

社會及環保報告

Social and Environmental Report





關於本報告

About this Report

這份機電工程署的環保報告，闡述我們年內在環保和社會方面的表現。本報告也為機電工程署提供一個與持份者溝通的平台，讓他們了解機電工程署在本港可持續發展及逐步邁向低碳生活之旅所擔當的角色。

範圍

本報告涵蓋機電工程署由2013年4月1日至2014年3月31日期間在本港的運作情況。報告內提供的數據均為實際數字，涉及機電工程署在全港各區的工作。在合適可行的情況下，各主要事項的數據已整合為可比較的數據。所有金額均以港元為單位。

原則

本報告參照《全球報告倡議組織G3.1指引》編寫。指標索引載於本報告最後部分，以供參考。

本報告的獨立核實聲明亦載於報告的最後部分。

This is the annual publication of the Electrical and Mechanical Services Department (EMSD) reporting on its annual performance in social and environmental aspects. This report also serves as a communication platform for EMSD and its stakeholders, addressing its role in the sustainable growth of Hong Kong and the journey towards low carbon living.

SCOPE

This report covers the operations of EMSD from 1 April 2013 to 31 March 2014. All data are presented as absolute figures and cover the geographic locations in which EMSD operates. Data on priority issues have been normalised into comparable terms where appropriate and practical. All monetary terms are in Hong Kong dollars.

PRINCIPLE

This report makes reference to the Global Reporting Initiative (GRI) G3.1 Guidelines. A GRI Content Index is provided at the end of this report for easy reference.

An independent verification statement of this report is also attached at the back.



機遇和挑戰

Opportunities and Challenges

可持續發展對機構的影響

這章闡釋可持續發展及我們機構的動態關係，及彼此如何互相影響。

作為負責任的政府部門，我們明白必須以身作則，在日常運作的每一層面，向社會示範如何善用可持續發展帶來的商機與機遇，及化解要走上可持續發展之路而面臨的挑戰。

對規管服務的影響

作為安全和能源效益的規管機構，規管服務直接受到全球日趨重視的可持續發展風氣影響。國際機構及本港的政策制訂者都要求優先處理可持續發展事項，例如管制排放物和減低能源強度。作為亞太經濟合作組織（亞太經合組織）的成員，香港全力支持2011年的《亞太經濟合作會議檀香山宣言》，致力在2035年前將能源強度降低45%。

經濟增長、人口增加及氣候變化對自然資源造成的壓力，已促使多國領袖專注研究如何為經濟增長和發展創造更多可持續的模式，並為此制訂更嚴格的排放管制規例。我們的規管服務所面對的挑戰，是掌握當前的國際發展形勢，協助政府完善一套讓香港可順利轉型為具能源效益及低碳經濟體的能源效益規管架構。

由於政府陸續制訂和實施更多能源效益法例，我們的執法工作也會相應增加。與此同時，由於業界及市民大眾需要更多有關能源效益、節約能源和可再生能源的資訊，以及深化對這些範疇的認識，我們會加強公眾教育工作。我們也會提升員工的能力以讓他們更有效地執行職務，並為香港引入適用的先進節能技術。

IMPACT OF SUSTAINABILITY ON THE ORGANISATION

This section addresses the dynamic relationship between sustainability and our organisation, and how one impacts on the other.

As a responsible government department, we are aware of the need to lead by example how to make the best use of opportunities afforded by sustainable development, and to mitigate and manage the challenges it poses in every aspect of our operations.

Impact on Regulatory Services

As a regulator in safety and energy efficiency matters, our Regulatory Services is directly impacted by the increasing worldwide emphasis on sustainable development. Both international bodies and local policy makers call for priority attention to sustainability issues such as emissions control and energy intensity reduction. As a member of the Asia-Pacific Economic Cooperation (APEC), Hong Kong fully supports the 2011 APEC's Honolulu Declaration, and will strive to reduce 45% of energy intensity by 2035.

The strain imposed on natural resources by economic growth, human population and climate change has prompted many leaders around the world to focus on ways to create more sustainable models for economic growth and development, which could lead to more stringent emission control regulations. The challenge for our Regulatory Services is to keep abreast of current international developments and help the government continuously improve the city's energy efficiency regulatory framework that is conducive to the transformation of Hong Kong into an energy efficient and low carbon economy.

As more energy efficiency legislations are enacted and implemented, our enforcement work will also grow. At the same time, our trades and citizens will need more information on energy efficiency and conservation as well as renewable energy, further boosting our public education work. We shall also step up our internal capabilities to perform these duties more effectively and, at the same time, introduce more state-of-the-art energy efficiency technologies and innovative concepts into Hong Kong.

對營運服務的影響

客戶部門期望我們維修保養的工程資產，能有最佳的壽命周期，和可持續的效益表現，這都是合理的要求。但是客戶的工程資產日漸老化，為服務的穩定性帶來威脅。因此，提高對資產管理的重視和推廣良好的管理方法，實已刻不容緩。這方面對我們來說，是個良好的機遇，我們可以提供更多的服務，協助客戶為重要的工程資產進行ISO 55001認證。

客戶部門對我們的能源管理、節約能源和可再生能源等服務項目的需求與日俱增。我們也一直積極主動，在可行情況下盡量採用更綠化、更具能源效益和環保的作業方法。過去幾年，我們已為政府各政策局和部門安裝了能效較佳的工程系統和落實節能措施，協助他們節省能源。長遠來說，我們的挑戰，是如何協助客戶透過行為上的改變和其他途徑，善用各種節能措施，從而進一步提高政府的節能成效。我們會繼續引入先進節能科技，為客戶的工程系統進行適當的維修保養，務求系統在整個生命周期的能效表現都維持在最佳水平，令作為我們客戶時刻都處於本港綠色營運先鋒之列。

機構對可持續發展的影響

規管服務

機電工程署致力為可持續發展帶來正面的影響，透過執行相關法例及各項宣傳活動和計劃，我們的規管服務全力支援政府推廣能源效益和可再生能源的政策。

Impact on Trading Services

Clients have a reasonable expectation that the engineering assets we help them maintain will enjoy an optimal life cycle and are sustainable in their performance. However, the aging issues of clients' engineering assets have become a potential threat to service reliability. It is therefore an urgent need to raise awareness of the importance of asset management and promote good practices. This is good opportunities for us to provide more services in helping clients to obtain ISO 55001 certification for critical engineering assets.

Clients have been increasing demand for our energy management, energy saving and renewable energy project services. We have also been making proactive efforts to be green, energy efficient and environment-friendly wherever possible. Over the past years, we have helped government bureaux and departments achieve energy savings through the installation of more energy efficient engineering systems and the implementation of energy saving best practices. In the long run, the challenge will be one of helping our clients to make good use of the best practices through behavior changes and other means, in order to take the government's energy saving achievements to a new height. We shall continue to bring in advanced energy saving technologies and maintain engineering systems at their best energy saving performance level during their life cycle, so that our clients are always at the forefront of green operations in Hong Kong.

ORGANISATION'S IMPACT ON SUSTAINABILITY

Regulatory Services

EMSD strives to make positive impacts on sustainability. Through legislation enforcement and various promotional campaigns and schemes, our Regulatory Services fully support the government's initiatives to promote energy efficiency and the use of renewable energy.

重點例子包括《建築物能源效益條例》、建築物能源效益註冊計劃、電氣產品的自願性及強制性能源效益標籤計劃、空調系統使用淡水冷卻塔計劃，以及推廣電動車的使用。

年內，我們對業界和公眾進行了廣泛的宣傳和教育工作，包括外展活動、印製刊物、舉辦展覽、講座和研討會等，以加強市民對節能生活方式的認識。

營運服務

我們的營運服務為本港各政府部門及公營機構提供機電工程服務，過程中涉及的辦公室運作及相關工程項目，無可避免會對環境造成影響。

為減少這些影響，我們實施了一套綜合管理系統，將品質、環境和職安健管理整合成一個流程框架，並找出未能符合要求的地方以作改善。與此同時，我們為客戶部門的節能及可再生能源計劃提供專業工程服務，協助他們直接減低能源消耗量和廢物產生量，亦對可持續發展帶來裨益。

此外，我們也為環境局提供專業意見和支援，推廣《建築物能源效益條例》、「室內溫度節能約章」和「『不要鎢絲燈泡』節能約章」，也時常為該局就其他環保與能源計劃和活動，提供技術支援。

Key examples include the Buildings Energy Efficiency Ordinance, Energy Efficiency Registration Scheme for Buildings, Energy Efficiency Labelling Schemes for electrical appliances, the Fresh Water Cooling Towers Scheme for air-conditioning systems, and encouraging wider adoption of electric vehicles.

Throughout the year, we organised extensive education and promotional programmes outreach activities, publications, exhibitions as well as talks for the trades and general public, so as to raise public awareness towards the energy-efficient lifestyle.

Trading Services

Our Trading Services provides E&M engineering services to government departments and public bodies in Hong Kong, a process which inevitably impacts upon the environment through our office operations and engineering related works.

To mitigate the impact, we have adopted an Integrated Management System that combines quality, environmental, occupational health and safety management systems as an overall process framework and to identify non-compliances for improvement. At the same time, we also make a positive impact through providing professional engineering services in energy efficiency and renewable energy projects to client departments that directly reduce energy consumption and emissions.

Furthermore, we give professional advice and support to the Environment Bureau to promote the Buildings Energy Efficiency Ordinance, the two Energy Saving Charters on Indoor Temperature and No Incandescent Light Bulbs. From time to time, we also give technical support to the Environment Bureau on other environment or energy related schemes and initiatives.

環保成效

Environmental Performance

環保責任

我們相信，在創造公眾價值的同時，我們不應破壞大自然，或以不合乎持續發展的方式去使用自然資源，以免後世代沒機會使用這些資源。其實，機電工程營運基金目前的五項策略之一，就是「持續綠色作業」，而規管服務也要求所有活動都以保護環境方式進行。

因此，我們的首要任務是避免污染環境，而在無法完全避免的情況下，則盡量減輕有關的影響。我們致力在業務營運過程中節省資源，減少製造廢物及避免污染。為此，我們已採取一切合理措施，恪守各種環保法例，作為我們營運的基本準則。與此同時，我們也鼓勵承辦商、供應商及其員工關注保護環境。

我們的环境管理歷程

我們為環保工作而推行的環境管理系統，多年來不斷改進。我們的環境管理之旅始於九十年代中期，2000年我們成為首個取得ISO 14001企業認證的政府部門。2002年，我們把品質、環保和職業健康及安全管理等各套系統進行簡化，合併成一個綜合管理系統，至2006年更將環境管理系統提升至ISO 14001:2004版。2008年，整個規管服務也全面實施該管理系統。

至2009/10年度，機電工程營運基金之下的所有OHSAS 18001認證均已成功提升至2007年版，而於2010/11年度，所有部別亦已將其ISO 9001系統提升至2008年版。部門的一貫做法，是定期檢討及更新我們的環境管理系統，確保符合最新的ISO 14001及有關標準。

ENVIRONMENTAL RESPONSIBILITIES

We believe that in creating public value in order to improve the community's quality of life, we must not damage nature or use natural resources in a way that will deprive future generations the benefit of using them. Indeed, one of EMSTF's current five strategies is to "sustain green operation", while RS also requires all its activities to be conducted in an environmental manner.

Our first priority is, therefore, to avoid creating environmental pollution, or reduce the impact if pollution is inevitable. We strive to conserve resources, minimise the generation of waste and prevent pollution in our business operation process. To achieve this goal, we have taken all reasonable measures to comply with green legislations as the baseline of our operation. We also encourage our contractors, suppliers and their staff to be equally friendly to the environment.

OUR ENVIRONMENTAL MANAGEMENT JOURNEY

Our environmental performance is mainly governed by our Environmental Management System which has evolved over the years. Our environmental management journey began in the mid-1990s and in 2000 we became the first government agency to attain the ISO 14001 Corporate Certificate. In 2002, we streamlined and combined our various management systems in quality, environment and occupational health and safety into an Integrated Management System (IMS), which was upgraded to ISO 14001:2004 in 2006. In 2008, the entire RS adopted IMS.

By 2009/10, all OHSAS 18001 certificates under EMSTF were successfully updated to the 2007 version, while all divisions have also been upgrading their ISO 9001 system to the 2008 version since 2010/11. It is our departmental practice to regularly review and upkeep the IMS to ensure that it conforms to the latest ISO 14001 and related standards.

節約能源先驅

機電工程署自九十年代起，一直在本港率先推動能源效益和鼓勵更廣泛應用可再生能源。

亞太經合組織領導人於2011年11月在美國夏威夷舉行會議，發表了《檀香山宣言》，成員國決議在2035年或之前，期望將能源強度進一步降低45%。作為亞太經合組織的成員，香港已採納宣言，並會致力達標。

以下是我們在2013/14年度，為配合政府推動能源效益和節約能源政策而進行的主要工作。

強制性能源效益標籤計劃

強制性能源效益標籤計劃第一及第二階段已全面實施，涵蓋五類產品，即空調機、冷凍器具、慳電膽、洗衣機和抽濕機，這五類產品必須附有能源標籤，讓消費者知悉有關能源效益表現。至2014年3月底，計劃已有約6 100個表列產品型號。

強制性能源效益標籤計劃，完全改變了市民挑選家居電器的方法。
The Mandatory Energy Efficiency Labelling Scheme has fundamentally changed the way our community selects domestic appliances.

ENERGY EFFICIENCY CONSERVATION INITIATIVES

Ever since the 1990s, EMSD has been playing a pioneering role in promoting energy efficiency and encouraging the wider use of renewable energy in Hong Kong.

The APEC's Honolulu Declaration was announced at the APEC Leaders' Meeting held in Hawaii, the United States in November 2011. Member Economies decided to raise the APEC-wide aspirational energy intensity reduction target to 45% by 2035. As a member economy of the APEC, Hong Kong has adopted the declaration and has been doing its best to meet the reduction target in energy intensity.

Highlighted below are key developments in 2013/14 to support government's policy to step up energy efficiency and conservation.

Mandatory Energy Efficiency Labelling Scheme

The initial and second phases of the Mandatory Energy Efficiency Labelling Scheme have been fully implemented, covering five products types: room air-conditioners, refrigerating appliances, compact fluorescent lamps, washing machines and dehumidifiers. All these five product types are required to bear energy labels to inform consumers of their energy efficiency performance. As at the end of March 2014, around 6 100 product models have been listed under the Scheme.

強制性能源效益標籤計劃
認住能源標籤 慳電又慳錢

Mandatory Energy Efficiency Labelling Scheme
Look for the Energy Label
Save Electricity, Save Money

ENERGY LABEL
能源標籤

1 最節能 效益最高 (綠色)
Grade 1 products are most efficient (Green)

你可以利用「每年耗電量」比較不同型號可節省多少電費
Use "Annual Electricity Consumption" to estimate the money you could save by choosing different models

根據強制性能源效益標籤計劃，在特許產品香港供應前，必須先附有能源標籤，以方便消費者選擇能源效益較佳的產品。

Under the Mandatory Energy Efficiency Labelling Scheme, energy labels must be displayed on prescribed products, before being supplied in Hong Kong to facilitate consumers in choosing energy efficient appliances.

查詢 1823 For enquiries www.emsd.gov.hk

機電工程署 EMSD

回收紙印刷
Printed on recycled paper

《建築物能源效益條例》

《建築物能源效益條例》自2012年9月起已全面實施。條例管制新建築物及進行「主要裝修工程」的現有建築物內的四類主要屋宇裝備裝置，即空調、照明、電力、升降機及自動梯裝置等須符合基本能源效益標準；商業建築物須為建築物內的主要屋宇裝備裝置每十年進行一次能源審核。

建築物能源效益資助計劃

機電工程營運基金自2009年4月起，一直為環境局提供專業技術支援，以實施環境及自然保育基金的4.5億元撥款推展建築物能源效益資助計劃，並協助評審有關的撥款申請。計劃旨在資助私人建築物業主為其樓宇進行能源及碳排放綜合審計，制訂能源效益改善方案，並改善大廈的屋宇裝備設施，以提升能源效益表現。計劃雖已於2012年4月7日結束，但機電工程營運基金仍繼續提供支援，協助監察獲撥款項目的進度，直至完工。

區域供冷系統

啟德發展區的區域供冷系統第一及第二期工程已於2013/14年度完成，並開始提供服務。一般而言，區域供冷系統較傳統氣冷式空調系統的耗電量，可減省多達35%。據估計，當啟德發展計劃全面完成後，區域供冷系統每年可減省耗電量達8 500萬千瓦小時，即每年減少排放59 500公噸二氧化碳。

環保採購

環保採購是我們的主要政策之一，以達至減少廢物、鼓勵廢物回收及循環再造。政府早於2000年已修訂採購規定，要求所有局與部門在採購物料和服務時必須考慮環保因素。為此，機電工程署已在日常運作中奉行環保採購的原則，根據環境保護署的環保產品規格進行採購，並在產品和服務採購政策中加入環保要求。

Buildings Energy Efficiency Ordinance

The Buildings Energy Efficiency Ordinance has come into full operation since September 2012. The Ordinance governs the minimum energy efficiency standards of four key types of building services installation including air-conditioning, lighting, electrical as well as lift and escalator in newly constructed buildings and “major retrofitting works” of existing buildings; and requires commercial buildings to carry out energy audit for the central building services installation every ten years.

Buildings Energy Efficiency Funding Schemes

The EMSTF has been providing professional support to the Environment Bureau since April 2009 on implementing the Buildings Energy Efficiency Funding Schemes of a total sum of \$450 million under the Environment and Conservation Fund, and also assisting it in vetting funding applications. The Schemes aim to help building owners conduct energy-cum-carbon audits of their buildings to identify areas for improvement, and implement projects to upgrade the energy efficiency performance of building services installations. Though the Schemes were closed on 7 April 2012, the EMSTF continued to assist in monitoring progress of approved projects until their completion.

District Cooling System

Phases I and II of the District Cooling System (DCS) at the Kai Tak Development began supplying chilled water in 2013/14 while the remaining works are under construction. In general, a DCS will consume up to 35% less electricity than traditional air-cooled air-conditioning systems. It is estimated that upon completion of the Kai Tak Development, the DCS will save up to 85 million kWh of electricity annually, equivalent to a reduction of 59 500 tonnes of carbon dioxide emission per annum.

GREEN PROCUREMENT

Green procurement is one of our key policies to encourage waste reduction, recovery and recycling. The government amended its procurement regulations as early as 2000 to require all bureaux and departments to take into account environmental considerations when procuring goods and services. In this regard, we have been doing our part by incorporating green requirements into our procurement policy for products and services, and in accordance with the Environmental Protection Department's “green product specifications”.

我們積極採納了環境局第2/2011號通告（綠色採購通告）內有關103種產品的綠色採購規定，並在部門採購工作中盡量遵循。在2013/14年度，在機電工程署4.27億元直接採購的貨品中，有1 172萬元的貨品是綠色採購單上的貨品。

我們也密切留意供應商提供的綠色產品和服務。如市場可普遍地提供綠色產品，我們會把有關綠色要求列為強制性的採購要求，以鼓勵供應商製造更多綠色產品。2013/14年度，有564家供應商提供環保產品，機電工程署也相應更新了供應商名冊。

同時，我們亦支援客戶落實能源效益及可再生能源項目，以及採購混合動力車和電動車等環保車輛。

我們於2010年3月成立環保採購工作小組，目的是為各類機電工程選覓符合環保要求的材料、產品、系統和建造方法。工作小組也審視各項環保新科技，研究能否在機電工程中推廣使用，以令客戶和公眾受惠。

為了使部門同事能更有效地分享環保採購的資訊和項目經驗，我們已於2010年7月在部門內聯網推出環保採購參考庫，收錄了現行各項環保採購指引、實務守則與各種高能效產品和裝置的標準，以及綠色產品的一般規格等，供員工參考。

客戶的環保工程項目

機電工程署的營運服務一直協助客戶發掘節省能源的機會及推行環保工程項目，以提高節能效益及更多使用可再生能源。我們於本年度為政府各政策局及部門完成了23個節能項目，例如燈光系統、太陽能街燈、高能效太陽能熱水系統、為學校和政府大樓安裝節省用水器材、以水冷式空調系統取代風冷式空調系統和安裝高效能無油離心式製冷機組等。預計這些新設備可每年減省耗電量達490萬千瓦小時。

We play an active role in green procurement by adopting the green product specifications of 103 products provided in the Environment Bureau Circular Memorandum No. 2/2011 (Green Procurement Circular) as far as possible in our purchases. In 2013/14, from the total amount of \$427 million for direct purchase of goods in EMSD, \$11.72 million was spent on purchases for the products on the green procurement list.

We keep track of the offers from suppliers for the green contents of their products. We shall change the green requirements to "mandatory" in the related procurement specifications as soon as the green products are commonly available in the market to encourage suppliers to produce more green items. In 2013/14, the updated EMSD Suppliers Lists contained 564 suppliers who were able to provide environment-friendly products for procurement.

At the same time, we also supported our clients by helping them to implement energy efficiency and renewable energy projects, as well as procure environment-friendly vehicles such as hybrid vehicles and electric vehicles.

A Working Group on Green Procurement in E&M Works was set up in March 2010 with an objective to oversee the identification of green materials and products, systems and construction methodologies in E&M works. The Working Group also examines the implications of new green technologies with a view to promoting them in E&M works, so as to benefit our clients and the public.

To facilitate effective sharing of green procurement information and project experiences within the department, a green procurement reference library was launched on EMSD's Intranet in July 2010. The library covers current guidelines, codes of practice and standards relating to energy efficiency products and installations, as well as general specifications for green products.

Green Projects for Clients

EMSD's Trading Services has been assisting clients in identifying energy saving opportunities and implementing green projects to enhance energy efficiency and the use of renewable energy. During the year, we have completed 23 energy efficiency projects for government bureaux and departments, such as installations of lighting systems, stand-alone solar street lights, high energy efficiency solar hot water systems, water-saving devices for schools and government buildings, replacement of air-cooled chillers with water-cooled chillers, and high efficiency oil-free centrifugal chillers. It is expected that these new installations will generate an annual energy savings of around 4.9 million kWh.



我們在2013年為民航處進行了一項試點項目，以節能的90瓦特發光二極管燈取替一盞常規的600瓦特氖光航空障礙燈，十分成功。民航處委託我們於2014年將改善工程擴展到其他航空障礙燈基站。

Subsequent to our successful trial replacement of a conventional 600W-neon obstacle light with a 90W-LED at one of CAD's obstacle light stations in 2013, CAD has entrusted EMSD to replace all neon obstacle lights at the remaining obstacle light stations with LED light in 2014.

為民航處推行環保項目

機電工程署為所有航空障礙燈進行定期檢查和緊急維修，確保運作正常，這是民航處委託我們的工作之一。航空障礙燈提醒機師要小心飛越機場附近的山嶺，確保來往機場航班的安全。2013年12月我們進行了一項試點項目，為一盞航空障礙燈安裝了GSM制式的自動撥號器，並以節能的發光二極管燈取代現有的航空障礙燈。這項試點項目每年節省了2 000多千瓦小時耗電量。因此，我們會於2014年內將這項改善工程擴展到其他航空障礙燈基站。

民航處也委託我們為民航處總部大樓，安裝四套中快型電動車充電設備，推廣使用電動車。

年內另一環保項目，是為民航處航空交通管制大樓、備用航空交通管制大樓及總部大樓內的電梯、洗手間、門柄等作二氧化鈦塗層處理。這種光催化劑塗層，能氧化及化解有機物質，減少空氣中的污染物並殺菌，幫助淨化空氣，改善上述範圍的空氣質素。

Green Project for Civil Aviation Department

EMSD conducts regular inspection and emergency repairs for all hilltop obstacle lights to ensure their proper functioning, which is part of the work entrusted by the Civil Aviation Department (CAD). The lights alert pilots to take extra care in navigating the nearby mountains, ensuring safety of flights to and from the Airport. In December 2013, we installed a trial GSM auto dialer and replaced the obstacle light on one of the obstacle light stations with a more energy efficient Light Emitting Diode (LED) light. The trial project saves over 2 000kWh power consumption per year. Similar modification is being extended to other obstacle light stations in 2014.

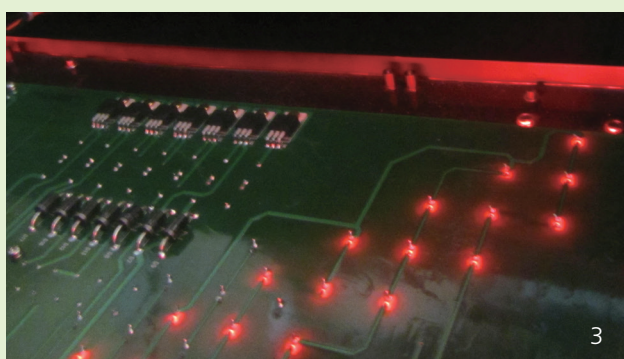
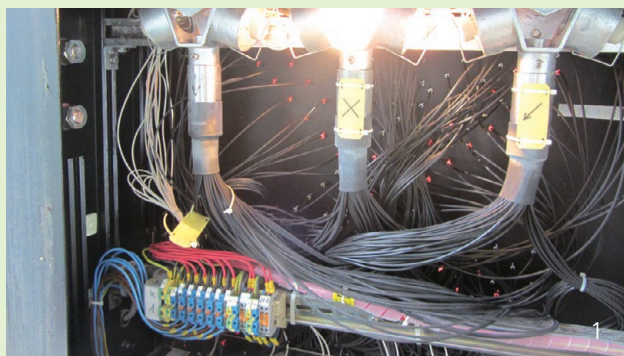
CAD also entrusted us to install four semi-fast electric vehicle charging facility at CAD Headquarters in 2013/14 to promote the use of electric vehicles.

Another environmental initiative in 2013/14 was the application of TiO_2 coating to certain areas such as lifts, toilets and door handles at the Air Traffic Control Complex/Back-up Air Traffic Control Complex/CAD Headquarters to improve air quality in those areas. The coating oxidises and decomposes organic matters and volatile organic compound, and kills bacteria.



我們為民航處升降機提供二氧化鈦塗層的處理，改善升降機空氣質素。

We applied TiO_2 coating to CAD lifts to improve air quality.



我們替運輸署更換行車線管制燈號和可變車速限制標誌，從而提供更佳的訊號顯示，以確保青馬管制區的行車安全。以上1-4照片分別為舊式鎢鹵燈；新式發光二極管燈；新式發光二極管燈內部及青馬管制區的行車線管制燈號。

We assisted Transport Department in replacing the LCS and VSLS to provide a better display of signals in order to ensure road safety in TMCA. Photos 1-4 above show the old Halogen lamp type; the new LED type equipment; the internal of new LED type equipment; and LCS equipment at TMCA, respectively.

更亮麗方案：發光二極管行車標誌

安裝於青馬管制區的行車線管制燈號和可變車速限制標誌，自1997年管制區啟用以來，已使用逾17年。現有的光纖式行車線管制燈號和可變車速限制標誌，採用鎢鹵燈泡光源作照明，但由於鎢鹵燈泡的照明效能較低及壽命較短，隨着設備日漸老化，行車線管制燈號和可變車速限制標誌的顯示已逐漸變得暗淡。此外，光纖式行車線管制燈號和可變車速限制標誌正逐步被市場淘汰，部分備用零件短缺，要維持良好操作狀態愈趨困難。

機電工程署獲運輸署委託，更換現有的行車線管制燈號和可變車速限制標誌，以確保青馬管制區的安全運作，從而便利將來的維修保養。我們計劃採用發光二極管式的行車線管制燈號及可變車速限制標誌，更換工程項目已於2014年6月展開。由於發光二極管的可視角度遠較現有的裝置為廣，而且更光亮，可為駕駛人士提供更清晰的交通燈號和訊息。此外，發光二極管式顯示標誌的耗電量較低，使用年限較長，因而較現有燈號及標誌更環保可靠。

LED Traffic Signs Bring Brighter Solution

The Lane Control Signal (LCS) and Variable Speed Limit Sign (VSLS) installed at Tsing Ma Control Area (TMCA) have been in service for more than 17 years since TMCA opened in 1997 and are showing aging problems. The existing LCS and VSLS are fibre optic type illuminating signs using halogen lamps as the light source. Halogen lamp has relative low luminous efficiency and short life cycle. As they age, the displays of these LCS and VSLS have become dimmer. The existing fibre optic type LCS and VSLS are also being phased out of the market, and it has become increasingly difficult to maintain them in good working condition due to lack of certain spare parts in the market.

EMSD was entrusted by Transport Department to replace the LCS and VSLS to ensure the safe operation of TMCA and to facilitate future maintenance of the equipment. We plan to select LED type of LCS and VSLS for this replacement work and the project was commenced in June 2014. As LED has a significantly wider viewing angle than the existing ones and is much brighter, the new signs will provide a clearer display of traffic signals/information to motorists. In addition, LED also consume much less electricity, have a longer serviceable life and are more reliable, hence the new signs are more environment-friendly than existing ones.



我們於伺服器上加建熱氣流通道，將冷和熱的空氣分隔在不同的通道中，以求達至最佳散熱效能。

Staff building a hot aisle containment separating hot and cold aisles in the server room to achieve the best cooling efficiency.



我們全力支持小蠔灣數據中心的電子病歷檔案及其他客戶資料的儲存工作。

Our team is dedicated to supporting the Siu Ho Wan Data Centre for the secure storage of the electronic health record and other client data.

數據中心空調系統綠色創新

我們的小蠔灣數據中心主要負責為政府部門提供數據儲存服務，其中包括食物及衛生局的電子病歷檔案儲存。我們率先為小蠔灣數據中心的空調系統採用了創新的環保高效節能設計，估計可以提高整體散熱效能達20%至30%，此舉是支援其他政府部門的環保措施。

這套獨特的空調系統是位於伺服器機房內，採用一個屏蔽式熱氣流通道設計。該設計是由一個鋁質框架，利用聚碳酸酯隔板置於伺服器機架頂部及每行機架兩旁所組成。屏蔽式熱氣流通道設計是一個高成本效益的解決方案，能把冷和熱的空氣分隔在不同的通道中。

伺服器機房中冷氣流通道的空氣溫度及相對濕度會由相關空調機組加以控制和監測，令它們處於可接受範圍內用作冷卻數據設備。為避免製造額外冷氣，這物理屏障擔當了一個重要角色，以分隔冷熱氣流通道，防止由熱氣流通道到冷氣流通道的再循環氣流，及由冷氣流通道到熱氣流通道的旁通氣流。這屏蔽式熱氣流通道設計能有效地收集由數據設備所產生的熱量，並帶回到空調機組，使該系統能24小時更節能地運作。

該節能空調系統乃數據中心第二期擴建工程的一部分，項目於2013年2月開始，並於2013年12月完成。

Data Centre Has Innovative, Green Air-Conditioning System

The Siu Ho Wan Data Centre stores vital data for various government departments, such as electronic health records of the Food and Health Bureau. Our initiative to redesign its air-conditioning system with innovative, energy efficient measures aims to improve the overall cooling efficiency by 20% to 30% as a green measure to support client departments.

This unique air-conditioning system comprises a hot aisle containment design in the server room. Formed by an aluminium framework with polycarbonate inserts on top of the server racks and at the two ends of the row, the hot aisle containment is a cost effective solution to separate the air between cold and hot aisles.

The air temperature and relative humidity in the cold aisle of server room are maintained in an acceptable range by the air-conditioning system for cooling the server equipment. In order to minimise the unnecessary supply of conditioned air, the physical barrier plays an important role to divide the cold and hot aisles which prevents both re-circulation air flow from hot aisle back to the cold aisle and bypass air flow directly from cold aisle to hot aisle respectively. This hot aisle containment design results in efficient collection of the dissipated heat from the server equipment back to the air-conditioning units, so as to operate the data centre in a more energy efficient manner round the clock.

The energy saving air-conditioning system is part of the Phase II expansion of the data centre, construction of which started in February 2013 and was completed in December 2013.

國際交流活動

作為香港推動能源效益的先鋒，我們積極參與國際交流活動，以掌握世界各地的節能新趨勢和發展。2013/14年度，機電工程署派員參加了多個地區性和國際性會議，其中比較重要的會議包括：

- 2013年4月在中國北京舉行的「亞太經合組織能源效益及節能專家小組第41次會議」。
- 2013年4月在越南河內舉行的「亞太經合組織新能源及可再生能源技術專家小組第40次會議」。
- 2013年10月在中國北京舉行的「亞太經合組織新能源及可再生能源技術專家小組第41次會議」。
- 2013年11月在越南峴港舉行的「亞太經合組織能源工作小組第46次會議」。
- 2013年11月在泰國曼谷舉行的「亞太經合組織能源效益及節能專家小組第42次會議」。
- 2014年3月在日本東京由亞太經合組織和東南亞國家聯盟聯合舉辦的「能源統計工作坊」。

INTERNATIONAL EXCHANGE

As a pioneer in promoting energy efficiency in Hong Kong, we have been active in international exchange work so as to keep ourselves abreast of the latest trends and developments worldwide. During 2013/14, EMSD representatives attended a variety of regional and international conferences and meetings, with key ones as follow:

- The 41st Meeting of APEC Expert Group on Energy Efficiency and Conservation, April 2013, Beijing, China.
- The 40th Meeting of APEC Expert Group on New and Renewable Energy Technologies, April 2013, Hanoi, Vietnam.
- The 41st Meeting of APEC Expert Group on New and Renewable Energy Technologies, October 2013, Beijing, China.
- The 46th Meeting of APEC Energy Working Group, November 2013, Da Nang, Vietnam.
- The 42nd Meeting of APEC Expert Group on Energy Efficiency and Conservation, November 2013, Bangkok, Thailand.
- APEC/ASEAN (Association of Southeast Asian Nations) Joint Workshop on Energy Statistics, March 2014, Tokyo, Japan.

節約營運資源

電力

我們主要的用電地點包括九龍灣總部大樓（連同企業數據中心）、加路連山工場、芬園車輛維修站、小蠔灣車輛維修站，以及香港國際機場空郵中心的機電工程署工場。年內用電量增加5.8%，如排除因為企業數據中心服務需求增加之因素，2013/14年度的用電量則比2012/13年度減少4.6%。

水

主要用於空調、園藝灌溉、飲用和清潔等。年內用水量較2012/13年度增加8.1%，原因是機電工程署總部大樓進行的活動增加，導致用水量上升。

煤氣

加路連山工場是使用煤氣供應熱水的主要場地。2013/14年度的煤氣用量較2012/13年用量增加。

CONSERVATION OF OPERATIONAL RESOURCES

Electricity

Major venues of electricity consumption include our Kowloon Bay Headquarters (including Corporate Data Centre), Caroline Hill workshop, Fan Garden Vehicle Depot, Siu Ho Wan Vehicle Depot, and the EMSD workshop in the Air Mail Centre at the Hong Kong International Airport. Electricity consumption increased by 5.8% compared to last year. If the effect of activity changes due to increased service demand for the Corporate Data Centre is excluded, there would be a net reduction of 4.6% in electricity consumption.

Water

Water is mainly consumed for air-conditioning, gardening, drinking and cleaning. Water consumption increased by 8.1% compared to 2012/13, which was due to increased activities in EMSD Headquarters in the year.

Towngas

The Caroline Hill workshop is the major venue using towngas for water heating. Towngas consumption in 2013/14 was increased.

機電工程署的電力、水及煤氣用量 ELECTRICITY, WATER AND TOWNGAS CONSUMPTION AT EMSD

	11/12	12/13	13/14
電力			
Electricity ('000kWh)	12 872	12 960	13 714
水			
Water (m ³)	53 897	46 168	49 912
煤氣			
Towngas (MJ)	137 808	131 760	223 728

物料

辦公室使用的物料

紙張及碳粉盒是辦公室使用的主要耗材，我們已盡量減少用紙量。2013/14年度的用紙量較原定上限少2.6%。由2001年起，我們已廣泛採用由循環再造纖維製成的環保紙。2013/14年度，環保紙佔部門總用紙量97.6%。原木紙只用於對外文件，而且盡量少用。我們在2013/14年度採購了2 984個碳粉盒，而由2005/06年度開始，我們已遵循政府措施，將用過的碳粉盒回收循環再用。

工場使用的物料

我們在日常運作中使用的物料、部件和產品，在其生產、使用和最終棄置的過程中，都會對環境造成不同的影響。因此，機電工程署致力減少物料的使用量，並盡量翻新和循環再用這些物料，讓我們在長遠的將來仍能享用天然資源。

廢氣、污水及廢物

減少廢物及循環再用

我們的廢物管理策略是盡量減少或避免產生廢物，並盡可能回收可再造物料。廢物主要來自兩大源頭：辦公室和工場。辦公室廢物主要是紙張及碳粉盒，而工場廢物則以舊水銀燈、舊充電電池、金屬廢料、舊車胎及光管為主。

MATERIALS

Materials Used in Offices

Paper and toner cartridges are the main materials used in offices. We make every effort to reduce our paper consumption. In 2013/14, paper consumption was 2.6% below the set quota. Since 2001, we have adopted the extensive use of environment-friendly recycled paper made from recycled fibre. In 2013/14, 97.6% of our total paper consumed was recycled paper. Use of virgin paper was limited to external documents only and is avoided as far as practicable. We purchased some 2 984 toner cartridges in 2013/14 and have followed government initiatives to recycle used toner cartridges since 2005/06.

Materials Used in Workshops

We recognise that materials, parts and products used in our everyday operations impact the environment in different ways through their production, use and ultimate disposal. EMSD endeavours to reduce the consumption of materials wherever possible, and to re-condition and re-use them whenever practical in order to sustain natural resources in the long run.

EMISSIONS, EFFLUENTS AND WASTES

Reducing and Recycling of Waste

Our waste management strategy is to minimise unavoidable waste generation and maximise material recycling. Wastes are primarily generated in two streams – from our offices and from our workshops. Major wastes from offices include paper and toner cartridges, while spent mercury lamps, rechargeable batteries, metal scraps, vehicle tyres and spent fluorescent tubes are major wastes from workshops.

廢氣

溫室氣體排放

溫室氣體排放已公認為導致全球暖化和氣候改變的原因。因此，減少排放溫室氣體，例如二氧化碳，是我們其中一項最大的挑戰。機電工程署排放的溫室氣體，主要由辦公室和工場的用電及運輸工具產生。2013/14年度，我們的運輸工具直接產生的二氧化碳約為1 660公噸，而使用電力間接排放的二氧化碳則約為9 512公噸。

運輸

機電工程署日常營運所使用的運輸工具耗用不能再生的化石燃料，並排放溫室氣體。截至2014年3月31日，我們用作執行職務的車隊有220部車輛，包括貨車、客貨車、大型房車和電單車。此外，我們也為客戶部門的5 859部政府車輛提供維修服務。為確保車輛在運作及維修過程中的廢氣排放減至最少，我們實行良好的內務管理措施、妥善保養車輛、減少使用運輸工具，以及改用混合動力或電動車輛等。我們現有六部混合動力車，消耗的燃料比體積相近的傳統車輛少40%。我們還有三部電動車。在未來數年，電動車和混合動力車的數量將會增加。

其他資源耗用詳情及廢氣、排放物及廢物的數字，請參考「統計資料摘要」。

EMISSIONS

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions are widely acknowledged as a cause of global warming and climate change, and reducing emissions such as CO₂ is one of our biggest challenges. EMSD's GHG emissions are mainly attributed to the consumption of electricity in our offices, workshops and transport. In 2013/14, direct emissions from our transport activities amounted to about 1 660 tonnes of CO₂ and our electricity consumption gave rise to about 9 512 tonnes of CO₂.

Transport

The use of transportation vehicles in EMSD operations consumes non-renewable fossil fuels and generates GHG emissions. As of 31 March 2014, we have a fleet of 220 vehicles including lorries, vans, saloon cars and motorcycles to deliver our services, and at the same time maintain 5 859 government vehicles for our client departments. We have to ensure that emissions from such activities are reduced to a minimum by good housekeeping, proper vehicle maintenance, reduced use of transportation vehicles or switching to hybrid or electric vehicles. We now have six hybrid vehicles, which consume 40% less fuel than conventional cars of similar size, and three electric vehicles. The number of hybrid vehicles and electric vehicles will be increased in the next few years.

For details of our performance in other resources consumption, as well as emissions, effluents and wastes, please refer to the section "Summary of Statistics".

機電工程署總部大樓太陽能光伏系統

機電工程署總部大樓的太陽能光伏系統是大樓的示範項目，可生產高達350千瓦電量的天然能源。自2005年完成裝置以來，一直為總部大樓提供清潔的可再生能源。至2014年3月底，該系統已累積生產193萬千瓦小時的能源。

Photovoltaic System at EMSD Headquarters

The photovoltaic system is the signature feature of energy generated from nature in the EMSD Headquarters, with a maximum output of 350kW. Since its inception in 2005, it has been generating clean renewable energy for use at our headquarters. The total output of the system up to end March 2014 was 1.93 million kWh.

重點與前瞻 HIGHLIGHTS AND WAY FORWARD

重點

- 為推動全民節能，環境局及機電工程署推出「室內溫度節能約章」及「『不要鎢絲燈泡』節能約章」，鼓勵社會減少空調用電量，以及停止使用能源效益低的鎢絲燈泡。
- 於2013/14年度推出第二及第三期《能源標籤快訊》，宣傳強制性與自願性能源效益標籤計劃的最新資訊。
- 於2013年11月14日推出為氣體煮食爐而設的自願性能源效益標籤計劃。
- 《建築物能源效益守則》2012年版的照明功率標準已經提升，並於2014年2月刊憲。
- 於2013年3月及9月分別推出《能源審核守則2012年版技術指引》及《建築物能源效益守則2012年版技術指引》。
- 根據從多個淡水冷卻塔抽取的891個水樣本的測試結果，機電工程署由2011/12年度起，根據《公眾衛生及市政條例》授予的權力，就受污染的淡水冷卻塔作出規管，以減低冷卻塔可能傳播退伍軍人病症的公眾衛生風險。

前瞻

- 就自願性能源效益標籤計劃擴展至涵蓋微波爐，進行籌備工作。
- 檢討《建築物能源效益守則》及《能源審核守則》。
- 根據《公眾衛生及市政條例》，於2014/15年度繼續抽驗約800個淡水冷卻塔的水樣本，就受污染的淡水冷卻塔作出規管。

Highlights

- Launched with the Environment Bureau the Energy Saving Charter on Indoor Temperature and the Energy Saving Charter on No Incandescent Light Bulbs, aiming to reduce electricity consumption for air-conditioning and phase out the use of energy-inefficient incandescent light bulbs.
- Published the second and the third issues of the Energy Label Newsletter in 2013/14 to update readers about the Voluntary Energy Efficiency Labelling Scheme and Mandatory Energy Efficiency Labelling Scheme.
- Launched a new Voluntary Energy Efficiency Labelling Scheme for Gas Cookers on 14 November 2013.
- Upgraded the lighting power density standards in the Building Energy Code 2012 Edition and gazetted in February 2014.
- Published the Technical Guidelines on Energy Audit Code 2012 Edition and the Technical Guidelines on Building Energy Code 2012 Edition in March and September 2013 respectively.
- Took 891 water samples from fresh water cooling towers (FWCTs), and requested their owners to carry out abatement action to reduce the potential public health risk of spread of Legionnaires' disease. EMSD began implementing measures since 2011/12 to regulate contaminated FWCTs, with delegated powers under the Public Health and Municipal Services Ordinance (PHMSO).

Way Forward

- Prepare for the extension of the Voluntary Energy Efficiency Labelling Scheme to cover microwave ovens.
- Review the Building Energy Code and Energy Audit Code.
- Continue to conduct annual water sampling of about 800 FWCTs in 2014/15 and implement regulatory control of contaminated FWCTs under the PHMSO.

社會成效 Social Performance

社會責任

我們透過關懷員工與服務社群，去履行部門的社會責任。具體來說，我們竭力為員工及承辦商提供安全及健康的工作環境，並符合一切相關的法例要求和規定。作為良好的企業，我們也緊遵公務員事務局的行為守則規範，並確保提供平等就業機會。至於服務社群方面，部門鼓勵員工參加各種慈善活動和社會服務項目，並鼓勵大家多參與專業工程學會的活動，為提升本地工程專業的水平及發展作出貢獻。

員工之僱用和發展

僱用

截至2013/14年底，我們共有5 168名僱員。我們承諾維護平等就業政策，目前有212名員工為輕度殘疾人士，佔員工總人數約4.1%。

年內，我們參與《有能者·聘之約章》及共融機構嘉許計劃，成為推動殘疾人士就業的僱主機構。

SOCIAL RESPONSIBILITIES

We discharge our social responsibilities via caring for staff and the community. Specifically, we strive to ensure that we provide a safe and healthy environment for our employees and contractors working for us, and to comply with the relevant laws and regulations. As a good corporate citizen, we also abide by the Civil Service Bureau's codes of conduct and see to it that we provide equal employment opportunities. As to caring for the community, we encourage our staff to participate in charitable and social service activities, as well as taking part in activities of professional engineering bodies to help contribute to the standards and development of the engineering profession.

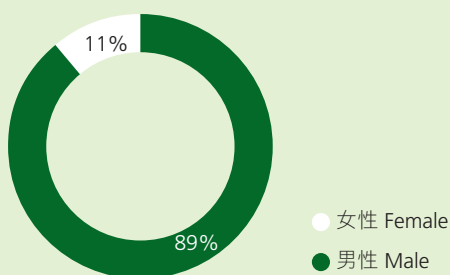
STAFF EMPLOYMENT AND DEVELOPMENT

Employment

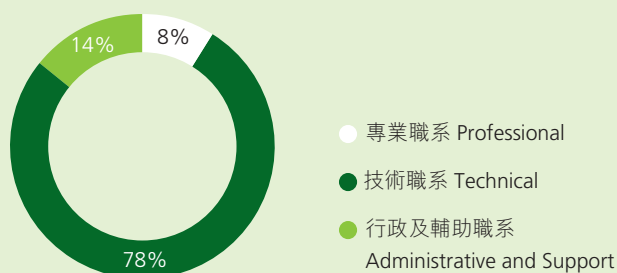
At the end of 2013/14, we have 5 168 employees. As a commitment to upholding the equal opportunity employment policy, we currently have 212 employees with minor disabilities, representing about 4.1% of our total workforce.

During the year, EMSD joined the Talent-Wise Employment Charter and Inclusive Organisations Recognition Scheme as an Employer Organisation to promote the employment of persons with disabilities.

按性別劃分
BREAKDOWN BY GENDER



按職級劃分
BREAKDOWN BY GRADE



僱用人員 Strength : 5 168名
* 截至2014年3月31日 As at 31 March 2014

員工病假

在2013/14年度，部門因員工放取病假而失去的工作天共20 098.5天，即相等於每名員工約3.89天。

Sick Leave

In 2013/14, a total of 20 098.5 working days were lost due to sick leave. This is equivalent to around 3.89 days per employee.

學習及發展

機電工程署深知，要維持一支能幹及與時並進的團隊，就必須不斷提升員工的能力和競爭力。因此，我們全力支持員工不斷學習，發展技能，為部門作出更大貢獻。我們推廣持續進修的文化，並通過人力資源方面的有效管理和不斷改進，建立一支勤奮向上、才識技能兼備的員工隊伍。我們的人力資源管理委員會由機電工程署署長擔任主席，並由各職系的首長及一般和共通職系的高級管理人員組成。委員會定期舉行會議，檢討部門的培訓計劃及活動。

在未來兩年，我們會透過發展部門「知識群體」以加強知識管理。

見習工程師訓練計劃

我們的見習工程師訓練計劃自六十年代推行以來，已培訓了700多位見習工程師。這計劃一向公認是香港工程界的最佳在職培訓計劃之一，目的是確保香港能有足夠的受訓工程師，滿足業界的需要。在2013/14年度，我們在電機、機械、電子、屋宇裝備、資訊科技和生物醫學等範疇共招募了19位見習工程師。

Learning and Development

At EMSD, we recognise the need to continually enhance the capabilities and competitive strengths of our staff in order to build a capable and progressive workforce. As such, we fully support our employees in pursuing learning and development opportunities that will eventually enhance their contribution to the organisation. We are committed to promoting a continuous learning environment to develop a motivated and competent workforce through effective management and continuous development of our human resources. Our Human Resources Management Committee, chaired by the Director of Electrical and Mechanical Services and comprising Heads of Departmental Grades as well as senior managers of General and Common Grades, meets regularly to review our training programmes and initiatives.

We will enhance knowledge management by developing departmental "Knowledge Communities" in the next two years.

Graduate Training Scheme

Since its inception in the 1960s, our Engineering Graduate Training Programme has attracted more than 700 graduate participants. The programme has long been considered one of the best on-the-job training schemes in the engineering profession in Hong Kong and has contributed to the provision of trained engineers to meet the needs of the local profession. In 2013/14, we recruited 19 engineering graduates specialising in electrical, mechanical, electronics, building services, information technology and biomedical engineering.



我們全力支持員工不斷學習，發展技能，為部門作出更大貢獻。
We fully support our employees in pursuing learning and development opportunities that will eventually enhance their contribution to the organisation.

見習技術員訓練計劃

技術員訓練計劃是我們另一項主要培訓計劃，目的是提供有系統及高水平的訓練，以滿足機電工程署和社會目前及未來對技術員的需求。計劃推行50多年來，為業界培訓了超過5 000名學徒。在2013/14年度，我們招募了59名見習二級技術員（三年訓練制）和32名見習一級技術員，同時新增設見習二級技術員（四年訓練制）的職位，並招募了93人。除提供在職訓練外，我們亦資助學徒修讀香港專業教育學院的工藝證書課程和高級文憑課程。

我們在2012/13年將學徒職位名稱更改為見習二級技術員（前稱技工學徒）及見習一級技術員（前稱技術員學徒），並加強宣傳工作，例如：到學校舉辦講座、製作小冊子及與業界合辦職業展覽等。目的為吸引更多的年輕人透過加入機電工程署而晉身機電業界。

培訓目標

在2013/14年度，每名員工的每年平均受訓日數為4.74天，高於原定4.5天的目標。我們會繼續鼓勵員工進修及提供所需的培訓，以改善服務、開拓新業務，以及促進員工的個人發展。

Technician Training Scheme

Another key training programme is our Technician Training Scheme which aims to provide systematic and good standard training to satisfy the present and future needs of EMSD as well as the community. The long-standing scheme has been running for over 50 years, successfully trained more than 5 000 apprentices for the profession. In 2013/14, we recruited 59 technician trainee II (three-year training) and 32 technician trainee I. A new post namely technician trainee II (four-year training) was created and we recruited 93 persons. Besides on-the-job training, we sponsored the apprentices to attend craft certificate courses and higher diploma courses in the Institute of Vocational Education.

To attract more young people to embrace the E&M trade through joining EMSD as apprentice, we renamed the post title of the apprentice to technician trainee II (formerly known as craft apprentice) and technician trainee I (formerly known as technician apprentice) in 2012/13, and enhanced the promotion works such as conducted briefing sessions at schools, published leaflets and coordinated with trades to organise job expo.

Training Targets

In 2013/14, we achieved 4.74 training days per staff member per year on average, exceeding the 4.5 days target set for the year. We will continue to encourage and provide relevant training to enhance our services and develop new services, and to facilitate employees' career development.



每名員工每年平均受訓日數 TRAINING DAYS PER STAFF PER YEAR ON AVERAGE

2013/14 年受訓日數
2013/14 Training Days

4.74

受訓目標日數
Training Target Days

4.5

健康安全的工作環境

職業健康及安全

機電工程署對職業健康及安全十分重視。我們的職安健政策及架構，確保部門各部分的職安健都達至並維持在高水平。

我們的「職業安全及健康策導委員會」，由高層管理人員組成，負責制訂部門的職安健政策、檢討部門內部及承辦商的意外事故，並監察部門在執行職安健措施方面的情況，以令安全表現得以持續改善。至於「部門職業安全及健康委員會」，則由管理層及來自各科/部別及部門協商委員會的員工代表組成，定期進行會議，落實部門的職安健宣傳活動和措施。

機電工程署設有安全管理制度及程序，以實踐我們為員工提供一個安全工作環境的承諾。透過定期舉辦各種職安健比賽和宣傳活動，包括首長級人員參觀工地及由部門安全專業人員實地視察和作員工簡報會，以及所有前線監工必須接受強制性安全訓練等，努力提高工作場所的安全。以下是我們於2013/14年度進行的部分工作。

年內新猷

2013/14年內，我們為三類工種引進了施工前安全檢查表格，即高空工作、路面工作、和涉及部門同事使用化學品的工作。我們更提倡一套「健體十式」，供同事在每天早操時多一個選擇，並安排了這套健身操的培訓班，也於部門的內聯網提供示範圖片和短片。

此外，部門也計劃將現有的「綠咭」重溫課程由半天增至一天，以加強員工的安全知識。至於合約安全方面，我們也就升降機與自動梯及機電工程合約工作，舉辦了兩場研討會，目的是為業界人士提供平台，探討除了滿足合約要求外，如何進一步加強各種安全措施。我們會繼續與業界合作，舉辦安全研討會和其他活動，推動工作安全。

A HEALTHY AND SAFE WORKING ENVIRONMENT

Occupational Health and Safety

At EMSD, we accord great importance to Occupational Safety and Health (OSH). Our Safety and Health Policy and infrastructure help ensure that a high standard of OSH in the workplace is achieved and maintained throughout the department.

The Steering Committee on Occupational Safety and Health, which comprises members of senior management staff, has been set up in EMSD to formulate departmental OSH policies, review in-house and contractor safety performance and oversee the implementation of OSH initiatives with a view to enabling continuous improvement in safety performance. Our Departmental Occupational Safety and Health Committee, which comprises management and staff representatives from branches/divisions as well as departmental consultative committees, meets on a regular basis to implement the departmental OSH promotional activities and initiatives.

EMSD have safety management systems and procedures in place to achieve our commitment of maintaining a safe work place for our employees. We strive to enhance workplace safety by regularly organising various occupational safety and health competitions and promotional activities, site visits by directorate officers, site inspections and staff briefings by our in-house safety professionals, and mandatory safety training for all frontline supervisors. The following are some examples in 2013/14.

New Initiatives

During 2013/14, we introduced pre-work safety check forms for three types of work, namely work at height, work on roads and use of chemicals by in-house staff. Furthermore, we recommended "Ten Strengthening Movements" as an additional option for staff morning exercise. Training sessions on the exercises were organised, supplemented by pictorial and video "demos" on the departmental Intranet.

Plans were also underway to extend our existing "green card" revalidation course from half-day to full-day in order to enhance staff knowledge of work safety. As far as contract safety is concerned, we have organised two contract work safety seminars on lift and escalator work as well as E&M work. The seminars aimed to establish a platform for industry practitioners to explore effective safety measures over and above contract requirements. We shall continue to collaborate with the trade to organise safety seminars and events to promote safety.

我們在浮標風速計支柱上安裝齒輪箱，使維修員工和航班更安全。
Installing a gear box onto the anemometer mast of the water buoy has enhanced safety for maintenance staff and air traffic.



(安裝前) 為風速計支柱安裝齒輪箱前，高空作業對維修員工有潛在危險。
(Before installation) Maintenance work before installing the gear box on the anemometer mast posed potential hazards of working at height.



(安裝後) 改善風速計支柱設計後，維修工作更安全。
(After installation) Maintenance work after fixing the anemometer mast in the cage is much safer.

新設計提升員工與航班安全

我們為香港天文台氣象浮標上的儀器主動提出改善設計方案，不單解決了維修人員的安全問題，更促進航班安全。

香港國際機場對開水域現共設有五個氣象浮標，每個均有儀器自動收集和測量風力、氣壓、溫度和濕度等資訊，通過無線電波，每十秒將即時資訊傳送到機場航空交通管制塔內的天文台機場氣象所。這些天氣資訊對預測機場周邊地區的風切變十分重要，有助飛機師緊隨預定的飛行路徑，確保航班安全。

然而，維修人員由於要攀爬維修籠至浮標頂部進行工作，會有潛在危險。我們在徵得天文台和海事處的准許後，主動重新設計風速計支柱，安裝一組密封式金屬齒輪箱，使浮標頂部的風向及風速監察裝置可輕易降下，工作人員再無需攀爬維修籠，已可進行維修。新設計既提升了工作安全，又不影響浮標的堅固性和穩定性，裝置的可用時間也見增加，有助提高航班安全。

New Design Enhances Staff and Air Traffic Safety

Our initiative to re-design the anemometer masts for the Hong Kong Observatory (HKO) weather buoys has solved safety issues for maintenance staff and contributed to better aviation safety.

Five weather buoys are currently deployed in waters off the Hong Kong International Airport, each with an automatic weather station mounted on a three-metre diameter buoy, measuring weather information such as wind, air pressure, temperature and humidity. Each station transmits the information by radio to the HKO Airport Meteorological Office in the Airport Traffic Control Tower every ten seconds. The information is vital for estimating wind shear over the areas around the airport, which helps pilots stay in their intended flight paths and ensures aviation safety.

However, climbing over the maintenance cage of the weather buoy and up to the anemometer mast to carry out maintenance work poses potential hazards for staff. With consent from HKO and the Marine Department, we took the initiative to re-design the anemometer mast by installing a gear box onto it so that the mast can be lowered down for maintenance work, eliminating the need to climb up the cage. The new design has enhanced maintenance work safety without compromising the robustness and stability of the buoys. System availability has also been raised, thus enhancing aviation safety.



得獎同事出席頒獎禮。

Our award-winning colleagues at the prize presentation ceremony.



機電工程署及機管局代表與各參與機構代表，一起舉行切燒豬儀式。EMSD staff and representatives from AA and other organisations sharing an auspicious "roast-pig carving" moment.

機場團隊獲機場安全運動比賽獎

機場工程分部同事於機場管理局每年一度的「飛行區及行李處理大堂安全運動」中，奪得多個獎項。安全運動的目的，是鼓勵及推廣安全文化，並提高行李處理大堂工作人員的安全意識，從而達至零意外。頒獎禮已於2014年1月9日舉行，行李處理組同事張樹興先生和李志堅先生，均獲頒「模範安全員工」獎，其出色表現備受表揚。

香港國際機場過去一年的客運量高達5 990萬人次，在機場維持高度安全的工作文化至為重要。我們一直都積極參與機場管理局的各種安全運動和措施，未來也會繼續支持。

Airport Team Wins Airport Safety Campaign Award

Our Airport Engineering Services Sub-division has won various awards at the annual Airfield and Baggage Hall Safety Campaign organised by the Airport Authority (AA). The campaign aims to achieve zero accident through encouraging and promoting a safety culture by raising the safety awareness of the baggage handling staff. Our colleagues Mr Cheung Shu-hing and Mr Lee Chi-kin, both of the Baggage Handling System team, were awarded the Safety Role Model Award. Their outstanding performance was recognised at a prize presentation ceremony held on 9 January 2014.

With passenger traffic of over 59.9 million passengers last year, the Hong Kong International Airport demands a strong safety culture at the workplace. We have always been supportive of the AA's safety campaigns and initiatives and shall continue to do so in future.



機電工程署講者向承辦商強調，部門的最終目標是所有工地都做到零意外。

EMSD speakers reminded contractors that our ultimate goal was zero accident at all work sites.

研討會提倡合約工作安全

我們於2013年11及12月，假機電工程署總部大樓舉行了兩場合約工作安全研討會，探討升降機與自動梯和機電工程的合約工作安全問題，共吸引了來自83個承辦商的320位人士參加。研討會的目的，是與業界人士分享和提倡有關工作安全的最佳做法，以及各種公德措施。與會講者一致強調，落實各種最佳做法、並在過程中注入創意，是加強工作安全和提高設施可用性的關鍵。

Seminars Promote Contract Work Safety

We held two contract work safety seminars on lift and escalator as well as E&M work at the EMSD Headquarters in November and December 2013, which attracted 320 participants from 83 contractors. Organised for industry practitioners, the seminars shared and promoted best practices in work safety and considerate practices. Speakers unanimously emphasised that adopting industry best practices and innovation the key to work safety and service reliability.

員工關係

員工滿意度調查

我們認為，定期量度及了解員工的滿意度極為重要。掌握員工的滿意程度以便進行架構改善，是我們關顧員工其中的一項承擔。我們委託獨立專業調查公司定期進行員工滿意度調查。在最近的2011/12年度調查，所有高級工程師及以下職級的員工，均獲邀透過問卷表達他們的意見。調查顯示，員工整體滿意度平均分數為6.5分（10分為滿分），與上次於2009年進行的調查相比，輕微上升0.2分。過去幾年的員工整體滿意度均見穩定。下一次調查將於2014/15年度進行。

員工諮詢途徑

我們設有四個部門協商委員會和五個部別協商委員會，以促進管理層與個別員工組別的溝通。員工也可自由參加部門11個員工協會和一般政府人員工會組織。我們定期與員工協會會面和舉行會議，商討員工關注的事項。

承辦商及供應商

承辦商及供應商管理

我們致力為客戶和市民提供優質可靠的服務，而承辦商、顧問公司和供應商是我們達成這目標的重要伙伴。我們不時邀請這些工作伙伴競投公共工程合約。在挑選承辦商時，我們堅守公開和公平的基本原則，並按照政府的指引，在合適情況下盡量採用競爭性投標。我們與承辦商、顧問和供應商建立和保持緊密聯繫，確保他們清楚知悉各項重要資訊，例如客戶關注的事項及工作安全，使問題及時得到妥善處理。

為了監察承辦商的工作，我們定期舉行會議和進行審核，跟進工程的進度，並盡量避免工程對附近地方造成不便或滋擾。在工程進行時，我們會定期評估及檢討承辦商的表現，直到工程竣工。

為了加強員工對承辦商及供應商管理的技巧和誠信，部門於2011年7月推出了《機電工程項目管理手冊》，並定期更新內容，最新版的《機電工程項目管理手冊》第四版已經於2013年3月推出。此外，還有為負責合約管理的員工定期安排有關合約管理、承辦商管理、合約安全及誠信管理的簡介會。

STAFF RELATIONS

Staff Satisfaction Survey

We believe that it is important to measure and track staff satisfaction regularly. To gauge staff perception in order to facilitate organisational improvement is part of our commitment to caring for staff. Independent research specialists are appointed to conduct staff satisfaction surveys on a regular basis. In the latest 2011/12 survey, every employee at senior engineer rank or below was offered an opportunity to express his/her views through a survey questionnaire. The overall staff satisfaction rating from the survey was 6.5 (on a scale of 10), which was a slight improvement of 0.2 as compared to the previous survey in 2009. Overall satisfaction levels in the past years have shown a steady trend. The next survey will be conducted in 2014/15.

Staff Consultation Channels

There are four departmental consultative committees and five divisional consultative committees to facilitate communication between particular groups of staff and management within EMSD. Staff members are also free to join the 11 staff unions of EMSD, as well as the general government staff unions. Regular gatherings and meetings are held with the EMSD staff unions to discuss issues of staff concern.

CONTRACTORS AND SUPPLIERS

Contractor and Supplier Management

Our contractors, consultants and suppliers are our important partners in the provision of reliable and quality services to our clients and the community. We invite these working partners to tender for public works contracts from time to time. In selecting contractors, we adhere to the basic principles of openness and fairness, and adopt competitive tendering wherever applicable in compliance with government guidelines. We have established and maintained close communication with our contractors, consultants and suppliers to ensure that critical information, such as client concerns and work safety, is clearly conveyed to them and relevant issues are addressed properly and in a timely manner.

To monitor the work of contractors, we conduct regular meetings and site visits to keep track of project progress as well as to minimise any inconvenience or disturbance caused to the neighbourhoods where the works take place. Regular reviews on contractors' performance are carried out to assess contractor performance throughout the project.

To enhance our staff skill and integrity in managing the work of contractors and suppliers, the Project Administration Handbook (PAH) for E&M Engineering Works was first issued in July 2011. Regular reviews were conducted to include the latest guidelines and updated administrative measures deployed by the department. The Fourth Revision of the PAH(E&M) was issued in March 2013. Briefings on contract management, contractor management, contract safety and integrity management were arranged for staff responsible for contract management.

客戶

我們的營運服務，為客戶提供優質服務之餘，同時致力調低利潤，讓客戶保留更多資源優化社會服務。

為持續改進服務，我們於2014年年初委託了獨立顧問公司進行新一輪的客戶意見調查，以量度80個客戶部門對機電工程營運基金服務的滿意度。是次客戶意見調查成功發出1 895份問卷，收回的已完成問卷有993份。整體回應率為52.4%。待顧問公司提交調查報告後，我們會研究調查結果，並着手改進，務求令客戶更稱心滿意。

規管服務方面，我們的客戶聯絡小組及各安全諮詢委員會也定期與公眾代表開會，就規管工作及各種機電安全推廣活動與公眾直接交流意見，聽取公眾的看法和建議，從而定出改善措施。我們也定期進行公眾意見調查，了解市民對機電安全和能源效益認識，並進行業界調查，探討業界對規管服務的看法，以找出規管服務需要改善的地方。我們也經常主動與業界舉行研討會，討論交流。如有需要，規管服務也會聯同其他政府部門、業界及公用事業公司，為受意外事故影響的市民盡快恢復水電及氣體供應。

政府部門及營運基金客戶的研討會及論壇

年內，我們繼續向其他政府部門和營運基金客戶，推廣能源效益與節能的好處和最新發展。有關課題包括一般的最佳做法及個別範疇的有效節能措施。

政府能源消耗匯報及監察

在2013年6月至7月，我們舉辦了三場「政府能源消耗匯報及監察」簡介會，除了匯報每年的能源消耗情況外，亦向各同事介紹有關節約能源的最新措施，以深化政府的節能文化。

CLIENTS

Our Trading Services strive to operate with minimal profit in delivering quality services, hence taking less and allowing our clients to retain more to better their services for the community.

In order to provide quality and ever improving services for our clients, we commission an independent research consultant in early 2014 to conduct a new round of Customer Opinion Survey to gather feedback from 80 of our client departments on our Trading Services. At the end of the survey, 993 out of the 1 895 questionnaires successfully dispatched were returned. The overall response rate is 52.4%. We will act upon receiving the survey report from the consultant, aiming to further enhance customer satisfaction.

As for Regulatory Services, our Customer Liaison Group and various safety advisory committees meet regularly with representatives from the general public to exchange views and obtain face-to-face feedback on our regulatory and safety promotion activities, and how they can be improved. Public opinion surveys to gauge public awareness of E&M safety and energy efficiency, as well as trade surveys to measure the trade's views of Regulatory Services, are also conducted regularly to identify improvement areas for Regulatory Services. Pro-active communication with the trades via seminars and discussions are also frequent. Where appropriate, Regulatory Services also works jointly with other government departments, the trades and utility companies to promptly restore utilities supply to citizens affected by major incidents.

Seminars and Forums for Government Departments and EMSTF Clients

During the year, EMSD continued to promote the benefits and latest practices in energy efficiency and conservation to other government departments, public organisations and EMSTF clients. The topics covered general best practices as well as energy saving tips for specific areas.

Government Energy Consumption Reporting and Monitoring

Three briefings on "Government Energy Consumption Reporting and Monitoring" were held in June and July 2013, where we reported on the latest status of government energy consumption to colleagues from various bureaux and departments. We also updated participants on the latest energy saving measures in order to foster government's energy saving and conservation culture.

我們還邀請了政府產業署的外判物業管理公司分享「政府辦公大樓的良好內務措施」，中華電力有限公司則介紹「電能回購」，而我們的工程師亦主講了「能源消耗分析與報告」、「機電工程署總部大樓之良好內務措施」和「如何透過能源審核找出能源管理機會」。講者與參加者都有良好互動，積極分享經驗。

應用「常態化比較電力消耗」工作坊

2014年1月，我們為香港警務處舉辦了「常態化工作坊」，讓參加者重溫如何在相約的操作環境條件下，比較不同年度的電力消耗。

社區

我們的員工一向積極服務社會。他們除執行職務，向市民傳達機電安全和能源效益的信息外，還在工餘時參與義工服務，回饋社會。我們的義工隊在多方面服務社會已超過十年。部門許多專業工程師也積極參與本地和國際的專業工程學會，為業界的發展出力，維持業界的高專業水平。

公眾教育活動

我們一直與其他政府部門和社會各界緊密協作，致力向市民推廣機電安全和節約能源。這是機電工程署規管服務的重要一環。我們通過不同渠道進行公眾教育工作，包括傳媒、互聯網、刊物、推廣及廣告宣傳活動、海報及郵件、嘉年華會、巡迴展覽、話劇表演、遊戲、問答比賽、講座及研討會，以滿足不同社會群組的需要。

We also invited a property management contractor for the Government Property Agency to share "Good Housekeeping Practices in Government Office Buildings". A CLP Power representative briefed participants on the company's pilot rebate programme and our engineers spoke on the "Review and Report of Energy Consumption", "Good Housekeeping Practices in EMSD Headquarters" and "Energy Audit – Identifying Energy Management Opportunities". The presentations were followed by lively discussion and sharing between speakers and the audience.

"Normalisation Workshop" on How to Compare Electricity Consumption

In January 2014, we held a "Normalisation Workshop" for the Hong Kong Police Force, to refresh participants on how to compare annual electricity consumption in a similar operating environment.

COMMUNITY

Our staff have long been active in serving the community, both in their work duties to reach out to the public to disseminate E&M safety and energy efficiency messages, and as voluntary service beyond their work duties to give back to the community. Our Staff Voluntary Service Team, for example, has served the community in numerous initiatives for more than ten years. Many of our professional engineers also play active roles in local and international professional engineering institutes to contribute to the growth of the profession and help maintain its high standards.

Public Education Activities

We work closely with other government departments and the community to promote E&M safety and energy efficiency to the public, an important aspect of the work of our Regulatory Services. Public education is conducted through a variety of channels, including mass media and the Internet, publications, promotional and advertising campaigns, posters and mail-outs, carnivals, roadshows, drama performances, game contests, quizzes, talks and seminars tailored to meet the needs of specific segments of the public.



機電工程署代表與講者合照。
Speakers and EMSD representatives at the forum.



研討會反應熱烈，吸引了約700名人士參加。
The forum met with enthusiastic response and attracted about 700 participants.

淡水冷卻塔和建築物能源效益的技術研討會

我們於2013年11月，舉辦了兩場「淡水冷卻塔和建築物能源效益的規管及實務」周年技術研討會，吸引了約700名人士參加。研討會目的是向業界及持份者，包括大廈業主、物業管理公司、顧問公司和承辦商，宣傳淡水冷卻塔的規管及實務事宜，並推廣建築物能源效益。

研討會分享了規管淡水冷卻塔的最新發展，並就淡水冷卻塔設計安裝、運作維修、水處理以及其他替代水源方面進行技術交流和分享經驗，並向業界簡介已於2012年全面實施的《建築物能源效益條例》及有關近況。

Technical Forum on Fresh Water Cooling Towers and Buildings Energy Efficiency

Two sessions of our annual "Control and Practice of Fresh Water Cooling Towers and Buildings Energy Efficiency" were held in November 2013 and attracted about 700 participants. The forum provided a platform to promote the control and practice of fresh water cooling towers, and briefed the trades and stakeholders on buildings energy efficiency. They included building owners, property management companies, consultants and contractors.

Topics covered included latest developments in the enhanced regulatory control of fresh water cooling towers, design and installation, as well as experience sharing on good operation and maintenance practices of cooling towers, water treatment management and technologies of alternative water sources. The forum also briefed the trades on the new Buildings Energy Efficiency Ordinance and the latest developments since its implementation in 2012.

《升降機及自動梯條例》簡報會

我們在2013/14年度於全港各區舉行了48場《升降機及自動梯條例》(條例)簡報會，向市民、業主立案法團及物業管理機構宣傳該條例。簡報會介紹條例規定升降機及自動梯負責人的責任，並講解如何管理升降機及自動梯的工作，同時鼓勵與會者為舊式升降機進行優化工程。我們也為香港物業管理公司協會會員，舉行了兩次簡報會，闡釋如何選擇及管理註冊升降機與自動梯承辦商。



公眾人士參與簡報會，了解新條例內容。
Members of the public attended a briefing on the new Ordinance.

Briefings on the New Lifts and Escalators Ordinance

Forty-eight briefing sessions were held in 2013/14 throughout Hong Kong to promote the new Lifts and Escalators Ordinance (LEO) to the general public, owners' corporations, and property management agencies. Speakers explained the duties of "Responsible Persons" for lifts and escalators under the LEO, briefed participants on how to manage the maintenance works of lifts and escalators, and also promoted the modernisation of aging lifts. We also held two briefing sessions for members of the Hong Kong Association of Property Management Companies on how to select and manage registered lift and escalator contractors.



我們的示範員正解釋系統技術。
Our demonstrator explained a technical point.



攤位遊戲吸引了不少兒童參與。
Children taking part in our interactive games.

「創新科技嘉年華2013」展示智能交通系統

由創新科技署舉辦的「創新科技嘉年華2013」，於2013年11月2至10日假香港科學園舉行。機電工程署今屆主題是智能交通系統，攤位展示了我們設計及策劃的兩項工程：數碼聲音轉播系統及紅燈執法照相機。

是次嘉年華的總入場人次創出23萬新高，證明公眾對創新及科技的興趣日增。我們攤位的有趣互動遊戲及示範，更吸引了大批市民參與；市民並通過攤位活動，親身體驗我們可靠高效的機電工程服務。



市民對智能交通系統感興趣。
Members of the public were interested in the Intelligent Transport Systems demonstrations.

InnoCarnival 2013 Showcases Intelligent Transport System

The InnoCarnival 2013, organised by the Innovation and Technology Commission, was held from 2-10 November 2013 in the Hong Kong Science Park. The theme of the EMSD pavilion was "Intelligent Transport System", which showcased two applications – the Rebroadcasting systems for Digital Audio Broadcasting and Red Light Camera, both designed and implemented by EMSD.

The InnoCarnival 2013 attracted a record number of over 230 000 visitors, indicating growing public interest in innovation and technology. Through interactive games and demonstrations, the EMSD pavilion attracted many visitors to take part in our booth activities and experienced first-hand our reliable and efficient E&M services.

部門義工辦長者講座

Our Volunteers Organise Talk for the Elderly



我們的見習工程師和見習技術員，為基督教家庭服務中心的長者，於2013年8月8日舉辦了一個家居機電安全和能源效益講座。這類義工活動是機電工程署回饋社會的活動之一。

Our engineer and technician trainees organised a briefing for the elderly at the Christian Family Service Centre on domestic E&M safety and energy efficiency on 8 August 2013. Such volunteer activities are part of EMSD's efforts to give back to the community.

單車隊愛心義騎

Cycling Team Rides for Charity



社區活動
COMMUNITY
ACTIVITIES

機電工程署義工於2013年10月12日，參加了全港首個夜間慈善單車活動——為香港防癌會籌款的「綠途義行」。活動全程26公里，於沙田舉行。當晚機電工程署署長陳帆先生更親自領隊，而高層管理人員則捐款贊助車隊。

Our volunteers took part in Hong Kong's first evening charitable cycling event on 12 October 2013. The "New Town Rider - Night Ride" was a 26-kilometre cycling event which took place in Sha Tin, and raised funds for the Hong Kong Anti-Cancer Society. Mr Frank Chan, Director of Electrical and Mechanical Services, led our cyclists team while senior management sponsored the team.



機電安全健步行 E&M Safety Walk



部門60多名員工及家屬和高層管理人員，齊於12月8日參加了由香港機電業工會聯合會和香港機電工程商聯會，於沙頭角農莊合辦的「機電安全健步嘉年華2013」，進行籌款及提倡地盤零意外。More than 60 EMSD staff members, their families and friends as well as our senior management participated in the "E&M Safety Walk and Carnival Fair 2013" on 8 December at the Sha Tau Kok Farm. The fund-raising event was jointly organised by the Federation of Hong Kong E&M Industries Trade Unions and the Hong Kong Federation of E&M Contractors Limited, which also promoted the goal of zero accident at work sites.

支持傷健共融日 Supporting Rehab Power Day



我們參加了香港復康力量於10月26至27日假維多利亞公園舉行的「復康力量傷健共融日2013」，部門攤位更特別設計了遊戲，鼓勵市民以更具有能源效益的燈具取代鎢絲燈泡，並展示了機電工程署的其他能源效益計劃。

We supported the "Rehab Power Day 2013", held on 26-27 October in Victoria Park by Hong Kong Rehabilitation Power. The EMSD booth used specially designed fun games to promote the replacement of incandescent light bulbs by more energy efficient lighting fixtures, and showcased other EMSD energy efficiency schemes.



參與無國界義工日 Taking Part in Volunteers' Day



部門的見習工程師於8月18日，參加了由「無國界義工」舉辦的「2013無國界義工日」大型周年活動。當天我們的義工隊探訪了兩家安老院舍，並以有趣的話劇和遊戲，提醒長者注意機電安全和節約能源。

Our engineer trainees participated in the "Volunteers' Day 2013", a large-scale annual event organised by Volunteer Space on 18 August. On the day, the EMSD team visited two homes for the elderly, and used fun drama and games to raise their awareness of E&M safety and energy efficiency.

參與環保嘉年華 宣揚節能訊息

Promoting Energy Efficiency at Green Carnival 2014



我們參加了環保促進會於2014年1月12日假九龍公園舉行的「環保嘉年華」，也是這周年活動的支持機構之一。部門的攤位遊戲，圍繞如何建設低碳城市及選用高效燈泡，吸引了不少市民參與。

EMSD participated in the Green Council's annual "Green Carnival" held on 12 January 2014 at Kowloon Park, as one of the supporting organisations. Our booth featured games about building a low-carbon city and using highly energy efficient light bulbs, attracting numerous visitors.



齊為公益百萬行

Colleagues Walk for Millions



2014年1月5日，部門130多名同事與親友參加了香港公益金舉辦的「港島、九龍區百萬行」，在部門高層率領下，順利完成了由黃泥涌峽道至香港仔郊野公園的行程。

More than 130 colleagues, their families and friends took part in the "Hong Kong and Kowloon Walk for Millions" on 5 January 2014, organised by the Community Chest. Led by our senior management, EMSD participants completed the walk from Wong Nai Chung Gap Road to the Aberdeen Country Park.

樂施毅行者2013 Oxfam Trailwalker 2013



機電工程署同事組成多個團隊，參加「樂施毅行者2013」，為樂施會各項扶貧救災工作籌募經費。跑過終點的是「巨大動力隊」。

Our staff members formed several teams to participate in the Oxfam Trailwalker 2013 to raise funds for Oxfam's various poverty alleviation and emergency relief projects. Passing the finishing line was the Immense Power Team.

保良局慈善步行 Po Leung Kuk Charity Walk



機電工程署30多位同事於2014年3月2日連同親友，齊參加「保良局慈善步行」籌款，為該局轄下260個服務單位籌募拓展經費。

More than 30 EMSD colleagues and their families and friends joined the Po Leung Kuk Charity Walk on 2 March 2014 to raise funds for its 260 service units to expand their services.



東區醫院籌款晚宴 Eastern Hospital Charity Dinner



2013年11月，我們參與了東區尤德夫人那打素醫院慈善信託基金的籌款晚宴，支持其推動醫療和醫學培訓的工作，並促進該院在其社區的健康服務。

In November 2013, EMSD participated in a charity dinner of the Pamela Youde Nethersole Eastern Hospital Charitable Trust, to support its cause to promote medicine and medical education as well as the health and welfare of the community which the hospital serves.

昂步棧道2014 Ngong Ping Charity Walk 2014



2014年1月12日，機電工程署四位同事參加了是次沿風景秀麗的「昂坪360救援徑」而行的慈善籌款步行，為香港青年旅舍協會籌募經費，支持探索大自然、推廣旅舍文化和環境保育的活動。

A team of four EMSD colleagues took part in the walk along the scenic Ngong Ping Trail on 12 January 2014, to raise funds for the Hong Kong Youth Hostels Association to explore nature, promote hostel culture and conservation.

與持份者溝通

作為政府機構，我們的持份者包括客戶、決策局、僱員、受規管業界、工商業組織、供應商和承辦商、專業和行業團體及社會大眾。

考慮到持份者的不同類別，我們提供了多種溝通渠道，以配合持份者不同的需要。當中包括年報、網站、通訊刊物如《機電與我》、《電力快訊》、《氣體快訊》、《智能》、《能源標籤快訊》、《機電傳聲》和《群聲》、客戶聯絡小組、員工協商委員會、與商會和專業團體的定期諮詢，以及有關機電安全及能源效益的宣傳及推廣與社區外展活動等。

此外，我們的高層管理人員更以身作則，支持和鼓勵同事加入香港工程師學會的理事會、各個委員會和工作小組，及參與國際性的工程組織，維護本港工程專業的高水平。

我們於2013/14年度為下列主要持份者舉行了多項活動：

STAKEHOLDER ENGAGEMENT

As a government agency, our stakeholder groups include clients, policy bureaux, staff, regulated trades, industry and business organisations, suppliers and contractors, professional and trade associations and the general public.

Given the varied nature of our stakeholders, we have developed different communication programmes to cater to their different needs. Our communication channels include annual report, websites, publications such as the E&M Safety Newsletter, Electricity News, Gas Safety Bulletin, Energy Wits, Energy Label Newsletter, VoiceLink and Group Voice, customer liaison groups, staff consultative committees, regular consultations with trade associations and professional institutions, and ongoing electrical and mechanical safety and energy efficiency publicity, promotion and community outreach programmes.

Furthermore, our senior managers are also personally involved in supporting and encouraging colleagues to join the Council and various Boards and Committees of the Hong Kong Institution of Engineers, and participating in international engineering organisations, as part of the effort to uphold the high standards of the engineering profession in Hong Kong.

The following major stakeholder engagement activities were held in 2013/14:

公眾人士 Public at Large

- 有32家發展商及管理公司承諾在2013年6月至9月期間，在他們旗下超過120多家商場公用地方維持平均室內溫度在攝氏24至26度之間。此外，亦有超過550間商舖、170座辦公室大樓和440家機構的辦公室簽署「室內溫度節能約章」。
- 32 developers and property management companies pledged to maintain an average indoor temperature at 120 shopping malls of between 24 and 26 degrees Celsius from June to September 2013, and more than 550 retail shops, 170 office buildings and 440 organisations signed up to the Energy Saving Charter on Indoor Temperature.
- 為各類機構/學校舉行130場講座或探訪，宣傳能源效益及節能。
- Delivered/Organised 130 talks and visits to organisations/schools to promote energy efficiency and conservation.
- 為多個機構舉行26場簡報會，宣傳《建築物能源效益條例》及有關建築物能源實務守則與能源審核的強制執行事宜。
- Delivered 26 presentations to various organisations for promotion of the Buildings Energy Efficiency Ordinance on mandatory implementation of building energy code and energy audit.
- 於2013年7月及12月分別走訪首批及次批須進行首次能源審核的商業建築物，宣傳《建築物能源效益條例》，並提醒建築物擁有人有關能源審核規定。
- Conducted a publicity visit to the first and second batches of commercial buildings, which are required to carry out the first energy audits, in July and December 2013 respectively to promote the Buildings Energy Efficiency Ordinance and to remind building owners of the relevant energy audit requirements.

公眾人士 Public at Large

- 舉行52次外展講座，而機電工程署教育徑也接待了276個參觀團，共約10 300位訪客，向各機構和學校宣傳能源效益和節能。
- 往全港幼稚園、小學及老人中心進行287次外展講座，向約41 000位參加者宣傳電力安全。
- 往全港幼稚園、青年中心及老人中心進行380次外展講座，向28 000多名參加者講解機動遊戲機、升降機和自動梯的安全使用方法。
- 舉行51次學校展覽，宣傳強制性能源效益標籤計劃。
- 於2014年2月全面走訪全港有關的零售商，宣傳第一及第二階段的強制性能源效益標籤計劃。
- 於2013年7月，就強制性與自願性能源效益標籤計劃舉行聯合簡介會。
- 於2013年6月10日就能源效益、節能與節能駕駛，舉行一場公開研討會。
- 為業界人士就《供電電纜（保護）規例》的要求，舉行34場安全講座及研討會，參加者包括政府工務部門、顧問公司、承辦商、合資格人士、一般工地員工等。
- 為業界代表、升降機/自動梯擁有人、業主立案法團成員和物業管理公司員工舉辦48場簡介會、技術及安全講座與研討會。
- 探訪超過2 000間車輪維修工場，推廣車輛維修工場約章計劃。
- Organised 52 outreach talks and 276 visits to the Education Path of EMSD Headquarters for about 10 300 visitors from different organisations and schools to promote energy efficiency and conservation.
- Visited 287 kindergartens, primary schools and elderly centres with about 41 000 participants to promote electrical safety.
- Visited 380 kindergartens, youth centres and elderly centres with over 28 000 participants to promote the safe use of amusement rides, lifts and escalators.
- Conducted 51 school exhibitions on the Mandatory Energy Efficiency Labelling Scheme (MEELS).
- Conducted a full-scale publicity visit to relevant retailers in February 2014 to promote the first and second phases of MEELS.
- Conducted briefing sessions on Energy Efficiency Labelling Scheme (both mandatory and voluntary) in July 2013.
- Held a public seminar on energy efficiency and conservation as well as eco-driving on 10 June 2013.
- Delivered 34 safety talks and seminars on the requirements of Electricity Supply Lines (Protection) Regulation to the trades, inclusive of government works departments, consultants, contractors, competent persons, general site staff, etc.
- Conducted 48 briefing sessions, technical and safety talks and seminars for trade representatives, lift/escalator owners, members of the incorporated owners and building management staff.
- Visited over 2 000 vehicle workshops to promote the Vehicle Maintenance Workshops Charter Scheme.

公眾人士 Public at Large

- 於2013/14年度，從淡水冷卻塔共抽取了891個水樣本，根據測試結果及《公眾衛生及市政條例》的規定，我們要求淡水冷卻塔擁有人採取減除妨擾的工作。
- In 2013/14, 891 water samples were taken from fresh water cooling towers (FWCTs). We had requested the owners of the FWCTs to carry out abatement action under Public Health and Municipal Services Ordinance according to test results.
- 推行註冊電業工程人員持續進修計劃，為註冊電業工程人員舉行245場講座/研討會。
- Conducted 245 talks and seminars on the implementation of the Continuing Professional Development Scheme for Registered Electrical Workers.
- 為了提升市民對氣體使用安全及良好方法的認識，我們於本年度透過食物環境衛生署舉辦了六場講座，讓食物業牌照申請人了解食肆及食物製備場所內作供應飲食用途石油氣裝置規定。我們亦探訪了20個寮屋和村屋區的居民，向他們講解家居氣體安全事宜。此外，我們亦向不同的工程承辦商舉辦了共28場的氣體安全講座以推廣氣體安全訊息。
- In order to enhance the community's awareness on safety and good practices in use of gas, we introduced applicants of food business licences to the requirements for liquefied petroleum gas (LPG) installations for catering purposes in restaurants and food preparation establishments through six seminars organised by the Food and Environmental Hygiene Department in this year. We also conducted visits to 20 squatter areas and villages to promote among the residents gas safety in households. Apart from this, we also organised 28 gas safety seminars to different contractors for the promotion of gas safety.
- 於2013年9月9日與香港物業管理公司協會及職業訓練局，聯合舉辦有關升降機及自動梯安全與負責人責任的研討會，約有300位物業管理從業員參加。
- Conducted a seminar on lift and escalator safety and Responsible Person's responsibilities on 9 September 2013, jointly with the Hong Kong Association of Property Management Companies and the Vocational Training Council, with the participation of about 300 property management members.
- 於2013年11月18日與專業團體聯合舉辦有關機動遊戲機的技術研討會，討論監管制度及成為檢測員及合資格人員的要求。
- Conducted a technical seminar with several professional institutions on 18 November 2013 on the regulatory regime of amusement ride safety and requirements of becoming a surveyor or qualified person in amusement rides.
- 於2014年3月6日舉辦研討會，與架空纜車從業員分享討論新技術資訊及安全意識。
- Conducted an experience sharing session on aerial ropeway technologies and safety awareness on 6 March 2014 for the operational personnel.
- 於2014年3月18日舉辦有關建築工地升降機及塔式工作台的研討會，提升從業員對現行監管制度的認識。
- Conducted an experience sharing session on the awareness of legal obligations on 18 March 2014 for the operational personnel of builders' lifts and tower working platforms.

我們的員工 Our Staff

- 規管服務於2013年12月10日及2014年2月18日舉行了管理工作坊。
- 機電工程營運基金於2013年9月4日及10月16日舉行了策略工作坊。
- 於2013年11月舉行三場署長簡報會。
- 首長級人員到訪了195個場地，進行員工親善探訪。
- 於2013年11月6日與部門11個工會舉行聯席會議。
- 於2014年3月舉行兩場部門專業人員周年論壇。
- 於2014年2月至3月為部門外調的督察級、技術級及初級員工舉行了四次周年論壇。
- 員工福利組為抱恙或住院員工進行了六次家訪、83次醫院探訪、56次工作間探訪、518次電話問候及27次吊唁探訪。
- Held the Regulatory Services' annual Management Workshops on 10 December 2013 and 18 February 2014.
- Held the EMSTF's annual Strategy Formulation Workshops on 4 September and 16 October 2013.
- Held three sessions of Director's Briefing in November 2013.
- Conducted 195 ambassador visits by directorate officers at various venues.
- Conducted a joint meeting with 11 staff unions of EMSD on 6 November 2013.
- Held two sessions of the Yearly Forum for professional staff in March 2014.
- Held four sessions of the Yearly Forums for seconded inspectorate, technical and junior staff from February to March 2014.
- Conducted six home visits, 83 hospital visits, 56 workplace visits, 518 goodwill phone calls and 27 condolence visits to sick or hospitalised staff, by the Staff Welfare Unit.

客戶 Our Clients

- 與香港警務處於2013年8月、11月及2014年1月及2月舉行高層會議，檢討我們的服務表現和尋找新的商機。
- 與渠務署於2013年3月、7月及10月舉行高層會議，檢討我們的工作表現。
- 分別與路政署、運輸署及消防處於2013年4月、及與入境事務處於2013年11月，舉行高層會議，檢討我們的服務表現。
- 與民航處於2013年6月、9月及2014年2月舉行工作層會議，檢討我們的服務表現。
- 與香港天文台於2013年5月、8月、11月及2014年2月舉行工作層會議，檢討我們的服務表現。
- 與香港機場管理局代表於2014年2月參觀澳門威尼斯人酒店的高壓製冷機組。
- 與食物環境衛生署於2014年1月舉行有關火葬場和骨灰龕的統籌會議。
- 安排與醫院管理局進行多次親善探訪、高層座談會及工作層座談會等。
- 於2014年2月及3月往路政署進行周年客戶拜訪，並檢討有關港珠澳大橋項目與中環灣仔繞道和東區走廊連接路項目的服務水平協議。
- 於2014年3月往土木工程拓展署進行周年客戶拜訪，並檢討有關蓮塘/香園圍口岸項目的服務水平協議。
- 與建築署於2014年1月進行服務水平協議檢討會議。
- 與警務處於2014年2月舉行高層會議，商討未來如何為客戶提供工程支援服務。
- 出席懲教署於2014年2月舉行的無線電系統移交儀式，並與客戶於活動後進行會議。
- 聯同懲教署呈交「電鎖保安系統」項目參與「2014香港資訊及通訊科技獎」，並獲得「最佳創新（企業創新）特別嘉許」獎。
- Held high level meetings with Hong Kong Police Force in August, November 2013 and January and February 2014 to review our service performance and explore new business opportunities.
- Held high level meetings with Drainage Services Department in March, July and October 2013 to review our service performance.
- Held high level meetings with Highways Department, Transport Department and Fire Services Department respectively in April 2013, and with Immigration Department in November 2013.
- Held working level meetings with Civil Aviation Department in June and September 2013 and February 2014 to review our service performance.
- Held working level meetings with Hong Kong Observatory in May, August and November 2013 and February 2014 to review our service performance.
- Paid joint site visit with the Airport Authority Hong Kong representatives to the high voltage air-conditioning chiller plant of the Venetian Macao Resort Hotel in February 2014.
- Held a coordination meeting with Food and Environmental Hygiene Department on crematoria and columbaria in January 2014.
- Conducted various courtesy visits, high level seminars and working level seminars for Hospital Authority.
- Paid annual customer visits to Highways Department in February and March 2014 to review the Service Level Agreements (SLAs) for the Hong Kong-Zhuhai-Macao Bridge project and the Central-Wan Chai Bypass and Island Eastern Corridor Link project.
- Paid annual customer visit to Civil Engineering and Development Department in March 2014 to review the SLA for Liantang/Heung Yuen Wai Boundary Control Point project.
- Attended a SLA review meeting with Architectural Services Department in January 2014.
- Held a high level meeting with Hong Kong Police Force in February 2014 to discuss future engineering support for client.
- Attended the Correctional Services Department (CSD) radio system handover event in February 2014 and met with CSD representatives afterwards.
- Submitted jointly with CSD the "Electric Locks Security System" project to the contest for the Best Innovation Award of the Hong Kong ICT Awards 2014 and received the "Best Innovation (Entrepreneurial Innovation) Special Mention" award.

獎項及嘉許

獎項及嘉許能提升士氣，並激勵員工有更卓越的表現。我們鼓勵員工適當地參與各項活動、比賽和認證工作，以拓展眼界，並掌握本港、區內以至國際間的最新科技發展和最佳做法。

AWARDS AND RECOGNITION

Awards and recognition boost morale and motivate staff to perform with excellence. We encourage staff to take part in external events, competitions and certification exercises where appropriate to broaden their horizons, and to keep pace with the latest technologies and best practices locally as well as on a regional or international level.

見習技術員連續五年獲職訓局獎項 Technician Trainees Win VTC Awards for Fifth Consecutive Year



圖1



圖2



圖3

機電工程署見習技術員繼2009、2010、2011及2012年連續四年奪得職業訓練局（職訓局）每年舉辦的「傑出學徒及見習員獎勵計劃」獎項後，2013年再奪此獎：見習二級技術員吳序強先生（圖1中間）榮獲「傑出學徒」獎項，見習一級技術員潘孝文先生（圖2中間）奪得「優異學徒」獎項，而見習二級技術員李日昇先生（圖3左面）在「最佳汽車學徒」比賽中，是六名優勝者之一。EMSD technician trainees won the annual Outstanding Apprentice/Trainee Awards organised by the Vocational Training Council (VTC) again in 2013, after winning them for four consecutive years in 2009, 2010, 2011 and 2012. Mr Nick Ng Chui-keung, Technician Trainee II (middle in photo 1) won the Outstanding Apprentice award; Mr Poon Hau-man, Technician Trainee I (middle in photo 2) won the Apprentice of Excellent Performance award; and Technician Trainee II, Mr Lee Yat-sing (left in photo 3) was one of six winners in the "Best Apprentice Competition".

傑出青年工程師優異獎 Young Engineer Merit Award



我們的業務發展部工程師吳家煒先生，在2014年3月18日香港工程師學會舉辦的第39週年晚宴上獲頒本年度「傑出青年工程師優異獎」。該獎項表彰吳先生在工程專業領域的卓越表現，以及在推動工程專業和服務社會方面的傑出成就。

Mr Gordon Ng Kar-wai, Engineer in our Business Development Division, received the Certificate of Merit of the Young Engineer of the Year Award 2014 at the 39th Annual Dinner of The Hong Kong Institution of Engineers on 18 March 2014. The Award recognises Mr Ng's consistent excellence in professional work and his remarkable achievements in developing the engineering profession and serving the community.

2013年公務員優質服務獎勵計劃：我們的優勝團隊

Civil Service Outstanding Service Award Scheme 2013: Our Winning Teams



電力法例部的「精益求精隊」於2013年公務員優質服務獎勵計劃中，在「監管/執行服務」組別中分別獲得銅獎及特別嘉許（誠信管理）獎兩個獎項。

The Continuing Improvement Team of the Electricity Legislation Division won the Bronze Prize and Special Citation (Integrity Management) Award of the Regulatory/Enforcement Service Award under the Civil Service Outstanding Service Award Scheme 2013.



一般法例部員工獲頒優異獎，表揚「註冊升降機及自動梯承辦商表現評級」制度對加強升降機和自動梯安全的貢獻。

Our General Legislation Division staff received the Meritorious Award in recognition of the contribution of our Registered Lifts and Escalators Contractors' Performance Rating System in enhancing lift and escalator safety.



我們為消防處設計的消防安全教育巴士廣受市民歡迎，消防處和機電工程署在2013年公務員優質服務獎勵計劃中贏得部門合作獎類別的優異獎。

The highly popular Fire Safety Education Bus, which we designed for Fire Services Department, has won both departments the Meritorious Award under the Partnership Award category of the Civil Service Outstanding Service Award Scheme 2013.

重點與前瞻 HIGHLIGHTS AND WAY FORWARD

重點

- 每名員工年內平均接受4.74日培訓。
- 為所有監工同事安排安全監工訓練，以加強工場安全。

Highlights

- Achieved an average of 4.74 annual training days per staff member.
- Arranged safety supervisor training for all works supervisors to improve safety performance.

前瞻


- 通過舉行各種促進職業安全及健康的活動，持續提高員工的安全意識。
- 努力達至每名員工平均每年接受最少4.5日培訓的目標。
- 於2014/15年度進行的下一次員工滿意度調查，爭取提高員工滿意度。

Way Forward

- Continue to improve staff safety awareness through various occupational safety and health promotional programmes.
- Aim to accomplish at least 4.5 training days per staff member per year on average.
- Strive to raise the Staff Satisfaction Index in the next Staff Satisfaction Survey, to be conducted in 2014/15.

全球報告倡議組織指標索引

GRI Indicator Index

指標 INDICATORS	全球報告倡議組織指標編號 GRI REFERENCE	頁數 PAGE REFERENCE
策略及分析 Strategy and Analysis	1.1 – 1.2	02 – 05
機構簡介 Organisational Profile	2.1 – 2.10	06, 60, 114 – 116
報告規範 REPORT PARAMETERS		
報告概況 Report Profile	3.1 – 3.4	98
報告範圍及界限 Report Scope and Boundary	3.5 – 3.11	98, 137
全球報告倡議組織內容索引 GRI Content Index	3.12	137
認證 Assurance	3.13	139
管治、承諾及參與度 GOVERNANCE, COMMITMENTS AND ENGAGEMENT		
管治 Governance	4.1 – 4.2, 4.4	06 – 13, 60 – 67
與持份者溝通 Stakeholder Engagement	4.14 – 4.16	122 – 133
管理方針及績效指標 MANAGEMENT APPROACH AND PERFORMANCE INDICATORS		
經濟 Economic	經濟績效 Economic Performance	EC1, EC3 
環境 Environmental	物料 Materials	EN1, EN2 111, 138
	能源 Energy	EN3, EN5, EN6 103 – 104, 110, 113
	水 Water	EN8 110, 138
	排放物、污水及廢棄物 Emissions, Effluents and Waste	EN16, EN18 112, 138
	產品及服務 Products and Services	EN26 102 – 109
	交通運輸 Transport	EN29 112
社會 Social	勞工措施及合理工作 Labour Practices and Decent Work	
	– 僱用 Employment	LA1 114 – 116
	– 職業健康與安全 Occupational Health & Safety	LA6, LA7 117 – 119
	– 培訓與教育 Training and Education	LA10, LA11 115 – 116, 134
	– 多元化與平等機會 Diversity & Equal Opportunity	LA13 114
	人權 Human Rights	
	– 結社自由與集體談判權 Freedom of Association & Collective Bargaining	HR5 120
	社會 Society	
	– 社區 Community	SO1 103 – 109, 122 – 128
	產品責任 Product Responsibility	
	– 產品及服務標籤 Product & Service Labelling	PR5 103

 請參閱《機電工程營運基金二零一三至一四年報告》單行本內之財務報告，該報告已上載至機電工程署網站。

Please refer to the Financial Report in the separately published Electrical and Mechanical Services Trading Fund Report 2013/14 which is available in EMSD website.

如欲取得更多關於全球報告倡議組織指標的資料，請瀏覽網站 www.globalreporting.org
For more information about the GRI indicators, please visit the website www.globalreporting.org

統計資料摘要

Summary of Statistics

資源 RESOURCE	2011/12	2012/13	2013/14
電力 (千瓦小時) # Electricity (kWh) #	12 872 172	12 960 001	13 713 616
煤氣 (兆焦耳) Towngas (MJ)	137 808	131 760	223 728
水 (立方米) Water (m³)	53 897	46 168	49 912
柴油 (升) Diesel (l)	102 482	106 298	285 444
汽油 (升) Gasoline (l)	472 855	437 780	370 354
紙張 – A3、A4 (令) Paper – A3, A4 (ream)	27 587	27 245	26 992
油漆及溶劑 (升) Paint & Solvent (l)	27 947	20 273	20 057
潤滑油 (升) Lubrication Oil (l)	85 046	81 384	100 169
油脂 (公斤) Grease (kg)	1 674	1 464	1 708
製冷劑 (公斤) (例如R22及R134a) Refrigerant (kg) (e.g. R22 & R134a)	20 024	14 993	13 302
工業用氣體 (立方米) (例如氧、氬及乙炔) Industrial Gas (m³) (e.g. Oxygen, Argon & Acetylene)	921	844	751
蓄電池電解液 (升) Battery Electrolyte (l)	535	165	201
原子車胎 (條) Tubeless Tyre (no.)	9 668	10 361	10 656
外車胎 (條) Outer Cover Tyre (no.)	2 648	2 760	3 108
車胎內膽 (條) Inner Tube (no.)	1 549	1 663	1 975
廢氣、污水及廢物® EMISSIONS, EFFLUENTS AND WASTE®			
廢紙 (公斤) Waste Paper (kg)	18 476	24 475	18 365
碳粉盒 (個) Toner Cartridges (no.)	3 736	3 446	3 121
用罄電池 (公斤) Batteries (kg)	3 389	2 631	16 040
金屬廢料 (公斤) Metal Scraps (kg)	14 511	24 180	27 484
廢油 (升) Waste Oil (l)	101 675	94 576	93 216
舊車胎 (條) Used Vehicle Tyre (no.)	12 369	4 847	11 862
含水銀照明燈 (盞) Spent Mercury Lamp (no.)	145 073	119 359	126 146
員工 STAFF			
每千名員工的須予呈報意外宗數 Number of Accidents per 1 000 Staff (reportable)	3.36	4.77	5.59
員工滿意度 (以10分為滿分) Staff Satisfaction (out of a score of 10)	6.5	不適用 Not Applicable	不適用 Not Applicable
培訓 (平均培訓日數目標: 4.5日 / 每名員工) Training (average training targets: 4.5 days/staff)	4.62	5.44	4.74

不包括員工食堂和租用辦公室的電力消耗

® 有關的廢物由持牌承辦商收集，供物料循環再造或棄置

Electricity Consumption of canteen, rented offices not included

® The concerned wastes are collected by the licensed contractor for material recycling or disposal.

核實聲明

Verification Statement



範圍及目的 Scope and Objective

香港品質保證局已對機電工程署（下稱機電署）社會及環保報告2013/14（以下簡稱「報告」）的全部內容進行獨立驗證。該報告陳述機電署在2013年4月1日至2014年3月31日於可持續發展方面的表現及成就。核實組成員沒有參與編制報告的數據和資料。

此核實聲明的目的是對外保證此報告所記載之內容為完整及準確。

Hong Kong Quality Assurance Agency (HKQAA) was commissioned by Electrical and Mechanical Services Department (hereinafter referred to as "EMSD") to undertake an independent verification of the Social and Environmental Report 2013/14 (hereinafter called "the Report"). The Report stated EMSD's sustainability performance and efforts made for the period from 1st April 2013 to 31st March 2014. The verification team did not partake in the compilation of the data and information of the Report.

The aim of this verification was to provide assurance on the completeness and accuracy of the information stated in the Report.

方法 Methodology

核實工作是依據目前的最佳核實方法執行，以下為評估此報告的準則：

- 遵守社會及道德問責學會(Institute of Social and Ethical AccountAbility)AA1000保證標準所定的完整性、準確性、中立性、可比性及回應性的原則；及
- 全球報告倡議組織(GRI)的可持續發展報告指南3.1版本

核實的程序包括審閱相關之文件、與負責編製報告的代表面談及選取報告內具有代表性的數據和資料進行查核，並徹底審查所選樣本的根本數據及證據。

The process used in this verification was based on current best practices. The Report was reviewed based on the following criteria:

- The principles of completeness, accuracy, neutrality, comparability and responsiveness, as set out in the Institute of Social and Ethical AccountAbility standard AA1000, and
- The Global Reporting Initiative (GRI) G3.1 Guidelines.

The verification procedure included reviewing relevant documentation, interviewing responsible personnel with accountability for preparing the Report and verifying the selected representative sample of data and information consolidated in the Report. Raw data and supporting evidence of the selected samples were thoroughly examined.

結論 Conclusion

基於是次的核實結果，香港品質保證局確定報告所載的資料，能對機電署在社會及環保方面的表現，作出相關及完整的披露；核實組確認報告是根據事實記錄而編寫，其陳述的資料準確無誤。此報告公平和如實地載述了機電署各項與社會及環保有關的措施、目標、進度及表現。

核實組已分別地向機電署就將來的可持續發展報告在結構及內容方面可改進的地方提出了建議，這些建議並沒有影響核實組對報告的意見。

Based on the outcome of the verification process, the verification team determined that the information presented in the Report provided a material and complete representation of the performance of EMSD in the context of sustainable development. The verification team confirmed that the Report was prepared based on factual statements and that the data contained within the Report are accurate. It is a fair and honest representation of initiatives, targets, progress and performance on EMSD's social and environmental achievements.

Opportunities for improvement on the reporting structure and contents are separately submitted to EMSD for their consideration on the compilation of future sustainable development reports. It does not affect our opinion on the Report.

香港品質保證局

Signed on behalf of Hong Kong Quality Assurance Agency

譚玉秀
策略業務助理總監
2014年10月

Jorine Tam
Assistant Director, Strategic Business
October 2014