

社會及
Social & 環保
Environmental
Report 報告
2011/12





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關於本報告

這是機電工程署的環保年刊，報告了我們年內在環保、社會和經濟方面的表現。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中所肩負的角色。

範圍

本報告涵蓋機電工程署由2011年4月1日至2012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，涵蓋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指引》編寫。全球報告倡議組織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。

About this Report

This is the annual publication of the Electrical and Mechanical Services Department (EMSD) reporting on its annual performance in environmental, social and economic aspects. This report also serves as a communication platform between EMSD and its stakeholders regarding 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 2011 to 31 March 2012. 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 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.



關於機電工程署 About EMSD

我們的抱負、使命和信念 Vision, Mission and Values

規管服務

抱負

成為促使香港在機電安全及善用能源方面，都達到世界首要都會水平的政府機構。

使命

確保機電及能源科技均以安全、可靠、經濟及環保的方式得以善用，並藉此促進社會的安全及提升生活質素。

信念

專業才能
誠信
可靠
承擔

Regulatory Services

Vision

To be the government agency that makes Hong Kong a top-ranking city in E&M safety and in the utilisation of energy.

Mission

To enhance the safety and the quality of life of our community by ensuring that E&M and energy technologies are harnessed in a safe, reliable, economical and environment-friendly manner.

Values

Expertise
Integrity
Reliability
Commitment

營運服務

抱負

致力提供優質機電工程服務，精益求精，以提升市民的生活質素。

使命

- 客戶
提供優質的工程方案，以滿足客戶的需要。
- 員工
建立一支卓越的員工隊伍，並維持和諧的工作環境。
- 部門
掌握科技發展和流程改善，以提供更佳服務。

信念

誠信
出色服務
關懷
以客為本
承擔

Trading Services

Vision

To improve the quality of life for our community through continuous enhancement of our electrical and mechanical engineering services.

Mission

- Customer
Providing quality engineering solutions to satisfy our customers' needs.
- Staff
Developing a competent workforce and maintaining a harmonious environment.
- Organisation
Keeping pace with technology development and process improvement for service enhancement.

Values

Integrity
Service excellence
Caring
Customer focus
Commitment

部門簡介

機電工程署有兩大職能。我們的規管服務透過執行電氣、機械、氣體工程、鐵路安全及能源效益法例和推廣公眾安全教育，保障市民的安全和提高能源效益。此外，根據「管制計劃協議」，規管服務也負責監管電力公司的技術表現及發展計劃。與此同時，我們的營運服務，即機電工程營運基金（營運基金），為本港各政府部門及公營機構提供電氣、機械、電子工程及屋宇裝備服務。

為確保本港的機電安全，規管服務出版各種指引和實務守則，並執行有關安全使用氣體、電力、升降機及自動梯、鐵路、電車、山頂纜車及機動遊戲機等的條例。與此同時，為推動能源效益和保護環境，我們積極為客戶及市民提供服務和舉辦各種活動，並推行香港首條能源效益法例。我們亦就政府的環保措施給予廣泛的專業及技術支援，例如制訂不同的自願性及強制性能源效益計劃、就香港的可再生能源資源進行研究、編纂能源消耗數據、引進環保車輛以及擬定能源效益相關的法例。

在客戶服務方面，營運基金提供一站式的工程和維修增值服務，以確保本港許多正在使用的電氣、機械、電子及屋宇裝備系統能持續有效及環保地運作。我們為機場、醫院、學校、紀律部隊、運輸及公路、港口及海港、政府合署及法院大樓，以及公眾文娛康樂設施提供服務，這些機構及設施均與香港市民的生活息息相關。

Organisational Profile

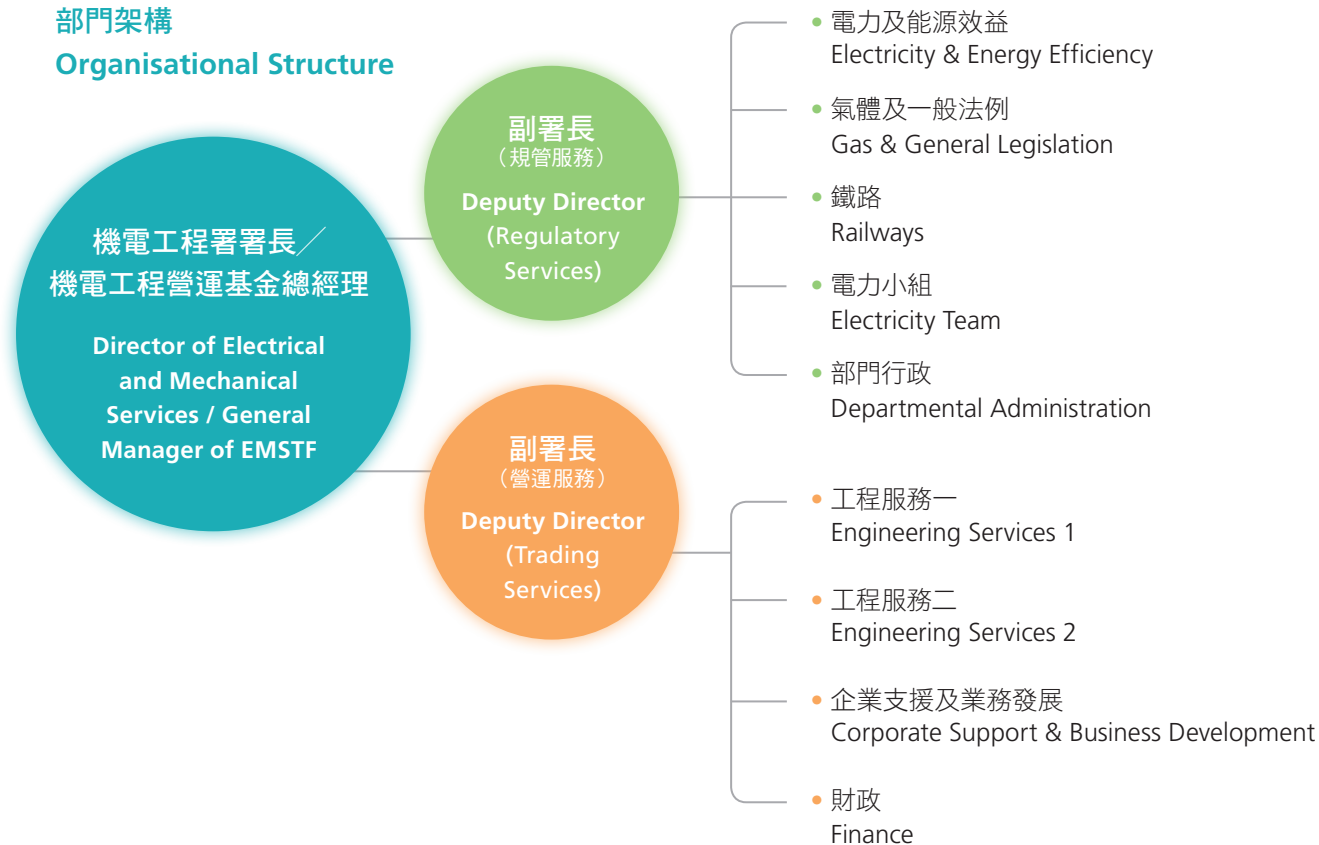
The Electrical and Mechanical Services Department (EMSD) plays a dual role. Our Regulatory Services (RS) ensures the safety of the public in electrical, mechanical and gas engineering areas, railway safety, as well as energy efficiency, via enforcement of safety and energy efficiency ordinances, and public education. Moreover, it also monitors the technical performance and development plans of the electricity supply companies under the Scheme of Control Agreements. At the same time, our Trading Services, known as the Electrical and Mechanical Services Trading Fund (EMSTF), delivers services in electrical and mechanical (EM), electronic engineering (EE) and building services (BS) to government departments and public institutions in Hong Kong.

To ensure E&M safety for the community, the RS issues Guidelines and Codes of Practice and administers various safety ordinances on the safe use of gas, electricity, lifts and escalators, railways, tramways, peak tram and amusement rides, among others. At the same time, we are actively involved in promoting energy efficiency and the protection of the environment through services and activities for our customers and the community, as well as administering Hong Kong's first energy efficiency ordinance. We also give extensive professional and technical support to the Government's environmental initiatives in the form of various voluntary and mandatory energy efficiency schemes, studies on renewable energy sources in Hong Kong, compilation of energy consumption data, introduction of ecofriendly vehicles, and preparation of energy efficiency related legislation.

In serving our customers, the EMSTF provides one-stop value-added engineering and maintenance services to ensure that the EM, EE and BS systems that keep Hong Kong up and running continue to do so effectively, efficiently and in an environmentally-friendly manner. We serve the airport, hospitals, schools, security forces, transport and highways, port and harbour, government offices and law court buildings as well as public recreation and leisure facilities, areas that make up the very fabric of life in Hong Kong.

部門架構

Organisational Structure



企業管治

機電工程署是香港特別行政區的一個政府部門，有明確的組織架構。企業管治架構詳列於下頁的圖。

我們的組織運作受各種法例、政策、通告和指引所規範。規管服務的運作由下列法例所規管：

- 《公共財政條例》
- 財務及會計規則
- 規管機電工程署在電氣、氣體、機械和鐵路安全，以及能源效益方面的管制和執法工作的相關法例

Corporate Governance

EMSD is a government department of the Hong Kong Special Administrative Region (HKSAR) with a clearly defined organisational structure. The structure for corporate governance is depicted in the figure on the next page.

Various legislation, policies, circulars and instructions are in place to govern our organisational practices. For the Regulatory Services, its operation is governed by the following:

- Public Finance Ordinance
- Finance and Accounting Rules
- Relevant legislations governing EMSD's regulatory and law enforcement work in electrical, gas, mechanical and railway safety as well as energy efficiency

以下是一些規管營運基金業務運作及活動的主要法規：

- 《公共財政條例》
- 《營運基金條例》
- 機電工程營運基金概要協議
- 財務及會計規則

機電工程署除了向有關的決策局負責外，亦受立法會、申訴專員、審計署署長的獨立監督。

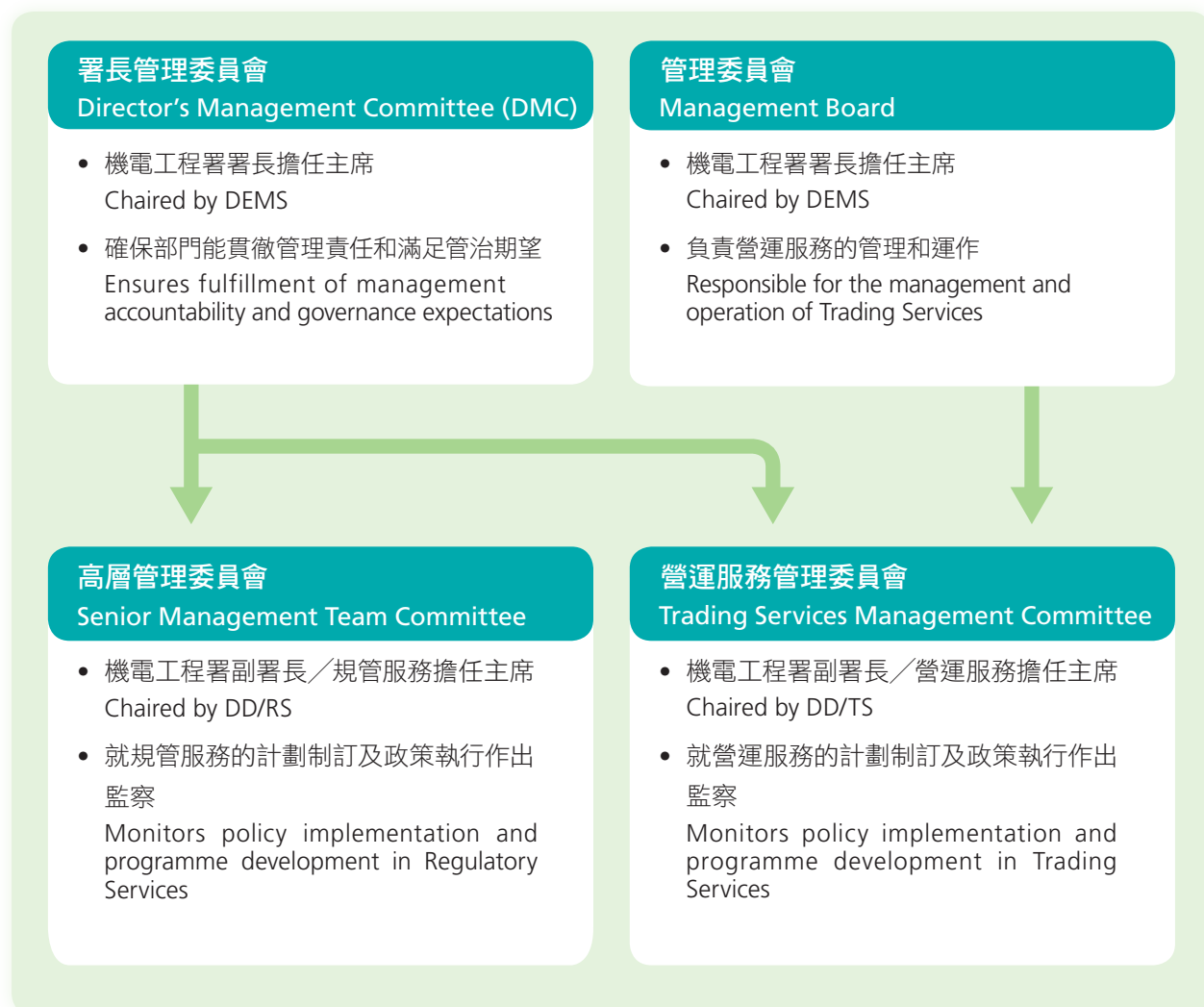
The operation of EMSTF business and activities are governed by:

- Public Finance Ordinance
- Trading Funds Ordinance
- EMSTF Framework Agreement
- Finance and Accounting Rules

In addition to the relevant policy bureaux to which EMSD is accountable, our operations are also subject to independent monitoring by the Legislative Council (LegCo), the Ombudsman and the Director of Audit.

機電工程署

Electrical and Mechanical Services Department



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》、《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，維持本港工程專業的高水平。

Stakeholder Engagement

As a government agency, our stakeholder groups include customers, 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 for their different needs. Our communication channels include annual reports, websites, publications such as E&M Safety Newsletter, Electricity News, Gas Safety Bulletin, EnergyWits, VoiceLink and GroupVoice, 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 upkeep the high standards of the engineering profession in Hong Kong.

我們於2011/12年度為下列主要持份者舉行了多項活動：

公眾人士

- 為各類機構/學校舉行220場講座或探訪，宣傳能源效益及節能
- 為多個機構舉行30場簡報會，宣傳新的《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
- 舉行了66次外展講座，而機電工程署教育徑也接待了188個參觀團，共約7,900位訪客，向各機構和學校宣傳能源效益和節能
- 為全港幼稚園、小學及老人中心安排339次外展講座，向約5萬位參加者宣傳電力安全
- 走訪181家幼稚園，講解機動遊戲機、升降機和自動梯的安全使用方法，有26,000名以上學童參加
- 於2011年舉行64次學校展覽，宣傳強制性能源效益標籤計劃
- 於2011年7月及9月兩輪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2011年5月，就用水效益標籤計劃及強制性與自願性能源效益標籤計劃，舉行兩次聯合簡介會
- 於2011年8月8日及11月7日就能源效益、節能與節能駕駛，舉行兩場公開研討會

The following major stakeholder engagement activities were held in 2011/12:

Public at large

- 220 talks and visits were delivered / organized to promote energy efficiency and conservation for organizations / schools
- 30 presentations were delivered to various organizations for promotion of the new Buildings Energy Efficiency Ordinance on mandatory implementation of building energy code and energy audit
- 66 outreach talks and 188 visits with about 7,900 visitors to the Education Path of EMSD HQs were delivered / organized to promote energy efficiency and conservation for organizations / schools
- 339 visits were delivered to kindergartens, primary schools and elderly centres with about 50,000 participants for promoting electrical safety
- 181 kindergartens (over 26,000 students participated) were visited to promote safe use of amusement rides and lift & escalator
- 64 school exhibitions on Mandatory Energy Efficiency Labelling Scheme (MEELS) were conducted in 2011
- 2 rounds of full-scale publicity visits to relevant retailers were conducted in July and September 2011 to promote 1st and 2nd phases of MEELS
- 2 joint briefing sessions on Water Efficiency Labelling Scheme and MEELS (both mandatory and voluntary) were conducted in May 2011
- 2 public seminars on energy efficiency & conservation and eco-driving were held on 8 August and 7 November 2011

- 於2011年6月28日為能源效益技術聯絡小組舉行「能源效益及節能項目與活動」研討會，參加者包括公營機構及政府部門
- 由2011年8月12日至11月11日進行「限制銷售能源效益較低的鎢絲燈泡」的公眾諮詢，並於公眾諮詢期間為多個機構、傳媒與諮詢委員會舉行7次簡介會
- 就自願性能源效益標籤計劃將會涵蓋的新電器產品，與工作小組成員及業界人士於2011年11月及2012年1月舉行兩次會議
- 為業界人士就《供電電纜（保護）規例》的要求，舉行31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
- 為業界及區議會等舉行33場氣體安全簡介會
- 為1,500多位業界代表、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12場簡介會、技術及安全講座與研討會

- Forum on Energy Efficiency and Conservation Projects & Initiatives was held on 28 June 2011 for members of Liaison Group on Energy Efficiency Technologies, comprising public organizations and government departments
- A public consultation on "Restricting of Sale of Energy-inefficient Incandescent Light Bulbs" was held from 12 August to 11 November 2011. 7 briefings were delivered to various organizations, media and advisory committees during the public consultation period
- 2 meetings were held with task force members and trade members for the preparation of new appliance under Voluntary Energy Efficiency Labelling Scheme in November 2011 and January 2012
- A total of 31 safety talks and seminars on the requirements of Electricity Supply Lines (Protection) Regulation were delivered to the trade, inclusive of government works departments, consultants, contractors, competent persons, general site staff, etc.
- 33 briefings on gas safety to industry, District Councils, etc. were conducted
- 12 briefing sessions, technical and safety talks and seminars were conducted for over 1,500 trade representatives, lift / escalator owners, members of the incorporated owners and building management staff

我們的員工

- 部門於2012年1月6日及2月7日舉行了規管服務策略工作坊，而機電工程營運基金也於2011年4月8日及5月20日舉行了策略工作坊。此外，機電工程營運基金也於2011年11月3日及4日舉行了「未來之路」前瞻工作坊
- 部門的人力資源管理委員會於2011年6月30日、10月10日及2012年1月19日舉行會議，討論人力資源管理事項，及有關人力培訓與發展的宏觀課題
- 進行2011/12年度員工滿意度調查。調查隔年進行一次
- 於2011年11月及12月舉行3場署長簡報會
- 首長級人員到訪了179個場地，進行親善探訪
- 於2011年10月31日 與部門11個工會舉行聯席會議
- 於2011年3月舉行兩場部門專業人員周年論壇
- 於2011年1月及2012年3月為部門外調的督察級、技術級及初級員工舉行周年論壇
- 員工福利組為抱恙或住院員工進行了4次家訪、46次醫院探訪、10次工作間探訪、236次電話問候及27次吊唁探訪

Our Staff

- Our Regulatory Services Strategy Workshop was held on 6 January 2012 and 7 February 2012. The EMSTF's annual Strategy Formulation Workshop was held on 8 April 2011 and 20 May 2011. An EMSTF Way Forward Workshop was held on 3 and 4 November 2011
- The Human Resource Management (HRM) Committee convened meetings on 30 June 2011, 10 October 2011 and 19 January 2012 to discuss HRM as well as Training and Development issues of wide concerns
- The Staff Satisfaction Survey, a biennial event, was conducted in 2011/12
- 3 sessions of Director's briefing were held in November & December 2012
- 179 ambassador visits were made by directorate officers to various venues
- A joint meeting with 11 staff unions of EMSD was conducted on 31 October 2011
- 2 sessions on Yearly Forum for professional staff was held in March 2012
- Yearly Forums for seconded inspectorate, technical and junior staff were held in January 2011 and March 2012
- 4 home visits, 46 hospital visits, 10 workplace visits, 236 goodwill phone calls and 27 condolence visits to sick or hospitalized staff were conducted by the Staff Welfare Unit

客戶

- 在2011年9月20日與香港郵政舉行客戶會議，以檢討我們的操作及維修服務，以及討論香港郵政轄下場地的節能措施和環保問題
- 在2011年10月6日與機管局舉行高層會議，檢討為機管局提供的維修保養服務和財務事宜
- 在2011年6月16日與民航處舉行會議，就營運基金為提供的操作及維修服務交換意見
- 在2011年4月28日、5月27日、6月30日、7月26日、8月30日、9月26日、10月27日及11月30日與消防處舉行高層座談會，以檢討服務表現和尋找新的商機
- 在2011年5月17日及12月15日與食環署舉行兩次高層會議，討論本港火葬場和骨灰龕業務的發展
- 與下列部門舉行高層會議：建築署（2012年1月13日）；土木工程拓展署（2011年9月19日）；香港天文台（2011年11月24日及2012年1月17日）；香港警務處（2011年12月21日）；運輸署（2011年5月18日）；工業貿易署（2011年9月22日）
- 安排與醫院管理局進行了多次親善探訪／高層座談會／工作層座談會等

Our Clients

- Client meeting with Hongkong Post was held on 20 September 2011 to review our Operation & Maintenance (O&M) services and discuss energy saving measures and environmental issues in Hongkong Post's venues
- High level meeting was held with Airport Authority Hong Kong (AAHK) on 6 October 2011 to review the maintenance services provided to AAHK and financial matters
- A visit to Civil Aviation Department was conducted on 16 June 2011 to exchange views on EMSTF's O&M services
- High Level Seminars were held with Fire Services Department to review service performance and explore new business opportunities on 28 April; 27 May; 30 June; 26 July; 30 August; 26 September; 27 October and 30 November 2011
- High level meetings were held with Food and Environmental Hygiene Department on 17 May 2011 and 15 December 2011 to discuss the development of crematorium and columbarium business in Hong Kong
- High level meetings were held with the following Government Departments viz. Architectural Services Department on 13 January 2012, Civil Engineering and Development Department on 19 September 2011, Hong Kong Observatory on 24 November 2011 and 17 January 2012, Hong Kong Police Force on 21 December 2011, Transport Department on 18 May 2011, Trade & Industry Department on 22 September 2011
- Various courtesy visits / high level seminars / working level seminars were conducted for Hospital Authority



署長的話 Director's Message



陳帆 太平紳士

Mr. Chan Fan, Frank, JP

“我們的目標，是成為實踐可持續發展的先進典範。”

“Our aim is to become a state-of-the-art showcase of sustainability.”

有關環境的種種討論，在香港非常熾熱，社會公眾尤其年輕一代對綠色生活、環保、能源效益及節能的關注與日俱增。

近年政府推出了大量措施，推動及鼓勵低碳生活。作為節能及能源效益的先驅，機電工程署樂於見到社會各界對低碳生活的支持日漸提高。我們會繼續努力，確保部門為社會提供的工程服務和規管服務，彰顯低碳減排的最佳做法。

本報告歸納了我們去年在環保、社會和經濟三方面的表現，也勾劃出我們的計劃和前瞻願景。在創造香港可持續發展環境的路上，希望大家與我們一起努力。

能源效益

我們的能源效益規管架構於2011/12年度有兩項重大發展，首先是2012年9月全面推行強制性能源效益標籤計劃第二階段。第二階段涵蓋洗衣機和抽濕機，把計劃涵蓋的產品種類增至總共5個。業界遵守強制性能源效益標籤計劃的程度一直很高，市民的反應也良好。我們會不斷檢討計劃，並考慮收緊評級要求。

另一項新發展，是《建築物能源效益條例》之下的《建築物能源效益守則》和《能源審核守則》已於2012年2月刊憲，為該條例於2012年9月全面實施而鋪路。《建築物能源效益條例》是本港首個規管建築物的能源效益法例，由於建築物佔本港總耗電量高達九成，條例對提高建築物能源效益預計會帶來深遠的正面影響。

低碳減排

除了規管工作，我們也在日常業務營運方面，致力締造一個低碳減排的環境。機電工程營運基金一直為客戶部門在機電系統的設計、採購、運作及維修保養各方面，提供工程方案及服務以加強能源效益、採用清潔能源和實行綠色採購。

舉些例子：我們為客戶採購混合動力車及電動車、在政府大樓安裝節能的照明及空調系統、及為冷卻塔安裝電磁去水垢系統。我們為客戶提供了大量工程方案，以改善環境和提高市民生活質素，以上只是其中數例。

The environment is a major topic of public debate and discussion in Hong Kong. There is increasing community concern in green living, environmental protection, energy efficiency and conservation, particularly among the younger generation.

The Government has embarked on numerous initiatives in recent years to facilitate and encourage low-carbon living. As a pioneer of energy efficiency and conservation in Hong Kong, EMSD is delighted to see increasing community support for the cause. We shall continue to ensure that all the engineering and regulatory services we provide to the community exemplify low-carbon and low-emission best practices.

This report summarises our environmental, social and economic performance in last year, and outlines some of our plans and aspirations going forward. We hope you will join us in creating a sustainable environment for Hong Kong.

Energy Efficiency

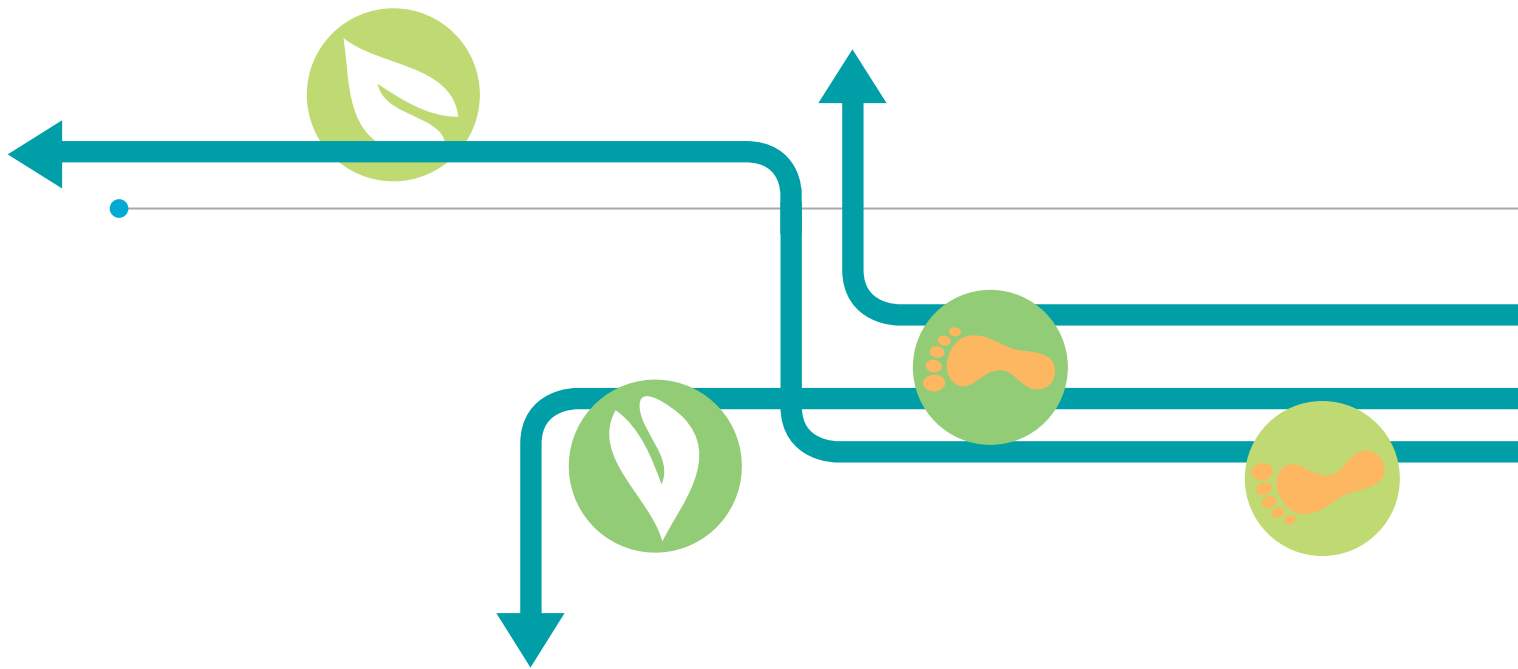
Our energy efficiency regulatory framework saw two major developments in the year 2011/12. One was the full implementation of phase two of the Mandatory Energy Efficiency Labelling Scheme (MEELS) in September 2012. This phase of the Scheme covers washing machines and dehumidifiers, bringing the total number of product types covered by the Scheme to five. Trade compliance to MEELS has been very high and community reception positive. We shall be constantly reviewing the Scheme and the possibility of tightening its grading requirements.

Regarding other new development, the gazetting of the Building Energy Code and Energy Audit Code Edition 2012 under the Buildings Energy Efficiency Ordinance in February 2012, paved the way for the full operation of the Ordinance in September 2012. As the first energy efficiency legislation governing buildings, the Ordinance is expected to have long-term positive effects in enhancing energy efficiency in buildings, which consume almost 90 per cent of all electricity consumption in Hong Kong.

Low Carbon Low Emission

Regulatory framework aside, fostering a low-carbon, low-emission environment is also a day-to-day commitment. Our Trading Services has been providing client departments with engineering solutions and services to optimise energy use, harness clean energy, and practise green procurement in every aspect of our E&M system design, procurement, operation and maintenance services.

Some examples are the procurement of hybrid and electric vehicles for clients, installing energy efficient lighting and high efficiency air-conditioning systems in government buildings, and installing magnetic de-scaling system for cooling towers. These are just a few of the many engineering solutions we provide to our clients to help improve the environment and the community's quality of life.



以身作則

作為政府部門，我們應該以身作則。我們的重點有三：關懷員工、維持高專業水平、以及服務社會。

提高工作安全，是我們對員工履行社會責任的重要任務。部門在2011/12年度，內部員工和承辦商職業安全都有出色表現，意外數字創新低。我們並不滿足，會繼續向各階層的員工加強工作安全的培訓和宣傳工作。

與此同時，員工培養、訓練、知識管理和招攬新血等，都是維持整體員工的幹練程度和活力的主要元素，部門正緊密部署在未來數年提升這幾方面的水平。

部門也會繼續鼓勵員工，為專業工程學會的工作作出貢獻，及參與社區服務和慈善活動。

感謝持份者

假如沒有持份者的支持和積極參與，我們不可能向低碳減排生活邁進。近年我們積極與其他公營機構、私人企業、業界、非政府機構、意見領袖及公眾人士緊密合作及討論，做出了一點成績。本報告不單闡釋了機電工程署在履行社會及環保責任方面的努力，亦是我們與各持份者交流的渠道之一。我們希望這份報告能引發新的意念和討論。

最後，我謹代表機電工程署再次向所有持份者致意。我們的工作以至這報告的出版，都有賴大家鼎力支持和鼓勵，謹此致謝。

陳帆
機電工程署署長



Leading by Example

As a government department, we should lead by example. Our focus is three-fold: being a caring employer, upholding the professional standards, and serving the community.

Workplace safety is a priority in discharging our social responsibility towards our employees. The year 2011/12 saw excellent performance in both in-house and contractor safety, with accident numbers at record low levels. We are not complacent and shall continue to step up workplace safety training and publicity across all levels of staff.

At the same time, staff capacity building, training, knowledge management and recruiting new blood are also vital to maintaining a competent and dynamic workforce, and the department is gearing up to achieve higher standards in each of these aspects in the coming years.

We will continue to encourage our staff to contribute to the work of professional engineering bodies, and to participate in community and charitable events and activities.

Thanks to Stakeholders

Our journey to achieve low-carbon, low-emission living is not possible without the support and active engagement of our stakeholders. In recent years much has been achieved via close cooperation and discussion with other public organisations, private sector companies, various trades, NGOs, opinion leaders and members of the public. This report describes EMSD's efforts in discharging its social and environment responsibilities, and is part of our ongoing dialogue with stakeholders. We hope it will trigger new ideas and discussions.

On behalf of EMSD, I wish to thank all our stakeholders once again for their support and encouragement, without which our work and this publication would not have been possible.

Chan Fan, Frank

Director of Electrical and Mechanical Services



挑戰和機遇 Challenges and Opportunities

可持續發展對機構的影響

香港作為國際都市，必須在發展快速的知識型經濟中維持經濟增長，並同時提高市民的生活質素。從可持續發展的角度來看，這表示機電工程署等機構必須以最有利生態環境的方式從事日常業務，俾能善用資源、盡量減少廢物和污染。同樣重要的是，我們必須妥善照顧員工、客戶及其他持份者的安全、健康和福祉。與此同時，我們也須尋找和充分把握可持續發展所帶來的商機。

對規管服務的影響

可持續發展對我們的規管服務，也帶來不容忽視的影響。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2007年在悉尼簽署的《亞太經合組織領導人關於氣候變化、能源安全和清潔發展的宣言》，並會以2005年的能源強度為基礎，致力在2030年前將能源強度降低至少25%。

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，並為此制定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，協助政府建立一個利便香港轉型為具能源效益及低碳經濟體的能源效益規管架構。

Impact of Sustainability on the Organisation

As an international city, Hong Kong must maintain its economic growth in a fast-paced knowledge economy while at the same time improve the quality of life for its citizens. From a sustainability perspective, this means that organisations such as EMSD must find the most eco-friendly way to conduct its daily activities so that resources are used in an optimal manner with the least possible waste and pollution. Equally important is that the safety, health and general well-being of its employees, customers and other stakeholders must be well taken care of. At the same time, we must also identify and make full use of business opportunities arising from sustainable development.

Impact on Regulatory Services

The impact of sustainable development on our Regulatory Services is no less significant. 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 APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development adopted in Sydney in 2007, and will seek to reduce at least 25% of energy intensity by 2030, with 2005 as the base year.

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 create an energy efficiency regulatory framework that is conducive to the transformation of Hong Kong into an energy efficient and low carbon economy.

由於政府陸續制定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。

對營運服務的影響

目前全球經濟持續不穩，或會令我們的收入出現波動，加上通脹和技術人力資源短缺可能會提高營運成本，這些都對我們的業務帶來隱憂。為此，我們已持續採取措施以審慎控制成本，並使用各種方法提升生產力，例如加強員工能力、更廣泛使用資訊科技，以及爭取與客戶部門簽訂更多長期服務水平協議，使業務更趨穩定。

至於商機方面，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日增，就是其中的明顯例子。政府致力推行環保建築綱領，所有局和部門需以2007/08年度為基礎，在2009/10年度至2013/14年度減省耗電量5%，也為我們的節約能源業務帶來更多商機。行政長官在二零一零至一一年施政報告也重申，期望在2020年，香港的碳強度可以由2005年的水平減少五至六成。最近通過的《建築物能源效益條例》及政府公布的應對氣候變化行動綱領，也勢必使客戶對能源效益服務的需求大增。整體來說，由於客戶部門愈來愈明白能源效益和節約能源對經濟和環境的好處，我們的能源管理業務長遠而言可望持續增長。

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 where appropriate state-of-the-art energy efficiency technologies into Hong Kong.

Impact on Trading Services

A potential threat to our service viability is the likely fluctuation in revenue as a result of continued instability in the current global economic climate, as well as the threat of inflation and shortage in skilled manpower that could add to our operating cost. In response, we have continued to take prudent cost control measures, stepped up productivity by various means such as enhancing staff competence and wider application of technology, reviewed and enhanced resource management, and secured more long-term service level agreements with client departments to add stability to our service.

As to opportunities, an obvious area is client departments' increasing demand for our energy management, energy saving and renewable energy project services. Further energy saving opportunities will also come from the Government's commitment to its Green Building Framework which aims to reduce electricity consumption in all bureaux and departments by a total of 5% from 2009/10 to 2013/14 against the base year of 2007/08. The Chief Executive has also reiterated in his 2010/11 Policy Address that he expects the carbon intensity in Hong Kong to be reduced by 50-60% by 2020, compared with the 2005 level. The newly enacted Buildings Energy Efficiency Ordinance and the release of the Government's climate change action agenda are set to create greater demand for energy efficiency services. Overall, the energy management service is likely to grow in the long run as client departments become increasingly aware of both the economic and environmental benefits of energy efficiency and conservation.

機構對可持續發展的影響

規管服務

機電工程署在多方面影響到可持續發展。我們的規管服務對可持續發展起着正面作用。我們執行能源效益法例，並通過各種計劃、推廣活動和獎項，推廣能源效益和更廣泛應用可再生能源。當中的重要例子包括電氣產品的自願性和強制性能源效益標籤計劃、空調系統使用淡水冷卻塔計劃、建築物能源效益註冊計劃，以及在《建築物能源效益條例》下實務守則的刊憲工作。年內，我們開展了廣泛的宣傳和教育工作，例如進行電視及電台宣傳、舉辦網上活動和設置網站、印製刊物、舉辦特別活動、為業界和市民舉辦講座和研討會等，以深化市民對具能源效益的生活方式的認識。

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、職安健管理系統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。我們就採購環保車輛為客戶提供技術意見和支援，並為他們提供日常維修服務。我們也為環境局提供技術支援以推廣建築物能源效益資助計劃，就私人樓宇的能源及碳排放綜合審計與能源效益資助申請項目進行評審。此外，我們亦支持環境局「環保午膳」計劃，為參與計劃的學校裝設相關的設施。

Organisation's Impact on Sustainability

Regulatory Services

EMSD makes an impact on sustainability in several ways. Our Regulatory Services makes a positive impact on sustainability via various schemes, promotional campaigns and awards to promote energy efficiency and the wider use of renewable energy, as well as the enforcement of energy efficiency related legislation. Notable examples are the voluntary and mandatory Energy Efficiency Labelling Schemes for electrical appliances, the Fresh Water Cooling Towers Scheme for Air-conditioning Systems and the Energy Efficiency Registration Scheme for Buildings, and gazetting of Codes of Practice under the Building Energy Efficiency Ordinance. Extensive publicity and education programmes such as TV and radio promotion, online activities and websites, publications, events, as well as talks and seminars are held for trades and the general public throughout the year to build awareness of an 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. We give professional advice and support to clients in the procurement of eco-friendly vehicles and provide on-going maintenance service. We also give technical support to the Environment Bureau to promote the Buildings Energy Efficiency Funding Schemes and vet applications from private buildings owners for partial subsidies to conduct energy-cum-carbon audits and energy efficiency projects. In addition, we support the "green lunch" initiative by providing necessary facilities in schools for the Environment Bureau.



重點與前瞻

Highlights and Way Forward

環境

重點

1. 強制性能源效益標籤計劃第二階段把涵蓋範圍擴大至洗衣機和抽濕機這兩個電氣產品類別，並已由2011年9月19日起全面實施
2. 於2011年6月14日推出為發光二極管而設的自願性能源效益標籤計劃
3. 《建築物能源效益條例》下的《建築物能源效益守則》和《能源審核守則》2012年版本已於2012年2月刊憲，而《建築物能源效益條例》已由2012年9月21日起全面實施
4. 於2011/12年度，機電工程署根據《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。我們於2011/12年度從841個淡水冷卻塔抽取了水樣本，根據測試結果，要求業主採取了《公眾衛生及市政條例》規定的改善工作
5. 啟德發展區的高能效區域供冷系統現正施工
6. 舉行亞太經合組織能源工作小組會議，就更廣泛使用電動車的策略和政策進行交流討論
7. 為客戶於2011/12年度完成84個節能項目，例如安裝節能照明和空調系統、及為冷卻塔安裝電磁去水垢系統等，預計完成後每年可減省耗電量約1,200萬千瓦小時

Environmental

Highlights

1. Phase two of the Mandatory Energy Efficiency Labelling Scheme extended the Scheme's coverage to two more types of electrical appliances, namely washing machines and dehumidifiers. Phase two began full implementation on 19 September 2011
2. A new Voluntary Energy Efficiency Labelling Scheme for LED lamps was launched on 14 June 2011
3. The Building Energy Code and the Energy Audit Code 2012 Editions, under the Buildings Energy Efficiency Ordinance were gazetted in February 2012. The Ordinance would come into full operation on 21 September 2012
4. With delegated powers under the Public Health and Municipal Services Ordinance (PHMSO), EMSD implemented new measures in 2011/12 to regulate contaminated fresh water cooling towers in order to reduce the potential public health risk of spread of Legionnaires' disease that might arise from them. In 2011/12, water samples from 841 fresh water cooling towers were taken, with rectifying action taken under PHMSO according to test results
5. Construction work for the energy efficient District Cooling System at Kai Tak Development was underway
6. Organised an APEC Energy Working Group conference to discuss strategies and policies to encourage the wider adoption of electric vehicles
7. Completed 84 energy efficiency projects, such as installation of energy efficient lighting, high efficiency air-conditioning system and magnetic de-scaling system for cooling towers in 2011/12 for Trading Services customers, with expected annual energy savings of almost 12 million kWh after completion.

環境

前瞻

1. 探討將強制性能源效益標籤計劃拓展至其他產品種類，及收緊空調機與冷凍器具的能源效益評級標準
2. 就自願性能源效益標籤計劃擴展至包括電磁爐，進行籌備工作
3. 為2012年9月實施《建築物能源效益條例》進行籌備工作
4. 根據《公眾衛生及市政條例》，於2011/12年度繼續抽驗約800個淡水冷卻塔的水樣本，並落實受污染淡水冷卻塔的規管工作
5. 繼續推行啟德發展區的區域供冷系統項目
6. 在未來數年繼續為客戶推展節能項目
7. 繼續減少用電，目標是以2007/08年度為基準，在2009/10年度至2013/14年度期間，把機電工程署轄下場地的每年耗電量減少共5%

Environmental

Way Forward

1. Explore extending the Mandatory Energy Efficiency Labelling Scheme to cover more product types, and review to tighten the energy efficiency grading standards of air-conditioners and refrigerators
2. Prepare for the extension of the Voluntary Energy Efficiency Labelling Scheme to cover induction cookers
3. Prepare for the implementation of the Buildings Energy Efficiency Ordinance that begins in September 2012
4. Continue to conduct annual water sampling of about 800 fresh water cooling towers and implement regulatory control of contaminated cooling towers under the PHMSO
5. Continue to implement the District Cooling System project at Kai Tak Development
6. Continue to implement energy saving projects for Trading Services customers in years ahead
7. Continue to reduce annual electricity consumption at EMSD venues by a total of 5% from 2009/10 to 2013/14 against the base year FY 2007/08

社會

重點

1. 安全表現出色，部門內部員工及承辦商意外數字創新低
2. 每名員工年內平均接受4.62日培訓
3. 所有管工均正接受了管工安全培訓，加強工場安全
4. 員工滿意度調查的整體滿意度達6.5，比上次調查為高
5. 於政府公務員事務局的「2011年公務員優質服務獎勵計劃」中連奪三個獎項
6. 三名學徒在職業訓練局的「2011年度傑出學徒/見習員獎勵計劃」中獲獎
7. 參與公益金百萬行步行和免費為大會提供後勤支援，包括起步點大球場內的機電系統和影音設施操作等

前瞻

1. 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
2. 努力達至每名員工平均每年接受最少4.5日培訓的目標
3. 於2013/14年度進行的下一次員工滿意度調查，爭取提高員工滿意度

Social

Highlights

1. Outstanding safety performance as in-house and contractor accident rate reached record low levels
2. Achieved an average of 4.62 annual training days per staff member
3. Safety supervisor training was being arranged for all works supervisors to improve safety performance
4. Staff Satisfaction Survey reported an overall satisfaction rate of 6.5 which showed improvement from the previous survey
5. Received 3 awards under the Civil Service Outstanding Service Award Scheme 2011 organised by the Civil Service Bureau
6. Three apprentices were recognized in the 2011 Vocational Training Council Outstanding Apprentice/Trainee Awards
7. Participated in the Community Chest's Walk for Millions and provided pro bono technical support for the electrical and mechanical systems and audio visual facilities

Way Forward

1. Continue to improve staff safety awareness through organisation of various occupational safety and health promotional programmes
2. Aim to accomplish at least 4.5 training days per staff member per year on average
3. Strive to raise the Staff Satisfaction Index in the next Staff Satisfaction Survey, to be conducted in 2013/14

經濟

重點

1. 營運基金財政表現良好，收入為43.18億元，收入回報率達11.8%，固定資產回報率為45.5%
2. 共批出總值超過19.4億元的物料供應及服務合約，支持本港經濟

前瞻

1. 作好準備，把握商機，配合客戶對能源管理、節約能源和可再生能源項目等不斷增加的服務需求
2. 繼續為客戶就各項基建發展提供支援
3. 為主要新項目，如船隻航行監察服務系統、新郵輪碼頭項目和啟德發展區的區域供冷系統提供技術意見

Economic

Highlights

1. Achieved positive financial performance with revenue of \$4,318 million, 11.8% Return on Revenue (ROR) and 45.5% Rate of Return on Fixed Assets for EMSTF
2. Supported the economy by letting out contracts totaling more than \$1.94 billion for the provision of goods and services

Way Forward

1. Prepare for new business opportunities arising from the increasing demand for our energy management, energy saving and renewable energy project services from clients
2. Continue to support clients in major infrastructure developments
3. Provide technical advice on new key projects such as the replacement of Vessel Traffic Services System, Cruise Terminal and District Cooling System at Kai Tak Development



環保表現

Environmental Performance

Creating sustainable development solution

締造可持續發展方案

環保責任

提升市民生活質素是機電工程署日常營運的基本原則之一。但是，在向客戶及市民提供服務的過程中，我們的運作亦會對環境造成影響。因此，我們的首要任務是避免污染環境，或在無法完全避免污染環境時，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，減少製造廢物及預防污染。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。

我們的環境管理歷程

我們為環保工作而推行的環境管理系統，多年來不斷改進。系統在九十年代中期開始推行，當時採用分散模式實行，各部份可微調其具體運作，同時符合國際認可標準和香港法例。

2000年，我們再向前邁進，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簡化，合併成一個綜合管理系統。2006年6月，我們更將環境管理系統提升至ISO 14001:2004版。2008年，規管服務的環境管理系統已擴展至鐵路科，即是說整個規管服務都已實施該管理系統。部門的慣例是定期檢討及更新環境管理系統，以確保符合ISO 14001及相關標準。

Environmental Responsibilities

One of the underlying principles of EMSD's operations is to enhance the quality of life of our community. However, our operations may also impact the environment in the course of rendering services to customers and the public.

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 (EMS) which has evolved over the years. First implemented in the mid-1990s, we adopted a decentralized approach so that each division fine-tuned their specific operations in accordance with the EMS while complying with internationally recognised standards and legislative requirements in Hong Kong.

In 2000, we took a step forward and became the first government agency to attain the ISO 14001 Corporate Certificate. In 2002, we streamlined our various management systems in quality, environment and occupational health and safety, and combined them into an Integrated Management System (IMS). In June 2006, the EMS was upgraded to include the updated ISO 14001:2004. In 2008, the EMS of Regulatory Services was extended to cover the Railways Branch such that EMSs are operating at all branches of EMSD. It has been a departmental practice to constantly and regularly review and upkeep the IMS to ensure that it conforms to the ISO 14001 and the related standards.

在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。

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》，成員國決定在2035年或之前，將能源強度進一步降低至45%的目標。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2011/12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階段已全面實施，涵蓋3類產品，即空調機、冷凍器具和緊湊型熒光燈（慳電膽）。計劃的第二階段拓展至另外兩類產品，即洗衣機和抽濕機，已於2011年9月19日全面實施。至2012年3底，計劃已有約4,600個表列產品型號。

In 2009/10, all OHSAS 18001 certificates under EMSTF were successfully updated to the 2007 version, and all individual divisions have also been upgrading their ISO 9001 system to the 2008 version since 2010/11.

Energy Efficiency Conservation Initiatives

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

The Asia-Pacific Economic Co-operation (APEC) Honolulu Declaration was announced at the APEC Leaders' Meeting held in Hawaii, United States in November 2011. Economies decided to raise the APEC-wide energy intensity reduction target to 45 percent 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 2011/12 to support Government's policy to step up energy efficiency and conservation.

Mandatory Energy Efficiency Labelling Scheme

The initial phase of the Mandatory Energy Efficiency Labelling Scheme, covering room air conditioners, refrigerating appliances and compact fluorescent lamps, has been fully implemented. The second phase of the Scheme extends the coverage to washing machines and dehumidifiers, and has also been fully implemented since 19 September 2011. 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 2012, around 4,600 product models have been listed under the Scheme.

《建築物能源效益條例》

《建築物能源效益條例》將於2012年9月21日全面實施。條例要求新建築物、重大裝修工程和商業樓宇的能源審核，均須符合《建築物能源效益守則》規定，並將於寬限期屆滿後執行。為了配合條例的全面實施，註冊能源效益評核人的註冊工作已經展開。由於法例涵蓋大部份政府建築物，營運基金的客戶也需要投放更多資源，加強轄下建築物的能源效益。

建築物能源效益資助計劃

機電工程署營運基金自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撥款4.5億元推展的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，製訂能源效益改善方案，並改善大廈的屋宇裝備設施，以提升能效表現。計劃將於2012年4月7日結束。

區域供冷系統

啟德發展區的區域供冷系統現正施工。一般而言，區域供冷系統的耗電量較傳統氣冷式空調系統減省達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。

Buildings Energy Efficiency Ordinance

The Buildings Energy Efficiency Ordinance will come into full operation on 21 September 2012. Requirements for compliance with the Building Energy Code in new buildings and major retrofitting works, and energy audit for commercial buildings as well, will be enforced after the current grace period. To support the full implementation of the Ordinance, registration of Registered Energy Assessors and preparation work for full implementation of the Ordinance are now in progress. As the Ordinance also applies to most government buildings, it will also drive EMSTF's client departments to pay more resources to enhance the energy efficiency of their buildings.

Building Energy Efficiency Funding Schemes

The EMSTF has been providing professional support to the Environment Bureau (ENB) 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. The Schemes will be closed on 7 April 2012.

District Cooling System

The District Cooling System (DCS) at the Kai Tak Development is under construction. In general, 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.

環保採購

環保採購是減少廢物、鼓勵廢物回收及循環再造的主要政策之一。政府早於2000年已修訂了採購規定，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。

我們積極採納了環保署第2/2012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。2011年，機電工程署3.54億元直接採購的貨品中，1,980萬元的貨品就是綠色採購單上的貨品。環保署有關每年綠色採購情況的2011年報告，將74個政策局／政府部門的綠色採購程度分為5組。報告顯示，機電工程署位列第三組，採購綠色產品達四至六成。

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。在2011/12年度，有125家供應商提供了環保綠色產品，機電工程署的供應商名冊也因應更新。

同時，我們也支援客戶落實能源效益及可再生能源項目，以及採購混合動力汽車和電動汽車等環保車輛。

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 (EPD) "green product specifications".

We play an active role in green procurement to adopt 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 2011, from the total amount of \$354M for direct purchase of goods in EMSD, \$19.8M was spent on purchases for the products on the green procurement list. A position report on Annual Green Procurement for the year 2011 prepared by EPD divided the extent of green procurement among the 74 Bureaux / Departments into 5 groups. As revealed in the report, EMSD was ranked in the 3rd group of having 40-60% in procuring green products.

We keep track of the offers from suppliers for the green contents of their products. We will 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 2011/12, 125 suppliers who were able to provide environmental friendly / green products were updated in EMSD Suppliers Lists for procurement of goods.

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

我們於2010年3月成立了環保採購工作小組，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圖書館，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

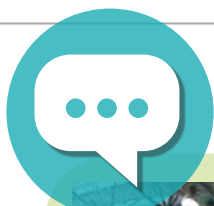
機電工程署的營運服務一直協助客戶發掘節省能源的機會及推行環保工程項目，以提高節能效益及更多使用可再生能源。我們於本年度為政府各政策局／部門完成了84個節能項目，例如獨立太陽能街燈、高能效太陽能熱水系統、為學校和政府大樓安裝慳水器材、以水冷式空調系統取代風冷式空調系統和安裝高效能無油離心式製冷機組等。預計這些新設備可每年減省耗電量約1,200萬千瓦小時。

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 product, 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 arm 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 84 energy efficiency projects for government bureaux and departments, such as installation of stand-alone solar street lights, high energy efficiency solar hot water systems, installation of water saving devices for schools and Government buildings, replacement of air-cooled chillers with water-cooled chillers, and installation of high efficiency oil-free centrifugal chillers. It is expected that annual energy savings of about 12 million kWh will be achieved from these new installations.



城門谷綜合泳館原有的400瓦特金屬鹵化物照明，已更換為200瓦特的電磁感應燈。

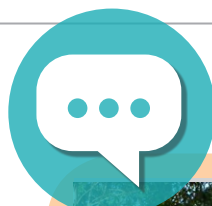
200W induction lamp high bay lights replaced 400W metal halide high bay lights at Shing Mun Valley Swimming Pool

城門谷綜合泳館綠色設施

在天花很高的場所，照明系統的維修保養往往有困難，成本又高，還有高空工作的潛在危險，因此電磁感應燈是個理想方案。機電工程營運基金於2011年5月，主動為城門谷綜合泳館將原有的400瓦特金屬鹵化物照明，更換為200瓦特的電磁感應燈。電磁感應燈以較低溫運作，光色更佳，光輸出穩定，壽命也較長。新照明系統較前省電51%，而照明平均度和照明水平也較前為佳。

Shing Mun Valley Swimming Pool Goes Green

Induction lamps are ideal for high ceiling applications where maintenance is difficult, costly and hazardous due to the need for working at height. EMSTF took an initiative in May 2011 to replace the existing 400W Metal Halide high bay lamps at Shing Mun Valley Swimming Pool with more energy efficient 200W induction lamps. Induction lamps operate at lower temperatures, maintain good colour rendering and stable light output and have long service life. The new lamps consume 51% less energy than before and provide better luminance uniformity and illuminance level.



太陽能發光二極管街燈。

Solar - powered LED street lighting

太陽能發光二極管美化河岸

民政事務署委託機電工程營運基金為梧桐河上游進行美化工程，沿上游2.6公里的河堤裝設了143支太陽能街燈。工程已於2011年8月完成，是以節能及可再生能源改善環境的另一例子。

Solar LED Lights Beautify River Bank

EMSTF was entrusted by the Home Affairs Department to beautify the Upper Ng Tung River embankment by designing and installing 143 post-mounted solar-powered LED lighting posts along a 2.6-km section of the river bank. Completed in August 2011, the project is another example of using energy saving and renewable energy solutions to improve our environment.



以發光二極管推動能源效益

政府承諾於2009/10至2013/14年間的5年內節省5%能源。為了讓客戶部門達標，機電工程營運基金的措施之一，是為政府物流服務署將現有的天井燈改為發光二極管燈，以節省能源。

政府物流服務署大樓的天井燈一直都採用400瓦特金屬鹵化物照明。2011年夏天，機電工程營運基金將其更換為更具能源效益的125瓦特發光二極管，且不含水銀及紫外光，也不會發出過量熱能。跟原有的天井燈比較，發光二極管天井燈節能達七成，壽命也較長。

Leading Energy Efficiency Drive with LEDs

The Government is committed to achieving a 5% energy saving in five years from 2009/10 to 2013/14 at all public venues. To help client departments achieve the goal, one of EMSTF's initiatives was to replace existing high bay lights at the Government Logistics Centre with LED lights to save energy.

Until recently the building's storage facilities were illuminated with 400W Metal Halide high bay lights. In the summer of 2011, EMSTF replaced them with 125W LED which is more energy-efficient and mercury- and UV-free, require no warm-up and do not generate excessive heat. The LED high bay lights consume 70% less energy compared with the original high bay lights and have a much longer life.



政府物流服務署的卸貨區及二樓儲物區，均安裝了125瓦特發光二極管天井燈。

125W LED high bay lights are installed at the loading bay area and second floor storage area of the Government Logistics Centre



海水泵房內的電解產氯裝置。

Chlorine generator located at the sea water pump room

添馬集中式海水冷卻系統

我們為添馬新政府總部大樓安裝了最先進的中央海水冷卻系統，大大提升了添馬空調設施的能源效益。系統有強力的過濾設施，阻擋海水中的沉澱物和廢物侵蝕冷凍機組。系統也能監察和控制排放海水的溫度和氯化物含量，確保符合環保法例。



添馬新政府總部大樓的中央冷凍機房。

Plant room located at new Central Government Offices at Tamar

Central Sea-water Cooling System at Tamar

A state-of-the-art Central Sea Water Cooling System installed at the new Central Government Offices at Tamar has greatly enhanced energy efficiency of the air-conditioning facilities at Tamar. The cooling system features powerful filters to ensure sediments and wastes of all sizes in the sea water are blocked from the chiller. It monitors and controls the temperature of discharged sea water and chlorine content to ensure compliance with environmental legislation.



新的《建築物能源效益守則》及《能源審核守則》
以配合《建築物能源效益條例》



New Building Energy Code and Energy Audit Code
for the Buildings Energy Efficiency Ordinance

能源效益新實務守則刊憲

兩份有關《建築物能源效益條例》的新實務守則，分別為《建築物能源效益守則》和《能源審核守則》，已於2012年2月刊憲。

《建築物能源效益守則》和《能源審核守則》2012年版本，為《建築物能源效益條例》於2012年9月開始的全面推行訂定了技術規定，要求比早期版本嚴格。《建築物能源效益守則》為《建築物能源效益條例》所訂明的4類屋宇裝備裝置，指明能源效益標準和規定，而《能源審核守則》則為能源審核訂出技術規定。我們就兩份新守則為業界舉行了一系列簡介會，也向營運基金客戶部門解釋了新守則，及其轄下的場地和設施應如何符合守則。

New Codes of Practice on Energy Efficiency Gazetted

Two new codes of practice relating to the Buildings Energy Efficiency Ordinance (BEEO) were gazetted in February 2012, namely the Code of Practice for Energy Efficiency of Building Services Installation, also known as the Building Energy Code or BEC, and the Code of Practice for Building Energy Audit, also known as the Energy Audit Code or EAC.

The BEC 2012 and EAC 2012 provide technical requirements to support the full implementation of the BEEO in September 2012, with more stringent requirements than earlier versions and took immediate effect.

The BEC specifies the energy efficiency standards and requirements for the four key types of building services installations prescribed in the BEEO, while the EAC sets out the detailed technical requirements in respect of energy audits under the BEEO. A series of briefings were organised for the trade on the new codes. Client departments of EMSTF were also briefed on the codes as well as compliance requirements at clients' plants and premises.

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。2011/12年度，機電工程署派員參加了多個地區性和國際性會議，較重要的如下：

- 2011年12月在馬來西亞舉行的「亞太經合組織／東盟能源數據聯合工作坊」
- 2011年5月在加拿大溫哥華舉行的「亞太經合組織能源工作小組第41次會議」
- 2011年10月在中華台北舉行的「亞太經合組織能源工作小組第42次會議」
- 2011年11月在南韓舉行的「亞太經合組織能源效益及節能專家小組第38次會議」
- 2012年2月在澳洲舉行的「亞太經合組織能源效益及節能專家小組第39次會議」
- 2011年10月在香港舉行的第四屆香港照明學會「國際照明研討會」

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 2011/12, EMSD representatives attended a variety of regional and international conferences and meetings, and the key ones are as follows:

- The ASEAN/APEC Joint Workshop on Energy Statistics, December 2011, Malaysia;
- The 41st Meeting of APEC Energy Working Group (EWG41), May 2011, Vancouver, Canada
- The 42nd Meeting of APEC Energy Working Group (EWG42), October 2011, Chinese Taipei
- The 38th Meeting of the APEC Expert Group on Energy Efficiency and Conservation, November 2011, South Korea
- The 39th Meeting of the APEC Expert Group on Energy Efficiency and Conservation, February 2012, Australia
- The 4th CIE(HK) International Lighting Symposium, October 2011, Hong Kong

節約營運資源

水電煤氣

下表載列機電工程署的水、電和煤氣使用情況。2011/12年度的用電量較2010/11年度增加1.5%，主要是因為企業數據中心的服務需求增加。如果排除因服務需求增加這因素，用電量則比2010/11年度減少10.8%。至於用水量，則較2010/11年度大幅增加26.7%，原因是年內機電工程署總部大樓進行活動的增多及加路連山物業租予其他政府部門供臨時用途，也導致額外用水。至於煤氣用量，則因焗爐於2012年2月至5月期間關閉，而比2010/11年度大幅下降。

電力 Electricity Consumption (‘000kWh)



主要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1.5%，如排除因為企業數據中心服務需求增加之因素，2011/12年度的用電量比2010/11年度減少10.8%。

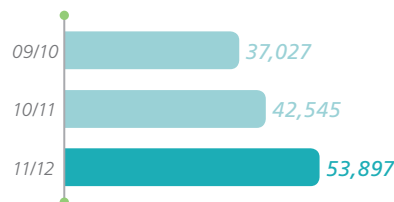
Major venues include our Kowloon Bay Headquarters (including Corporate Data Centre), Caroline Hill workshop, Fan Garden Vehicle Depot, Siu Ho Wan Vehicle Depot, and the EMSD workshop in the Air Mail Centre at Hong Kong International Airport. Electricity consumption increased by 1.5% compared to last 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 10.8% in electricity consumption.

Conservation of Operational Resources

Public Utilities

Electricity, water and town gas consumption at EMSD is shown in the graphs below. Electricity consumption in 2011/12 increased by 1.5% compared to 2010/11 mainly due to the increased service demand in the Corporate Data Centre. If the effect of such increased activities arising from service demand is excluded, there would be a net reduction of 10.8% in electricity consumption compared to 2010/11. Water consumption has a significant increase of 26.7% compared to 2010/11 due to the increase in activities in EMSD HQ and the usage from temporary occupancy of the Caroline Hill premises by other departments in the year. Town gas consumption reduced significantly compared to the consumption level in 2010/11 due to boiler shutdown between February to May 2012.

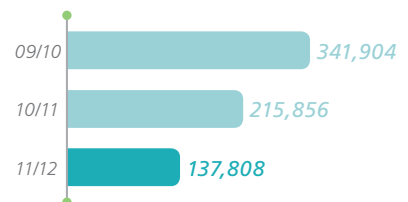
水 Water Consumption (m³)



主要用於空調、園藝灌溉、飲用和清潔等。年內用水量較2010/11年度大幅增加26.7%，原因是機電工程署總部大樓進行的活動增多及加路連山物業租予其他政府部門供臨時用途，導致額外用水。

Water is mainly consumed for air-conditioning, gardening, drinking and cleaning. Water consumption has a significant increase of 26.7% compared to 2010/11 which was due to the increase in activities in EMSD HQ and the usage from temporary occupancy of the Caroline Hill premises by other departments in the year.

煤氣 Towngas Consumption (MJ)



加路連山工場是使用煤氣供應熱水的主要場地。由於焗爐曾於2012年2月至5月期間關閉，因此2011/12年度的煤氣用量，相對2010/11年大幅下降。

Caroline Hill workshop is the major venue relying on town gas for water heating. Significant reduction was recorded in 2011/12 compared to 2010/11 due to boiler shut down between February - May 2012.

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物料，我們已盡量減少用紙量。2011/12年度的用紙量較原定上限少1.9%。由2001年起，我們已廣泛採用由循環再造纖維製成的環保紙。2011/12年度，環保紙佔部門總用紙量99%。原木紙只用於對外文件，而且盡量少用。我們在2011/12年度採購了3,164個碳粉盒，而由2005/06年度開始，我們已遵行政府措施，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 office. We make every effort to reduce our paper consumption. In 2011/12, paper consumption dropped by 1.9% compared to the set quota. Since 2001, we have adopted the extensive use of environment-friendly recycled paper made from recycled fibre. In 2011/12, 99% 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 3,164 toner cartridges in 2011/12 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 as much as 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 minimize 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變化的原因。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。2011/12年度，我們的運輸工具直接產生的二氧化碳約為1,412公噸，而通過耗電間接排放的二氧化碳則約為9,011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2012年3月31日，我們的車隊有240部車輛，包括貨車、客貨車、大型房車和電單車，供執行職務之用。此外，我們也為客戶部門的5,780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6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1部電動汽車，在未來幾年，電動汽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 and workshops, and transport. In 2011/12, direct emissions from our transport activities amounted to about 1,412 tonnes of CO₂ and our electricity consumption gave rise to about 9,011 tonnes of CO₂.

Transport

The use of transport in EMSD operations consumes non-renewable fossil fuels and generates GHG emissions. As of 31 March 2012, we have a fleet of 240 vehicles including lorries, vans, saloon cars and motorcycles to deliver our services, and at the same time maintain 5,780 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 transport 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 one electric vehicle. The number of hybrid 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2012年3月底，該系統已累積生產146萬千瓦小時的能源，減少的溫室氣體排放量相等於1,022公噸二氧化碳。

Photovoltaic System at EMSD Headquarters

The photovoltaic system is the signature feature of energy generation from nature in 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 2012 is 1.46 million kWh. The system has helped reduce GHG emissions equivalent to 1,022 tones of CO₂.



Being a good corporate citizen

良好企業公民

社會表現

Social
Performance



社會表現 Social Performance

社會責任

為客戶和市民締造綠色和健康的生活環境，只是我們眾多職責之一。作為關懷社會及負責任的企業公民，我們亦有義務為僱員及其他替我們工作的人提供安全健康的環境，同時遵守相關法例。作為政府部門，我們按香港特別行政區政府的政策框架行事，包括勞工及人權方面的事務。我們也受公務員事務局的行為守則規範，並依據法例提供平等就業機會。此外，我們也鼓勵員工積極參與不同的社區活動。

Social Responsibilities

Our responsibility is not limited to maintaining a green and healthy environment for our client departments and the public. As a caring and responsible corporate citizen, we also have the obligation to provide a safe and healthy environment for our employees and other parties working for us, and to comply with the relevant laws and regulations. As a government department, we operate under the HKSAR Government policy framework, especially in labour and human rights issues. Governed by the Civil Service Bureau's codes of conduct, we also provide equal employment opportunities in accordance with the law. We also encourage our staff to participate actively in various community activities.

員工之僱用和發展

僱用

截至2011/12年底，我們共有5,302名僱員。我們承諾維護平等就業政策，目前有220名員工為輕度殘疾人士，佔員工總人數約4%。

Staff Employment and Development

Employment

At the end of 2011/12, we have 5,302 employees. As a commitment to upholding the equal opportunity employment policy, we currently have 220 employees with minor disabilities, representing about 4% of our total workforce.

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。

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.

在未來兩年，我們會透過發展部門「知識群組」以加強知識管理。

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

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，目的是確保本港能有足夠的受訓工程師，滿足業界的需要。在2011/12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17位見習工程師。

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 2011/12, we recruited 17 engineering graduates specialising in electrical, mechanical, electronics, building services, information technology and biomedical engineering.

學徒訓練計劃

技術員及技工學徒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及技工的需求。計劃推行50多年來，為業界培訓了超過4,500名學徒。在2011/12年度，我們招募了57名技工學徒和36名技術員學徒。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。

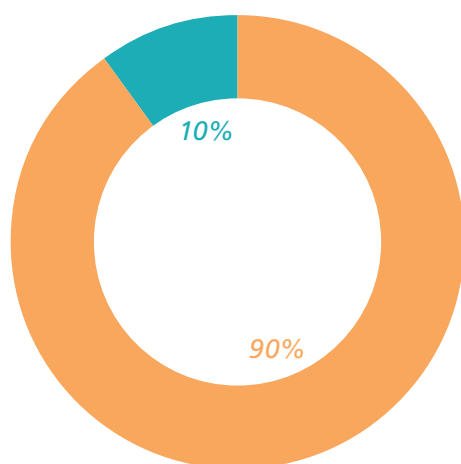
Apprentice Training Scheme

Another key training programme is our Technician and Craft Apprentice 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 4,500 apprentices for the profession. In 2011/12, we recruited 57 craft apprentices and 36 technician apprentices. Besides on-the-job training, we have sponsored the apprentices to attend craft certificate courses and higher diploma courses in the Institute of Vocational Education.

我們會於2012/13年檢討現有學徒訓練計劃，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。

To attract more young people to embrace the E&M trade through joining EMSD as apprentice, we will review the existing Apprentice Training Scheme in 2012/13.

按性別劃分 Breakdown by Gender

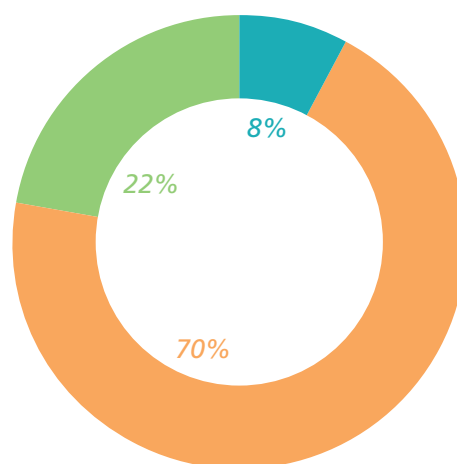


● 男性
Male

● 女性
Female

僱用人員: 5302名
*截至2012年3月31日
Strength: 5302
*As at 31 March 2012

按職級劃分 Breakdown by Grade



● 專業職系
Professional

● 技術職系
Technical

● 行政及輔助職系
Administrative and support

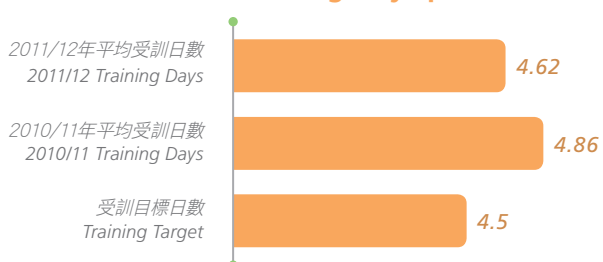
培訓目標

在2011/12年度，每名員工的每年平均受訓日數為4.62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。

Training Targets

In 2011/12, we achieved 4.62 training days per staff member per year on average, exceeding the 4.5 days target set for the year. We continue to encourage and provide training relevant to enhancing our services and developing new services, and to facilitate employees' career development.

每名員工每年受訓日數 Training Days per Staff



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，確保部門各部份的職安健都達致並維持在高水平。

我們的「職業安全及健康策導委員會」，由高層管理人員組成，負責製訂部門的職安健政策、檢討部門內部及承辦商的意外事故、及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，監察部門的職安健政策落實情況，及檢討職安健的宣傳活動。我們持續舉辦培訓及複修課程，並透過不同渠道發放職安健資料。

我們在2011/12年的安全表現相當出色，部門內部降至18宗意外，是歷來最低。承辦商意外數字降至9宗，是近十年第二低，同時也創了承辦商意外率的歷來新低。良好的成績，來自我們採取多管齊下的方式加強工作間安全，包括舉辦職安健比賽、由部門的安全專家進行密集的職業安全探訪及簡報會、及要求所有前線管工接受安全培訓等。這些措施不但使所有工作人員更安全，停工時間也相對減少，對客戶和社會都有好處。

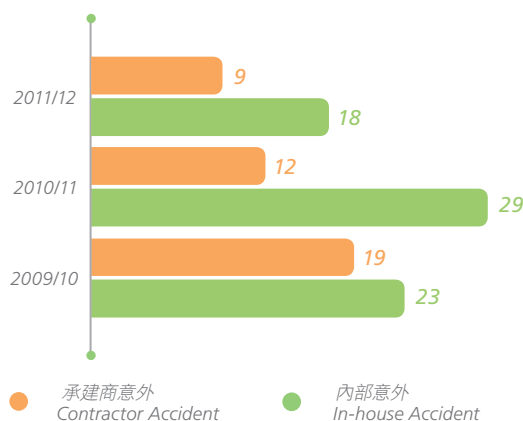
A Healthy and Safe Working Environment

Occupational Health and Safety

At EMSD, we attach 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 senior management staff, is set up in EMSD to formulate departmental OSH policies, review in-house and contractor accidents and oversee 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 monitor the implementation of departmental safety and health policies, and to review the implementation of OSH promotional activities. We have continued to arrange safety training and refresher courses, and disseminate safety information through various channels.

須呈報意外率
Reportable Accident Rate





部門也以各種職安健專題舉辦各項比賽，例如「零意外」、「最佳安全進步」、「找危害、齊參與」、「報告險失事故」、「最佳職安健改善個案」、「最佳辦公室整理」比賽和最佳海報設計比賽等。優勝的隊伍和部別均獲頒獎項，嘉許他們在職安健方面的出色表現。

此外，機電工程署的合約也加入了一系列額外條文以加強安全，包括要求嚴格執行《建築地盤安全手冊》和增加安全巡查，並將這些要求納入部門的《項目管理手冊》，要求項目負責人遵行。我們也為部門員工和承辦商舉辦多場簡報會，讓大家熟習各項新措施。

We have achieved outstanding safety performance in 2011/12. There were 18 in-house accidents, an all time low. At the same time, 9 contractor accidents were recorded, the second lowest number in the past decade and the all time low contractor accident rate. This was the result of a multi-pronged approach to enhancing workplace safety that included various occupational safety and health competitions, frequent site visits and staff briefings by our in-house safety experts, and mandatory safety training for all frontline supervisors. The benefit for clients and the community is improved safety for all personnel and reduced downtime. OSH competitions were held on themes such as Zero Accident, Safety Improvement, "We See, We Clear" and "Near-Miss Incident" Reporting, Best Safety Enhancement Project and Good Office Housekeeping, best poster design, etc. Awards were given to teams and divisions in recognition of their outstanding safety performance.

A series of enhanced measures were introduced in order to enhance safety in EMSD contracts. The measures, including strict enforcement of the Construction Site Safety Manual (CSSM) and increased safety inspection, were incorporated into the Project Administration Handbook for compliance by project officers. Briefing sessions had been held for staff and contractors to familiarize with the new measures.



機電工程署和機場管理局人員於頒獎禮合照。

EMSD and Airport Authority staff at the prize presentation ceremony

機場團隊獲安全獎項

機電工程營運基金的機場工程分部團隊在機場管理局舉辦的「工程及維修部承辦商安全運動」中，分別奪得「洞悉危機」比賽金獎和海報設計比賽亞軍兩個獎項。

機場工程分部團隊於2011/12年度也創出了零宗須呈報事故的佳績，原因是實施了多項有助加強工作間安全的措施，包括舉辦建立團隊工作坊、早會、突擊巡查、跨部別審查、季度培訓和安全工作行為計劃等。

Airport Team Clinches Safety Award

The EMSTF team at the airport won two awards in the Technical Services Department's Maintenance Contractor Safety Campaign organized by the Airport Authority (AA), taking gold award in the "Spot the Hazard" competition and earning a first runner-up prize for its poster design.

The airport team also achieved zero reportable incidents during 2011/12, thanks to various initiatives to reinforce workplace safety, including teambuilding workshops, morning briefings, surprise inspections, cross-divisional checks, quarterly refresher training and a work behavior safety programme.



政府飛行服務隊工作人員以往須以人手提起油槍。

Operators of the Government Flying Services had to hand carry the fuel hose in the past

油管牽引車減低人手操作風險

政府飛行服務隊的營救行動無可避免會有風險。為了減低飛行服務隊操作人員為飛機加油時，要拖動和提起達14公斤的油槍可能引致勞損和受傷的風險，機電工程營運基金提出改善建議，加強客戶的員工的操作安全。

方案內容是研製一架可調校油槍高度的油喉牽引車。政府飛行服務隊以往須調派至少兩名人員把沉重的油槍和油喉從油站拖到要加油的飛機，油槍如意外掉落地上，便會有漏油之虞。操作人員現可借助油喉牽引車，輕易地把油喉運到飛機停泊的位置，而油槍亦可穩妥放置在牽引車上，方便加油，令操作更安全有效。

Hose Trolley Reduces Manual Handling Hazards

When it comes to refueling of rescue aircrafts used by the Government Flying Service (GFS), it invariably poses a certain level of occupational hazard during its operation. The EMSTF has offered a solution to reduce the risk of injuries arising from the refuelling operation, which involves moving and lifting a 14 kg fuel hose. Our colleagues initiated a change that enhanced operation safety of GFS personnel.

This involved designing a fuel hose trolley with an adjustable height for the nozzle. In the past, at least two GFS staff members had to carry the heavy fuel dispensing nozzle and hose from the fuel station to the aircraft, and oil might leak if the nozzle was accidentally dropped onto the ground. With the fuel hose trolley, the fuel hose can now be easily wheeled to the aircraft and the nozzle securely positioned for refueling, making the operation safer and more effective.



油喉牽引車取代了人手提起油槍，降低職業意外風險。

Fuel Hose trolley reduces manual lifting and thus reduce occupational hazards.



員工設計職業安全海報

我們通過多種比賽和探訪，致力提高員工的職安健意識。圖為職業安全海報設計比賽的得獎作品。

Staff Design Safety Posters

We are committed to raising staff's awareness for occupational safety and health through various competitions and visits. The pictures show the winning designs of the poster competition.



亞軍作品
The First Runner-up



冠軍作品
The Champion



季軍作品
The Second Runner-up

員工病假

在2011/12年度，部門因員工放取病假而失去的工作天共17,061天，即相等於每名員工約3.22天。

Sick Leave

In 2011/12, a total of 17,061 working days were lost due to sick leave. This is equivalent to around 3.22 days per employee.

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4個部門協商委員會和5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。

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 organizational 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 is 6.5 (on a scale of 10), which is 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 / meetings are held with the EMSD staff unions to discuss issues of staff concern.

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。工程竣工後，我們會進行檢討，進一步評估承辦商的表現。

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月發出了《機電工程項目管理手冊》，並為負責合約管理的員工定期安排有關合約及承辦商管理、合約安全及誠信管理的工作坊。

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 customer 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.

To enhance our staff skill and integrity in managing the work of contractors and suppliers, the Project Administration Handbook for E&M Engineering Works was issued in July 2011 and regular workshops on contract and contractor management, contract safety and integrity management are arranged for staff responsible for contract management.

客戶

我們進行日常業務，尤其我們的營運服務，首要是令客戶稱心滿意。為此，我們委託獨立調查顧問公司每兩年進行一次客戶滿意度調查。最近一次的客戶滿意度調查將於2012年5月完成。我們會研究調查結果，並着手改進，務求令客戶更稱心滿意。下次客戶滿意度調查將於2014年年初進行。

規管服務方面，我們的客戶聯絡小組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，了解市民的機電安全和能源效益意識，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。以下是2011/12年度的重點活動。

Customers

Achieving customer satisfaction is a priority in our day-to-day service, particularly for our Trading Services. In this regard, we commission an independent research consultant to conduct Customer Satisfaction Survey once every two years to gauge customer satisfaction level. The most recent survey would be completed by May 2012. We will act upon the findings, aiming to further enhance customer satisfaction. The next survey will be conducted in early 2014.

As to Regulatory Services, our Customer Liaison Group meets 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 work 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. The following are highlights in 2011/12.



講者回答與會者問題。

Speakers answering questions from the delegates

政府部門研習能源效益知識

能源效益事務處於2011年7月底及8月初在香港中央圖書館，為各政府部門舉辦了三場「2011年度政府部門的能源消耗報告及監察」簡報會，有400多名政府部門代表出席。

簡報會的目的，是讓各政府部門的環保經理更深入瞭解能源消耗數據的重要性，及其有效的收集與應用方法，從而提高能源效益。講者包括政府產業處、兩電及煤氣公司代表，分別跟與會者交流經驗。

Government Departments Learn More About Energy Efficiency

Our Energy Efficiency Office held three briefings for government departments in late July and early August 2011 at the Central Library on the topic of "Government Departments' Energy Consumption Report and Monitoring 2011", attracting over 400 participants from various departments.

The briefings aimed to inform green managers in government departments about the importance of energy consumption data, its effective collection and application, as well as ways to enhance energy efficiency. Guest speakers from the Government Property Agency as well as the power and gas companies also shared their experiences.



綠色環保日各講者與主辦單位人員合照。

Speakers and organizers of the Green Day event taking a group photo

瑪嘉烈醫院綠色環保日

瑪嘉烈醫院於2012年1月舉行綠色環保日，機電工程營運基金及能源效益事務處代表，獲邀講述和分享有關節能和能源管理的經驗。出席的醫院員工對多種課題都很感興趣，例如對於電器用品在備用狀態下仍然耗能表示關注，並表示會在離開工作間前關掉所有辦公室設備。

Green Day at Princess Margaret Hospital

Representatives from EMSTF and the Energy Efficiency Office were invited to speak at the Princess Margaret Hospital Green Day held in January 2012 to share experiences in energy saving and energy management opportunities. Attendees from the hospital showed interest in a wide range of topics such as energy wastage of the stand-by power mode, and indicated they would switch off all office appliances when leaving the workplace.



能源效益事務處代表於研討會上，為物業管理公司講解《建築物能源效益條例》。

Staff of Energy Efficiency Office giving a seminar on Buildings Energy Efficiency Ordinance for Property Management Companies

管業公司建築物能源效益研討會

能源效益事務處於2012年3月為物業管理公司舉辦了一場研討會，介紹《建築物能源效益條例》的最新發展，反應相當踴躍。

Buildings Energy Efficiency Seminar for Property Management Companies

Speaker from our Energy Efficiency Office delivered a briefing on the latest development of Buildings Energy Efficiency Ordinance in a seminar held in March 2012 organised by EMSD. The seminar was well attended by the Property Management Companies.



出席「能源效益與節能項目及措施的實務分享論壇」的來賓有180多位。

More than 180 attendants participating in the Forum on Energy Efficiency and Conservation Projects and Initiatives for Practical Sharing

能源效益實務分享論壇

能源效益事務處聯同「節能技術聯絡小組」代表，於2011年6月28日舉辦了「能源效益與節能項目及措施的實務分享論壇」。六位來自聯絡小組成員機構的同事，包括香港房屋委員會、香港鐵路有限公司、水務署和機電工程署的代表，就能源效益與節能項目分享心得。



機電工程署員工與講者合照。

Speakers and EMSD staff taking a group photo

Forum to Share Energy Efficiency Experience

Representatives of our Energy Efficiency Office and members of the Liaison Group on Energy Efficiency Technology organised the "Forum on Energy Efficiency and Conservation Projects and Initiatives for Practical Sharing" on 28 June 2011. Six speakers from the Liaison Group including representatives from the Hong Kong Housing Authority, MTR Corporation, Water Supplies Department and EMSD shared their experience in energy efficiency and conservation measures.

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。

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 in order 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.

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、遊戲和問答比賽，以及為個別社會群組專門舉辦的講座及研討會等。

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 the needs of specific segments of the public.



出席亞太經合組織「電動車的能源及綠色運輸優點」研討會的150多名代表。

More than 150 delegates attended the "APEC Workshop on Energy and Green Transport Benefits of Electric Vehicles"

亞太經合組織電動車研討會

機電工程署於2011年10月協助舉辦了一個名為「電動車的能源及綠色運輸優點」的亞太經合組織研討會。研討會假香港科學園舉行，吸引了亞太經合組織的15個經濟體參加。大會並同時舉辦一個向公眾開放的電動車展覽。

研討會的另一重點活動，是安排與會代表參觀深圳的電動車廠及充電生產設施。

APEC Workshop on Electric Vehicles

EMSD helped organised the "APEC Workshop on Energy and Green Transport Benefits of Electric Vehicles" in October 2011. Held at the Hong Kong Science Park, it drew delegates from 15 APEC economies and included an exhibition of electric vehicles, which was open to the public.

A highlight of the workshop was bringing the APEC delegates to visit an electric vehicle plant and a charging facilities plant in Shenzhen.



技術研討會吸引了700多位參加者。

Attendants of more than 700 at the Technical Forum



署理助理署長／電力及能源效益王錫章先生於技術研討會上發言。

Mr. S C Wong, Acting Assistant Director/ Electricity & Energy Efficiency, speaking at the Technical Forum

淡水冷卻塔與建築物能源效益技術研討會

這一年一度的研討會於2011年11月舉行，吸引了700多名參加者。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，提供一個平台宣傳淡水冷卻塔的監管及實務事宜及推廣建築物能源效益。研討會就淡水冷卻塔的設計、安裝及維修方面進行了技術交流和分享經驗，並向與會者介紹《建築物能源效益條例》及其實施情況。

Technical Forum on Control and Practices of Fresh Water Cooling Towers and Buildings Energy Efficiency

This annual forum held by the Energy Efficiency Office in November 2011 attracted over 700 attendants. It provided a platform to promote the control and practices of fresh water cooling towers and buildings energy efficiency to the trade and stakeholders including building owners, property management companies, consultants and contractors. The forum has brought about sharing of practical experience in the design, installation and maintenance of fresh water cooling towers, promotion of wider use of energy efficient water-cooled air conditioning systems and introduction to the Buildings Energy Efficiency Ordinance and its implementation to the attendees.



助理署長／電力及能源效益李國強先與主辦單位及嘉賓合照。
Mr. KK Li, Assistant Director, Energy Efficiency taking group photo with organizers and guests

為環保嘉年華2012主禮

機電工程署助理署長／能源效益於2012年1月為環保促進會舉辦的環保嘉年華2012主禮，並扼要談及新的《建築物能源效益條例》與強制性能源效益標籤計劃的最新發展。能源效益事務處也有參與嘉年華，並設置遊戲攤位，向市民派發有用資訊及紀念品。



能源效益事務處的遊戲攤位。

Game booth set up by the Energy Efficiency Office

Officiating at the Green Council Carnival 2012

Assistant Director/ Energy Efficiency from EMSD officiated at the opening ceremony of the Green Council Carnival 2012 held in January, and gave a briefing about the new Buildings Energy Efficiency Ordinance and the latest developments of the Mandatory Energy Efficiency Labelling Scheme (MEELS). Our Energy Efficiency Office also participated in the event, disseminating promotional materials and fun souvenirs on MEELS at its game booth to visitors.



百萬行結束後大合照。

Group photo after completion of the charity walk

員工與家屬參與公益金百萬行

支持公益金百萬行已是我們機構文化的一部份。2012年1月舉行的港島區百萬行，我們有80多位員工及家屬參加，籌得款項用以幫助全港貧困及有需要的家庭。

除了參加步行，我們的同事更免費為百萬行提供技術支援，包括起步點大球場內的機電系統和影音設施操作等。

Staff and Families Walk for Millions

Supporting the Community Chest's Walk for Millions is part of our culture. More than 80 colleagues and their families joined the annual Hong Kong Island Walk in January 2012. The walk raised funds for charity services to support less privileged families and all those in need in Hong Kong.

In addition to taking part in the walk, our colleagues also provided pro bono technical support for the electrical and mechanical systems and audio visual facilities at the Hong Kong Stadium, where the walk began.



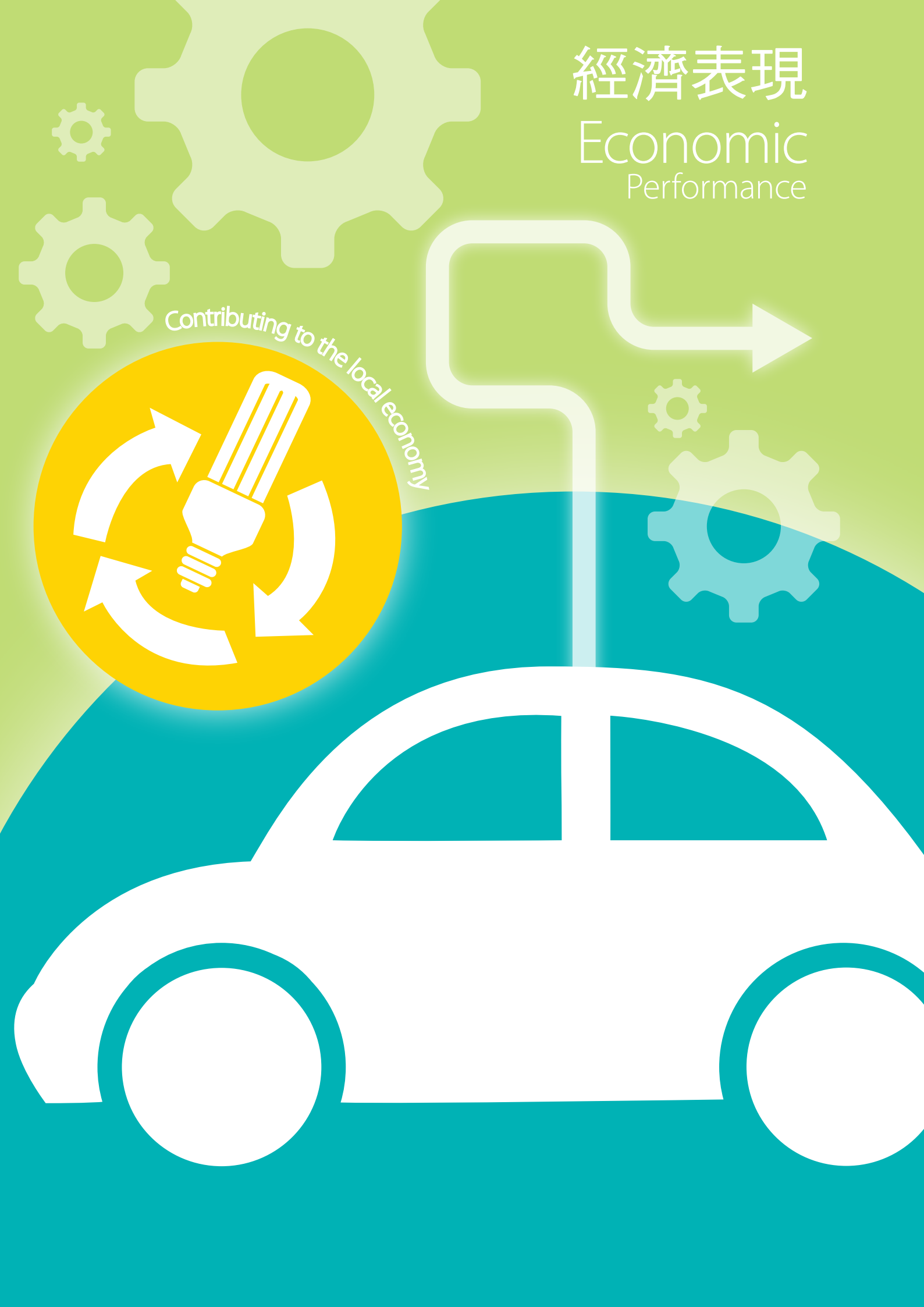
參加百萬行的員工及家屬共80多人。

Over 80 family and staff members attending the charity walk

經濟表現

Economic Performance

Contributing to the local economy



經濟表現

機電工程署為香港的經濟發展作出貢獻。我們的營運服務為包括政府部門及公營機構等客戶提供服務，而我們的規管服務則以市民大眾為對象。兩者都為員工提供就業機會，也為向我們提供貨品和服務的供應商及承辦商帶來商機，惠及本地經濟。

此外，我們的規管服務亦致力確保本港有一個安全和講求節約能源的環境，這對吸引外資來港十分重要。由於節能產品和建築物能源效益的規管架構在未來數年將更趨完備和成熟，市場對低碳及有利生態環境平衡的產品和服務需求定會增加，從而為業界和社會帶來更多營商和創新的機會。

概覽

我們每年都透過機電工程營運基金業績報告及規管服務行政預算檢討我們的經濟表現。如欲全面了解我們的財務表現，請參閱機電工程營運基金2011/12年年報 (<http://www.emsd.gov.hk>)，以及香港特別行政區政府的政府一般收入帳目（總目42）(www.budget.gov.hk)。

Economic Performance

EMSD plays an active role in the economic development of Hong Kong. Our Trading Services arm provides services to our customers comprising government departments and public bodies, and our Regulatory Services provides services to the general public. In turn, these activities create jobs for our staff and business opportunities for suppliers and contractors from whom we purchase goods and services. All of these activities contribute to the local economy.

In addition, our Regulatory Services helps maintain a safe and energy efficient environment which is vital to attracting business activities and investment into Hong Kong. As the regulatory framework for energy efficient products and buildings is likely to grow and mature in the coming years, market demand for low carbon and more sustainable products and services is set to increase, thus creating more opportunities for business and innovation for the trade and community.

Overview

Our economic performance is reviewed on a yearly basis through the annual reporting of the business results of the Electrical and Mechanical Services Trading Fund (EMSTF) for our Trading Services, and through the Administrative Budget for our Regulatory Services. More information can be obtained from the EMSTF Annual Report 2011/12 (<http://www.emsd.gov.hk>) and the HKSAR Government's General Revenue Account (Head 42) (www.budget.gov.hk) for a complete review of our financial performance.

實際的部門開支摘要載於下表：

A summary of the actual departmental expenditure is set out in the table below:

主要經濟指標摘要 - 規管服務

Summary of Key Economic Indicators – Regulatory Services

	2009/10 (千港元) (HK\$'000)	2010/11 (千港元) (HK\$'000)	2011/12 (千港元) (HK\$'000)
供應商及承辦商費用 Suppliers & Contractors Costs	74,060	72,384	82,012
為政府部門進行節能項目／ 可再生能源項目及室內空氣 Expenditure on Energy Efficiency Projects/ Renewable Energy Projects & IAQ Projects for Government Departments	200,350	131,102	58,861
總薪酬及福利／員工成本 Total Payroll and Benefits/ Staff costs	194,809	199,255	214,828

主要經濟指標摘要 — 營運服務

Summary of Key Economic Indicators – Trading Services

	2009/10 (HK\$'000)	2010/11 (HK\$'000)	2011/12 (HK\$'000)
營業額 Turnover	4,130,110	4,217,056	4,317,640
供應商及承辦商費用 Suppliers & Contractors Costs	1,804,857	1,781,660	1,857,162
總薪酬及福利／員工成本 Total Payroll and Benefits / Staff costs	1,784,968	1,806,854	1,969,511
稅務（名義） Taxation (notional)	85,070	98,770	95,560
固定資產回報率 Rate of Return on Fixed Assets	49.1%	58.1%	45.5%
收入回報率 Rate of Return on Revenue	11.8%	12.7%	11.8%

新業務發展

在2011/12年度，我們除了繼續為客戶部門的日常運作及機電項目提供支援外，亦協助政府推行各項發展基建及低碳經濟的政策措施。營運基金團隊參與大型基建項目的角色日重，需要提供的資訊與通訊科技服務及節能環保項目，也見增加。

年內有數個重要新場地納入營運基金的操作及維修保養業務範圍，例如新政府總部大樓和新立法會綜合大樓、民航處新總部大樓、活化後專用作推廣粵劇的油麻地戲院、威爾斯親王醫院住院主樓暨創傷中心、及將軍澳醫院日間醫療大樓。

營運基金也有參與幾個主要新項目，例如蓮塘／香園圍口岸與相關工程的機電工程技術審核工作。我們亦支援海事處就更換及提升現時的船隻航行監察服務系統進行可行性研究。這是個重要項目，完成後將大大提升執法機關監察本港水域的能力。我們還有參與啟德發展區的區域供冷系統和新郵輪碼頭項目。

環保方面，我們為一項生物柴油試驗計劃提供技術意見，及監察參與計劃的政府車輛在使用B5柴油後的表現。另一綠色項目，是協助政府部門購置電動車，及在政府停車場安裝電動車充電設施，以協助政府鼓勵市民更廣泛使用電動車。預計工程將於2012/13年度展開。

New Service Development

During 2011/12, we continued to support client departments in their daily operations and E&M projects, in addition to assisting the Government's policy initiatives to develop Hong Kong's infrastructure and an energy efficient and low carbon economy. The EMSTF team has assumed an increasing role in Hong Kong's major infrastructure developments, while meeting increasing service demand for Information and Communication Technology services as well as energy efficiency and green projects.

During the year, new major venues were added to EMSTF's portfolio for operation and maintenance services. Some examples are the new Central Government Offices, the new Legislative Council Complex, the new Civil Aviation Department Headquarters building, the revitalised Yau Ma Tei Theatre dedicated to promoting Cantonese opera, the Main Clinical Block and Trauma Centre of the Prince of Wales Hospital and the Tseung Kwan O Hospital Ambulatory Care Block.

EMSTF also played a role in several new key projects, such as the technical review of E&M engineering works for Liantang/Heung Yuen Wai boundary control point and associated works. Our colleagues also supported the Marine Department in conducting a feasibility study for the replacement and upgrading of existing Vessel Traffic Services System, a major project that will eventually enhance the surveillance capability of our law enforcement agencies in Hong Kong waters, as well as taking part in the Cruise Terminal and Distinct Cooling System at Kai Tak Development.

On the green front, we provided technical advice for a pilot biodiesel scheme and monitored the performance of government vehicles using B5 diesel. Another green initiative was to help the Government promote the wider use of electric vehicles by helping government departments procure electric vehicles (EV) and install EV charging points in government car parks throughout the territory, with works scheduled to commence in 2012/13.

營運基金年內與不同政府部門，續訂機電設施維修保養和工程支援與監察服務的長期服務水平協議，包括為醫院管理局轄下各家醫院、民航處新總部大樓和入境事務處深圳灣管制站等場地的機電設施，提供操作及維修保養服務。我們也與政務司司長辦公室和立法會行政管理委員會，分別簽訂服務水平協議，為新政府總部大樓和新立法會綜合大樓提供操作和維修保養服務。此外，我們更成功投得機場管理局年內推出的幾份工程合約，負責機場主要機電系統的操作及維修保養。

僱員

截至2012年3月31日止，機電工程署聘用了5,302名員工，較上年度減少了0.7%。員工成本包括薪酬、強制性公積金供款、津貼和附帶福利，總額約為22億港元。

物料及服務採購

我們一直與顧問、供應商和承辦商緊密合作，為市民和客戶部門提供高效率和優質的服務。在採購物料及服務方面，我們按照發展局（工務科）、環境局和政府物流服務署制訂的指引，嚴格遵守採購程序和各類合約的招標程序。2011/12年度，我們在承辦商及供應商方面的開支總額約為19.4億港元。

A number of major Service Level Agreements (SLAs) were secured during the year with various government departments for the provision of E&M maintenance and engineering support and monitoring services. These included SLAs with the Hospital Authority for O&M services at its hospitals, the Civil Aviation Department for O&M services at its new headquarters, the Immigration Department for O&M services for its engineering equipment at the Shenzhen Bay Control Point, the Chief Secretary for Administration's Office for O&M services at the new Central Government Offices, as well as the Legislative Council Commission for O&M services at the new Legislative Council Complex. Several Airport Authority contracts to operate and maintain major E&M systems at the airport were also won via tendering.

Employees

As of 31 March 2011, EMSD employed 5,302 staff. This represents a 0.7% decrease on the previous year. Staff cost including payroll, Mandatory Provident Fund contribution, allowance, and fringe benefits was \$2.2 billion.

Procurement of Goods and Services

We regularly work with our consultants, suppliers and contractors who support us in providing quality services efficiently and effectively to the public and our client departments. For the purchase of materials and services, we strictly adhere to the procurement procedures and tender processes for various types of contracts according to the guidelines set by the Development Bureau (Works Branch), the Environment Bureau and the Government Logistics Department. The expenses on contractors and suppliers in 2011/12 were approximately \$1.94 billion.



world class quality proven



質素達世界級水平

獎項及嘉許
Awards and Recognition



獎項及嘉許 Awards and Recognition

獎項及嘉許

在2011/12年度，機電工程署人員獲政府及外間機構頒發多個重要獎項，表揚他們在工作或社會服務方面的出色表現。我們也主動參與各項活動、比賽及合適的認證工作，以掌握不同範疇的最佳做法和標準。

Awards and Recognition

In 2011/12, EMSD staff received several major awards both from the Government and also external associations in recognition of their outstanding performance at work or community service. We also participate in events, competitions and certification exercises where appropriate to keep ourselves abreast of the best practices and standards of excellence in different areas.



機電工程署署長(右起第七)與高層管理及員工於領獎後合照。

The Director (seventh from right) photographed with senior management and staff after receiving the awards at the ceremony



連摘公務員優質服務獎勵計劃 三大獎項

機電工程署三個部別於2011年公務員優質服務獎勵計劃連奪三個獎項，證明各位同事為持續改善作出的努力得到認同。得獎項目分別是贏得「部門合作獎」的工程策劃部「海上警視系統」，和在「監管／執行服務」組別中分別獲得銀獎和銅獎的氣體標準事務處A部的「健調氣順」隊、和氣體標準事務處B部的「先知先覺」隊。

公務員事務局於1999年推出公務員優質服務獎勵計劃，宗旨是表揚個別政府部門及團隊的卓越服務表現，並讓公務員從得獎團隊的出色服務項目中學習，拓寬視野與經驗，從而加強對公眾的服務質素。

EMSD received 3 Awards under the Civil Service Outstanding Service Award Scheme

Three divisions in EMSD won awards under the Civil Service Outstanding Service Award Scheme 2011 in recognition of their strive for continuous improvement. Project Division won the Meritorious Partnership Award with our Versatile Marine Policing Response System while the Gas Standards Office (Division A and B) won the Silver and Bronze Prize of the Regulatory/Enforcement Service Award with their Reviving Gas and Proactive Team, respectively.

The Civil Service Outstanding Service Award Scheme launched by the Civil Service Bureau in 1999 aims to commend individual departments and teams with excellent performance in the delivery of service, offers opportunities for fellow colleagues to learn from the award-winning quality service schemes, consolidate experiences and broaden perspectives, so as to further enhance the quality of service delivered to the public.



翁家軒先生(左一)奪得2011年傑出學徒及見習員獎勵計劃獎項。

Mr. YUNG Ka-hin won the Outstanding Apprentice and Trainee Award 2011

學徒贏得職訓局獎項

機電工程署技術學徒繼2009年及2010年奪得職業訓練局每年舉辦的「傑出學徒及見習員獎勵計劃」獎項後，2011年再接再厲，由學徒翁家軒先生奪得此項殊榮。除此之外，有兩名學徒的卓越表現亦獲得嘉許，分別是羅浩倫及溫永森，二人均獲優異獎。

Apprentice Won VTC Awards

EMSD technical apprentices were recipients of the Outstanding Apprentices and Trainee Awards organized annually by the Vocational Training Council in the last two years (2009 & 2010). The proud achievement was repeated by Mr. Yung Ka-hin, who received the same accolade in 2011. Another two EMSD technical apprentices, Mr. Law Ho-lun and Mr. Wan Wing-sum won the meritorious award for their excellent performance.

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	13 - 16	
機構簡介 Organisational Profile	2.1 - 2.10	3 - 7, 39 - 43, 58 - 61	
報告規範 Report Parameters			
報告概況 Report Profile	3.1 - 3.4	2	
報告範圍及界限 Report Scope and Boundary	3.5 - 3.11	1, 2, 65	
全球報告倡議組織內容索引 GRI Content Index	3.12	65	
認證 Assurance	3.13	67 - 68	
管治、承諾及參與度 Governance, Commitments and Engagement			
管治 Governance	4.1 - 2, 4.4	3, 4, 6, 7	
與持份者溝通 Stakeholder Engagement	4.14 - 4.16	8 -12, 50 - 55	
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	23, 58 - 61
環境 Enviromental	物料 Materials	EN1, EN2	36 , 66
	能源 Energy	EN3, EN5, EN6	20, 21, 26, 27, 35
	水 Water	EN8	35, 66
	排放物、污水及廢棄物 Emissions, Effluent and Waste	EN16, EN18	36, 66
	產品及服務 Products and Services	EN26	25 - 33
	交通運輸 Transport	EN29	37
	社會 Social	勞工措施及合理工作 Labour Practices and Decent Work	
	- 僱用 Employment	LA1	39 - 41, 61
	- 職業健康與安全 Occupational Health & Safety	LA6, LA7	42 - 46
	- 培訓與教育 Training and Education	LA10, LA11	39 - 41, 64
	- 多元化與平等機會 Diversity & Equal Opportunity	LA13	39
	人權 Human Rights		
	- 結社自由與集體談判權 Freedom of Association & collective Bargaining	HR5	47
	社會 Society		
	- 社區 Community	SO1	26 - 33, 52 - 56
	產品責任 Product Responsibility		
	- 產品及服務標籤 Product & Service Labelling	PR5	26

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 <http://www.globalreporting.org/Home>

For more information about the GRI indicators, please visit the website <http://www.globalreporting.org/Home>

統計資料摘要 Summary of Statistics

資源 Resource	2009/10	2010/11	2011/12
電力 (千瓦小時) # Electricity (kWh)#	11,962,512	12,682,496	12,872,172
煤氣 (兆焦耳) Towngas (MJ)	341,904	215,856	137,808
水 (立方米) Water (m ³)	37,027	42,545**	53,897
柴油 (升) Diesel (l)	136,074	118,496	102,482
汽油 (升) Gasoline (l)	513,083	504,856	472,855
紙張 - A3、A4 (令) Paper - A3, A4 (ream)	27,379	27,778	27,587
油漆及溶劑 (升) Paint & Solvent (l)	33,506	34,788	27,947
潤滑油 (升) Lubrication Oil (l)	123,602	102,199	85,046
油脂 (公斤) Grease (kg)	1,958	1,002	1,674
製冷劑 (公斤) (例如R22及R134a) Refrigerant (kg) (e.g. R22 & R134a)	18,915	18,182	20,024
工業用氣體 (立方米) (例如氧、氬及乙炔) Industrial Gas (m ³) (e.g. Oxygen, Argon & Acetylene)	2,753	1,767	921
蓄電池電解液 (升) Battery Electrolyte (l)	1,947	660	535
原子車胎 (條) Tubeless Tyre (no.)	9,103	8,243	9,668
外車胎 (條) Outer Cover Tyre (no.)	3,272	2,857	2,648
車胎內膽 (條) Inner Tube (no.)	1,944	1,732	1,549
廢氣污水及廢物 @ Emissions, Effluents and Waste @			
廢紙 (公斤) Waste Paper (kg)	23,535	22,296	18,476
碳粉盒 (個) Toner Cartridges (no.)	3,309	3,053	3,736
用罄電池 (公斤) Batteries (kg)	3,626	3,458	3,389
金屬廢料 (公斤) Metal Scraps (kg)	37,270	47,241	14,511
廢油 (升) Waste Oil (l)	117,896	124,148	101,675
舊車胎 (條) Used Vehicle Tyre (no.)	8,172	9,101	12,369
含水銀照明燈 (盞) Spent Mercury Lamp (no.)	145,550	136,454	145,073
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)	4.38	5.42	3.36
員工滿意度 (以10分為滿分)* Staff Satisfaction (out of a score of 10)*	6.30	不適用 Not Applicable	6.5
培訓 (平均培訓日數目標: 4.5日/每名員工) Training (average training days/targets : 4.5 days/staff)	5.00	4.86	4.62

不包括員工食堂和租用辦公室的電力消耗

** 上年度有關數字已更正。

@ 有關的廢物由持牌承辦商收集，供物料循環再造或棄置

* 員工滿意度調查每兩年進行一次

Electricity Consumption of canteen, rented offices not included
** Figures published last year corrected

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

* Staff Satisfaction Survey is conducted once every 2 years.



VERIFICATION STATEMENT

核實聲明

Scope and Objective

範圍及目的

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 2011/12 (hereinafter called “the Report”). The Report stated EMSD’s sustainability performance and efforts made for the period from 1st April 2011 to 31st March 2012. 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.

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 2011/12（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 2011 年 4 月 1 日至 2012 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。

Methodology

方法

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 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.

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、可比較性及回應性的原則；及
- 全球報告倡議組織（GRI）的可持續發展報告指南 3 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。



Conclusion

結論

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.

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。

Signed on behalf of Hong Kong Quality Assurance Agency

香港品質保證局

Jorine Tam
Assistant Director, Strategic Business
March 2013
譚玉秀
策略業務助理總監
2013年3月

讀者意見表格

多謝閣下閱覽本署的《2011/12年度社會及環保報告》。為協助我們改善日後的報告編製工作，歡迎各位提出寶貴意見。

	不足	可接受		內容豐富	
	1	2	3	4	5
1. 你認為報告哪部分的內容最豐富？					
a. 關於本報告	☐	☐	☐	☐	☐
b. 關於機電工程署	☐	☐	☐	☐	☐
c. 署長的話	☐	☐	☐	☐	☐
d. 挑戰和機遇	☐	☐	☐	☐	☐
e. 重點與前瞻	☐	☐	☐	☐	☐
f. 環保表現	☐	☐	☐	☐	☐
g. 社會表現	☐	☐	☐	☐	☐
h. 經濟表現	☐	☐	☐	☐	☐
i. 獎項及嘉許	☐	☐	☐	☐	☐
j. 全球報告倡議組織指標索引	☐	☐	☐	☐	☐
k. 統計資料摘要	☐	☐	☐	☐	☐
2. 本報告能否令你更了解機電工程署在環保方面的表現？	能 ☐		不能 ☐		沒有意見 ☐
3. 本報告能否令你更了解機電工程署在社會責任方面的表現？	能 ☐		不能 ☐		沒有意見 ☐
4. 整體而言，你怎樣評價本報告？	差 ☐		好 ☐		很好 ☐
5. 如有其他意見／建議，請註明：					
6. 我們可怎樣回應你的意見／建議？ (請提供電郵地址或聯絡資料，以便我們跟進) - 可選擇是否填寫此項。					

請把讀者意見表格送交：

香港九龍啟成街3號，部門安全分部

傳真：(852) 2576 1207

電郵：safety@emsd.gov.hk

Feedback Form

Thank you for reading our Social and Environmental Report 2011/12. To help us improve future editions of our Social and Environmental Report, we would be grateful to have your comments.

	Inadequate		Acceptable		Very Informative
	1	2	3	4	5
1. Which part of the report do you find most informative?					
a. About this Report	☐	☐	☐	☐	☐
b. About EMSD	☐	☐	☐	☐	☐
c. Director's Message	☐	☐	☐	☐	☐
d. Challenges and Opportunities	☐	☐	☐	☐	☐
e. Highlights and Way Forward	☐	☐	☐	☐	☐
f. Environmental Performance	☐	☐	☐	☐	☐
g. Social Performance	☐	☐	☐	☐	☐
h. Economic Performance	☐	☐	☐	☐	☐
i. Awards and Recognition	☐	☐	☐	☐	☐
j. GRI Indicator Index	☐	☐	☐	☐	☐
k. Summary of Statistics	☐	☐	☐	☐	☐
2. Does the report enable you to understand more about EMSD's performance on environmental issues?	Yes ☐		No ☐		No Comment ☐
3. Does the report enable you to understand more about EMSD's performance on social issues?	Yes ☐		No ☐		No Comment ☐
4. Overall, how would you rate our report?	Poor ☐		Good ☐		Excellent ☐
5. Other comments and suggestions, please specify					

6. How can we convey our response to your comments/ suggestions?

(Please provide email or contact details for us to follow up.) - Optional

Please return feedback form to:

Safety Sub-division, EMSD, 3 Kai Shing Street, Kowloon, Hong Kong

Fax: (852) 2576 1207

Email: safety@emsd.gov.hk

機電工程署
EMSD



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