency standard by a prescribed percentage (such as 15% or 20%), recognition in the form of an energy mark will be given through a voluntary administrative scheme.

對現有建築物 For Existing Buildings

- 所有涉及大型翻新工程(例如當工程涉及更換受《能源效益守則》涵蓋的裝置類別之大型組件或為建築物進行翻新工程的範圍超過50%樓面總面積)的商業樓宇和住宅及工業樓宇的公用地方 (不論公私營界別)，均應符合《能源效益守則》。
  All major retro-fitting works (e.g. replacement of major components of installations covered by the BECs or involving more than 50% of the gross floor area) in commercial buildings and communal areas of residential and industrial buildings in both the private and public sectors should comply with the BEC.
- 業主及物業管理公司須在大型工程完成的兩個月內向機電署提交聲明及證明文件。
  Building owners and the property management companies are required to submit a self-declaration together with supporting documents to the EMSD within two months after completion of the major retro-fitting works.
- 就累計面積超過500平方米的商業樓宇而言，業主及物業管理公司應安排每隔十年由認可專業人士進行能源審核，並讓佔用人或準佔用人閱覽審核結果。
  Building owners and the property management companies should arrange energy audits once every ten years by recognized professionals for commercial buildings with a cumulative floor area over 500 m^2. The audit results should be made available to occupants or potential occupants.

香港特區政府就該建議向各社會階層進行廣泛諮詢，以聽取各持份者及公眾的意見，諮詢活動包括記者會、專業人士會議、電視及電台廣播、登報及一系列的技術講座及公眾研討會。諮詢期已在2008年3月31日完結，並得到各持份者及公眾的寶貴觀點和意見。政府部門現整合有關意見，以擬備有關草案的立法建議工作，並計劃在2009/10立法年度提交該立法建議草案於立法會討論。

環境局局長邱騰華太平紳士在2007年12月28日的記者招待會上宣佈展開強制性計劃的公眾諮詢
Public Consultation on the mandatory scheme kicked off by Mr. Edward Yau, JP, Secretary for the Environment in a press conference on 28 December 2007

Various sectors of the community were consulted about the proposal through press and professional conferences, television & radio broadcastings, newspaper advertisements and a series of technical talks and public forums. The public consultation ended on 31 March 2008 and valuable views and comments from the stakeholders and the public were received. The views and comments collected are now being consolidated and a draft legislation proposal is being prepared. It is planned to introduce the legislative proposal to the HKSAR Government's Legislative Council within the 2009/10 legislative year.

先進的壓縮機技術
提高製冷機的能源效益
Advanced Compressor Technology
Enhances Chiller Energy Efficiency

要在暖通空調系統達到節能，設備能效表現扮演著一個重要角色。製冷機作為一個主要用電設備，可為整個暖通空調系統提供良好的節能機會。最近機電工程署在一個政府樓宇中完成了一項節能工程，把舊有的100冷噸風冷式製冷機更換為蘊涵先進壓縮機技術的150冷噸風冷式製冷機。新安裝製冷機的獨有節能特點包括：

1) 採用在150冷噸機種範圍中並不常見的離心壓縮機設計；

2) 以可變速驅動器控制雪種壓力和雪種體積度以達最低壓縮機功率，這是該製冷機進行雪種壓縮週期時的主要節能關鍵(註；有關詳情可參閱本文末端的插件)；

3) 以磁懸浮軸承取代機油潤滑系統，從而避免了相信對製冷機有負面影響的潤滑油遷移問題；以及

4) 使用永磁同步馬達作壓縮機的動力來源。

新的製冷機從2007年12月底開始運作。當它與另一部採用螺桿壓縮機的風冷式製冷機作初步比較，平均節能約為百分之二十九。 在這段期間，製冷機是在極端低負載狀態下運行。更多數據將被收集以估算出該製冷機全年可節省的能源，但初步估計應該有大約百分之二十左右。

如大多數其他新節能技術一樣，使用先進壓縮機技術須要付出額外成本。初步估計，遞增成本的回收期約為六年半到十年。

To achieve energy efficiency in HVAC system, equipment energy performance always has an important role to play. Chiller, as a piece of major electricity consumption equipment, can present good saving opportunities to enhance the overall energy efficiency of the whole HVAC system. An energy saving project to replace an old 100 RT air cooled chiller by a new 150 RT air cooled chiller with an advanced compressor technology was recently completed by EMSD in one of the Government venues. The unique energy efficiency features of the new chiller include:

1) Centrifugal compressor design which is uncommon for air cooled chillers in the 150 RT size range;

2) Variable frequency drive to control the refrigerant pressure and volume to achieve minimum compressor power which is believed to contribute the major saving in refrigerant gas compression power (see explanation in the inset at the bottom) of the equipment;

3) Magnetic bearings to eliminate the need for an oil lubrication system and hence avoiding oil migration problem which may adversely affect chiller energy performance; and

4) Permanent magnet synchronise DC brushless motors as compressor prime mover.

The new chiller was operational since end December 2007. The preliminary average energy saving, when compared with another air cooled chiller with screw compressors, was about 29%. During this period, the chiller was operated under an extreme partial load condition. While more data are being collected to ascertain and validate the year round saving, it was preliminarily projected that the annual average saving should be in the range of some 20%.

新的製冷機擁有兩台先進的無潤滑機油離心壓縮機
The new chiller is equipped with two advanced oil free centrifugal compressors.

Like most of other energy efficient technologies, the advanced compressor technology only comes with a cost premium. The payback period for the increased cost is estimated to be in the range of 6.5 to 10 years.

壓縮機消耗的能源主要是為了提升氣化雪種的壓力。理論上，壓縮機多變性工作的功率可以透過以下方程式作出上計算：

The power consumed by a compressor is mainly to provide the pressure lift for the gas phase refrigerant. Theoretically the polytropic work of a compressor can be calculated by the equation:

$$P = m \cdot \left[\frac{p_2 \cdot v_2 - p_1 \cdot v_1}{\ln\left(\frac{p_2 \cdot v_2}{p_1 \cdot v_1}\right)} \right] \cdot \ln\left(\frac{p_2}{p_1}\right)$$

當中 where
p1 = 壓縮機吸氣端的雪種壓力 refrigerant pressure at compressor suction state point
p2 = 壓縮機排氣端的雪種壓力 refrigerant pressure at compressor discharge state point
v1 = 壓縮機吸氣端的雪種體積度 refrigerant specific volume at compressor suction state point
v2 = 壓縮機排氣端的雪種體積度 refrigerant specific volume at compressor discharge state point
m = 雪種的質量流量 refrigerant mass flow rate
P = 壓縮機功率 compressor power

水冷式製冷機組的可變流量冷卻水泵控制

Variable Flow Condensing Water Pump Control for Water Cooled Chiller Plants

由於製冷機為製冷機組內的主要電力消耗設備，一貫做法會著力於尋找高能源效益的製冷機，以提升製冷機組的整體能源效益。事實上，在協調製冷機組組件間微妙的操作互聯關系方面，也可提供良好的節能機會。政府最近在一個辦工大樓內完成了一項改裝工程，把水冷式空調的恆定流量冷卻水泵系統改裝為可變流量系統。該項目採用了一個先進的控制系統控制冷卻水泵的可變速驅動器(VSD)。有了這控制系統，冷卻水泵的運行速度能更有彈性和敏捷地跟據溫度傳感器數據來配合製冷機組的散熱需要而作出適當的改變 (看圖1)。

In enhancing energy efficiency of chiller plants, a lot of efforts have been spent to look for higher efficiency chillers which are the major electricity consuming equipment of the system. In fact, managing the subtle operational interrelationship among system components of a chiller plant can also present good energy saving opportunities. A project for retrofitting a constant flow condensing water pump system into a variable flow system was recently completed for the water cooled chiller plant in a Government office building. The project has adopted an advanced control system to control the variable speed drives (VSDs) of the condensing water pumps. With such a control system, the running speed of the condensing water pumps could be adjusted in a more versatile and responsive manner to match the chiller's heat rejection demand as sensed by the temperature sensors (see Fig. 1).

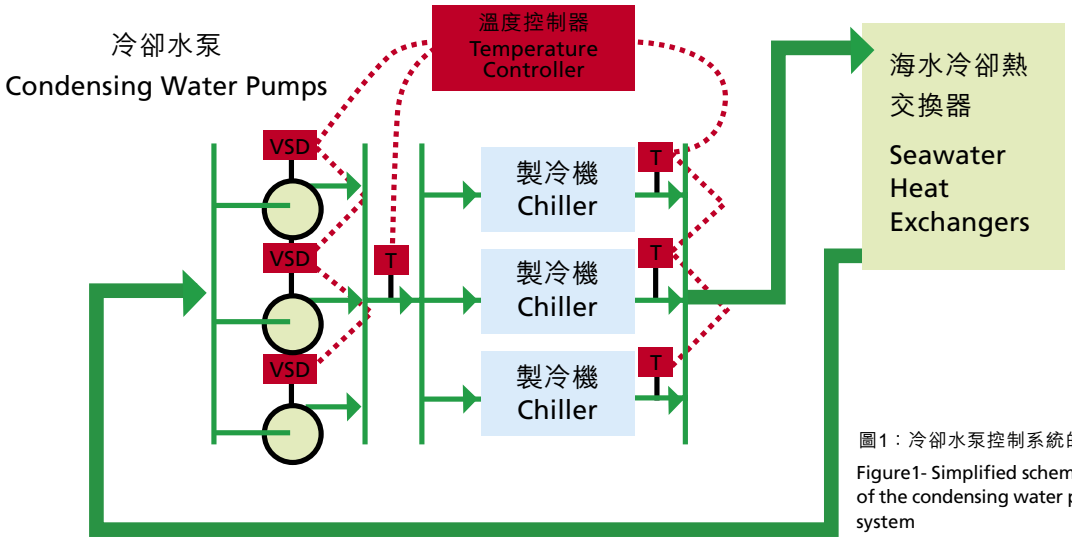


圖1：冷卻水泵控制系統的簡化概要圖

Figure1- Simplified schematic diagram of the condensing water pump control system

然而，必須注意的是減少冷卻水流量會增加雪種冷凝時的溫度和壓力，有可能為製冷機的運作帶來負面影響，減低了運作效率。所以當安裝該控制系統時，需要優化整個控制系統，否則從水泵獲得的節能很容易被製冷機增加的能耗所抵消。我們現正收集更多的運作數據以就該控制系統作出全面的節能評估。根據初步的資料，下表顯示可變流量冷卻水泵先進控制系統在一個典型工作天運作時的節能潛力：

However, it has to be noted that reducing condensing water flow rate may entail operational penalties to the chiller equipment due to an increase in refrigerant condensing temperature and pressure. A system optimization process is required when the advanced control system is implemented, otherwise the energy saving arised from the pumps may be offset due to this operational penalties. More data will be collected to obtain a holistic picture of the energy saving potential. For illustration, the following table shows the preliminary result on energy saving potential of the retrofitted advanced control system for the variable flow condensing water pump system on a typical day:

	冷卻水泵運作 Condensing Water Pumps Operation		
	恆定流量 Constant Flow	可變流量 Variable Flow	估計全日能源消耗 Estimated Daily Energy Consumption
製冷機壓縮器運行電流 (安培) Chiller Compressor Running Current (A)	900	950	增加300千瓦小時 Penalty 300 kWh
冷卻水泵運行電流 (安培) Condensing Pumps Running Current (A)	245	80	節省900千瓦小時 Saving 900 kWh
可變流量運行下的節能淨額: Net energy saving from variable flow operation:			600千瓦小時 600 kWh



相片說明：左— 直接數字控制器；中— 可變速驅動器；右— 冷卻水泵組

Photo caption: Left - DDC controller; Middle; VSDs; Right; Condensing water pumps

淡水冷卻塔計劃
Scheme for Fresh Water Cooling Towers

淡水冷卻塔計劃繼續成功地推廣使用淡水於空調系統中的蒸發式冷卻塔。隨着日漸增加的需求，自2007年10月，本計劃已增加3個選定地區和擴大了中環和馬料水這兩個選定地區覆蓋的範圍。3個新選定地區是西半山、白石角和天水圍。至2008年3月31日，選定地區已達82個。

越來越多非住宅建築物的擁有人開始認識使用冷卻塔在他們的空調系統的節能效益。自先行性淡水冷卻塔計劃實施以來，至2008年3月31日，已收到超過340宗申請。當中共有116個裝置，共1佰40萬千瓦製冷量，已完成並投入工作。我們估計每年可節省約9仟7佰萬度電和減少6萬8仟噸溫室氣體排放。

在新近啟用的冷卻塔裝置中，安裝在尖沙咀基督教青年會和紅磡香港專上學院天台的冷卻塔裝置是其中兩套最大的淡水冷卻塔裝置。

The Scheme for Fresh Water Cooling Towers continues to prove its success in promoting wider use of fresh water evaporative cooling towers in air-conditioning systems. To meet the increasing demand, 3 more designated areas have been added to the existing coverage and the designated areas of Central and Ma Liu Shui have been extended since October 2007. The new designated areas are Mid-levels West, Pak Shek Kok and Tin Shui Wai, making the total number to be 82 as at 31 March 2008.

More and more non-domestic building owners have become aware of the energy saving benefits of using evaporative cooling towers in their air-conditioning systems. Since the commencement of the Pilot Scheme and up till 31 March 2008, we have received over 340 applications and 116 installations with a total cooling capacity of 1,400,000 kW have been completed and put into operation. We estimated that this will save electricity by 97MkWh per annum and reduce green house gases by 68,000 tonnes per annum.

Among the completed cooling tower installations in the recent months, the ones installed on the roofs of the YMCA in Tsim Sha Tsui and the Hong Kong Community College in Hung Hom are among the largest.

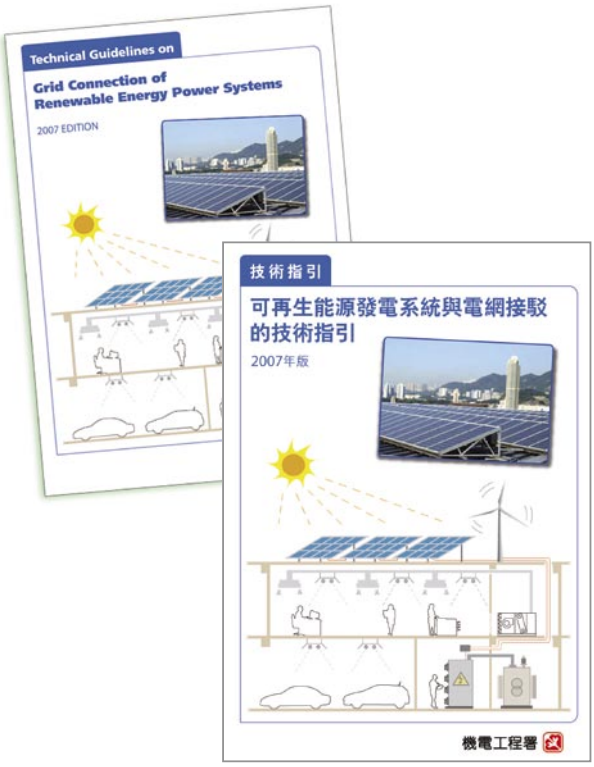
Cooling towers on the roof of the Young Men's Christian Association (YMCA) in Tsim Sha Tsui (cooling capacity: about 1,200 TR)

安裝在尖沙咀基督教青年會天台的冷卻塔（製冷量：約1,200冷噸）

Cooling towers on the roof of the Hong Kong Community College in Hung Hom (cooling capacity: about 2,100 TR)

安裝在紅磡香港專上學院天台的冷卻塔 (製冷量：約2,100冷噸)

可再生能源發電系統與電網的接駁
Grid Connection of Renewable Energy Power Systems



可再生能源發電系統與電網接駁的技術指引(2007年版)已經出版。上述指引提供可再生能源發電系統與電網接駁有關的各類技術要求和指引，這包括在安全性、穩定及可靠性、設備保護、供電質素和向電力公司申請與電網接駁的程序等資料。第一版的技術指引在2005年出版，鑑於有關國際標準不斷更新及業界的技術又不斷改良，機電工程署於2007年出版了修訂版。

相信大家都知道，可再生能源有助減低使用化石燃料帶來的問題，但一般的可再生能源都不是一個供應穩定的能量源。當可再生能源未能提供足夠電力，則須要由後備電源（例如市電）補充，以應付電力需求。

為了讓公眾更了解與電網接駁的技術事宜和向電力公司申請併網的程序，我們在2005年成立了一個工作小組，制訂及檢討可再生能源發電系統與電網接駁技術的指引。

The Technical Guidelines on Grid Connection of Renewable Energy Power Systems (2007 Edition) has been published. The Technical Guidelines provide general guidance on various technical aspects relating to grid-connection of renewable energy power system (REPS) including safety, reliability, equipment protection, and power quality as well as information on procedures of making application to the power companies for grid connection. The first edition of the Technical Guidelines was issued in 2005. To keep pace with the changes in international standards and the technological advancement in the trade and industry, EMSD published the revised edition in 2007.

As you may also be aware of, renewable energy resources can contribute to mitigating the problems associated with the use of fossil fuels. However, most of the renewable energy resources are intermittent in nature. It is therefore necessary to have a backup power supply such as the electricity grid to meet the demand when the electricity generated by the renewable energy system is unable to provide the power required.

To assist the trade and the general public to better understand the technical issues and the application procedures relating to grid connection of renewable energy installations, a Working Group was formed in 2005 to develop and review a set of technical guidelines for connection of renewable energy power system to the grid.

Key points of the Technical Guidelines

Some key points and revisions of the Technical Guidelines are listed below:

a) Aggregated Power Rating up to 1000 kW: The 2007 Edition is applicable to REPS with Aggregated Power Rating up to 1000 kW. Since the 2005 Edition is applicable to REPS of rating up to 200kW, additional guidance is provided to cover REPS between 200kW and 1000kW in the 2007 Edition.

技術指引的要點

以下為技術指引的一些修訂和重點：

a) 總額定功率提升至一兆瓦：2007年版適用範圍已增至一兆瓦。由於2005年版的指引是適用至200千瓦，2007年版提供了額外指引和相關規定與200千瓦至一兆瓦的可再生能源發電系統。

b) 安全方面的考慮：有關安全要求例如「防孤島」功能等會與第一版相同並更為嚴格。「防孤島」功能是一個安全保護設施，它會在電網停止供電時，自動切斷可再生能源發電系統與其配電系統之間的連繫。2007年版亦加入要求有關工程人員需顧及電網的斷路器有機會自動重合的安全考慮。

c) 實例裝置的電路圖： 新版本加入多個實例裝置的電路圖，以示範實際安裝的情況。該等電路圖展示符合技術指引的相關實例裝置的安裝方法和配置。

d) 參考國際標準和實務指引： 2007年版的修訂已參考有關國際標準、本地規例和守則以及海外的實務指引。

除英文版之外，中文版亦已同期出版，供市民查閱。大家可在機電工程署網頁（網址：www.emsd.gov.hk/emsd/eng/pee/nre.shtml）下載中英文版。

工作小組

工作小組的成員來自業界的不同範疇，包括電力公司、專業學會、顧問公司及承建商、地產發展商、關注可再生能源的組織等。以下是工作小組的代表機構：

- 香港顧問工程師協會
- 中華電力有限公司
- 香港電燈有限公司
- 香港機電工程商聯會
- 香港工程師學會
- 香港太陽能聯盟
- 香港地產建設商會

b) Safety consideration: The safety requirements such as anti-islanding function specified in the Technical Guidelines are the same as the previous edition and more stringent. The anti-islanding is a protection for automatic disconnection of the REPS from the electrical distribution system when the grid supply is interrupted. The 2007 Edition adds that the anti-islanding function shall also cater for circuit breaker auto-reclosing operation on the Grid in addition to the requirements in the previous edition.

c) Schematic diagrams of example installations: In this new edition, schematic diagrams of a number of examples installations have been provided to illustrate practical grid-connection arrangements. These schematic diagrams show the installed configurations of those REPSs at the time of compiling the Technical Guidelines.

d) Reference to international standards and best practices: The 2007 Edition has been reviewed making reference to the latest international standards, local codes and rules as well as the best practices worldwide.

Other than the English version, a Chinese version of the 2007 Edition has also been made available to the public. Both versions can be downloaded from EMSD website (www.emsd.gov.hk/emsd/eng/pee/nre.shtml).

Working Group

The members of the Working Group come from different sectors of the electrical trade and industry including representatives from power companies, professional institutions, consultants and contractors, property developers, renewable energy interest groups etc. The following organisations are represented in this Working Group:

- The Association of Consulting Engineers of Hong Kong
- CLP Power Hong Kong Limited
- The Hongkong Electric Co., Ltd.
- The Hong Kong Federation of Electrical and Mechanical Contractors Limited
- The Hong Kong Institution of Engineers
- The Hong Kong PV Consortium
- The Real Estate Developers Association of Hong Kong

強制性能源效益標籤計劃
Mandatory Energy Efficiency Labelling Scheme

為了推行強制性能源效益標籤計劃，《能源效益（產品標籤）條例草案》已經在2007年提交立法會。草案已在條例草案委員會完成審議，並已於2008年4月底經立法會通過。三類產品，即冷氣機、雪櫃和緊湊型熒光燈(慳電膽)，已被納入建議中的首階段強制性能源效益標籤計劃。根據計劃，上列類別的產品在香港供應前，必須先附上能源標籤，以方便消費者選擇具能源效益的產品。

能源標籤分為五級。產品如獲得第一級能源標籤，表示該產品在市面上能源效益最高，如獲得第五級能源標 籤，則表示該產品的能源效益最低。

The Energy Efficiency (Labelling of Products) Bill for implementing the mandatory Energy Efficiency Labelling Scheme was introduced to the Legislative Council in 2007. The Bills Committee has completed scrutinizing the Bill and the Bill was passed by the Legislative Council by end of April 2008. Three kinds of products, namely room air conditioners,refrigerating appliances and compact fluorescent lamps, are included in the initial phase of the proposed mandatory Energy Efficiency Labelling Scheme. Under the proposed legislation, energy labels are required to be affixed with the above products before being supplied in Hong Kong to facilitate the consumers in choosing energy efficient products.

The energy label classifies a product into five grades. A product with Grade 1 energy label is among the most efficient in the market while a product with Grade 5 is least efficient.

聯絡資料 Contact

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