



部門簡介及架構

Organisational Profile and Structure

機電工程署有兩大職能，分別由轄下的規管服務及營運服務執行。

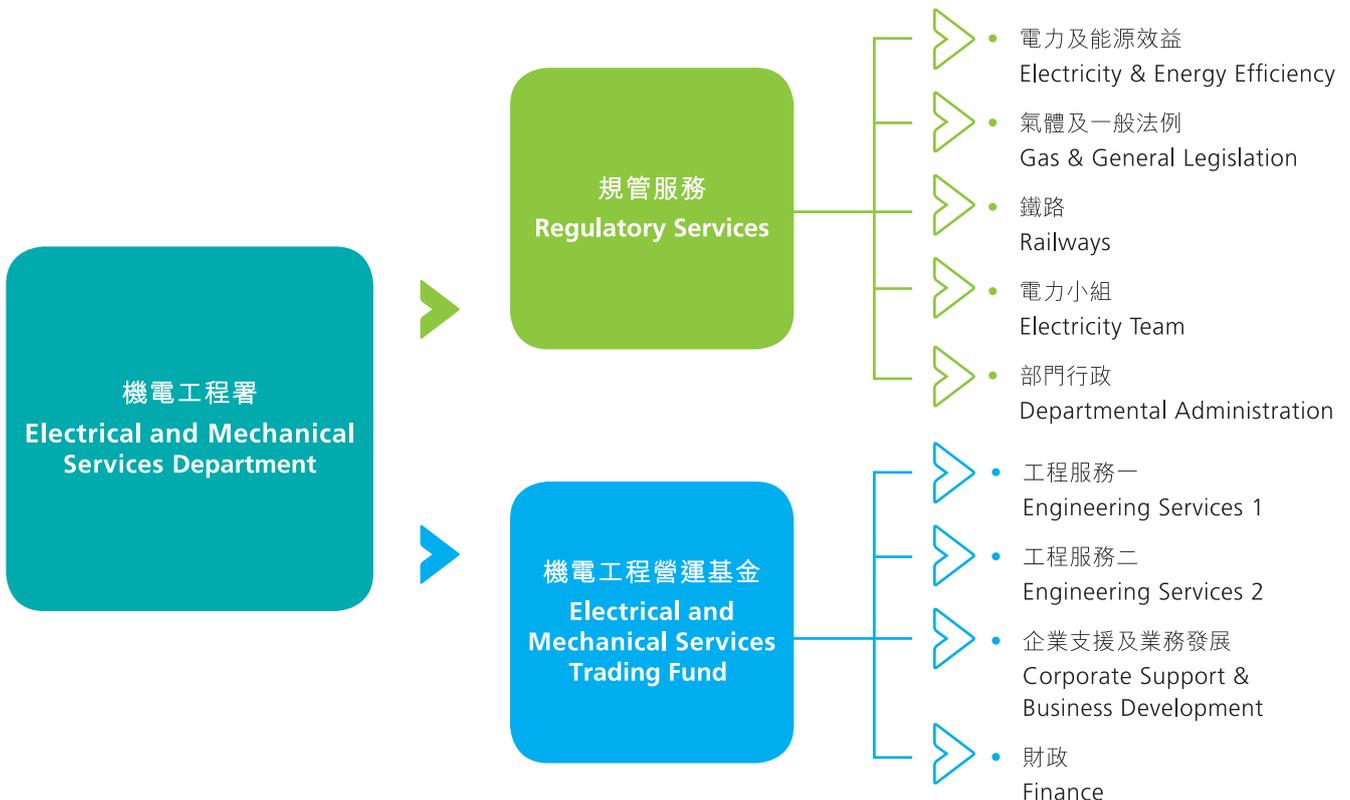
規管服務的職能，是在本港確保機電安全和推廣能源效益。具體工作是透過執行法例和推動公眾教育，以規管電氣、機械及氣體安全、鐵路安全及推廣能源效益，保障市民的安全和提高能源效益。此外，規管服務也根據「管制計劃協議」，監管電力公司的技術表現及發展計劃。我們也為政府的環保工作，提供專業及技術支援，例如制訂各種自願性及強制性能源效益計劃、及進行多個有關能源效益的研究和項目等。

至於我們的營運服務，即機電工程營運基金（營運基金），則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。營運基金提供一站式的工程和維修增值服務，以確保本港公營部門的電氣、機械、電子及屋宇裝備系統能暢順有效及環保地運作。我們的客戶部門包括機場、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。我們為這些與市民息息相關的範疇提供服務，提升本港的生活質素。

The Electrical and Mechanical Services Department (EMSD) plays a dual role via its two arms: Regulatory Services (RS) and Electrical and Mechanical Services Trading Fund (EMSTF).

The role of RS is to ensure E&M safety and promote energy efficiency in the community. Specifically, RS regulates electrical, mechanical and gas safety, railway safety, as well as energy efficiency, via law enforcement and public education. It also monitors the technical performance and development plans of the electricity supply companies under the Scheme of Control Agreements, and gives professional and technical support to the government's environmental initiatives in the form of various voluntary and mandatory energy efficiency schemes as well as energy efficiency related studies and projects.

As to EMSTF, its role is to deliver services in electrical and mechanical (EM), electronic engineering (EE) and building services (BS) to government departments and public institutions in Hong Kong. It provides one-stop value-added engineering and maintenance services to ensure that the EM, EE and BS systems in the public sector operate effectively, efficiently and in an environment-friendly manner. We serve customer departments including 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 a quality life in Hong Kong.





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陳帆太平紳士

Mr Chan Fan, Frank, JP

機電工程署署長

機電工程營運基金總經理

Director of Electrical and Mechanical Services

General Manager, Electrical and Mechanical

Services Trading Fund

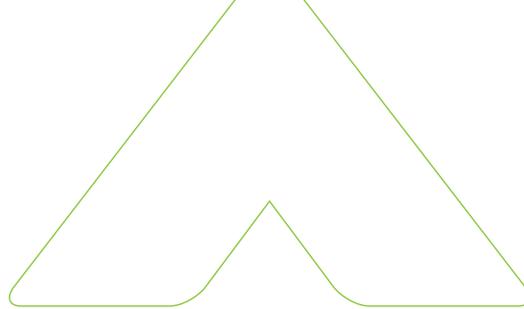


今年是我們首度將規管服務、營運服務和社會及環保方面的主要活動，以綜合年報方式報道。由以往的三份年報，整合成為一份部門年報，我們希望此舉能使業界、客戶部門、其他持份者和市民大眾更了解我們的工作，也更明白我們努力為社會創造的價值。

整體而言，2012/13年雖有不少挑戰，但規管服務和營運服務都有令人振奮和豐碩的成績。與此同時，我們也全方位履行各種社會和環保責任，並取得相當進展。

This year is the first time that we report the key activities of our Regulatory Services and Trading Services, as well as our social and environmental initiatives, in a single publication. By consolidating three separate annual publications into one single EMSD annual report, we hope the trades, our client departments, other stakeholders and the general public can better understand our work and appreciate the value we endeavour to create for the community.

Overall, 2012/13 was an encouraging and fruitful year for both our Regulatory Services and Trading Services, despite the many challenges we faced. Moreover, we continued to discharge our social and environmental responsibilities on all fronts of our work and made much progress.



規管服務

我們的規管服務旨在確保公眾安全和提高能源效益。今年，我們在這兩方面的工作均有相當大的突破。

首先，《升降機及自動梯條例》（第618章）已於2012年開始實施，取代已沿用50年的舊例。新條例加重了違例罰則及引入工程人員註冊制度，並清楚界定升降機及自動梯的持份者共同承擔責任。此外，針對能源效益的《建築物能源效益條例》（第610章）亦於2012年全面實施，清楚列明在建築物內主要屋宇裝備的能源效益及能源審核規定，為節能發展邁出重要一步。

環保及可持續發展

年內有幾個突破性的項目和發展。啟德發展計劃是本港全新的區域發展，空調需求龐大，因此我們在該區設立最具能源效益、也是全港首個區域供冷系統。第一階段工程已經完成，啟德郵輪碼頭於2013年6月開幕時，區域供冷系統已開始為碼頭設施供應冷水。

此外，為了提升車輛安全和改善路邊空氣質素，我們繼推行車輛維修技工自願註冊計劃之後，更於2012年與業界訂立「車輛維修工場約章」。車輛維修工場簽署約章，承諾遵守《車輛維修工場實務指引》，包括技術、環保、安全、員工培訓、服務和文件紀錄方面的要求，並承諾提供不低於《指引》要求的服務質素。

保持高度透明

我們認為政府部門應保持高度透明，因此一直定期更新部門網頁，主動發放最新資訊供傳媒和公眾參考，包括石油氣品質化驗結果、專用加氣站的車用石油氣上限價格調整、淡水冷卻塔水樣本檢測結果、能源表現監察測試結果、升降機及自動梯承辦商表現評級，以及事故調查報告。我們又會主動聯絡傳媒，務求為市民提供最新最準確的第一手資訊，建立和突顯部門公開、負責和親民的服務文化。

REGULATORY SERVICES

Our regulatory services aim to ensure public safety, as well as to promote a more energy efficient community. We have made considerable breakthrough in both aspects in the year.

First, the Lifts and Escalators Ordinance (Cap. 618) came into operation in 2012 to repeal the old legislation used for 50 years. The new Ordinance increases penalties for malpractice, introduces a registration system for workers and clearly defines the shared responsibilities of stakeholders for lifts and escalators. At the same time, the Buildings Energy Efficiency Ordinance (Cap. 610) also came into full operation in 2012. It states clearly the energy efficiency requirements of all major building services installations and the energy audit requirements in buildings, which marks a major step towards energy conservation development.

Environmental Protection and Sustainable Development

A number of milestone projects and developments are worth noting in the year. Catering to the needs of the Kai Tak Development, a new district development with large demand for air-conditioning, we built a District Cooling System which is the most energy efficient air-conditioning system and the first of its kind in Hong Kong. Phase I of the system was completed and commenced supplying chilled water to the Kai Tak Cruise Terminal upon its opening in June 2013.

Another initiative that contributes towards vehicle safety and roadside air quality improvement is the Vehicle Maintenance Workshops Charter which we launched with the trade in 2012, a further step after the Voluntary Registration Scheme for Vehicle Maintenance Mechanics. By subscribing to the Charter, vehicle maintenance workshops pledge to abide by the Practice Guidelines for Vehicle Maintenance Workshops that stipulate service requirements in technical, environmental, safety, training, service and documentation aspects, and undertake to operate their workshops at a level of quality not lower than that specified in the Guidelines.

Maintaining a High Level of Transparency

We also believe in maintaining a high level of transparency, and have an established practice of regularly posting data and information on our departmental website for easy access by the media and the public. These include data on LPG quality test results, auto-LPG ceiling price movements at dedicated stations, water sample test results of fresh water cooling towers, energy label compliance monitoring test results, lift and escalator contractors performance ratings, and incident investigation reports. Our proactive communication with the press also serves to provide the public with accurate and up to date information first hand, underscoring an open, accountable and approachable departmental culture.

營運服務

營運基金年內仍然受惠於穩定的營商環境。在2012/13年的收入為46.43億元，較去年輕微上升3.25億元。另一方面，最令人鼓舞的是，根據獨立顧問所做的客戶意見調查結果，在以8分為滿分準則下，我們的客戶滿意度從2010年的6.01分躍升至2012年創紀錄的6.12分，反映了客戶對我們員工共同努力的肯定。

聚焦公眾價值

去年，我們為營運基金制訂了「透過與客戶的伙伴關係，創造公眾價值惠利市民」的五年企業目標。我們未來數年發展的核心理念將以公眾價值為依歸。首先，我們自發將營運利潤的利息回撥政府。此外，我們正調低利潤率，以創造一個用較低利潤營運，以讓客戶保留更多資金的新營運模式。我們希望把利潤回撥，使客戶可以利用保留的資金，改善服務。這是我們以社會最佳利益為依歸，創造最大公眾價值的承諾。

提升優質服務

在應付日益殷切的服務需求及維持現有人手的情況下，我們推展新的服務模式。新模式包括就市場能夠提供優質服務的工作項目作出更多外判安排，聚焦於具有高公眾價值、關鍵和必要服務，及提高我們管理和監督承辦商和外判服務的能力。明年，我們將會把握每個機會，繼續擴大應用範圍，推展這種新的服務模式。

我們亦尋求在署內推動文化轉變，使管理層和員工以新思維，新角度審視他們的角色和貢獻。我們努力營造的工作氛圍，是讓員工充分理解所做工作的真正意義，不只是保養、修理和更換，而是透過創新和優良的工程方案發揮影響，為改善市民生活質素作出貢獻。我們要让員工明白，我們所做的不只是工作而是提供關乎市民福祉的服務，並將對服務市民的價值視為我們對社會的貢獻。我們希望在署內孕育服務為本的文化，這是我們把優質服務提升至另一階段的關鍵。

TRADING SERVICES

Our Trading Services continued to enjoy a relatively stable business environment. Revenue in 2012/13 was HK\$4,643 million, with a modest increase of \$325 million from that in the preceding year. On the other hand, it was most encouraging to note the phenomenal results of the independent customer opinion survey. Our customer satisfaction rating climbed from 6.01 in 2010 to a record breaking 6.12 in 2012 on an eight point scale. It reflects our clients' recognition of the concerted efforts of our staff.

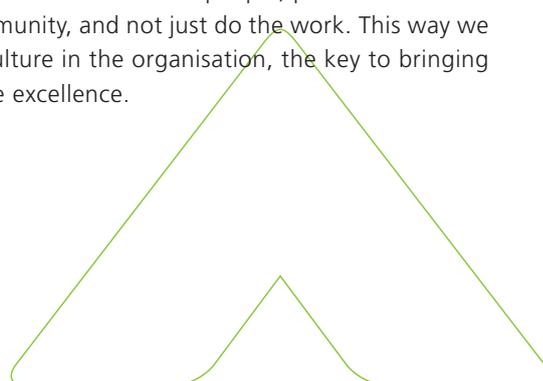
Focus on Public Value

Last year, we formulated the EMSTF five-year corporate goal: "creating public value for community betterment through partnership with our clients". The focus on public value signifies the essence of our development in the coming years. As a start, we initiated to strip our operating profit and return the interest to the government. Furthermore, we were in the process of trimming down our profit margin. Our aim is to create a new business model operating with minimal profit, hence taking less and allowing our clients to retain more. It is our desire to return our profits to their rightful place, allowing clients to make use of the saved funds to better their services for the community. It is our commitment to create the best possible public value in the best interest of our community.

Key to Service Excellence

We initiated new service delivery modes to embrace the challenge of increasing service demands and containing the size of our staff. The new modes comprise greater outsourcing of what the market can provide with high quality of service, holding on to critical and essential services of high public value, and increasing our service capability in management and supervision of contractors and outsourced services. We will continue to make every possible opportunity to expand the application of these new service delivery modes in the next year.

We also sought to create within the organisation a cultural transformation which would bring our management and staff viewing their role and contribution in a whole new light. We endeavor to create an atmosphere in which our colleagues completely and fully understand the true meaning of their work, not just to maintain, repair and replace. We want them to focus on contributing to and improving people's quality of life and their well being through innovative and best engineering practices. We enable our staff to realise the value of our services for people, perceive the value as a contribution to the community, and not just do the work. This way we wish to cultivate a serving culture in the organisation, the key to bringing us to the next level of service excellence.





年內另一成績，是為客戶部門的工程資產取得 PAS 55 認證。PAS 55 是個優良的資產管理模式，由資產運作周期的策略以至日常的維修工作都包括在內。我們率先為客戶的救護車隊管理實施 PAS 55，近期再為交通燈系統引進這個管理模式。為客戶部門管理好工程資產，就等於為社會整體資產做好管理工作。

履行社會及環保責任

年內同樣重要的，是我們積極持續履行社會和環保責任，樹立好榜樣。我們的做法，是以可持續和環保的方式執行規管服務和營運服務的工作、做一個良好僱主、和參與社會服務。

我們年內為多項工作例如員工培訓，投放了額外資源並推行一系列創新措施，提升機電行業的水平。我們把學徒訓練計劃，重新命名為技術員訓練計劃，並作出優化及上調薪酬，以吸引年輕新血，為工程行業培養接班人。我們也積極舉辦各種業界研討會及推出電台節目，務求促進業界提升水平。我們會鼓勵同事不斷創新，回饋社會。

致謝

我們很幸運擁有一支努力不懈、專業和靈活的團隊，與業界、客戶及持份者合作無間，大家相互信賴、欣賞和分享，創造了獨有的人脈資源及無可匹敵的協作關係。我向他們致以萬二分感謝。

我亦衷心感謝所有給予我們指導、支持、建議和反饋的人士。來年，期待大家繼續一起努力。

陳帆

機電工程署署長
機電工程營運基金總經理

Another achievement during the year was caring for our client departments' assets through PAS 55 certification, which provides a model of good asset management from lifecycle strategy to everyday maintenance. We initially applied PAS 55 to ambulance fleet, and more recently to traffic signal system. Taking good care of our client departments' assets will directly benefit the quality of society's assets as a whole.

DISCHARGING SOCIAL AND ENVIRONMENTAL RESPONSIBILITIES

No less important is our sustained efforts to discharge social and environmental responsibilities in order to set an example to society. Our approach is to operate all our Trading Services and Regulatory Services in a sustainable and environmental manner, be a good employer, and contribute to community.

During the year we committed extra resources to various initiatives such as staff training and came up with a range of innovative measures to raise the standards of the E&M trade. An example was revamping our apprentice training scheme, which was renamed technician training scheme, with salary increase to attract young talent for the engineering industry. Various trade forums and media programmes were organised to help raise trade standards. We shall encourage fellow colleagues to continue to innovate and explore new ways to give back to the community.

VOTE OF THANKS

We are fortunate to have a great team of staff of exceptional diligence, professionalism and agility who work exceedingly well with the trades, our clients, and all the stakeholders. This unflinching relationship based on mutual trust, appreciation and sharing creates a unique talent base and an unrivalled collaboration. I cannot express enough my gratitude to all of them.

My sincere thanks extend to all those who have given us their guidance, support, advice and feedback. We look forward to working together in the year ahead.

Chan Fan, Frank

Director of Electrical and Mechanical Services
General Manager, Electrical and Mechanical Services Trading Fund



安全節能在香港
A Safe and Energy Efficient Hong Kong

規管服務業務概覽

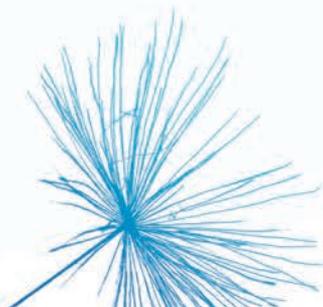
Regulatory Services - Achievements Overview



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抱負、使命和信念 >>

Vision, Mission and Values

抱負

我們的抱負，是要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

我們的使命，是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

Vision

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

Mission

Our mission is 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



1. 署長

陳帆太平紳士
機電工程署署長

Director

Mr Chan Fan, JP

Director of Electrical and
Mechanical Services

3. 助理署長

梁建民
助理署長/鐵路

Assistant Director

Mr Leung Kin-man

Assistant Director/Railways

6. 會計師

嚴國豪
部門會計師
2013年5月2日履新

Accountant

Mr Yim Kwok-ho

Departmental Accountant
w.e.f 2 May 2013

2. 副署長

薛永恒太平紳士
副署長/規管服務

Deputy Director

Mr Sit Wing-hang, Alfred, JP

Deputy Director/Regulatory Services

4. 助理署長

賴漢忠
助理署長/氣體及一般法例

Assistant Director

Mr Lai Hon-chung, Harry

Assistant Director/Gas and
General Legislation

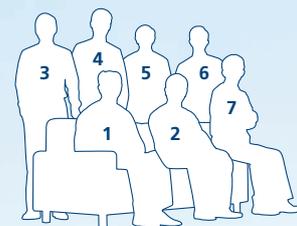
7. 秘書

周楚添
主任秘書

Secretary

Mr Chow Chor-tim

Departmental Secretary



5. 助理署長

李國強
助理署長/電力及能源效益

Assistant Director

Mr Li Kwok-keung

Assistant Director/Electricity and
Energy Efficiency



 面對機電設備老化的問題，我們不但要保障公眾機電安全，同時也須讓公眾安心並信賴我們的能力。

Faced with the challenge of aging engineering assets, not only do we have to ensure the electrical and mechanical safety of the public are not compromised, we must also make the public feel confident and trust in our capabilities.

薛永恒太平紳士

Mr Sit Wing-hang, Alfred, JP

機電工程署副署長/規管服務

Deputy Director/Regulatory Services, EMSD

2012年是忙碌而豐盛的一年。我們非常努力落實多項保障公眾安全的政策，以及推動更具能源效益的社會。

推出新法例 與時並進

我們的規管服務旨在確保公眾安全和提高社會能源效益。2012年，我們在這兩方面的工作均有相當大的突破。

The year 2012 was productive in terms of the department's operations as we made considerable contributions to the implementation of policies that ensure public safety and the promotion of a more energy efficient community.

NEW ORDINANCES TO REFLECT CHANGE OF THE TIMES

The work of our regulatory services aims to ensure public safety, as well as to promote a more energy efficient community. We have made a considerable number of breakthroughs in both aspects in 2012.

首先，《升降機及自動梯條例》（第618章）已於2012年12月實施，取代已沿用50年的《升降機及自動梯（安全）條例》（第327章），本署人員多年來在這方面的努力年終見成果。舊有的條例自生效以來，社會和技術已經歷多番改變和發展，新條例是因應這些改變和發展而制訂，標誌著本港升降機及自動梯發展的一個重要里程碑。

為更有效規管升降機及自動梯業界，我們加重了違例罰則並要求工程人員註冊。更重要的是，新條例清楚界定升降機及自動梯的責任承擔者。港府在1960年代草擬《升降機及自動梯（安全）條例》時，市場上物業管理公司數目不多，因此升降機及自動梯的法律責任是由建築物擁有人承擔的。時至今日，八成左右的建築物都由物業管理公司負責，原有法例已不再切合市場實況，因此有必要修訂該法例以準確反映現況，同時達到立法原意，規定適當的持份者須承擔相應的法律責任。新條例首次訂明升降機及自動梯擁有人和管理人的職責，並規定他們須按各自在管理和監控升降機及自動梯方面的職責，承擔法律責任。

《建築物能源效益條例》為節能發展邁出一步

針對能源效益的《建築物能源效益條例》（第610章）亦於2012年生效。這是香港首次制定法例清楚列明在建築物內主要屋宇裝備的能源效益及能源審核規定，可說是香港法律上的一大突破。

在香港，九成左右的用電量是由建築物所消耗，而商業建築物的空氣調節、照明及電力裝置和升降機及自動梯佔總用電量的比例亦甚大。《建築物能源效益條例》訂明新建築物內上述主要的屋宇裝備及進行裝修有關工程的基本能源效益規定，以及為商業建築物進行能源審核的規定，對香港的節能和環境保護工作來說，是一項重要發展。

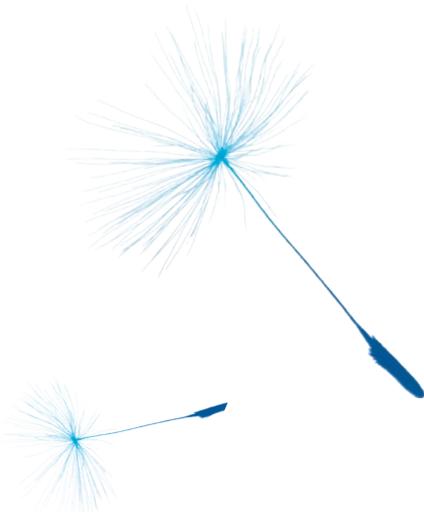
First, the hard work of our colleagues finally bore fruit in 2012 as the Lifts and Escalators Ordinance (LEO) (Cap. 618) was implemented in December 2012. This is an important milestone in the history of lifts and escalators in Hong Kong as it finally replaces the 50 year-old Lifts and Escalators (Safety) Ordinance (Cap. 327) with some much needed updating in order to meet the social and technological development since the legislation was passed.

In addition to regulating the lift and escalator industry by enforcing higher penalties for malpractice and registering the workers, more importantly and fundamentally, the LEO clearly defines the responsible party for the lifts and escalators. When the Lifts and Escalators (Safety) Ordinance was first written in the 1960s, there were not many property management companies in the market, so the liability of the lifts and escalators was held by the building owners. Today, however, about 80% of the buildings are managed by property management companies, which means the law has deviated from the true market situation and an amendment to the Lifts and Escalators (Safety) Ordinance was needed to truly reflect the market situation and to hold the correct parties legally liable as the ordinance had intended. The LEO is most innovative in this respect as it defines clearly the roles of the owners and persons managing the lifts and escalators and holds them legally liable in accordance with their roles in the management and control of the lifts and escalators.

BEEO MARKS A STEP TOWARDS ENERGY CONSERVATION DEVELOPMENT

In terms of energy efficiency, the Buildings Energy Efficiency Ordinance (BEEO) (Cap. 610) also came into operation in 2012. The BEEO is a breakthrough in Hong Kong's legislative history as it is the first ordinance that states clearly the energy efficiency requirement of all major building services installations and the energy audit requirement in buildings.

Buildings account for about 90% of Hong Kong's electricity consumption, with air-conditioning, lighting and electrical installations and lifts and escalators in commercial buildings accounting for a large proportion of the total energy consumed. Thus, by defining the basic energy efficiency requirements for these installations in new buildings and retrofitting works, and the energy audit requirement for commercial buildings, the BEEO will be making a major contribution towards energy conservation and environmental protection in Hong Kong.



車輛維修技工註冊計劃

妥善維修保養車輛是保障道路安全和促進環境保護的重要因素。因此，本署與相關行業多番磋商後，於2007年1月推行車輛維修技工自願註冊計劃，透過訂立持續專業進修的規定，確保註冊車輛維修技工具備應有資歷及最新的技術知識和技能。這促使車輛維修工場相應尋求提升服務效益的方法。為此，我們於2012年訂立「車輛維修工場約章」，要求維修工場須保持良好營商手法並顧及職業安全。

為車輛維修技工和維修工場而設的自願註冊計劃是提升行業專業地位的重要舉措，同時亦能使偏離良好營商手法的業界人士承擔責任。本署將會在適當時考慮把註冊計劃改為強制執行。

區域供冷系統

我們在啟德發展區政府重要基建項目的核心設施工程中，參與了多項工作。啟德郵輪碼頭於2013年6月開幕時，區域供冷系統已開始為碼頭設施供應冷水。區域供冷系統運用海水冷卻，能源效益較淡水冷卻塔驅動的個別水冷式空調系統和傳統的氣冷式空調系統，預計分別高20%和35%。由於啟德發展計劃是全新的區域發展，空調需求龐大，政府就藉此機會，在該區設立最具能源效益、也是全港首個同類的空調系統。

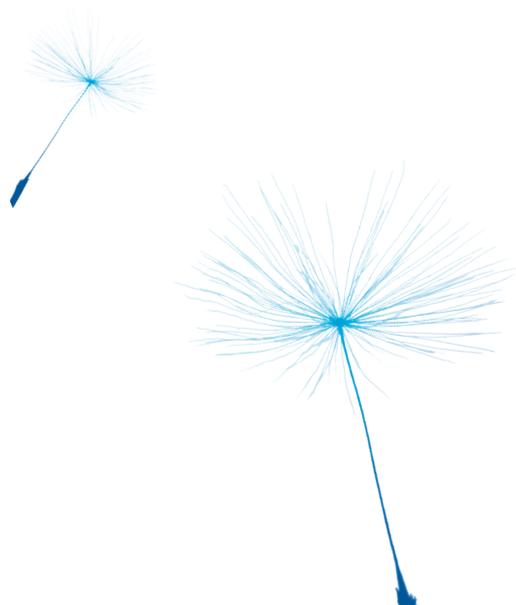
REGISTRATION SCHEME FOR VEHICLE MECHANICS

Adequate vehicle maintenance makes a significant contribution towards road safety and environmental protection. Hence, the department, after much consultation with the relevant trades, began implementing the Voluntary Registration Scheme for Vehicle Mechanics in January 2007 to ensure that registered vehicle mechanics are competent and that their technical know-how and skills are up-to-date through the requirement of continuous professional development. This prompted a corresponding demand in vehicle maintenance workshops to look for ways to improve their services for effective service enhancement, which in turn led to the introduction of the Vehicle Maintenance Workshops Charter that committed workshops to a certain standard of good trade practices and occupational safety in 2012.

The combination of a Voluntary Registration Scheme for both vehicle mechanics and workshops is an important step towards enhancing the professional status of the industry as well as holding them accountable for deviations from good trade practices, thus paving the way for the department to look into the possibility of making the registration scheme mandatory in due course.

DISTRICT COOLING SYSTEM

The department was also heavily involved in the core facilities of the government's major infrastructure project at the Kai Tak Development, and the District Cooling System commenced supplying chilled water to the Kai Tak Cruise Terminal at its grand opening in June 2013. The Sea Water Cooled District Cooling System is estimated to be 20% and 35% more energy efficient than individual water-cooled air-conditioning systems using fresh water cooling towers and traditional air-cooled air-conditioning systems respectively. Since the Kai Tak Development is a new district development with large demand for air-conditioning, the government has taken the opportunity to implement the District Cooling System which is the most energy efficient air-conditioning system in the new development and the first of its kind in Hong Kong.



保障安全 讓公眾安心

香港經濟在1970及80年代起飛，期間落成的建築物和基建設施，已開始老化。面對機電設備老化的問題，我們不但要在機電設備方面保障公眾安全，同時也須讓公眾安心並信賴我們的能力。例如，單靠保證升降機及自動梯能安全運作已不足夠，我們必須讓市民大眾放心使用這些設施。為此，我們已加強了審核巡查，並落實了一系列的安全推廣活動，以喚起社會對保養及更換已老化機電設備的需要。

除此之外，本署亦制訂了部門的危機預防、應變及管理計劃，以便同事在遇到危機時能妥善處理。計劃的首要目標是防止發生事故。同事在制訂計劃過程中，估算可能出現的問題，以及預計公眾和傳媒會關注的事項，從而採取預防措施，杜漸防微。

當日後遇到無可避免的危機時，同事便可按計劃以沉著專業的態度處理，加上適時發放相關資訊，讓公眾和傳媒感到安心，加強對本署保障市民安全的信心。

保持高度透明

我們認為政府部門應保持高度透明，因此我們一直以來都定期更新部門網頁，發放最新資訊。一般而言，我們在網頁公布予市民參考的資料包括：車用石油氣品質化驗結果、專用石油氣加氣站的車用石油氣上限價格調整、淡水冷卻塔水樣本檢測結果、能源表現監察測試結果、升降機及自動梯承辦商表現評級，以及事故調查報告。我們又會主動聯絡傳媒，務求為市民提供最新最準確的第一手資訊，建立更公開更親民的服務文化。

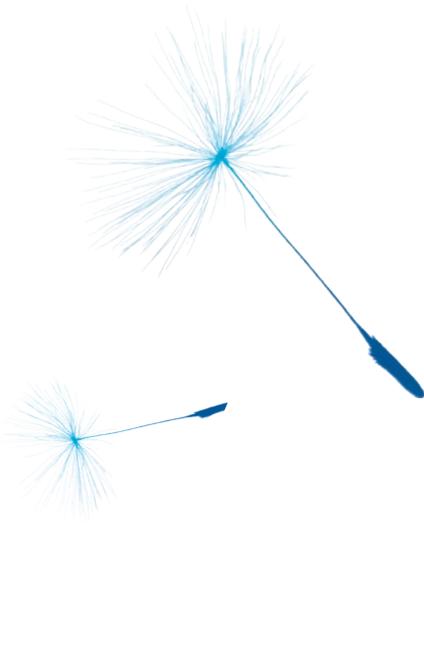
SAFETY AND PEACE OF MIND

Hong Kong's economy took off during the 1970s and 1980s. The majority of the buildings and infrastructure constructed during that boom time are facing the threat of deterioration. Faced with the challenge of aging electrical and mechanical facilities, not only do we have to ensure the electrical and mechanical safety of the public are not compromised, we must also make the public feel confident and trust in our capabilities. For example, our reassurance of the safe operation of lifts and escalators alone is not sufficient. We must provide them with the peace of mind to feel safe when using them. In this connection, we have stepped up our audit inspections and implemented a series of safety promotional programmes to arouse public attention to the need of proper maintenance and replacement of aged facilities.

Besides, we have also devised a departmental Crisis Prevention, Response and Management Plan to prepare us for the eventuality of a crisis. The prime objective of the Plan is incident prevention. During the preparation of the Plan, colleagues tried to foresee possible problems that may arise, anticipate the public's and media's concerns, and take advance steps to prevent these situations from arising. In the event of an unavoidable crisis, colleagues could follow the Plan to calmly and professionally handle the crisis, disseminate pertinent information in a timely manner during crisis situations so as to assure the public and the media of our professionalism, and that they may entrust their safety in our capable hands.

MAINTAINING A HIGH LEVEL OF TRANSPARENCY

We also believe in maintaining a high level of transparency, and have an established practice of regularly posting data on our department's website. The data we typically share includes auto LPG quality test results and dedicated LPG filling station auto LPG ceiling price movements, fresh water cooling tower water sample test results, energy label compliance monitoring test results, lift and escalator contractors performance ratings, and incident investigation reports for public access. Our proactive communication with the press serves to provide the public with accurate and up to date information first hand, thereby presenting an even more open and approachable department culture.



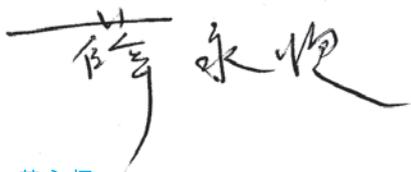
前瞻

展望未來，我們會繼續協助持份者認識其本份和責任，以及如何履行責任，去年開始推行的優化升降機計劃便是一例。該計劃旨在向公眾和持份者說明他們的法律責任、和優化升降機設施的重要性。儘管本署作為規管部門，只須監管升降機及自動梯的安全和運作，但我們也會主動舉辦業界講座，向公眾講解相關的條例。

我們會繼續在部門內推動緊密合作的文化，提高員工士氣，以及鼓勵他們持續進修和發展。我們深信，不斷追求知識和累積經驗，長遠來說對市民、本署以至整個社會都有利。

感謝支持

去年，規管服務運作暢順，新條例得以順利實施，實有賴業界和各方持份者的支持，規管服務的同事當然也值得表揚。同事盡心盡力，表現出色，部分更多走一步，憑著傑出的規管成績贏得多個獎項。我很高興看到本署人員能夠緊密合作，致力提供理想的生活環境，讓香港市民安居樂業。



薛永恒

機電工程署副署長/規管服務

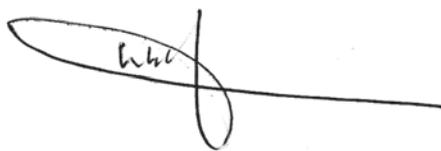
OUTLOOK

Looking ahead, we will continue to facilitate stakeholders' understanding of their responsibilities and liabilities, as well as to educate them in the ways to discharge their duties, such as the Lift Modernisation Programme that was launched last year to educate the public and stakeholders on their legal liabilities and the importance of modernising their lift equipment. Although our role as regulator only requires us to monitor the safety and operation of the lifts and escalators, we have also taken the initiative to conduct trade talks to educate the public on relevant ordinances.

We will continue to foster a cohesive culture within our department, boosting staff morale and encourage them to pursue continuous training and development. We believe the continuous pursuit of knowledge and experience will reap long-term benefits to our people, the department and society as a whole.

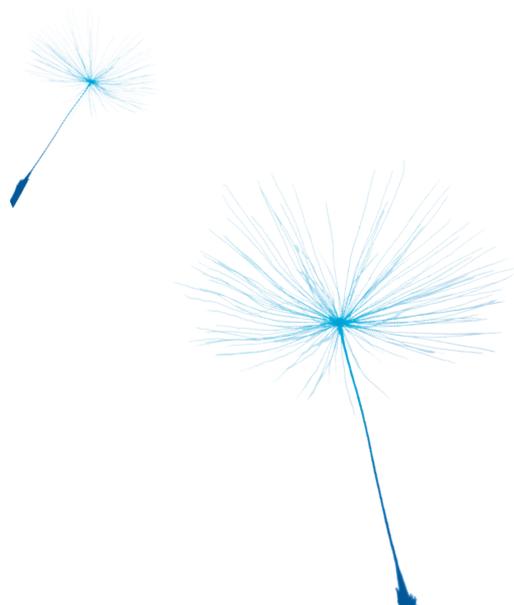
APPRECIATION AND THANKS

I would like to join our Director in expressing our gratitude to the trades and other stakeholders for their continuous support, without which our operations and implementation of new ordinances during the year would not have continued so smoothly. I would also like to thank all our colleagues for their dedication and outstanding service, and those who went the extra mile to win awards and recognition for our regulatory achievements. I am delighted to see a high level of engagement among staff throughout our organisation and their dedication to providing a safe home and peace of mind for the people of Hong Kong.



Alfred W H Sit

Deputy Director/Regulatory Services, EMSD







重要活動
Highlights



《升降機及自動梯條例》引入新管制措施

2012年4月通過的《升降機及自動梯條例》（第618章）於同年12月17日全面生效，進一步提升香港升降機及自動梯的安全水平。條例引入一系列的規管措施，包括改善升降機及自動梯工程人員的註冊制度，加強違例罰則，擴大條例的適用範圍，以及提高運作效率和執法成效。本署相信，新條例會提升香港升降機及自動梯的安全水平。我們會繼續就條例與升降機及自動梯公司、業界和市民大眾溝通，並監察條例的實施情況。

LIFTS AND ESCALATORS ORDINANCE PROMPTS ADDED CONTROL MEASURES

Enacted in April 2012, the Lifts and Escalators Ordinance (LEO) (Cap. 618) came into full operation on 17 December 2012, further enhancing lifts and escalators safety in Hong Kong. The LEO introduces a series of enhanced regulatory control measures, including strengthening the registration regime for personnel engaged in lift and escalator works; raising the penalty levels of offences; extending the coverage of legislations; and enhancing the operational efficiency and enforcement effectiveness. The department believes that the safety level of lifts and escalators in Hong Kong will be raised by the new legislation, and will continue to communicate with lift and escalator companies, the trades and general public regarding the LEO, as well as to monitor and observe its implementation.



為啟德發展區提供關鍵基建服務

重建啟德機場原址是政府重要基建項目之一，旨在善用該塊土地及催化九龍城和新蒲崗兩區的重建工作。機電工程署作為政府機電服務的提供者，轄下各部別都積極參與了該幅土地的發展準備工作，特別是期待已久並於2013年6月啟用的啟德郵輪碼頭。

2012年，我們的氣體標準事務處就發展區內的一項主要氣體喉管改造工程進行監督工作，確保工程安全完成，讓新郵輪碼頭得以安全進行全面發展。此外，啟德區域供冷系統的第一階段工程已順利完成，並已開始供應冷凍水給啟德郵輪碼頭及公共屋邨內的零售範圍使用。

CONTRIBUTING TO MAJOR INFRASTRUCTURE DEVELOPMENT AT KAI TAK AREA

The redevelopment of the former Kai Tak Airport area is one of the government's major infrastructure projects aiming to optimise the potential of the site while, at the same time, acting as a catalyst for the regeneration of the Kowloon City and San Po Kong districts. As the government's E&M service provider, various EMSD divisions were deeply involved with the preparation of the site, particularly with the much anticipated opening of the Kai Tak Cruise Terminal in June 2013.

To this effect, in 2012, our Gas Standards Office was involved in overseeing the safe completion of a major gas pipeline diversion project at the site which will enable the safe and full development of the new Cruise Terminal. Furthermore, our Energy Efficiency Office has successfully completed the first stage of the District Cooling System for the Kai Tak Cruise Terminal and the retail areas of the public housing estates in the development site.



《建築物能源效益條例》為綠化香港跨前一大步

本署於2012年完成的另一項重要工作是於9月21日實施《建築物能源效益條例》（第610章）。條例為新建建築物或正進行主要裝修工程的現有建築物，訂定了電力、空氣調節、照明和升降機及自動梯裝置等屋宇裝備裝置的基本能源效益標準，對香港的環境保護工作是個重要里程碑。條例亦要求商業建築物的擁有人進行能源審核，以便找出能源管理機會。鑑於建築物佔全港的總用電量達九成之多，提升建築物能源效益不但有助推動整體能源效益，還大大減少本地的溫室氣體排放。

BUILDINGS ENERGY EFFICIENCY ORDINANCE MARKS A BIG STEP TOWARDS A GREENER HONG KONG

Another major achievement by the department in 2012 was the introduction of the Buildings Energy Efficiency Ordinance (BEEO) (Cap. 610) on 21 September 2012. The BEEO marks an important milestone in Hong Kong's environmental protection as it sets a energy efficiency standard for building services installations such as electrical, air-conditioning, lighting and lift and escalator installations in new buildings and existing buildings undergoing major retrofitting works. The BEEO also requires owners of commercial buildings to carry out energy audits to identify energy management opportunities. As buildings account for about 90% of the total electricity consumption in Hong Kong, improving buildings' energy efficiency will not only help promote energy efficiency as a whole, but also make a huge impact in reducing the city's greenhouse gas emissions.



與電業界攜手推動持續進修

「註冊電業工程人員持續進修計劃」已於2012年1月1日開始實施。根據計劃，註冊電業工程人員須於申請註冊續期前完成兩個單元的培訓課程，有助推動電業界持續進修的文化。秉承我們在新計劃發展階段已積極與業界合作、並進行充分諮詢的一貫作風，電力法例部將繼續與業界聯會和工會組織保持密切聯繫，並舉辦導師培訓課程，以順利落實持續進修計劃。

JOINT EFFORT WITH ELECTRICAL TRADE TO PROMOTE CONTINUING PROFESSIONAL DEVELOPMENT

1 January 2012 hailed the start of the Continuing Professional Development Scheme for Registered Electrical Workers (REWs). The scheme requires REWs to complete two modules of training before applying for renewal of registration, while at the same time

fosters a continuous learning culture for the electrical trades. Following the department's usual practice of full cooperation and consultation with the trades during the development stage of new schemes, the Electricity Legislation Division continued to remain in close communication with trade and union organisations to enable the smooth running of the scheme; as well as to organise a Train-the-Trainer programme with them in order to ensure the successful implementation of the scheme.



積極執行安全措施，致力減低事故率

鑑於公眾安全是機電署的首要考慮，我們投放並善用不少資源，推出有利公眾的政策。為了防止意外事故，我們更主動執行各種安全措施。

例如，氣體標準事務處主動在地盤為工程承辦商舉辦安全講座，減低建築工程期間氣體喉管意外損毀的情況。此外，在預防建築地盤的地下電纜損毀事故方面，電力法例部已聯同電力公司進行地盤巡查，並舉辦安全講座給工程承辦商和政府工務部門，以提高他們的安全意識和對法例要求的認識。再者，在加強建築工地電力安全方面，電力法例部也發信給所有註冊電業承辦商及註冊電業工程人員、相關商會及工會等，提醒業界必須確保建築工地電力安全，並聯同建造業議會舉辦安全講座，以讓有關業界增加對事故成因的了解及提高他們的安全意識。

與此同時，鐵路科則嚴格規管鐵路安全及執行《香港鐵路條例》，為大幅減少因設備故障及員工行為引致的鐵路事故作出貢獻。

昂平360纜車系統於2011年和2012年初發生一連串故障後，在本署監督下進行了一系列的更換工程、檢查和改善措施。因此，自2012年4月纜車重新投入服務後，故障已顯著減少。



PROACTIVE SAFETY MEASURES IMPLEMENTED TO REDUCE INCIDENT RATES

With ensuring public safety as one of the department's top priorities, EMSD utilises much resources in initiating policies that are deemed beneficial for the public. We proactively implement safety measures to prevent incidents.

For instance, the Gas Standards Office took the initiative and gave safety talks to works contractors onsite which contributed to the decrease in accidental damage of gas pipes during construction works. To prevent underground cable damage incidents at construction sites, the Electricity Legislation Division has carried out joint site inspections with the power companies and given safety talks to contractors and government works departments in order to enhance their safety awareness and understanding of the legislative requirements. In addition, to enhance electrical safety at construction sites, the Electricity Legislation Division has issued letters to all Registered Electrical Contractors, Registered Electrical Workers, related contractors' associations and workers' unions to remind the trade members of the electrical safety at construction sites. We also deliver safety talks jointly with the Construction Industry Council with a view to helping the trade members understand more about the causes of incidents as well as enhancing their safety awareness.

At the same time, the Railways Branch's stringent regulation of railway safety and enforcement of the Mass Transit Railway Ordinance have contributed to the considerable fall in the trend of railway incidents caused by equipment failure and staff behaviour.

After a number of stoppage incidents in 2011 and early 2012, Ngong Ping 360 underwent a series of replacement works, examinations and implementation of improvement measures under the supervision of the department. As a result, the number of stoppage incidents has been drastically reduced since the ropeway resumed service in April 2012.





保障公眾安全 >>>
Protecting Public Safety





電力法例部工程師定期巡查香港電力公司的供電設施，以保障市民安全。
Electricity Legislation Division engineers carrying out regular inspections on Hong Kong power companies' electricity supply facilities to ensure public safety.



機電署在大亞灣應變計劃跨部門演習中擔當重要角色。
EMSD played an important role in the Daya Bay Contingency Plan Interdepartmental Drill.

電力安全

數年前，電力法例部開始籌備引進的「註冊電業工程人員持續進修計劃」現已完成，進修計劃並於2012年1月1日開始實施。根據計劃規定，各註冊電業工程人員必須完成指定的安全培訓，方可申請註冊續期。進修計劃為註冊電業工程人員提供包含兩個單元的培訓，即「法例及安全規定」及「技術知識」，令規管業界標準的工作向前邁進一步，並有助推廣工程人員的持續進修文化。

本部亦聯同業界團體舉辦導師培訓課程，方便實施新的進修計劃，並且確保全港都有充足數量的培訓單元供註冊電業工程人員報讀。結果，有13個團體共298名會員參加並成功修畢導師培訓課程。這些認可導師其後為超過27,000名註冊電業工程人員開辦了260次培訓班，大大提高這項計劃的成效。

參與大亞灣應變計劃大型演習

2012年4月26及27日，機電署一組工程人員參與為期兩天的跨部門演習，旨在測試一旦大亞灣核電站發生嚴重事故而引致輻射外洩時，大亞灣應變計劃的成效。這次演習有30多個政府政策局及部門共約2,000名人員、當地居民組織、志願人士及其他有關團體參與，是歷來最大型的演習，用以測試在突發而緊急的情況下，各有關方面的應變能力和協調工作。在是次演習中，機電署啟動了緊急應變中心，測試本署的應變能力，包括在署內以至與其他政策局及部門之間的協調。該組工程人員密切監察事態的發展，並為其他政策局提供技術支援，例如就有關事故提供在工程方面的技術數據詮釋。為期兩天的演習圓滿結束，機電署的表現備獲好評。

事故趨勢

電力事故數字經過近幾年持續下降後，固定電力裝置事故及第三者損毀供電電纜事故數字於2012年見輕微上升。

電氣產品事故數字較去年輕微增加，主要是由於年初天氣惡劣所導致。

ELECTRICAL SAFETY

Preparation work for the introduction of the Continuing Professional Development (CPD) Scheme for Registered Electrical Workers (REWs) which began in previous years came to a conclusion on 1 January 2012 when the CPD Scheme came into effect. It became mandatory for all REWs to complete the requisite safety training before applying for a renewal of registration. The scheme provides REWs with a two-module programme of training, covering "Legislative and Safety Requirements" and "Technical Knowledge" which is the correct step towards regulating the trade standards, as well as fostering a continuous training culture with the workers.

In order to facilitate the implementation of the new CPD Scheme, and to ensure an adequate number of training modules to be readily available for REWs to enrol throughout the city, the Electricity Legislation Division also launched a Train-the-Trainer programme with trade organisations. As a result, a total of 298 members from 13 organisations joined and successfully completed the Train-the-Trainer programme. These Recognized Trainers subsequently organised 260 training sessions for over 27,000 REWs, greatly enhancing the effectiveness of the scheme.

Participation in Large Scale Daya Bay Contingency Plan Exercise

On 26 and 27 April 2012, a team of engineers from EMSD participated in the two-day interdepartmental exercise which

aimed to test out the effectiveness of the Daya Bay Contingency Plan (DBCP) in the event of a serious off-site accident and subsequent radiological release at the nuclear power plant at Daya Bay. With the participation of about 2,000 officers from more than 30 government bureaux and departments, as well as local resident bodies, volunteers and other concerned parties, the exercise was the largest event ever held to test the response capability and coordination among the concerned parties under emergency and stress conditions. During the exercise, EMSD activated an emergency response centre, testing out the department's response, including coordination within EMSD and with other bureaux and departments. A team of engineers closely monitored the development of the situation and provided technical support to other bureaux such as the interpretation of technical data relating to the engineering aspects of the incident. The two-day exercise ended smoothly and input from EMSD was well received.

Incident Trend

After several years of steady decline, the number of electrical incidents for fixed electrical installations and third-party damage to electricity supply lines showed a slight increase in 2012.

Electrical product incidents experienced a slight increase from the previous year mostly due to the adverse weather condition early in the year.

電力事故數目 Electrical Incidents Figures





電力法例部定期舉辦研討會，向工人及業界灌輸最新機電法例知識。
Electricity Legislation Division organises regular seminars to educate workers and trades on the latest electrical and mechanical legislations.

加強電力安全培訓

安全是本署關注的重要事項，電力法例部繼續與承辦商及業界團體舉辦各種電力安全講座。此外，有鑑於下半年度內發生的致命電力意外，電力法例部也加強提醒電業工程人員工作時必須遵守良好的操守及安全文化，並為此展開一系列的宣傳工作，提高他們的電力安全意識，例如派送宣傳資料給註冊電業承辦商、註冊電業工程人員及工會，同時與其他政府部門如勞工處及建造業議會合辦專題研討會。

2012年11月19日，電力法例部與港九電器工程電業器材職工會及香港電器工程商會合辦周年「電力規例研討會」，首次在荃灣大會堂演奏廳舉行，有超過1,000名電業界人士出席，場面十分熱鬧。研討會的主題為「更專業更安全共建電業新里程」，當天所有講題都圍繞專業及安全兩個重點。

新發展帶來新挑戰

本港日後將會進行大量基建工程，這或會令建築地盤內第三者導致的電纜損毀事故有所增加。電力法例部需要遏止可能增加的電纜損毀事故，這是一項挑戰。為此，本部別會採取各項預防措施，例如聯同電力公司進行突擊實地巡查、不時檢討所有電纜損毀事故、找出有問題的承辦商以提高其安全意識，例如發出勸諭信、安排安全講座、以及密切監察他們的安全表現，並會按需要進一步加強宣傳工作。

2012年年內，本港電氣產品市場引進了多項新科技及新潮流，為消費品市場帶來了多款新的小型電氣產品，例如LED燈、家用美容儀器及咖啡機等。電力法例部會繼續密切監察小型電氣產品市場上的安全標準。

花絮 Side Story



機電署（電力法例部）
機電工程師陳家強先生（左）及管理支援主任曾穎棋小姐
Mr Steve Chan, Electrical & Mechanical Engineer (Left) and
Miss Theodora Tsang, Management Support Officer
EMSD (Electricity Legislation)

自行設計「e家」一家人以宣傳電力安全

電力法例部慣常在各種宣傳物品採用專利動畫人物，以吸引青少年。雖然這些受歡迎的動畫人物有助推廣安全信息，但是亦有其局限。機電工程署（電力法例部）機電工程師陳家強先生負責電力法例部的宣傳及學校外展計劃，他解釋說：「我們有意為外展計劃製作新動畫，但採用專利動畫人物卻十分昂貴，而且費時失事，因此我們在2010年決定自行創作自家動畫人物。」

電力法例部外展計劃安全大使曾穎棋小姐表示：「我們需要多個動畫人物，可以提點大家在不同情況下，香港一般家庭必須注意的事項，而「e家」的概念便由此誕生。「e家」包括五位家庭成員，即婆婆、爸爸、媽媽、女兒安安和兒子全全。他們的經歷不單只教導年幼兒童應如何妥善使用電氣產品，同時三名家長亦為兒童在日常生活中的正確做法樹立榜樣。

「e家」一家人出現在電力法例部的多款教育短片、海報、單張、紀念品，以及電氣安全宣傳網站「電力資訊站」。陳先生解釋說：「市民對『e家』一家人的反應熱烈，我們感到十分欣慰，並計劃在日後的宣傳活動中，繼續採用這些人物。我們已製作更多「e家」一家人的紀念品，例如棋盤遊戲、間尺、記事簿及塑膠文件夾，供宣傳活動上派發。」

Heighten Training on Electrical Safety

With safety as one of the department's top concerns, the Division continued to conduct various talks with contractors and trade organisations on electrical safety. Fatal incidents during the latter half of the year also alerted the Division of the need to remind electrical workers on the importance of good practices and safety culture during work. Thus, a series of promotions was carried out to raise awareness on electrical safety, such as sending promotional materials to Registered Electrical Contractors, REWs and Trade Unions, as well as jointly organising topical seminars with other departments like the Labour Department and the Construction Industry Council.

The Annual Technical Seminar jointly organised by the Division with the Hong Kong and Kowloon Electrical Engineering and Appliances Trade Workers' Union and the Hong Kong Electrical Contractors' Association was held for the first time in the Auditorium of the Tsuen Wan Town Hall on 19 November 2012 and the event was well attended by over 1,000 enthusiastic members from the electrical trade. The theme of the seminar was "Enhancing Professionalism and Safety – Towards a New Milestone for the Electrical Trade" and all discussions on the day were centred on professionalism and safety.



New Developments Bring New Challenges

In the years ahead, there will be a lot of infrastructure construction work which may increase the chance of third-party damage to electricity power cables on construction sites. It is a challenge to the Division to contain the possible increase in electricity power cable damage incidents. As such, the Division will carry out various preventive measures, such as conducting ad hoc joint site inspections with the power companies, reviewing all electricity power cable damage incidents, identifying target contractors for safety awareness promotion exercises such as sending advisory letters, arranging safety talks and closely monitoring their safety performance. The Division will also further strengthen publicity work as need arises.

The year 2012 also saw the introduction of a range of new technologies and fashionable trends in the electrical appliance market that brought a range of new small appliances such as LED lights, home-use beauty gadgets and coffee machines onto the consumer market. The Division will continue to remain vigilant in monitoring the safety standards of the small appliance market.

Self-Designed "e-Family" to Promote Electric Safety

In order to attract teenagers, the Division used to use licensed cartoon figures in various publicity materials. Although the popularity of these cartoon characters has helped facilitate the promotion of safety messages, it also created limitations. "We intended to produce new animation for the outreach programme, but using licenced cartoon characters was very costly and time consuming," explained Mr Steve Chan, the EMSD Engineer responsible for the promotion and school outreach programme in the Electricity Legislation Division, "that was why we decided to develop our own cartoon characters in 2010."

Ms Theodora Tsang, the Division's Safety Ambassador for Outreach Programme said, "We needed a range of cartoon characters that could highlight the different things people should beware under different scenarios, which could happen to any Hong Kong family. That was how the concept of the "e-Family" was born." The "e-Family" has five members, Grandma, Daddy, Mummy, On On, the daughter and Chuen Chuen, the son. Their adventures not only teach young children how to properly use electrical appliances, but the three adults also set an example for the children on good practices in everyday life.

The "e-Family" is featured in many of the Division's educational videos, posters, leaflets, souvenirs and on the electrical safety promotion website, namely the Electricity Information Corner. "We are very pleased with the good response we have received from the public on the "e-Family," and plan to continue to use these characters in our future promotion campaigns," explained Mr Chan, "We have produced more "e-Family" souvenirs such as board games, rulers, note pads and plastic folders as giveaways during publicity events."



為進口及儲存石油氣而設的儲藏庫。
Terminal for importation and storage of LPG.

氣體安全

氣體事故數字處於低水平

2012年，氣體事故數字顯著減少，從2011年的275宗下跌至2012年的226宗。這個結果顯示，本署的氣體標準事務處近年採用以風險管理為本的預防及改善措施已見成效。

加強與業界和其他政府部門的溝通和合作

氣體標準事務處持續與業界保持緊密溝通，以便推動業界遵守氣體安全規例及良好作業守則。由於預期全港的建築工程量大增，氣體標準事務處於是加強在建築地盤宣傳氣體安全，例如為工程承辦商舉辦更多安全講座，闡述如何避免損毀氣體喉管。

鑑於氣體標準事務處的工作與其他政府部門息息相關，因此，該事務處亦集中加強與各部門的溝通與合作。例如與屋宇署合作，透過強制驗樓計劃推廣氣體喉管的檢查工作，以及與勞工處協議，假如任何一方發現可能導致食肆廚房發生意外的違規行為，便會通知對方。

加緊巡查石油氣加氣站

2012年12月，雪佛龍加氣站提供的石油氣質量出現問題，引起市民關注。氣體標準事務處迅速採取行動，檢討雪佛龍提交的調查報告，並考慮獨立專家的意見。此外，更加強監察石油氣加氣站的石油氣品質，避免再發生同類事件，同時規定所有石油氣供應公司必須檢討進口石油氣的監察品質程序，進一步加強目前的做法。



定期與氣體供應公司進行事故應變演習，提升應變能力。
Carrying out regular incident drills with gas supply companies to enhance readiness of emergencies.

重大基礎建設

2013年，新啟德郵輪碼頭落成啟用。氣體標準事務處在這方面的重要任務之一，是監察煤氣公司安全完成一項主要海底氣體喉管改道工程，以騰出地方全面發展郵輪碼頭。

在內地西氣東輸二線天然氣輸港的項目上，氣體標準事務處緊密配合項目的進展，批准青山發電有限公司興建一條新的海底天然氣喉管和相關的天然氣發電設施，這是政府控制空氣污染的策略之一，規定本地電力公司使用較清潔的燃料，以減少發電廠的污染物排放。



氣體標準事務處協調石油氣加氣站地底石油氣缸的十年安全測試，以盡量減少對業界和公眾的影響。
The 10 year integrity inspections of underground LPG Tank at LPG filling stations are carefully coordinated by Gas Standards Office to minimise impact to trade and public.



▶ 連接西氣東輸二線香港段的新天然氣發電設施。
New natural gas facilities for power generation connecting to the Hong Kong section of the Second West-East Gas Pipeline.



▶ 氣體標準事務處稽核氣體供應公司所進行的氣體安全檢查。
Gas Standards Office auditing the gas safety inspection work being carried out by a gas supply company.

GAS SAFETY

Gas Incidents at Low Level

The year 2012 saw a remarkable decrease in the number of gas incidents, dropping from 275 in 2011 to 226 in 2012. The result underlined the effectiveness of the risk-based preventive and rectification measures which the Gas Standards Office adopted in recent years.

Strengthened Communication and Collaboration with Trades and Other Government Departments

The Office continued to maintain close communication with the trades to promote compliance and good trade practices in terms of gas safety. It foresaw a heightened construction activity in the territory and stepped up gas safety promotions at construction sites such as conducting more safety talks to works contractors on avoidance of damage to gas pipes.

Recognising the close correlation between its work and that of other government departments, the Office also focused on strengthening communications and collaborations with the departments. For instance, with the support of the Buildings Department, the Office promoted the inspection of gas pipes by means of the Mandatory Building Inspection Scheme. Additionally, arrangements were also made with the Labour Department whereby either department would notify the other should it identify certain kinds of irregularities that might pose hazards in restaurant kitchens.

Tightened Inspection on LPG Filling Station

Concerns were raised in December 2012 regarding the quality of liquefied petroleum gas (LPG) supplied by Chevron's filling stations. The Office took prompt action by reviewing the investigation report provided by Chevron and considering the advice from independent professionals. Furthermore, the Office also strengthened the monitoring of LPG quality at all LPG filling stations in order to prevent similar incidents from occurring, as well as requiring all LPG supply companies to review their monitoring procedures on the quality of imported LPG, thereby strengthening current practices.

Major Infrastructure

The year 2013 saw the opening of the new Kai Tak Cruise Terminal. One of the Office's major tasks in this connection was to oversee the safe completion of a major gas pipeline project undertaken by Towngas, which aimed to divert cross-harbour pipelines to make way for the full development of the Terminal.

The office closely facilitated the project implementation of natural gas supply from the Mainland's Second West-East Gas Pipeline, approving the construction of a new submarine natural gas pipeline and new associated natural gas facilities for power generation by Castle Peak Power Company Limited, which was part of the government's strategy to control air pollution that requires local power companies to use cleaner fuels to reduce pollutant emission from power plants.



▶ 工程師親臨地盤視察海底氣管改道工程進度，確保氣體安全，以配合啟德郵輪碼頭發展。
Engineers carrying out on-site gas safety inspection of the submarine gas pipeline diversion works for the development of the Kai Tak Cruise Terminal.



▶ 與建新海底天然氣喉管時使用的的敷管船。
Laybarge for construction of new submarine natural gas pipeline.

花絮
Side Story



機電署（氣體標準事務處）
機電工程師吳玉華女士
Ms. Alice Ng, Electrical & Mechanical Engineer
EMSD (Gas Standards Office)

大埔區大範圍煤氣供應中斷事故

氣體標準事務處當值工程師吳玉華女士憶述：「2012年6月4日早上6時許，我被一個緊急電話弄醒，得知大埔區發生煤氣供應中斷事故。」

作為《氣體安全條例》的執法機關，氣體標準事務處的工程師會輪流候命，處理事故。吳女士解釋說：「在接到緊急電話後，我們會立即就事故進行調查，監察修復進度，並建議預防措施。」

這是吳女士到任氣體標準事務處以來所處理的最大型事故。吳女士憶述：「我是第一個接報到場的人，我看到路面毀爛，水不斷湧出。」事故的影響廣泛，水與碎石已淹浸大埔區大範圍的煤氣供應網絡，影響14個公共屋邨和私人屋苑約9,800個住戶和24家商戶。煤氣公司在現場設立臨時控制中心，並動員超過400名工人及操作人員，努力在安全及迅速的情況下恢復煤氣供應。此外，事故吸引大批傳媒、當區社區人士和區議員的關注。「這難免對我們增添壓力，促使我們要應對相關的挑戰。」

吳女士表示：「在整整兩天期間，我們從早上8時30分至晚上10時都留守在現場，直至事故解決為止。」她與同事合力，密切監察維修工程，包括煤氣供應系統的清洗和穩定性測試，並且探訪個別用戶，查核煤氣供應系統是否妥善，確保公眾氣體安全。吳小姐表示：「煤氣供應最終在2012年6月6日中午全面恢復。」

吳女士說：「這是一個難忘的經驗，因為是次事故讓我們有機會把緊急應變計劃付諸實行，同時加強各有關人士的溝通，以避免同類事故再發生。」

Large-scale Gas Supply Interruption Incident in Tai Po

"On 4 June 2012 at about 6:00am, I was woken up by an emergency call and was told that town gas supply in Tai Po was interrupted," recalled Ms Alice Ng, a duty engineer of the Gas Standards Office.

As the enforcing body of the Gas Safety Ordinance, engineers of the Gas Standards Office take turns to stand-by in the event of incidents. "Upon receiving an emergency call, we will immediately carry out an investigation into the incident, monitor its recovery progress and make recommendations on preventive measures," Ms Ng explained.

It was the biggest incident Ms Ng had handled since joining the Office. "I was the first responder arriving at the scene. I saw that the road slab was destroyed and water was gushing out," Ms Ng recalled. The impact of the incident was vast, as water and gravel had flooded into a large area of the town gas supply network in the Tai Po area, affecting about 9,800 households and 24 businesses in 14 public and private estates. In an effort to resume gas supply in a safe and quick manner, the gas company set up a temporary control centre on site and mobilised more than 400 workers and operators. Also, the incident attracted a lot of attention from the media, local communities and district councillors. "This unavoidably represented an added pressure on us, which drove us to meet the associated challenges."

"We remained on site for the entire two-day period from 8:30am to 10:00pm until the incident came to a conclusion," Ms Ng said. She and her colleagues worked to ensure the public's safety by closely monitoring the repair works, including cleaning and soundness testing of the gas supply system, as well as visits to individual customers to check the integrity of the gas supply system. "Gas supply was fully resumed at noon of 6 June 2012," Ms Ng said.

"It was an unforgettable experience as the incident provided an opportunity for us to put our emergency plan into practice and to enhance communication with the concerned parties to prevent the recurrence of similar incidents," Ms Ng said.



機電署（氣體標準事務處）
機電工程師謝振華先生
Mr Tse Chun-wah, Electrical & Mechanical Engineer
EMSD (Gas Standards Office)

盡量減少檢查石油氣缸對市民帶來的影響

政府鼓勵柴油的士及公共小巴改用石油氣，提倡更廣泛使用清潔能源。自2000年以來，為配合石油氣車輛計劃，石油氣加氣站網絡一直不斷建造。根據《氣體安全條例》的規定，加氣站的地底石油氣缸須定期進行安全測試。目前全港正在營運的60個加氣站中，有12個專用加氣站，佔本港石油氣車輛市場的70%。氣體標準事務處工程師謝振華先生解釋說：「假如任何一個專用加氣站關閉兩個月，為地底石油氣缸進行檢查，或會造成嚴重交通問題，因為在交更期間突然有大量的士和小巴湧至。假如在同一地區內有多過一個專用石油氣加氣站關閉，交通或會變得混亂。」

雖然氣體標準事務處的主要職責是規管氣體安全，但鑑於機電署的工作信念與文化，氣體標準事務處早於2008年已開始與石油氣加氣站營辦商及各石油氣車輛業界及工會聯繫，擬定一個計劃總綱，盡量減少關閉專用石油氣加氣站所帶來的影響。「我們竭力減少影響，不單只因為這些加氣站對的士及小巴業界的營運影響甚大，同時亦因為道路交通擠塞也會影響市民。」

「儘管我們作好準備，但卻沒法準確預測司機會如何反應，又或交通流向會如何改變。」氣體標準事務處與警方及運輸署就可能發生的交通問題緊密合作，與石油氣車輛業界聯繫，分期關閉石油氣加氣站，盡量減少影響，並且調派職員監察有關情況。謝先生表示：「我們從中學會與業界合力解決問題，並加強與各持份者的溝通和聯繫，這有利我們日後的工作和合作。」

Minimising Public Impact of LPG Tank Inspection

In order to promote the wider use of clean energy, the government introduced incentives for diesel taxis and public light buses to convert to Liquefied Petroleum Gas (LPG). Concomitant with the LPG Vehicle Scheme, a network of LPG filling stations has been progressively building since 2000, with their respective underground LPG tanks time-tagged for mandatory integrity inspections as required by the Gas Safety Ordinance. Out of the 60 LPG filling stations currently operating in Hong Kong, there are 12 dedicated LPG filling stations that account for 70% of the total auto-LPG market share in Hong Kong. "If any of these dedicated LPG filling stations was closed for two months to facilitate inspection of the underground LPG tank, it might cause severe traffic problems due to the sudden influx of taxis and public light buses during shift-change hours. If more than one dedicated LPG filling station was closed in the same locality, traffic might become chaotic," Mr Tse Chun-wah, engineer of the Gas Standards Office explained.

Although the Office's main duty is to regulate gas safety, EMSD's strong work ethics and culture have led the Office to begin liaising with LPG filling station operators, and various LPG vehicle trades and unions as early as 2008 to work out a master plan to minimise the impact of the dedicated LPG filling station closures. "We went to great lengths to try to minimise the impact, not only because these stations are crucial to the smooth operation of taxi and public light bus trades, but also because road traffic congestion will also affect the public."

"Regardless of our preparation, there are no accurate ways to predict the way drivers will react or the direction the traffic will go." The Office worked closely with the Police and Transport Department on possible traffic issues, liaised with the LPG vehicle trades to close the dedicated LPG filling stations in stages to minimise impact, and deployed staff to monitor the situation. "We learned to resolve problems together with the trades and strengthen our communication and relationship with all stakeholders, which would benefit our future work and cooperation," said Mr Tse.



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《升降機及自動梯條例》引進新的准用證，清楚列明它的屆滿日期，以便使用者監察。

The new Lifts and Escalators Ordinance introduces a new use permit that clearly indicates its validity period to promote "user surveillance".



新法例有助確保升降機及自動梯妥善維修狀況及安全操作。

The new legislation helps to ensure that lifts and escalators are kept in a safe and well maintained manner.

機械安全

實施《升降機及自動梯條例》(第618章)

2009年，機電署開始為《升降機及自動梯（安全）條例》作全面檢討。經多年的籌備和詳細討論，並與業界進行多次會議及溝通後，《升降機及自動梯條例》（第618章）（下稱「條例」）及其兩條附屬規例，《升降機及自動梯（一般）規例》和《升降機及自動梯（費用）規例》已於2012年12月17日開始生效，取代《升降機及自動梯（安全）條例》。

「條例」規定，升降機及自動梯的管理責任須由業主、業主立案法團和物業管理公司共同分擔。「條例」訂明升降機和自動梯的管理人連同擁有人都須負責任，目的在於確保有關裝置安全操作及獲得妥善維修。再者，最高罰款額亦增至200,000元，以發揮更大的阻嚇作用。

此外，「條例」亦訂立一項工程人員註冊制度，工程人員須按其資歷進行註冊。「條例」開始實施的首六個月內，在5,000名工程人員當中，約有一半已根據新制度註冊，而機電署的目標是在2013年年底前完成全港所有5,000名工程人員的註冊工作。

「條例」針對升降機和自動梯的維修及操作作更嚴密的規管，以提高公眾安全及更能滿足市民的期望與要求。為了讓市民及業界持份者清楚認識到新法例的實施，一般法例部舉辦了一系列的宣傳活動，例如播放電視宣傳短片及電台宣傳廣播、印製海報、單張和指南，並為物業管理公司、市民大眾及業界從業員舉行超過40場研討會，向他們簡介「條例」規定的升降機和自動梯負責人及註冊人士的責任，以及如何安全使用升降機和自動梯，同時在上述部分研討會中提出優化升降機和自動梯的七項建議，有超過3,000名市民出席。在簡介會上，一般法例部派發了各類小冊子，內容涵蓋升降機優化工作、「條例」的實施，以及「條例」訂明的升降機和自動梯負責人的責任。

MECHANICAL SAFETY

Implementation of the Lifts and Escalators Ordinance (Chapter 618)

EMSD commenced work to amend the Lifts and Escalators (Safety) Ordinance in 2009, and after years of preparation and canvassing, numerous meetings and communication with the trades, the Lifts and Escalators Ordinance (LEO) (Cap. 618), and the two regulations under the ordinance, that is, the Lifts and Escalators (General) Regulation and the Lifts and Escalators (Fees) Regulation, came into force and repealed the Lifts and Escalators (Safety) Ordinance on 17 December 2012.



一般法例部印製一系列宣傳小冊子，向市民和業界推廣新法例的詳情。
General Legislation Division printed a series of promotional pamphlets to publicise the details of the new legislation to the public and trades.



負責人須在事故發生24小時內以書面通知機電署署長及有關的註冊升降機及自動梯的承辦商。
Responsible persons are required to notify the Director of Electrical and Mechanical Services and registered lift and escalator contractors in writing within 24 hours of any incident occurrence.

Under the LEO, responsibility of management of the lifts and escalators are shared among homeowners, owners' corporations and property management companies. The inclusion of the persons managing the lifts and escalators to be held responsible along with the owners serves to ensure the equipment is kept in safe working order and in proper state of repair and maintenance. Furthermore, the maximum fine for penalty was also increased to \$200,000 as a greater deterrent.

Additionally, the LEO also introduced a workers' registration system whereby workers are registered in accordance with their qualifications. In the first six months from the commencement of the operation of the ordinance, about half of the 5,000 workers have already registered under the new scheme and EMSD aims to complete the registration of all 5,000 workers in Hong Kong by the end of 2013.

The LEO enforces enhanced regulatory control on the maintenance and operations of lifts and escalators in order to enhance public safety and better satisfy the public's expectations and demands. In order for the public and industry stakeholders to be fully aware of the implementation of new legislature, the General Legislation Division organised a series of promotions such as television and radio announcements, posters, leaflets and guidebooks, as well as holding over 40 seminars for management companies, the general public and industry practitioners, briefing them on the duties of the responsible persons and registered personnel for lifts and escalators under the ordinance as well as the safe use of lifts and escalators. The seven proposals to modernise the existing lifts were also included in part of the above seminars. Over 3,000 members of the public attended. During the briefings, booklets covering lift modernisation, introduction of the ordinance, and the duties of the responsible persons as outlined by the ordinance were distributed.



自2007年至今，已有約10,000名技工透過「車輛維修技工自願註冊計劃」註冊。
About 10,000 vehicle mechanics have already registered under the Voluntary Registration Scheme for Vehicle Maintenance Mechanics since 2007.

車輛維修技工註冊計劃

全港約有653,010輛持牌車輛，即每公里路面便約有3,121輛持牌車輛使用，令香港成為全球最繁忙的城市之一。本港有9,420名車輛維修技工，全賴他們才可保障本港的道路安全，確保這些車輛可在路上安全行駛。有見及此，機電署設立車輛維修技工自願註冊計劃，讓具備所需資歷及經驗的車輛維修技工可獲得註冊，從而確立表現水平，甄別合資格的車輛維修技工，並透過《行為守則》更有效規管維修業界。雖然計劃只是自願性質，但在2013年，已有約7,400名車輛維修技工註冊，佔全港車輛維修技工人數78%左右，顯示業界十分支持這項計劃。一般法例部會繼續監察和積極改善這項計劃，並就是否需要立法徵詢業界意見進行正式研究。

車輛維修工場約章

車輛維修技工自願註冊計劃成功執行後，一般法例部於2012年推出車輛維修工場約章。約章亦屬自願性質，車輛維修工場如簽署上述約章，即表示承諾遵守一套《實務守則》，從而提高服務標準和工場的專業水平。約章雖然仍在起步階段，但已為進一步規管及加強監控車輛維修工場奠定基礎。



已簽署車輛維修工場約章的車輛維修工場於當眼處張貼約章內容，以表承諾提供優質服務。
The service pledge is prominently displayed in the workshops that have joined the Vehicle Maintenance Workshops Charter, indicating their commitment to providing quality service.

Registered Scheme for Vehicle Mechanics

There are about 653,010 motor vehicles licensed in Hong Kong, which means there are approximately 3,121 licensed vehicles for every kilometre of road, making Hong Kong one of the busiest cities in the world. Hong Kong's safety on the road is guarded by the 9,420 vehicle mechanics that ensure these vehicles are road worthy. In view of this, EMSD introduced a Voluntary Registration Scheme for Vehicle Mechanics to benchmark these mechanics. Mechanics in possession of necessary qualifications and experiences are eligible for registration, hence establishing a performance standard to identify competent vehicle mechanics. Meanwhile, the industry could also be better regulated under a Code of Conduct. Although the scheme is only operated on a voluntary basis, about 7,400 vehicle mechanics are already registered under the scheme in 2013, accounting for about 78% of the vehicle mechanics in Hong Kong, indicating the trade's acceptance of the scheme. The General Legislation Division will continue to monitor and pro-actively enhance the scheme, and conduct formal studies in consultation with the trade regarding the need for legislation.

Vehicle Maintenance Workshops Charter

Following the success of the Voluntary Registration Scheme for Vehicle Mechanics, the General Legislation Division launched the Vehicle Maintenance Workshops Charter in 2012. Operating also on a voluntary basis, vehicle maintenance workshops pledging the charter agree to abide by a set of practice guidelines, which will in turn serve to raise the workshop's service standard and professionalism. Still at its initial stage, the charter has laid a foundation for future regulation and enhanced control on vehicle maintenance workshops.



本港兩個主題公園在2012年年間均推出全新機動遊戲機。
Both theme parks in Hong Kong introduced new amusement rides in 2012.

新機動遊戲機

鑑於娛樂需求持續上升，本港兩個主題公園不斷引進新機動遊戲機，以應付需求。香港迪士尼樂園新機動遊戲機的設計審核及實地檢驗工作已適時完成，「灰熊山谷」新主題區的「灰熊山極速礦車」可依時啟用，而「迷離莊園」內「迷離大宅」的安裝工程亦隨即展開。此外，在2012年7月，海洋公園引進了「極地時速」過山車，標誌著該公園順利完成重建計劃。

氦氣球事故技術調查

海洋公園於2012年6月28日發生事故，一部載有七名乘客及一名操作員的氦氣球於距離降落平台約29米外的花園著陸。機電署經調查後發現，氣球在操作時因受熱和重複的機械運作影響，引致氣球物料的黏合力減弱而洩漏氦氣，導致今次事故。由於海洋公園計劃只以氦氣球作為短期裝置，事故發生後有關氦氣球經已全面停止服務。

昂坪360纜車暫停運作後重開

昂坪360纜車在2012年1月25日發生停頓事故後，纜車服務暫停約兩個月。機電署的調查發現，是次事故是由於纜車系統中4號牽引纜滑輪的軸承內環滾動面出現不規則損蝕，加上4號牽引纜滑輪膠邊的不均勻磨損，導致纜車的運作停頓。機電署密切監察牽引纜滑輪軸承更換工程的進度、年度檢驗，以及與纜車系統的運作與維修有關的改善措施的實施情況，包括加強監察牽引纜滑輪軸承，每月為潤滑油進行分析，以及改善緊急處理程序。

機電署在確定纜車系統已落實各項必需措施，足以避免再發生同類事故及加強系統的穩定性後，昂坪360纜車於2012年4月3日重開。

花絮 Side Story

業界對新條例的意見

2012年12月17日，《升降機及自動梯條例》（第618章）開始生效，為年代已久極需改善的舊條例作出修訂，以反映市場的轉變及社會人士的期望。職業訓練局薄扶林大樓卓越培訓發展中心是全港唯一設有相關機械設施的中心，可教授升降機與自動梯的裝置、維修及保養的工作。作為該中心的總教導員，黃啟漢先生從工程人員的獨特角度觀察到新條例帶來的影響。

黃先生表示：「機電署投入大量人力物力，推出這項新條例，在諮詢期間及草擬階段聯繫各持份者，並成立由各界社區領袖組成的專責小組和分組，以討論有關條例的細節，最終達致一條平衡各方利益，同時為市民提供最大安全保障的條例。」舉例來說，在過去，升降機和自動梯工程人員的技術資格大部分視乎其工作經驗而定。假如工程人員決定轉往另一公司，其技能資歷便不能轉移。黃先生解釋說：「新條例正確反映工程人員的技術資格，註冊是根據工程人員在當前工作環境中，真正表現的技能水平而批核的。新條例為工程人員帶來持續提高工作水平的文化，而我們亦把培訓課程改為學分制，相信此舉會吸引更多年輕人投身這個行業。」



卓越培訓發展中心（電機業）
總教導員黃啟漢先生
Mr Charles Wong, Chief Instructor
Pro-Act Training and Development Centre (Electrical)

New Amusement Rides

With the increasing entertainment need, the two local theme parks have been introducing new amusement rides to meet the demand. Design vetting and on-site examination of the new rides at Hong Kong Disneyland were completed in time for the opening of the roller coaster "Big Grizzly Mountain Runaway Mine Cars" in the new theme land, "Grizzly Gulch", as well as the commencement of the installation of the new ride "Mystic Manor" at "Mystic Point". Meanwhile, the new roller coaster, "Arctic Blast" was introduced at Ocean Park in July 2012, which signified the successful completion of the park's redevelopment project.



維修人員為昂坪360纜車牽引纜滑輪軸承定期添加潤滑油，確保運作暢順。
Staff regreasing the bull wheel bearings of the Ngong Ping 360 Ropeway periodically to maintain continuous smooth operations.

Technical Investigation of Helium Balloon Ride Incident

An incident occurred on 28 June 2012 at Ocean Park when the helium balloon ride carrying seven passengers and a pilot landed on a planter 29 metres away from the landing platform. After investigation, the EMSD's findings suggested that thermal and mechanical cyclic effects of the balloon during operation had reduced the adhesion of the balloon fabrics, and subsequently led to a helium gas leak that caused the incident. As Ocean Park intended the helium balloon ride as a transitional attraction, the service of the ride was terminated after the incident.

Ngong Ping 360 Reopened After Extended Suspension

The service of the Ngong Ping 360 Ropeway was suspended for about two months following a stoppage incident on 25 January 2012. Upon investigation by EMSD, the ropeway interruption was found to be caused by irregular spalling in the inner race of the bull wheel No.4 bearing and uneven wearing out of the linings of that bull wheel. EMSD closely monitored the progress of the bearing replacement work, the annual survey, and the implementation of the improvement measures related to the operation and maintenance of the ropeway system, including the enhancement of condition monitoring of the bull wheel bearings, monthly grease analysis and improvement of emergency handling procedures.

The Ngong Ping 360 Ropeway resumed operation on 3 April 2012, after EMSD confirmed its satisfaction that required implementation measures for preventing recurrence of similar incidents and enhancement of system reliability were in place.

Industry's Opinion on New Legislation

The Lifts and Escalators Ordinance (Cap. 618) came into force on 17 December 2012 providing the much needed amendments to an aging ordinance and to reflect market changes and social expectations. As the Chief Instructor of Pro-Act Training and Development Centre at VTC Pokfulam Complex, the only institute equipped to teach the installation, repair and maintenance of lifts and escalators in Hong Kong, Mr Charles Wong is in the unique position to observe the impact of the new legislature from the workers' viewpoints.

"EMSD has put in a lot of effort to roll out this new legislature, liaising among various stakeholders during the consultation and drafting stages and setting up task forces and sub-groups made up of community leaders from all walks of life to discuss the details of the ordinance," commented Mr Wong. "The result is an ordinance that strikes a balance between the interests of all parties, while providing maximum safety protection for the public." For instance, in the past, the recognition of competency of lift and escalator workers were largely based on their working experience, and competency qualifications were not transferrable should the workers decide to work for another company. "The new ordinance rightly reflects workers' technical qualifications, with the registration based on their technical skills which truly reflects the current job situation," Mr Wong explained. "The new ordinance introduces a culture of continuous improvement to our workers, and we have also changed our training courses to be credit-based, which we believe will attract more young people to pursue this career path."



鐵路科人員時常通宵檢驗港鐵列車，以確保市民旅途安全。
Railways Branch staff often work overnight to inspect MTR trains to ensure passengers have a safe journey.

鐵路安全

改善事故趨勢

鐵路科的鐵路規管理念是安全至上。若發生鐵路事故，香港鐵路有限公司（「港鐵公司」）必須通知鐵路科進行所需調查，查找出事原因，確保該公司採取適當的補救和預防措施。

鐵路科不斷監察港鐵公司的事故趨勢和模式，以預先找出任何新的趨勢或重複發生的錯誤。在監察過程中，鐵路科會定期聯絡港鐵公司檢討事故數字，確保及時採取適當的管制措施。

在實行適當措施後，鐵路科很高興看到，2012年內因設備故障及員工行為引起的事故，每月平均數字較2011年已大幅下降27%。然而，鐵路科會繼續留意事故趨勢，在發現新趨勢後立即與港鐵公司聯繫，以採取必需改善措施。

審批載客新C-列車

為應付日益增加的客運服務需求，港鐵公司訂購了14列列車以強化觀塘綫、荃灣綫、港島綫和將軍澳綫幾條市區路線的現有車隊，以及八列列車於觀塘綫延綫及西港島綫啟用時投入服務。2012年，已付運的列車合共13列。鐵路科監察新列車的各項安全及表現測試，確保列車安全良好才投入服務。新引入的C-列車首先在觀塘綫行走，騰出的現有列車則已調配服務其他市區路線。由於引入新車強化車隊，加上在服務方面的其他改善，港鐵列車服務在2012年得以增加62,000班次。較頻密的列車班次有助舒緩車站的擠逼情況及縮短乘客的候車時間。

2012年，鐵路科亦核證了行走荃灣綫、港島綫和將軍澳綫的C-列車綜合測試。這些列車加強了鐵路網絡列車服務的靈活性，為乘客提供更方便快捷的服務。



鐵路科人員為港鐵C-列車測試逃生門。
Railways Branch staff testing the detrainment doors of the MTR C-Trains.



鐵路科人員正在檢驗C-列車車廂之間的通道。
Staff from the Railways Branch inspecting the gangway between compartments of the C-Trains.

因設備故障及員工行為引起的鐵路事故數目 Annual Railway Incidents Caused by Equipment Failure and Staff Behaviour



年度鐵路事故
Annual Railway Incidents



平均每月事故
Average Monthly Incidents

RAILWAY SAFETY

Improving Incident Trend

The Railways Branch puts safety as its top priority for railway regulation. When a railway incident occurs, MTR Corporation Limited (MTRCL) is required to notify the Branch for necessary investigation to find out the cause, ensuring the adoption of appropriate remedial and preventive measures by MTRCL.

The Branch continuously monitors MTRCL's incident trends and patterns in order to identify any developing trends or repeated errors in advance. Throughout the process, the Branch remains in regular contact with MTRCL to review their incident figures and to ensure that appropriate control measures are implemented in a timely manner.

With the measures in place, the Branch was happy to see a considerable fall in the monthly average number of incidents caused by equipment failure and staff behaviour, decreasing by 27% in 2012 compared with the figures in 2011. Nevertheless, the Railways Branch will continue to keep track of the incident trend and liaise with MTRCL for necessary improvements once identified from incidents.

Approval of C-Train to Passenger Service

With the aim of meeting the growing need for train service, MTRCL purchased 14 trains to strengthen its existing fleet in urban lines, namely Kwun Tong Line, Tsuen Wan Line, Island Line and Tseung Kwan O Line; and another eight trains to tie in with the opening dates of the Kwun Tong Line Extension and West Island Line. Thirteen of these trains were delivered in 2012. The Railways Branch was responsible for monitoring various



C-列車逃生門設於列車頭尾兩端。
Detrainment door is located at the front and rear of the C-Trains.

safety and performance tests of the new trains before they were confirmed safe and sound and released for operation. The new C-Trains were first introduced to the Kwun Tong Line, thus releasing the existing trains to run on other urban lines. The strengthened fleet, together with other service enhancements added about 62,000 additional train trips in 2012. The more frequent train service helped ease crowding conditions at the railway stations and reduce waiting time for passengers.

In 2012, the Branch also certified the integration tests for C-Trains to run on the Tsuen Wan, Island and Tseung Kwan O Lines, which provided added flexibility for train movement in the railway network and benefited passengers with more effective and efficient services.



廣深港高速鐵路（香港段）的隧道工程。
Tunnel Construction of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (Hong Kong Section).

未來的挑戰

2015年，在西港島綫、觀塘綫延綫、南港島綫（東段）和廣深港高速鐵路（香港段）四條主要鐵路綫竣工後，鐵路網絡的大規模擴建工程便告完成。為日後啟用的西港島綫而進行的上環站改善工程已於2012年完成，而沙田至中環綫的建造工程亦已於同年年底展開。鐵路科正忙於檢核和審批上述五項鐵路工程的新列車路線，以及現有路線的改善工程。儘管資源緊絀，鐵路科會繼續密切監察港鐵公司所有新鐵路項目，確保鐵路安全運作。

花絮 Side Story



機電署（鐵路科）
高級工程師周欽偉先生
Mr Steven Chow, Senior Engineer
EMSD (Railways Branch)

C-列車檢查

鐵路科負責香港鐵路安全的規管工作。在批准C-列車載客前，鐵路科須確保列車能通過一系列的安全及表現測試。

高級工程師（鐵路科）周欽偉先生解釋：「我們的首要考慮是乘客安全，因此必須肯定新列車安全良好，才可讓列車投入服務。」

為測試C-列車在不同情況的安全表現，必須於路軌測試列車，而測試須於夜間進行，以免影響正常的列車服務。周先生笑說：「我們已習慣了當夜班！再者，C-列車檢查須在非常緊迫的時間內完成，但可通宵開放給我們測試列車的路軌數目卻很有限。」

儘管有這些局限，而工作時間亦不固定，鐵路科一直對安全標準保持最高要求。鐵路科選擇檢查列車緊急逃生門的地點，是樂富與黃大仙之間的路軌；該處是路軌最斜，弧度最彎的一段。測試結果顯示，緊急逃生門經多番反覆測試後零件損壞，無法順暢地打開。周先生強調：「緊急逃生門是乘客的緊急出口，我們要確保設備絕對安全。」鐵路科堅持港鐵公司須重新設計及改良有關零件，才批准C-列車投入載客服務。

C-Train Inspection

The Railways Branch is responsible for regulating railway safety in Hong Kong. Prior to the permission of C-Trains to be put into service, the Branch had to ensure that the trains successfully passed a series of safety and performance tests.

"Passenger safety is foremost on our minds, and we have to make sure the new trains are safe and sound before they are allowed to operate," explained Mr Steven Chow, Senior Engineer, Railways.

In order to check the C-Trains' safety performance under various conditions, the trains were tested on the rail tracks, and these tests had to be carried out at night so as not to affect the operation of normal train services. "We are used to working night shifts!" smiled Mr Chow. "Moreover, the C-Train inspections had to be completed in a very narrow time-frame – we only had a limited number of overnight tracks to perform the tests."

Despite this challenge and irregular working hours, the Branch has always maintained the highest safety standards. For the inspection of the detrainment doors' operations, the Branch chose a location between Lok Fu and Wong Tai Sin where the railway track had a steep gradient and maximum cant. Test results revealed that the doors did not open smoothly due to wearing out of parts from repeated tests. "The detrainment door is the passengers' emergency exit, and safety is what we would never compromise on," Mr Chow insisted. The Branch insisted MTRCL to redesign and correct the parts before approval was finally granted for the C-Trains to commence passenger service.



 鐵路科與港鐵公司保持密切聯繫，並監察其管制措施保障市民安全。
 Railways Branch maintains close communication with MTRCL and monitor their control measures to ensure maximum public safety.

Future Challenges

The public will see the massive expansion of the railway network in 2015 with the completion of four major railway lines: West Island Line, Kwun Tong Line Extension, South Island Line (East) and Guangzhou-Shenzhen-Hong Kong Express Rail Link (Hong Kong Section). Modification works of the Sheung Wan Station in preparation for the upcoming opening of the West Island Line were completed in 2012, while the Shatin to Central Link

began construction works in late 2012. The Branch is facing the challenge of vetting and approving the new railway lines for all five new railways projects, as well as the modification works of the operating railway lines concurrently. Although resources are tightly engaged, the Branch will closely monitor MTRCL's new railway projects to ensure that railway safety is not compromised.



 輕鐵道路安全運動2012提醒市民注意輕鐵道路安全。
 Light Rail Road Safety Campaign 2012 enhances public awareness on road safety on light rail roads.



推廣能源效益及節能

Promoting Energy Efficiency and Conservation







能源效益事務處人員巡查區域供冷系統供冷機房的工程。
Energy Efficiency Office staff inspecting the construction of the chiller plant room of the District Cooling System.

《建築物能源效益條例》的實施

對能源效益事務處來說，2012年是非常重要的一年，因為《建築物能源效益條例》（下稱「條例」）（第610章）在2012年9月21日全面實施。「條例」規定新建建築物及進行「主要裝修工程」的現有建築物內的屋宇裝備裝置，即空調、照明、電力、升降機及自動梯等，均須符合《建築物能源效益守則》所規定的設計標準。此外，現有商業建築物及綜合用途建築物亦須根據《能源審核守則》的規定每十年進行一次能源審核。實施「條例」對減少溫室氣體排放有相當大的貢獻，並且是本署不斷為香港努力提供較佳居住環境的重要里程碑。

註冊能源效益評核人

能源效益事務處亦同時推展「註冊能源效益評核人」的註冊工作，以助實施「條例」。評核人的責任包括協助發展商、業主或負責人遵從「條例」的規定。截至目前為止，在850份註冊申請中，約750份已獲批准。

建築物能源效益自願註冊計劃

雖然「條例」現已生效，但是新條例只適用於2012年9月21日後落成的新建築物，又或在此之後進行主要裝修工程的現有建築物。因此，能源效益事務處在1998年10月推出的「香港建築物能源效益註冊計劃」依然有效，以鼓勵其他現有建築物提高能源效益，減少溫室氣體排放。迄今已有超過1,500座建築物根據是項自願計劃註冊。



機電署（能源效益事務處）高級工程師楊楚基先生於「圓桌對談：綠色建築及可持續技術」活動中，向業界領袖講解《建築物能源效益條例》。
Mr Ken Yeung, Senior Engineer, EMSD (Energy Efficiency Office) gave a briefing on the BEEO to industry leaders at the "Roundtable Dialogue: Green Buildings & Sustainable Technologies" event.



▶ 新建樓宇必須符合新建築物能源效益守則之設計標準。
Newly constructed buildings must meet the new Building Energy Code design standards.

Implementation of Buildings Energy Efficiency Ordinance

The year 2012 was very important for the Energy Efficiency Office as the Buildings Energy Efficiency Ordinance (BEEO) (Cap. 610) came into full operation on 21 September 2012. Under the new ordinance, building services installations such as air-conditioning, lighting, electrical installations, as well as lifts and escalators in newly constructed buildings or “major retrofitting works” on existing buildings must comply with the design standards of the Building Energy Code (BEC). Furthermore, existing commercial buildings and composite buildings are also required to carry out energy audits in accordance with the Energy Audit Code (EAC) every 10 years. The introduction of the BEEO will make a considerable contribution towards the reduction of greenhouse gas emission and marks an important milestone in the department’s continuous effort in promoting a better living environment for Hong Kong.

Registered Energy Assessor

In order to facilitate the implementation of the BEEO, the Office also proceeded with the registration of Registered Energy Assessors whose duties include assisting developers, owners or responsible persons to comply with the requirements of the BEEO. To date, the Office has already approved about 750 of the 850 applications for registration.

Voluntary Energy Efficiency Registration Scheme for Buildings

Despite the BEEO coming into effect, the new ordinance will only apply to new or existing buildings undergoing major retrofitting after 21 September 2012. In order to encourage other existing buildings to enhance their energy efficiency and reduce greenhouse gas emissions, the Hong Kong Energy Efficiency Registration Scheme for Buildings that the Office launched in October 1998 would remain in effect. So far, over 1,500 buildings have registered under this voluntary scheme.



自願性能源效益標籤計劃從2012年7月開始涵蓋電磁爐。
From July 2012, induction cookers were also included in the Voluntary Energy Efficiency Labelling Scheme.



節能小貼士的展板有助推動高能源效益的生活方式。
Exhibition panels with Energy Saving Tips help promote a more energy efficient lifestyle.

強制性能源效益標籤計劃

2011年9月19日，強制性能源效益標籤計劃第二階段開始生效，計劃範圍擴大至包括洗衣機和抽濕機。計劃下涵蓋的五種產品，即空調機、冷凍器具、緊湊型熒光燈（慳電膽），洗衣機和抽濕機均須貼上能源標籤，為消費者提供產品的能源效益資料。能源效益事務處舉辦多個強制性能源效益標籤計劃業界研討會，宣傳有關法例的規定、進口商和供應商的責任，以及如何申請及展示能源標籤，以教育業界及供應商有關計劃的知識。

自願性能源效益標籤計劃

在成功實施強制性能源效益標籤計劃的同時，能源效益事務處亦為小型電氣產品推行自願性能源效益標籤計劃，向市民推廣節能。除了上述計劃已涵蓋的20種家用產品和辦公室儀器外，日益受歡迎的電磁爐亦在2012年7月24日納入計劃。能源效益事務處希望透過是項計劃，推動市民更認真地考慮能源耗用量，促使生產商及供應商逐步取締較不節能的型號。

Mandatory Energy Efficiency Labelling Scheme

The second phase of the Mandatory Energy Efficiency Labelling Scheme (MEELS), which extended the scope of the scheme to washing machines and dehumidifiers, came into effect on 19 September 2011. The five products covered under the scheme, namely room air-conditioners, refrigerating appliances, compact fluorescent lamps (CFLs), washing machines and dehumidifiers are required to bear energy labels that provide consumers with the products' energy efficiency information. In order to educate the trades and suppliers on the scheme, the Office organised a number of Trade Seminars on MEELS, disseminating information regarding the statutory requirements, the obligation of importers and suppliers, and how to apply for and display the energy labels.

Voluntary Energy Efficiency Labelling Scheme

Along with the successfully implemented MEELS, the Office also operated a Voluntary Energy Efficiency Labelling Scheme (VEELS) for small electrical appliances to promote energy saving to the public. In addition to the 20 types of home appliances and office equipment already covered under VEELS, the increasingly popular home appliance, the induction cooker was also included in the scheme on 24 July 2012. Through VEELS, the Office hopes to cultivate a more conscientious public culture in terms of energy consumption which will in turn induce manufacturers and suppliers to phase out the less energy efficient models.



能源效益事務處人員於商店檢查電器是否符合能源標籤法。
Energy Efficiency Officers carrying out shop inspections to check on energy labelling on electrical appliances.



區域供冷系統在啟德重建發展項目中佔一重要席位。
The District Cooling System forms an integral part of the Kai Tak Redevelopment Project.



啟德郵輪碼頭接駁了香港首個區域供冷系統。
The Kai Tak Cruise Terminal is connected to Hong Kong's first District Cooling System.

區域供冷系統

能源效益事務處參與啟德發展區區域供冷系統第一期和第二期的施工，作為政府發展前啟德機場用地的主要基建項目的一部分。這是本港首次裝設此類設施，能源效益事務處既要克服新技術發展所帶來的挑戰，也須適時進行地下水管敷設工程，以及完成接駁供冷機房和海水泵房，以配合啟德郵輪碼頭於2013年6月啟用。

能源效益事務處其後也會為定於2013年第三季啟用的啟德發展區公共屋邨商場及日後的醫院和辦公室大樓，裝設區域供冷系統。

淡水冷卻塔計劃

能源效益事務處過去曾引進多項計劃，鼓勵建築物改用更具能源效益的裝置，其中一項計劃便是空調系統使用淡水冷卻塔計劃。機電署率先提出上述計劃，鼓勵非住宅建築物為其空調系統更廣泛使用淡水冷卻塔式的水冷式系統，以取代氣冷式系統。採用淡水冷卻塔的水冷式系統，估計較傳統氣冷式系統可節省達20%左右的能耗，不但為建築物節省金錢開支，同時又更環保。截至2012年12月，能源效益事務處收到733個加入是項計劃的申請，當中有426個申請的裝置（包括1,452座冷卻塔）已在全港各區完成安裝。能源效益事務處會透過擁有人遞交的每月操作記錄和年度審核報告，繼續監察該等裝置的運作和水質情況。

District Cooling System

As part of the government's major infrastructure project to develop the former Kai Tak Airport area, the Office was involved in the construction of the Phase I and II of the District Cooling System (DCS) at the Kai Tak Development. The first installation of its kind in Hong Kong, the Office was faced with the challenge of overcoming new technology development, while at the same time, laying the underground pipe-works and completing the connected chiller plant rooms and seawater pump room in time for the grand opening of the Kai Tak Cruise Terminal in June 2013.

Subsequently, the Office will also be installing the DCS in retail areas of the public estates in the Kai Tak Development due to open in the third quarter of 2013, as well as the future hospital and office buildings.

Fresh Water Cooling Towers Scheme

In the past, the Office has introduced various schemes to encourage buildings to convert to more energy efficient installations, and one of these schemes was the Fresh Water Cooling Towers Scheme for Air Conditioning Systems (the "Scheme"). Spearheaded by EMSD, the Scheme encouraged the wider use of water-cooled types using fresh water cooling towers by non-domestic buildings instead of the air-cooled types for their air-conditioning systems. Water-cooled systems using the fresh water cooling towers is estimated to be up to 20% more energy efficient than the traditional air-cooled systems, thus reaping financial savings for the buildings while being more environmentally friendly. As at December 2012, the Office has received 733 applications for joining the Scheme, among which 426 installations (comprising 1,452 cooling towers) have been completed throughout the city. The Office will continue to monitor the operational conditions and water quality of the completed installations through owners' submissions of monthly operational records and annual audit reports.



能源效益事務處抽查及公布淡水冷卻塔水質報告。

Energy Efficiency Office carries out random checks and releases test results on water sampling on fresh water cooling towers.



「全民節能」

2012年6月7日，能源效益事務處聯同環境局和可持續發展委員會舉辦「全民節能」宣傳活動，推動全民節能。在啟動儀式上隆重宣布推出「節能約章」，並獲得19家發展商及物業管理公司支持，承諾於2012年6月至9月期間，把他們旗下103間商場的平均室內溫度維持在攝氏24至26度之間。據研究顯示，建築物用電約佔全港耗電量的90%，而當中大部分為商業處所的空調用電。這103間商場的支持是減省全港能源耗用量最有效的方法，期望其他商場及商業處所會效法並參與「節能約章」。

500個新設電動車充電設施

能源效益事務處向來支持政府推廣提倡使用電動車。2012年5月24日，財政司司長曾俊華先生在天星碼頭政府停車場為電動車充電設施啟用儀式主禮，並宣布會在全港18個政府停車場設置500個標準充電點，供市民使用，以持續推動市民更廣泛採用電動車。到2012年年底，連同私人停車場內裝設的充電設施，全港充電點總數會達至1,000個。再者，全港的快速充電器亦由五個增至十個。擴大的充電網絡會帶來更多方便，增強本港市民使用電動車的信心。

新技術提高效益成果

能源效益事務處運用其專業知識研發流動程式，供在店舖巡查電氣產品時使用，以便更有效率和更有成效地為市民提供最佳服務。過去，巡查人員在進行每日巡查前，需把最新數據下載到電子手帳內，在返回辦事處後又要將巡查結果上載。有了新流動程式，便可實時在線上取得數據，而巡查人員亦可隨時隨地檢索準確的資料。巡查時所收集得的資料可即時輸入並上載，大大減少文書工作和發生人為錯誤的機會，因而加強巡查的質量控制和準確度。



▶ 財政司司長曾俊華先生（右三）主持電動車充電站的啟動儀式。
Mr John Tsang, Financial Secretary (3rd from right), officiating at the launching ceremony of the Electric Vehicles Charging Stations.



▶ 應用程式的運用大大提高了店舖巡查的效率和準確度。
The use of mobile applications increases the efficiency and accuracy of shop inspections.



▶ 1,000個電動車充電點，遍布香港各停車場，以推廣電動車普及化。
1,000 Electric Vehicle Charging Stations were installed in car parks throughout Hong Kong to promote the use of EVs.

Community-wide Participation in Energy Saving

On 7 June 2012, the Office joined with the Environment Bureau and the Council of Sustainable Development and organised the Publicity Event on Community-wide Participation in Energy Saving to promote community-wide energy saving. During the launching ceremony, the Office announced the launch of the Energy Saving Charter, and the endorsement of the charter by 19 developers and property management companies in pledging to maintain an average indoor temperature of between 24 and 26 degrees Celsius during the months June to September 2012 at 103 shopping malls. According to studies, around 90% of the electricity is consumed in buildings in Hong Kong, with air-conditioning in commercial premises accounting for a large proportion of energy consumed. Garnering the support of these 103 shopping malls is the most effective means to reduce energy consumption in the city, and hopefully, other shopping centres and commercial premises will follow their example and join the charter.

500 New Charging Stations for Electric Vehicles

The Office has been supporting the government's initiative in promoting the use of electric vehicles (EVs). As part of the continuous effort to drive wider adoption of EVs, the Financial Secretary, Mr John Tsang, officiated at a ceremony for EV charging points on 24 May 2012 at the Star Ferry Car Park and

announced the launching of 500 standard charging points at 18 government car parks for public use throughout the city. Together with charging facilities installed by owners of private car parks, the EV charging infrastructure would reach 1,000 charging points by the end of 2012 in Hong Kong. Furthermore, the number of quick chargers around the territories would also be increased from five to ten. The added convenience provided by the expanded network would increase public confidence in using electric vehicles in Hong Kong.

Adopting New Technology Increased Efficiency and Effectiveness

In its mission to provide the best service for the public more efficiently and effectively, the Office utilised its expertise and developed a mobile application for shop inspections on electrical appliances. In the past, inspectors had to download the most up-to-date database to their PDAs prior to their inspections every day, and then had to upload the results of their inspections after they returned to the office. With the new mobile application, data is available online in real time, and accurate information is always readily available to the inspectors. The information gathered during inspections can be entered and uploaded immediately, minimising paperwork and possible human errors, thereby enhancing the quality control and accuracy of the inspections.



▶ 能源效益事務處同事郭穎妍對推動綠色教育不遺餘力，獲頒「年青綠色領袖獎」。
Our colleague, Ms Wendy Kwok from the Energy Efficiency Office, won the "Young Green Leader Award" for her efforts in promoting green education.

「能源數據培訓交流工作坊」

機電署明白持續發展十分重要，並一向積極支持員工參與研討會、會議或交流會，以取得最新的市場資訊。為此，能源效益事務處於2012年10月15及16日，為新入職員工及其他政府部門舉辦「能源數據培訓交流工作坊」。工作坊為期兩天，其間除了由能源效益事務處工程人員提供最新的能源數據，以及其他部門人員分享他們在有關範疇的經驗外，亦邀請了海外和本地能源數據專家就特定課題發表演說，顯示能源效益事務處對節能的專業和積極態度。希望藉著這個工作坊可讓其他部門更清楚明白能源數據的重要性，日後可從這些部門收集更準確和可靠的資料，協助政府制訂往後的能源政策，為市民的利益謀福祉。

獎項

2012年，屋宇裝備工程師郭穎妍女士獲香港工程師學會頒發「年青綠色領袖獎」，以表揚她在推動綠色教育所作出的努力。除了在《建築物能源效益條例》草擬初期提供協助外，郭女士還就審核註冊能源效益評核人的申請，以及與綠色團體合力促進建築物能源效益上作出寶貴的貢獻。

▶ 花絮 Side Story



香港女童軍總會（東區分會）
副主席李榮貴工程師
Ir Spencer Li, Divisional Vice Chairman
Hong Kong Girl Guides Association (Island East Division)

介紹綠色建築物特色的教育徑

作為香港主要的機電工程服務機構，機電署總部大樓展示了機電與屋宇裝備的最新發展。為此，機電署特別設計了一條教育徑，介紹這些尖端綠色設施和可持續發展設計。

2013年5月18日，香港女童軍總會（東區分會）副主席李榮貴工程師與20位女童軍領袖參觀教育徑。李工程師解釋說：「我們的女童軍領袖對綠色概念感到興趣，其中一位領袖建議我們到機電署總部大樓參觀，看看該建築物的特色。」機電署迅速作出安排是次參觀在一個月內進行。

兩名職員在現場帶領女童軍領袖遊覽教育徑。教育徑包括七樓機電安全展覽區的四件展品，用作介紹機電署在電氣安全、機動遊戲機安全、氣體安全以及升降機和自動梯安全方面的工作；天台觀景台的光伏板系統、地下能源效益展覽館的19組互動式遊戲和展品，以及垂直綠化裝置、聚光伏板及總部大樓外行車道的其他能源效益設施。李工程師憶述：「各人都對這次參觀機電署的活動讚不絕口。展覽設計別出心裁，內容深入淺出，互動遊戲和展品都極為有趣，大人小孩都樂在其中。」

李工程師讚揚機電署積極推廣綠色建築。「是次參觀後，我們認識到有關節能方面的新知識，並對機電署所負責的工作範圍與規模之廣留下深刻印象。」

「我們女童軍認為教育徑之旅精彩有趣，一定會推薦給其他團體和部門前往參觀。」



社區團體及組織參觀機電署總部大樓，加深對本署工作範疇的了解。

Local communities and organisations visited the EMSD Headquarters, to have a better understanding of the department's scope of work.

“Energy Statistics Capacity Building Workshop”

EMSD recognises the importance of continuous development and has always been most supportive of its staff in attending seminars, conferences or exchanges for the most up-to-date market information. In this respect, the Office has organised

an Energy Statistics Capacity Building Workshop for new staff and other government departments on 15 and 16 October 2012. During the two-day workshop, in addition to engineers from Energy Efficiency Office disseminating up-to-date information on energy statistics and officials from other departments sharing their experience in the field, overseas and local energy data experts were also invited to speak on selected topics, showing the Office's professional and proactive attitude towards energy conservation. The Office hopes that through better understanding the importance of energy data, more accurate and reliable information will be collected from other departments in the future, thereby facilitating the government's work in devising future energy policies for the public's benefit.

Awards

Ms Wendy Kwok Wing-yin, Building Services Engineer, was awarded the “Young Green Leader Award” by the Hong Kong Institution of Engineers in 2012 as recognition of her work in promoting green education. In addition to her input during the early stages of the drafting of the BEEO, Ms Kwok also contributed to the vetting of REA applications and the promotion of building energy efficiency with green organisations.

Education Path Showcases Green Building Features

As EMSD is a prime provider of electrical and mechanical engineering service in Hong Kong, its headquarters displays the latest development in electrical, mechanical and building services. To this effect, the department has established a dedicated Education Path to showcase these cutting-edge green features and sustainable development designs.

On 18 May 2013, Ir Spencer Li, Divisional Vice Chairman of Hong Kong Girl Guides Association (Island East Division) and 20 Girl Guide Leaders visited the Education Path. “Our Girl Guide Leaders were interested in green concepts, and one of our leaders suggested we visit the EMSD Headquarters and take a tour of their building features,” explained Ir Li. The tour arrangements were made efficiently and the visit was conducted within a month.

Two staff members were on hand to take the group of Girl Guide Leaders for a tour of the Education Path, which consists of four exhibits in the Electrical and Mechanical Safety Exhibition Area on the 7th floor including EMSD's work in electrical, amusement rides, gas, and lifts and escalators safety; the photovoltaic panel system on the rooftop viewing gallery; the 19 interactive games and exhibits in the Exhibition Gallery on Energy Efficiency on the Ground Floor; and the Vertical Greening installation, Concentrated Photovoltaic Panel (CPV) and other energy efficient facilities on the outdoor building driveway. “Everyone enjoyed the EMSD visit,” recalled Ir Li. “The exhibitions were well laid out and easy to understand, and everyone, from adults to children, had great fun with the interactive games and displays.”

Ir Li commended EMSD for its initiative in promoting green buildings. “After the tour, we gained new knowledge about energy conservation issues, and were amazed by the scale and scope of the work which EMSD is responsible for.”

“The Education Path tour is a great activity for our Girl Guides, and we would definitely recommend other organisations and departments to visit too.”





提高公眾安全及 
節能意識

**Raising Public Awareness of
Safety and Energy Conservation**





機電安全嘉年華是機電署的重要年度宣傳活動之一。
The E&M Safety Carnival is one of EMSD's main publicity events.

多年以來，機電署一直通過規管服務、執法行動、試驗計劃，以及與其他政府部門通力合作，致力為市民提供更安全、更完善的居住環境。然而，假如沒有市民的支持，我們的一切努力都只會是白費。因此，本署向來深信，在工作上必須公開透明，盡量向所有持份者及傳媒提供清晰明白的資料。本署亦致力讓市民參與各類公眾教育計劃，以便提高市民大眾的安全及節能意識，從而促進本署的運作及宣傳。

「機電安全香港通」

鑑於市民對安全及正確做法的意識十分重要，本署繼續在2012年舉辦每兩年一度的「機電安全香港通」，包括一系列的活動，例如學校話劇、繪畫創作比賽、年曆卡設計比賽、短片攝製比賽、歌曲填詞比賽，以及網上問答比賽。當中的重點活動是於2012年11月17及18日在葵涌運動場舉行的「機電安全嘉年華」，吸引約12,000人入場。嘉年華設有富教育意義的攤位遊戲、展覽、即場問答遊戲、歌星表演、話劇及兒童天地，入場人士全都盡興而回。



發展局局長陳茂波先生與一眾嘉賓於2012年12月16日在九龍灣零碳天地主持「升降機及自動梯條例啟動典禮」。
The Secretary for Development, Mr Paul Chan and the honored guests officiated at the Lifts and Escalators Ordinance Launching Ceremony at Zero Carbon Building in Kowloon Bay on 16 December 2012.



▶ 嘉年華會攤位遊戲以輕鬆好玩的形式宣傳家居安全。
Game booths promote home safety in a relaxed and fun way.



▶ 透過流動展品來增加市民對新法例的認知。
Raising public awareness on newly introduced legislations by means of roving exhibits.



▶ 中電及香港工程師學會代表蒞臨機電署總部參觀及參加節能座談會。
Representatives from CLP Power Hong Kong Limited & The Hong Kong Institution of Engineers attending an Energy Efficiency Seminar at the EMSD Headquarters.

Throughout the years, EMSD has strived to provide a safer and better living environment for the public through regulatory services, law enforcement, pilot schemes and cooperation with other departments. However, all our effort would be pointless without the public's support. Hence, the department has always believed in the importance of corporate transparency and tries to be upfront with all stakeholders and the media. The department also tries to engage the public in a variety of public education programmes in order to raise awareness in the general public which in turn facilitates the operation and promotion of our work.

The E&M Safety Campaign

Recognising the important role that public awareness plays in safety and good practices, the department continued to organise the biennial Electrical and Mechanical Safety Campaign in 2012 that featured a series of activities such as school drama performances, drawing competitions, calendar card design competitions, short video competitions, lyrics compositions and an on-line quiz. The highlight of the campaign was the Electrical and Mechanical Safety Carnival. The event was held in Kwai Chung Sports Ground on 17 and 18 November 2012, attracting about 12,000 visitors who enjoyed a fun-filled day with the educational game booths, exhibitions, on-site quiz, pop singers' performances, drama performances and children's fun corner provided by the participating organisations.



「升降機及自動梯條例啟動典禮」

本署亦會透過大型推廣活動，令市民認識新實施的條例。例如，於2012年12月16日在零炭天地舉行的「升降機及自動梯條例啟動典禮」。是次典禮是向市民介紹新條例並展開有關宣傳活動，當天吸引了約2,000人入場，場內設有教育展覽和遊戲攤位，並安排了歌星表演和話劇。入場人士度過了有趣而愉快的一天。

一般法例部同時展開了一系列的宣傳活動，包括播放電視宣傳短片及電台宣傳廣播、舉辦講座，以及印製指南、海報和單張，讓公眾和業界更清楚他們在新條例實施後的職責和責任。此外，一般法例部又多次安排青年大使進行探訪，到訪了約100幢沒有業主立案法團、業主委員會或物業管理公司的建築物，向居民和升降機擁有人宣傳有關條例的資訊和管理升降機須知。

能源效益標籤計劃

強制性標籤計劃首階段及第二階段分別於2009年11月9日及2011年9月19日全面實施後，能源效益事務處隨即繼續透過各類刊物、業界研討會、專設網站、電視宣傳短片及電台廣播等進行宣傳，致力教育市民和業界有關能源標籤事宜。



機電署備有多個有關能源效益標籤計劃的流動展板可供本地學校及團體借用。
Various roving displays on the Energy Efficiency Labelling Scheme are available for loan to local schools and organisations.



機電署經常更新部門網頁，向公眾提供最新資訊。
The department's websites are regularly updated to provide the latest and most up-to-date information to the public.



機電署邁進社區，也會參加由其他組織和團體舉辦的社區活動。
 In order to reach out to the public, EMSD also participate in community events organised by local associations and organisations.

Lifts and Escalators Ordinance Launching Ceremony

Large scale marketing campaigns also raise public awareness of newly introduced ordinances. For instance, the new Lifts and Escalators Ordinance and its associated marketing campaign were kicked off by a launching ceremony on 16 December 2012 at the Zero Carbon Building which attracted around 2,000 visitors. The visitors enjoyed a day of fun and entertainment including educational exhibitions, game booths, as well as pop-singers and drama performances.

The General Legislation Division launched a series of promotions simultaneously to enhance public and trade knowledge of their duties and responsibilities under the new ordinance, which included television and radio public announcements,

seminars, guidebooks, posters and leaflets. The Division also organised a series of ambassador visits to approximately 100 buildings without Owners' Corporations, Owners' Committees or property management agents, disseminating information relating to the ordinance and offering tips on how to manage their lifts to residents and lift owners.

Energy Efficiency Labelling Scheme

Following the full implementation of the initial and second phases of MEELS on 9 November 2009 and 19 September 2011, the Energy Efficiency Office continued to put in a lot of effort into educating the public and the trades about the Energy Label through various publications, trade seminars, dedicated website and television and radio public announcements.



機電署總部七樓展覽廳的互動展品大受小學生歡迎。

The interactive displays on the 7th floor Exhibition Gallery are most popular with primary students.

提高公眾安全及節能意識的互動網站

2012年8月6日，能源效益事務處推出新的「能源標籤網」www.energylabel.emsd.gov.hk，專門提供能源標籤及節能產品的資訊，鼓勵市民選用更具能源效益的產品，並且提高公眾節能的意識。網站載列各種有關強制性標籤計劃的資訊，計劃涵蓋的產品清單，以及從計劃刪除的產品清單。此外，網站亦有各類刊物、小冊子及快訊可供下載，方便市民快速的查找相關資料。

與業界及零售商直接聯繫

若署方要成功推行強制性標籤計劃，與業界通力合作是成功關鍵。在2012年，能源效益事務處一方面宣傳強制性標籤計劃第二階段，另一方面亦致力參與推廣《建築物能源效益條例》、《建築物能源效益守則》及《能源審核守則》，並為各業界、專業團體及其他持份者舉辦約60場簡報會。

除了與業界及供應商聯繫外，本署亦明白到零售店舖也能發揮舉足輕重的作用，因為他們不單只在銷售產品方面直接受到影響，同時亦為本署站在前線向市民傳遞信息。為此，能源效益事務處已就各類受影響的產品印備一系列小冊子及快訊，並派遣職員到訪店舖派發宣傳資料，以及講解標籤計劃。

學校外展計劃

本署推行學校外展計劃，作為教育市民的工作之一。我們的職員會探訪學校，推廣機電安全及節能知識。本署不斷改善及更新教材，從而增加學生對講座的興趣，令計劃達到預期的成效。舉例來說，能源效益事務處已設計一套新的能源標籤展板，可在校訪時展出，又或供學校借用來舉辦流動展覽，以配合強制性標籤計劃第二階段的實施。此外，我們亦曾到幼稚園、青少年中心及老人中心進行超過217次探訪，向超過31,000名受眾宣傳升降機和自動梯及機動遊戲機的安全使用。

由於學校外展計劃的目標對象涵蓋幼稚園至中學生，同時為了增加較年輕學生對學校講座的興趣，本署自行創作卡通人物「e家」，於各宣傳刊物及短片中採用，這些卡通人物極富創意，對本署各部份的外展講座十分有用。此外，所創作的故事都圍繞「e家」一家人發生，讓年輕學生觀看時感到有趣，而日常生活的題材令年輕學生容易產生聯想，從而讓他們及早在日常生活中養成節能習慣及採納正確做法。

Interactive Website to Create Public Awareness

In order to encourage the public to select more energy efficient products as well as to raise public awareness of energy saving issues, the Office launched a new website "Energy Label Net" www.energylabel.emsd.gov.hk on 6 August 2012, which is dedicated to provide information on energy labelling and energy saving products. The website is full of information about MEELS, a list of products covered under the scheme, as well as a list of products removed from the scheme. Various publications, pamphlets and newsletters providing quick access to relevant information are also available for download.

Direct Contact with Trades and Retail Sales

The success of implementation of the mandatory labelling scheme relies on the cooperation between EMSD and the trades. In addition to the promotion of the second phase of MEELS, the Office was also heavily involved in the promotion of the Buildings Energy Efficiency Ordinance (BEEO), Building Energy Code (BEC) and Energy Audit Code (EAC) throughout 2012 and organised about 60 briefings for various trades and professional organisations, as well as other stakeholders.

Apart from communication with the trades and suppliers, the department also recognises the important role that retail shops play, for not only are they directly affected in the selling of products, they also act as the frontline for the department in terms of disseminating information to the public. Therefore, the Office published a series of pamphlets and newsletters regarding each category of appliances affected and knowledgeable staff were sent to retail shops to distribute promotional materials and to explain the labelling scheme.



學校外展計劃探訪幼稚園，向小朋友推廣安全意識，自小養成良好的習慣。
School Outreach Programme includes kindergarten visits which can promote safety awareness to children, instilling a habit of good practice early in their lives.

School Outreach Programme

As part of our effort to educate the public, the department operates a School Outreach Programme with staff visiting schools to give talks to promote electrical and mechanical safety as well as energy conservation. To facilitate the success of the programme, the department continuously enhances and updates its teaching tools to make these school visits more interesting for the students. For instance, in conjunction with the implementation of the second phase of MEELS, the Energy Efficiency Office devised a new set of exhibition panels on Energy Labels which could either be displayed during school visits, or available for loan to schools as mobile exhibitions. Furthermore, over 217 visits were also made to kindergartens, youth centres and elderly centres to promote the safe use of lifts and escalators, as well as amusement rides safety, reaching an audience of over 31,000 participants.

As the target audience of the SOP ranges from kindergarten to secondary school students, and to make the school talks more interesting for the younger students, the department created e-Family cartoons which are featured in their above-the-line promotion materials as well as videos, and proven to be a useful and creative tool for the department's outreach talks. Moreover, the stories featuring the e-Family are fun for young students to watch and their life-like scenarios make it easy for them to relate to, thus cultivating a habit of energy saving and good practice early in their lives.



機電署外展計劃安排同事到訪老人院，提醒他們使用家居電器時需小心的事項。
EMSD's Outreach Programme arranges colleagues to visit the elderlies at nursing homes, reminding them to be careful when using electrical appliances.



▶ 機電署的宣傳短片已上載YouTube Channel，供市民隨時瀏覽和下載。
All EMSD's videos are uploaded onto its dedicated YouTube Channel so that the public can view or download at their leisure.

運用具創意的宣傳工具

去年，電力法例部為註冊電業工程人員製作了第三輯教育短片，在本署新開設的YouTube頻道播放，作為直接接觸市民及業界的渠道。新短片「電工學堂之停電工作方程式」講述在不同的電力裝置的場所工作時應如何關掉電源，以避免在帶電情況下工作，減低風險，並解釋如何實施工程許可證制度。該短片有助提高業界的電力安全意識。

鑑於市民的電力安全意識十分重要，電力法例部已加強年輕一代的早期教育及向他們宣傳正確的做法。基於這個信念，電力法例部在去年投放資源創作了「e家」一家人，顯示我們有長遠的計劃，決心推廣安全意識文化。



中華基金中學
物理科主任唐敏中老師
Mr Jacky Tong, Head of Department (Physics)
The Chinese Foundation Secondary School

聯繫年青一代

教育改革和現代教學方法加深大家對教育的認識。機電署明白到傳授知識不再只局限在課堂以內，因此，其轄下能源效益事務處一直推行教育計劃，到學校進行外展探訪。

中華基金中學物理科主任唐敏中老師表示：「機電署學校外展計劃（下稱「外展計劃」）大大補足了我們課程的內容，使之更加豐富。外展計劃為學生提供有關能源效益和節能的額外知識，擴闊他們的知識領域。」

中華基金中學成功地將機電署外展計劃融入其學校課程內，在過去曾邀請外展計劃的職員就能源效益及節能等課題進行演講，例如傳統照明與LED燈的分別。唐先生稱讚說：「機電署代表的解說十分專業，配備各種教材，例如宣傳短片、簡介和解說前後的問答遊戲，也讓學生更感興趣。」

同樣地，能源效益事務處亦運用外展計劃宣傳機電署的政策。舉例來說，處方製作了四個流動展板，可借給學校及團體用作流動展覽。

外展計劃亦協助機電署聯繫其他受眾。2013年4月，中華基金中學舉行開放日，邀請外展計劃在當日設置一個攤位，這是一個黃金機會，可讓本署向參觀人士宣傳有關政策和計劃。

唐先生表示：「開放日當天，機電署的攤位很受歡迎，學生對攤位的互動遊戲極感興趣。事實上，我們已遞交另一份申請，邀請機電署再次參加本校在7月舉行的家居節能嘉年華。」

Use of Creative Promotional Tools

Utilising the department's newly launched YouTube video channel as a direct mean to reach the public and trades, the Electrical Legislative Division produced its third educational video for the REWs last year. The new video, "Switch off electricity supply before electrical work" helped raise trade awareness on electrical safety, illustrating the way to shut power off in order to avoid live work when working on different parts of an electrical installation to reduce risk, and explaining the way the permit-to-work system works.

Recognising the importance of public awareness of electrical safety, the Electrical Legislation Division has placed much importance on early education and promotion of good practices with the younger generation. With this purpose in mind, the Division invested resources in the creation of the "e-Family" last year, indicating its long term commitment in the promotion of a safety awareness culture.



Reaching out to Younger Generations

Education reform and modern teaching methods deepen the concept of education to the effect that the imparting of knowledge is no longer limited to just within the classroom. Hence, EMSD's Energy Efficiency Office has been running an educational programme that organises outreach visits to schools.

"EMSD's School Outreach Programme (SOP) is a great supplement to enrich our syllabus. It enhances our students' knowledge base by providing them with additional knowledge on energy efficiency and conservation," commented Mr Jacky Tong-man Chung, a Physics teacher of The Chinese Foundation Secondary School.

The Chinese Foundation Secondary School has successfully integrated the department's SOP with its school syllabus, and has in the past invited SOP's staff to speak to the school regarding energy efficiency and conservation topics such as the differences between traditional and Light Emitting Diode (LED) lights. "The EMSD delegate's presentation was very professional, and she had all these teaching tools like video clips, PowerPoint presentations and pre-and post-quizzes, which made it more interesting for the students," commented Mr Tong.

Similarly, the Office also utilised the SOP to publicise the department's other policy promotions. For instance, as part of the promotion of the Mandatory Energy Efficiency Labelling Scheme, the Office has commissioned four road show kiosks, which could be lent to schools and organisations for use as mobile exhibits.

The SOP also helped the department reach out to other audiences. The SOP was invited to set up a booth during The Chinese Foundation Secondary School Open Day in April 2013, which was a golden opportunity to promote its policies and schemes to visitors.

"The EMSD kiosks were very popular during our open day, and the students loved their interactive games. In fact, we have already submitted another application to invite EMSD to return to our school to participate in our Energy Conservation Carnival in July!" Mr Tong said.



機電工程營運基金報告

Electrical and Mechanical Services Trading Fund Report



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抱負 VISION

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。

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

使命 MISSION



客戶 **CUSTOMER**

提供優質的工程方案，以滿足客戶的需要。

Providing quality engineering solutions to satisfy our customers' needs.

員工 **STAFF**

建立一支卓越的員工隊伍，並維持和諧的工作環境。

Developing a competent workforce and maintaining a harmonious environment.

部門 **ORGANISATION**

掌握科技發展和流程改善，以提供更佳服務。

Keeping pace with technology development and process improvement for service enhancement.

信念 VALUES

誠信 **INTEGRITY**

我們秉持誠信，維持良好道德操守。

We uphold honesty and integrity to embrace an ethical culture.

出色服務 **SERVICE EXCELLENCE**

我們提供安全可靠、高效率、具成本效益和優質的服務。

We provide safe, reliable, efficient, cost-effective and quality services.

關懷 **CARING**

我們關懷員工、客戶和市民大眾，並重視環保。

We care for our staff, customers, community and the environment.

以客為本 **CUSTOMER FOCUS**

為滿足客戶的各種需要，我們盡心竭力，積極提供工程方案，以贏取客戶的信任和 support。

We focus on the needs of our customers and provide engineering solutions in a proactive and responsible manner to win their trust and support.

承擔 **COMMITMENT**

我們言行一致，信守承諾。

We do what we promise.



主席 Chairman



韋志成太平紳士
Mr Wai Chi-sing, JP
發展局常任秘書長(工務)
Permanent Secretary for Development
(Works)

成員 Members



林天星太平紳士
Mr Lam Tin-sing, Enoch, JP
發展局副秘書長(工務)2
Deputy Secretary for Development (Works) 2



陳帆太平紳士
Mr Chan Fan, Frank, JP
機電工程營運基金總經理(機電工程署署長)
General Manager, EMSTF
(Director of Electrical and Mechanical Services)



胡建明太平紳士
Mr Woo Kin-ming, JP
機電工程署副署長/營運服務
Deputy Director/Trading Services, EMSD

秘書 Secretary



周楚添先生
Mr Chow Chor-tim
機電工程署主任秘書
Departmental Secretary, EMSD

管理委員會 Management Board



主席 Chairman

1. 陳帆太平紳士
Mr Chan Fan, Frank, JP
機電工程營運基金總經理
(機電工程署署長)
General Manager, EMSTF
(Director of Electrical and
Mechanical Services)

成員 Members

2. 胡建明太平紳士
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機電工程署副署長/營運服務
Deputy Director/Trading
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Assistant Director/ 1, EMSD

4. 張國輝先生
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Assistant Director/ 2, EMSD

5. 戴德謙太平紳士
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機電工程署助理署長/3
Assistant Director/ 3, EMSD

6. 羅雪芬女士
Ms Law Suet-fan, Rebecca
機電工程署財政經理
Finance Manager, EMSD

7. 羅福基先生
Mr Law Fuk-ki
機電工程署員工關係主任
Staff Relations Officer, EMSD

秘書 Secretary

8. 周楚添先生
Mr Chow Chor-tim
機電工程署主任秘書
Departmental Secretary, EMSD





胡建明太平紳士
Mr Woo Kin-ming, JP
機電工程署副署長/營運服務
Deputy Director/Trading Services, EMSD

機電工程營運基金在2012/13財政年度的表現良好，收入為46.43億元，增長率達7.5%，按稅後運作盈利計算的收入回報率為6.9%。除財政表現令人鼓舞外，我們的客戶服務亦獲得創紀錄的滿意度。根據獨立顧問對75個政府機構進行的客戶意見調查結果，在以8分為滿分的準則下，我們的客戶滿意度由2010年的6.01分躍升至2012年的6.12分。

迎接挑戰

雖然表現理想，但我們不能掉以輕心，仍要沉着應對未來挑戰。隨着新場地和各項系統裝置相繼落成，客戶對我們的操作和維修保養服務需求將日益殷切，而預期我們在客戶未來的基建工程中也會承擔更多項目管理職責。面對服務需求不斷增加，我們必須限制人手增長及以較低利潤營運，並提升服務質素和成本效益。我們亦須改變運作模式，以新思維、新的知識本位角度和更廣闊的工程服務視野，以及新的營運文化和新方案，為客戶提供服務。這不單是轉捩點，也是我們需要邁向的發展新台階。

因此，我們在2012年的「策略制訂工作坊」訂定新五年企業目標——「透過與客戶的伙伴關係，創造公眾價值惠市民」，並透過實施五大策略來實踐上述目標，這五大策略分別是：1.) 透過優化外判安排和合約管理等措施提供更優質服務；2.) 成為業界典範；3.) 建立員工才能與關懷文化；4.) 優化知識管理；及5.) 持續綠色作業。

在未來數年，營運基金將秉持這個企業目標和相關五大策略，邁進另一新階段。

向前邁進

為持續提供優質服務，我們會把常規性的簡單工作外判，集中處理高公眾價值的工作，逐步邁向監管者的角色。在2012/13年，我們把300輛一般用途車輛的維修保養外判，承辦商人員在我們的九龍灣廠房工作，由我們現場直接監督。我們亦把油麻地戲院的機電、空調和舞台設備服務外判，由承辦商人員負責日常工作，我們派員駐場監督，這是我們第一次以這種模式，外判為表演場地提供的服務。我們基於所取得的成功經驗，把這種新外判模式推廣至歌連臣角火葬場及和合石火葬場，並同時計劃外判中環至半山自動扶梯和步行道系統以及總部大樓的操作及維修保養工作。





The Electrical and Mechanical Services Trading Fund performed well with a revenue of HK\$4,643 million in 2012/13. Revenue growth achieved 7.5% and return on revenue based on operating profit after tax was 6.9%. On top of these financial results, we prided ourselves in excelling at customer service and scoring an all-time high customer satisfaction rating. On an independently conducted customer opinion survey of 75 government organisations, customer satisfaction increased from 6.01 in 2010 to 6.12 in 2012 on an eight point scale.

EMBRACING THE CHALLENGE

Notwithstanding with such level of performance, we understand we cannot be complacent. We know there are challenges ahead. As new venues and additional installations of our clients are completed, demand for our operation and maintenance services will continue to grow. With some clients' infrastructure projects in the pipeline, we are expected to take on greater project management roles and responsibilities. Against these increasing service demands, we have to constrain the growth of our staff, operate at a lower profit margin, and enhance the quality and cost-effectiveness of our services. Our business model will need changes too. We require a new staff mindset, a new knowledge based platform, a new broader view of engineering services, a new operating culture and a new approach to delivering services to our clients. We see this as a turning point and a new era in our development.

To this end, during the Strategy Formulation Workshop in 2012, we formulated the new five-year corporate goal of "creating public value for community betterment through partnership with our clients". This corporate goal is to be achieved through the implementation of five strategies, namely: (1) delivering service excellence through measures such as enhancing outsourcing and contract management; (2) becoming a trade model; (3) building staff capacity and a caring culture; (4) enhancing knowledge management; and (5) sustaining green operation.

The corporate goal and associated five strategies will guide our work in the coming years with a view to bringing EMSTF to new heights.

BUILDING UP THE MOMENTUM

On delivering service excellence, our new mode of service delivery comprises focusing on work of high public value and outsourcing mundane tasks, while we are moving towards a supervisory and management role. In 2012/13, we outsourced the maintenance services for 300 general purpose vehicles, under which the contractor works at our Kowloon Bay Depot under our direct supervision. For the first time in a performing arts venue, we let out a contract providing services for the electrical, mechanical, air-conditioning and stage equipment at the Yau Ma Tei Theatre. In-house supervisory staff are deployed on site, with the daily operations outsourced to a contract team. Riding on these successes, we extended this new mode of outsourcing to Cape Collinson Crematorium and Wo Hop Shek Crematorium, whereas outsourcing of the operation and maintenance services for the Central-Mid-Levels Escalator and Walkway System and our headquarters is underway.

為達致成為業界典範的目標，我們致力推廣機電行業。在2012/13年，我們聯同機電業相關機構舉辦了「機電人力資源論壇」，探討如何吸引年青人參加技術員訓練計劃和加入機電業。我們又成立香港機電業推廣工作小組及協辦「香港機電業（技術人員）—就業及發展活動」，吸引新血加入機電業。有關宣傳活動吸引超過2,700人入場參觀。

員工是我們最珍貴的資產，為此我們特別投放大量資源，貫徹建立員工才能與關懷文化的策略。我們的培訓預算，由2011/12年度約400萬元增至2012/13年度的600萬元，這方面的支出預期將持續增長。為提高員工處理事故的能力，我們舉辦兩次「事故和傳媒管理論壇」，討論真實個案，分享經驗。另外，為加強與員工的聯繫溝通，我們進行更多員工探訪和與員工代表會晤，革新員工通訊《群聲》讓內容更以員工為本，同時開始舉辦榮休聯歡會。

此外，我們亦實施多項措施吸引年青人加入技術員訓練計劃。除於2012年將學徒改稱見習技術員外，我們在2013年推出為期四年的二級見習技術員訓練計劃，吸引從未接受技術訓練的中學畢業生報考。我們亦把見習技術員的薪酬調升約30%，並到學校推廣有關計劃，印製宣傳單張及與業界統籌舉辦職業展覽。我們預期訓練計劃的申請者將較2012年多，因此會在2013年開設約多一倍訓練名額，至約180個。

在優化知識管理方面，我們籌備成立群體網站，為員工提供一站式搜尋、檢索和分享工程知識的平台，藉此發展和推廣分享與學習文化，這是我們為知識承傳及建立專業才能踏出的第一步。我們同時鼓勵員工參與由總工程師領導的睿智小組及匯智論壇等公開平台。

我們亦致力持續綠色作業。在2012/13年，於總部大樓召開的會議開始採用平板電腦，以實現無紙化會議和減少紙張消耗。另外，我們正籌劃改造總部大樓，使其符合最新的綠色建築標準，為行業樹立榜樣。我們的改造工程會根據建築環境評估法的要求進行，並以取得鉑金級認證為目標。

為未來積極奮進

在五年計劃和2012/13年的工作基礎下，未來一年我們會按五大策略更廣泛推展各項措施。例如，在提供優質服務方面，我們將繼續優化外判安排和合約管理，探討更廣泛採用先進科技如綜合樓宇管理系統，同時透過對服務項目實施資產管理和優化品質管理，進一步提升服務效率和可靠性。我們將竭誠工作，致力貫徹就每項策略制訂的措施，實踐我們的企業目標——透過與客戶的伙伴關係，創造公眾價值惠惠市民。

在2012/13年，我們收到約160封客戶嘉許信。客戶鼓勵是我們進一步改善的動力，對此我們深表謝意。我們亦由衷感謝所有員工、客戶、持份者和常務委員會對我們的支持、意見、信任和承諾，讓營運基金在年內取得豐碩成果。



胡建明

機電工程署副署長/營運服務



As part of our efforts in becoming a trade model, we promote the electrical and mechanical industry. In 2012/13, we organised the “Electrical and Mechanical Manpower Forum” in collaboration with other organisations in the E&M industry to explore ways to attract young students to join the technician training scheme and the industry. We convened the Hong Kong E&M Trade Promotion Working Group and organised the “Hong Kong E&M Trade (Technical Personnel) – Career and Development”, a joint publicity function attracting young blood for the industry, which was well received by 2,700 visitors.

In line with the strategy of building staff capacity and a caring culture, we invested heavily in developing our most valuable asset – our staff. Our training budget increased from about \$4M in 2011/12 to \$6M in 2012/13, and the expenses in staff development would continue to grow. We enhanced our staff’s incident responsiveness by conducting two Incident and Media Handling Forums in which real cases were examined and with experience shared. In addition, we strengthened staff communications with more visits and meetings, revamped the employee Group Voice newsletter with an employee-oriented style, and started organising farewell tea parties for retirees.

Moreover, a number of measures were put in place to attract more young people to join our technician training scheme. Further to changing the post title from apprentice to technician trainee in 2012, we launched a new four-year technician trainee II programme in 2013. It targeted at secondary school leavers without prior technical education. We increased the salary of trainees by about 30%, promoted the scheme during school visits, published leaflets and coordinated with trades to organise career exhibitions. Compared with the preceding year, a higher number of applications is expected and we will offer about 180 training places in 2013 which is about twice of that of 2012.

On enhancing knowledge management, we were establishing a community portal as a single access point to search, retrieve and share engineering knowledge. This was our first step to developing and promoting a sharing and learning culture for knowledge transfer and building up expertise. We were also encouraging staff participation in open platform interest groups and forums led by chief engineers.

We are committed to sustaining green operation. In 2012/13, we commenced using tablet computers at meetings in our headquarters for achieving paperless meeting environment and reducing paper consumption. Moreover, to set an industry example of converting an existing building to a green building meeting the latest standard, we started planning to transform our headquarters with latest green building technologies for Building Environment Assessment Method (BEAM) Plus certification with the target to obtain Platinum grade.

LOOKING FORWARD WITH ENTHUSIASM

Noting that it is a five-year plan and building on the work in 2012/13, we will see wider and greater implementation of the five strategies in the coming year. For example, on delivering service excellence, while we will continue to enhance outsourcing and contract management, we will explore the application of new technologies like integrated building management system (iBMS), implementation of asset management system for our services and enhancement of our quality management system to improve service efficiency and reliability. Various initiatives on each strategy are in the pipelines. After all, we will strive to work towards our corporate goal, to create public value for community betterment through partnership with our clients.

In 2012/13, we received some 160 appreciation letters from our clients. We cannot thank them enough for their encouragement, giving us impetus to driving for further improvement. Our sincere thanks go also to all of our staff, clients, stakeholders and Executive Board members for their support, advice, trust and commitment, without which EMSTF will not be of such success.



Woo Kin-ming

Deputy Director/Trading Services, EMSD



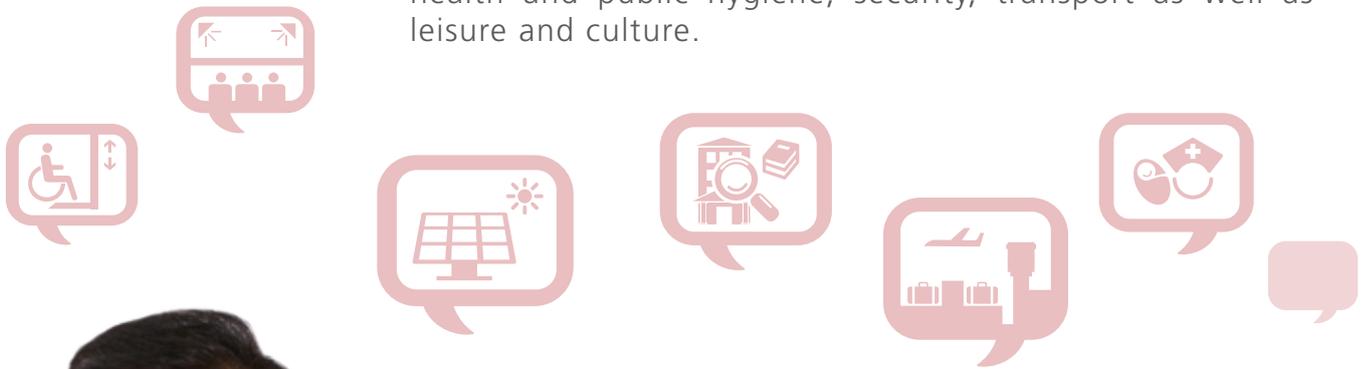


創造公眾價值

Creating Public Values

我們提供的機電工程服務，主要包括操作和維修保養服務及特定項目管理服務，在不同領域創造公眾價值利惠市民，包括醫療與公共衛生、保安、運輸，以及康樂與文化。

Our electrical and mechanical engineering services cover mainly operation and maintenance as well as specific project management. These services create public value for community betterment in different domains, including health and public hygiene, security, transport as well as leisure and culture.



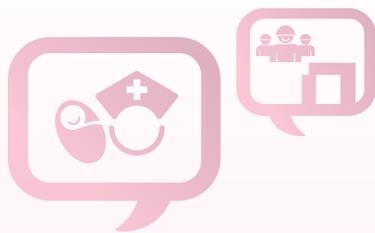
創造公眾價值 Creating Public Values



2012/13 年是我們與醫院管理局五年服務水平協議的第一年。我們維修保養手術室內大部分工程設備，確保手術得以暢順進行。
The year 2012/13 marked the renewal of our five-year SLA with the Hospital Authority. We maintain most of the engineering equipment in operating theatres to ensure surgery can be carried out smoothly.



我們協助菲臘牙科醫院設立中央消毒物品供應系統，令主要消毒程序能有效地根據最新標準進行。
We assisted the Prince Philip Dental Hospital in setting up a new Central Sterile Supplies System. Major sterilisation processes can be carried out more effectively while meeting the latest standards.



醫療與公共衛生

2012/13年見證了我們持續支援公共醫療的承諾，這年是我們與醫院管理局（醫管局）簽訂新一份為期五年服務水平協議的第一年。協議內容涵蓋我們為醫管局轄下醫院的機電、空調、屋宇裝備、電子和生物醫學等設備提供操作和維修保養服務。年內醫管局更委託我們為新北大嶼山醫院提供維修保養服務。隨着這項新設施的建成，大嶼山日漸增加的人口、旅客和機場員工，都無需長途跋涉，即可得到全面的醫療照顧。

除操作及維修保養服務外，我們亦從操作、維修保養和用家角度出發，繼續為醫管局提供專業意見，以支持他們興建新醫院，包括天水圍醫院和兒童專科卓越醫療中心，以及提升現有設施，如擴建基督教聯合醫院、重建瑪麗醫院和葵涌醫院。

另外，繼過去數年支援醫管局轄下首批醫院取得澳洲醫療服務標準委員會認證後，我們會繼續協助醫管局轄下其他醫院推展認證計劃。我們也協助東區尤德夫人那打素醫院設立新的腎科中心，負責中心內各種工程設施的設計、供應、安裝、測試與校驗工作。新的腎科中心裝設了無紙化的病人資料管理系統以簡化臨床程序，該中心將有助舒緩市民對腎科服務日益殷切的需求。我們亦協助菲臘牙科醫院設立中央消毒物品供應系統，集中處理院內消毒程序。透過引入先進自動化設備，主要消毒程序能有效地根據最新標準進行。新設備不但提升處理消毒物品的能力，而且透過實施新工作流程，已消毒與尚未消毒的器具能完全分隔，有效減少交叉感染機會。



我們維修保養醫管局轄下醫院的照明、空調和消防系統，為市民和醫護人員提供安全及舒適的環境。
We maintain the lighting, air-conditioning and fire service systems in hospitals under the Hospital Authority to provide a safe and comfortable environment for citizens and health care workers.



我們為政府醫院提供 24 小時維修保養服務，配合醫院的救急需要。
We provide round-the-clock maintenance services for government hospitals to aid emergency needs.

HEALTH AND PUBLIC HYGIENE

The year 2012/13 highlighted our continued commitment to public health. It marked the renewal of our five-year Service Level Agreement (SLA) with the Hospital Authority (HA). The SLA covered the operation and maintenance (O&M) of the electrical, mechanical, air-conditioning, building services, electronic and biomedical systems in HA hospitals. During the year, HA further entrusted us to provide O&M services for the new North Lantau Hospital, which enables the island's growing population, tourists and airport workers to gain access to a comprehensive medical facility in closer proximity.

Apart from delivering O&M services, we will continue to provide HA with professional advices (from O&M and users' perspectives) to facilitate their development projects such as the new Tin Shui Wai Hospital and the new Centre of Excellence in Paediatrics, as well as the upgrading of existing facilities such as the expansion of United Christian Hospital, and the redevelopment of Queen Mary Hospital and Kwai Chung Hospital.

In the past few years, we have been supporting HA in the successful accreditation by the Australian Council on Healthcare Standards for phase I hospitals. We will continue to assist HA hospitals in the accreditation programme for the remaining phases and the revalidation process. Furthermore, we assisted Pamela Youde Nethersole Eastern Hospital in setting up the new renal centre. We helped them manage the design, supply, installation, testing and commissioning of various engineering facilities. Equipped with paperless patient information management system for streamlining clinical process, the new renal centre aims to cope with the increasing demand of renal service in the community. We also assisted the Prince Philip Dental Hospital in setting up a Central Sterile Supplies System for centralising the sterilisation service in the hospital. With the introduction of advanced automatic facilities, major sterilisation processes can be carried out more effectively while meeting latest standards. The new system not only improves the throughput, but also minimises the chance of cross contamination through implementation of the new work flow system that completely segregates the clean and dirty equipment.



我們於口岸添置熱像系統，協助衛生署加強防疫能力。
We assisted the Department of Health in strengthening its port health enforcement capability through installation of thermal imaging systems.

在公共衛生方面，為保障大眾免受禽流感及中東呼吸綜合症候群等威脅，我們於邊境口岸添置熱像系統，協助衛生署加強監控能力。我們並把醫管局及衛生署轄下隔離病房和流感門診的工程系統重新調整至處理大型流感模式，以為醫治可能出現的患者作準備。

此外，我們為食物環境衛生署轄下火葬場提供操作及技術支援，以確保火葬過程能莊嚴得體地進行。火葬服務需求亦會在農曆新年前一段日子大增，為此我們特別加強支援，以應付需求。

In terms of public hygiene, to safeguard the public from threats such as Avian Influenza and Middle East Respiratory Syndrome, we assisted the Department of Health (DH) in strengthening its port health enforcement capability through installation of additional thermal imaging systems. We also reactivated the engineering systems in the isolation wards and fever clinics in HA and DH to prepare for the possible intake of patients.

In addition, we have been providing operational and technical support to crematoria under the Food and Environmental Hygiene Department to ensure that cremation is carried out in a dignified and comforting manner. Furthermore, we rendered strengthened support during the period shortly before the Lunar New Year to cope with the drastic increase in demand for cremation service.

客戶的鼓勵 CUSTOMERS ENCOURAGEMENT



你們的工程團隊負責為衛生防護中心五樓的三座大樓進行翻新工程，全部工程於短短七個月內分三個階段完成，我們感到非常滿意。幸好有你們的能幹領導、團隊成員的專業精神及付出的努力，令工程得以完成。

我們很高興能與你們的團隊成員一起工作，對於他們的奉獻精神和工作態度，我們留下十分深刻的印象。衷心期待着你們的持續支援。

The project team of your department has been responsible for the renovation works of three blocks at the fifth floor of the Centre for Health Protection, which were completed in three phases over a period of less than seven months to our entire satisfaction. This would not have been possible without your able leadership and the team members' professionalism and tremendous hard work.

We are glad to have worked with your team members and we are highly impressed by their devotion and working attitude. We look forward to continued support from your team.

醫院管理局高級經理（行政）
黃慶華先生

Mr Benny Wong,
Senior Manager (HO Administration), Hospital Authority



對營運基金同事為香港紅十字會輸血服務中心提供的特別支援服務，以協助出入控制系統的維修工作，我深表感謝。

你們作出適當的安排和緊急支援，為我們更換了控制電纜，好讓出入控制系統服務供應商得以維修出現問題的系統。我們感謝團隊成員穩妥可靠的支援，相信你們未來會繼續支持本中心的服務。

I would like to convey my deepest appreciation to EMSTF colleagues for the ad hoc support service provided to the Hong Kong Red Cross Blood Transfusion Service to facilitate the access control system repair work.

With the kind arrangement and urgent support from your colleagues, the control cable was replaced and the problem could then be fixed by the access control system service provider. We thank you for the unfailing support provided by your team members and we trust that your department would continue to support our service.

香港紅十字會輸血服務中心醫務及行政總監
連智傑醫生

Dr Lin Che-kit,
Chief Executive & Medical Director,
Hong Kong Red Cross Blood Transfusion Service



在2013年農曆新年前的一段日子，我們得到營運基金的鼎力支持，提供操作及技術支援，於富山火葬場及葵涌火葬場特別增設了相當數量的加班火化時段。你們的團隊積極投入工作，充分彰顯出你們的專業及承諾，而這些公認的特質正是兩個場地有效率運作的關鍵所在。藉此機會，我向你們工作團隊表達誠摯的謝意，你們的持續支援，無疑是極其重要，為公眾提供優質的火化服務，造福市民，僅此衷心致謝。

With the strenuous operational and technical support of EMSTF, a considerable number of the overtime cremation sessions were specifically provided by both the Fu Shan Crematorium and the Kwai Chung Crematorium during Pre-Lunar New Year period 2013. It is recognised that the professionalism and the commitment have been fully exhibited by your devoted work teams and these are definitely a key to the efficient and effective operation of both venues. I would like to take this opportunity to express our sincere gratitude and heartfelt appreciation to your work teams for the continuing support, which are undoubtedly of the vital importance in the provision of the quality cremation service to cater for the overriding public interest.

食物環境衛生署新界區高級衛生督察（墳場及火葬場）
郭明幹先生

Mr Kwok Ming-gon,
Senior Health Inspector (Cemeteries & Crematoria) New Territories,
Food and Environmental Hygiene Department



我們也為香港海關引進流動 X 光車輛掃描系統，以應付邊境車輛流量的急速增長。該流動系統可按運作需要，靈活調配至任何邊界管制站執行偵測走私貨品的工作。

We supported the Customs and Excise Department to meet rapid boundary vehicular traffic growth by introducing into Hong Kong a mobile x-ray vehicle scanning system. The system can be flexibly deployed as and when needed to any boundary control points to search for smuggling goods.



保安

年內，我們開始為香港海關的無線電通訊系統和消防處的數碼集群無線電系統提供維修保養服務。我們確保這兩套採用陸地集群無線電技術的新系統能提供全天候話音清晰、有效使用頻譜，及話音和數據傳送加密的服務，令有關公職人員更有效調撥資源以應對突發事件。我們亦與警務處簽訂為期六年的服務水平協議，提供包括項目管理以及警務車輛、偵察車速攝影機、衝紅燈攝影機、無線電發射站和其他機電系統的維修保養。這些車輛及系統都是警務處在維持社會秩序時不可或缺的裝備。

此外，為支援警務處縮減邊境禁區範圍以騰出可開發土地配合本港經濟發展，我們設計及安裝了一個現代化的圍網保安系統。新的圍網保安系統配備高速中央處理系統、新的非法闖入感測導線網絡和高強度影像分析系統，以加強邊境禁區的保安監控和提高偵測非法闖入者的效率。我們也為香港海關引進流動 X 光車輛掃描系統，以應付邊境車輛流量的急速增長。該流動系統可按運作需要，靈活調配至任何邊界管制站執行偵測走私貨品的工作。



我們設計及安裝了一個現代化的圍網保安系統，以支援警務處縮減邊境禁區範圍以騰出可開發土地配合本港經濟發展。

We designed and built a modern fence protection system for the Hong Kong Police Force to support the reduction of the Frontier Closed Area for releasing lands for other uses to cope with the economic development in Hong Kong.



營運基金工程師正在測試用作監控掃描過程和實時檢視掃描影像的精密儀器。彩色 X 光影像可清楚顯示被掃描車輛內的不同物料。
 An EMSTF engineer is testing the sophisticated equipment for control and monitoring of the scanning process and real time image display. A colored x-ray image shows clearly different materials in the scanned vehicle.



九龍政府合署及其他地方已安裝消防處數碼集群無線電系統的天線，以提升無線電覆蓋範圍及通訊效率。
 Antennas for Fire Services Department's Digital Trunked Radio System were installed at various locations, for example the Kowloon Government Offices, to enhance radio coverage and communication efficiency.

SECURITY

During the year, we took on the maintenance of the Digital Radio Communication System and the Digital Trunked Radio System from the Customs and Excise Department (C&ED) and the Fire Services Department (FSD) respectively. We ensured that the two systems equipped with Terrestrial Trunked Radio (TETRA) technology could at all times offer high voice quality, effective bandwidth utilisation and encrypted communication for secure voice and data transmission. Our services empowered frontline public officers better manage resources to cope with emergency situations. We also renewed a six-year SLA with the Hong Kong Police Force (HKPF). Services covered include project management, as well as maintenance of police vehicles, speed enforcement cameras, red light cameras, radio sites and other engineering systems, which are indispensable to HKPF in maintaining public order.

Moreover, we designed and built a modern fence protection system for HKPF to support the reduction of the Frontier Closed Area (FCA) for releasing lands for other uses to cope with the economic development in Hong Kong. The new fence protection system provides a high speed central processing system, new intrusion sensor cabling network and powerful video analytic system that enhance security control and detection of intruders at FCA. We also supported C&ED to meet rapid boundary vehicular traffic growth by introducing into Hong Kong a mobile x-ray vehicle scanning system, which can be flexibly deployed as and when needed to any boundary control points to search for smuggling goods.



年內，我們開始為消防處的數碼集群無線電系統提供維修保養服務。我們確保系統能有效運作，令消防員更有效調撥資源以應對突發事件。
During the year, we took on the maintenance of the Digital Trunked Radio System from Fire Services Department. We ensure the system operate efficiently so firefighters can better manage resources to cope with emergency situations.

在2012/13年，我們為消防處救護車隊取得了PAS 55資產管理認證。PAS 55是一種專業資產管理模式，涵蓋資產「從生產到廢置」的整個運作周期。我們透過應用這種管理模式，為救護車的採購、維修保養和改裝工作提供妥善服務。另外，我們受消防處委託，為將軍澳新消防訓練學校提供項目管理服務，裝設一系列實火場景模擬事故訓練設施。設施將包括與大廈、飛機和鐵路站等實景相當的模擬場景，消防訓練導師可透過電腦模擬各種火災和救援情況，為消防員提供既像真又安全的訓練環境。

In 2012/13, our services for FSD's ambulance fleet successfully obtained PAS 55 Asset Management Certification. We leveraged on the PAS 55 "Cradle to Grave" asset management to excel our services in ambulance procurement, maintenance and modifications. We were also entrusted by FSD to provide project management services for the construction of a range of live fire simulators at the new Tseung Kwan O Fire Services Training School. These simulators will include full-size mock-ups specifically constructed to resemble fire and rescue situations in places such as high-rise buildings, aircrafts and railway stations. Firefighting instructors will be able to set up training scenarios in the simulators through computer controlled systems, thereby enabling firefighters to train in a realistic but safe environment.



懲教署一直與機電工程營運基金緊密合作，並建立了良好的工作關係。機電工程營運基金在提供全面和高水準的機電及顧問服務上聲譽良好。我們深信營運基金在安裝羅湖懲教所的綜合保安系統工程方面具備實際的專業知識，對營運基金團隊的工作很有信心。

安裝工程進行期間，機電工程營運基金團隊與我們充分合作，並能配合我們要求的工作方案，令工作流程非常順暢。保安是懲教署首要關注的事項。在整個過程中，機電工程營運基金團隊完全了解我們的關注，並遵循我們為確保保安監控而提出的所有要求。這方面往往涉及額外的工作和資源。對我們來說，這是最令人印象深刻的。

Correctional Services Department (CSD) has long been working closely with the EMSTF and the working relationship is well-established. The EMSTF has a track record for providing comprehensive and high standard electrical and mechanical services and consultancy. We believe EMSTF has the technical know-how for this Integrated Security System project at Lo Wu Correctional Institution, and we have confidence in the EMSTF team's work.

The EMSTF team gave us full cooperation and matched up with our required work programmes, achieving very smooth workflow during the installation work. Security is the CSD's paramount concern. Throughout the process, the EMSTF team fully understood our concern and complied with all our requirements for the safeguard of security control, which often involved extra work and resources. We were most impressed by these extra contributions.

懲教署高級監督（工程及策劃）

鍾子綸女士

Ms Chung Chi-lan,

Senior Superintendent (Works and Planning), Correctional Services Department

客戶的鼓勵

**CUSTOMERS
ENCOURAGEMENT**



機電工程營運基金對監察消防處的第三代調派系統內多個子系統及數碼集群無線電系統的表現，不遺餘力。

鑑於消防處須全天候24小時應付任何緊急事故，因此，這類關鍵系統無間斷的運作對消防處的服務非常重要。備有電子工程專門技術的機電工程營運基金最能確保系統的高效率運作，亦是一個稱職的維修保養承辦商。最重要的是，機電工程營運基金的團隊對緊急事故的搶修，貫徹反應敏捷。

The EMSTF has contributed great effort to monitor the performance of most of the sub-systems in Third Generation Mobilising System and the Digital Trunked Radio System in Fire Services Department (FSD).

As FSD will round the clock respond to any emergency incident, the incessant operation of these mission critical systems is so crucial to the operation of the Department. The EMSTF, with affluent electronic engineering expertise, is a competent maintenance contractor to ensure effective and efficient operation of these mission critical systems at all times. It is very important that the EMSTF team always attends quickly to any critical emergency maintenance.

消防處高級消防區長（資訊科技管理組）
麥國森先生

**Mr Mak Kwok-sum,
Senior Divisional Officer (Information Technology Management Unit),
Fire Services Department**



在香港特別行政區政府15周年慶祝活動期間，一支保養妥善及準備就緒的車隊，對執勤人員的效率及安全來說十分重要。營運基金的人員為此在背後默默耕耘，確保前線人員達成目標。由此可見，你們的團隊專業，知識廣博，對工作盡忠職守，無從置疑。

作為大嶼山區指揮官，我感到非常安心，因為有你們這支堅毅及盡忠職守的團隊與警隊一起工作。

Having a well-maintained and operationally ready fleet of vehicles was critical to the efficiency and safety of the officers involved during the HKSAR 15th Anniversary Celebrations. It is clear that EMSTF staff worked relentlessly behind the scenes to enable the front line to achieve these objectives. This achievement is testimony to your collective professionalism, resourcefulness and dedication to duty.

As Lantau District Commander, I feel assured that I have colleagues of your determination and dedication working alongside the Police Force.

香港警務處大嶼山區前任指揮官
郭蔭庸先生

**Mr Kwok Yam-yung, Frank,
the then District Commander (Lantau), Hong Kong Police Force**



運輸

機場方面，我們於2012年透過投標奪得機場重要基礎設施的維修保養合約，涵蓋助航燈、行李處理、污水處理和空調等系統維修保養服務。我們負責助航燈系統內包括11,000多盞跑道燈和滑行道燈的維修保養，在2012年為352,000架次航機，提供清晰明確的目視指引。我們也為每小時處理分送16,000件行李的行李處理系統提供全年365天的駐場故障維修服務。我們奪得這些維修保養合約，證明了我們的優質與絕對可靠的服務得到客戶機場管理局的信賴，為香港市民和訪客帶來無可比擬的機場體驗。另外，隨着位於機場島的民航處新總部於2013年全面投入運作，我們亦開始為大樓提供全方位操作和維修保養服務，以支援航空安全。



我們在控制室內檢視行李處理系統，確保行李處理過程暢順而有效率。
We closely monitor the performance of the baggage handling system to ensure the smooth and efficient process of luggage.



營運基金為行李處理系統提供全年 365 天的駐場故障維修服務，旅客對系統處理行李的效率感到滿意。
Travellers are satisfied with the efficiency of the baggage handling system, for which we provide a 365-day on site fault attendance service.



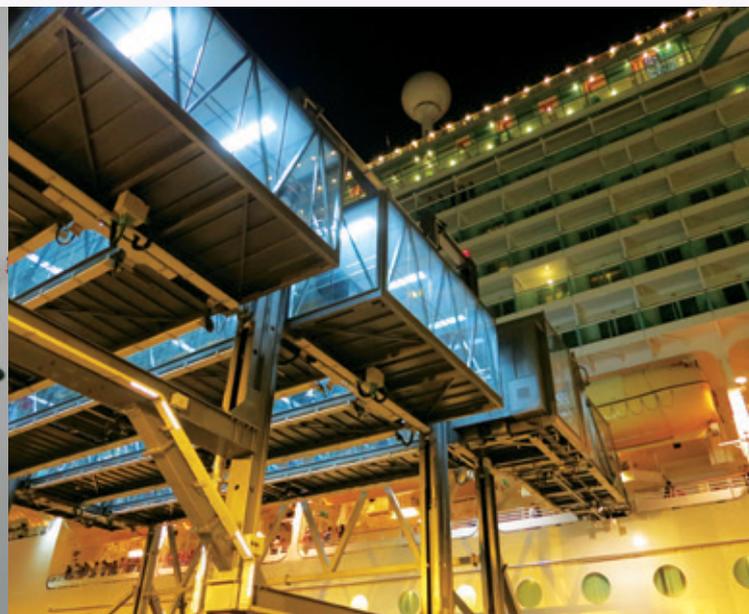
我們維修保養機場空調系統，為旅客提供舒適環境。
We maintain the airport air-conditioning system to give travellers a comfortable environment.

TRANSPORT

For the airport, we won in 2012 through tendering for critical airport infrastructure maintenance contracts, including airfield ground lighting, baggage handling, wastewater treatment and air-conditioning systems. The airfield ground lighting system which we maintained comprises over 11,000 runway lighting and taxiway lighting and provided clear and robust visual guidance for 352,000 air traffic movements in the airport in 2012. The baggage handling system for which we provided a 365-day on site fault attendance service, maintained a destination flow of 16,000 bags per hour. Our winning of these maintenance contracts reinforced our service quality and impeccable reliability together with the trust of our client, Airport Authority, bringing Hong Kong's public and visitors an unparalleled airport experience. Moreover, we played a part in enhancing aviation safety and began to provide comprehensive operation and maintenance service to the new Civil Aviation Department Headquarters on Airport Island as it became fully operational in 2013.



在新啟德郵輪碼頭，我們的工作人員透過船橋內的控制屏測試及校驗登船橋的操作。
At the new Kai Tak Cruise Terminal, our staff conducts testing and commissioning of the Seaport Passenger Boarding Bridge operation through a control console inside the Bridge.



我們的工程服務在建設海上運輸基建上也有所進展。年內，我們為新啟德郵輪碼頭負責的工作，包括乘客登船橋的安裝能按時圓滿完成，為迎接2013年6月「海洋水手號」郵輪首泊作好準備。登船橋由五條走廊通道組成，全長約90米，是現時世界上最大型的活動橋。隨着郵輪碼頭於2013/14年全面投入服務，我們亦開始替旅遊事務署為碼頭的工程系統提供維修保養服務。另外，年內我們與海事處簽訂服務水平協議，為更換和提升船隻航行監察服務系統（航監系統）提供項目管理服務。相較現時 5,000 個船隻目標的處理量，新航監系統可偵測及追蹤多達10,000 個船隻目標，當系統在2016/17年投入服務時，海事處為訪港船隻提供可靠航監服務的能力將進一步增強。

至於陸上運輸基建，為確保隧道內的道路使用者可以享用無間斷的數碼聲音廣播服務，至2012年12月，我們已在四條政府隧道安裝數碼聲音轉播系統。駕車人士在隧道內，可透過先進的數碼聲音廣播系統享用無間斷的電台廣播服務。這套廣播系統更具備話音插播功能，可在出現緊急情況時，於數碼廣播節目中插播須向駕車人士發布的實時交通及安全資訊。另外，我們為運輸署提供更換獅子山隧道送風系統的項目管理服務，亦於2012年12月完成，為安全高效的隧道營運提供穩定可靠的送風系統。

在行人交通方面，我們與運輸署簽訂服務水平協議，由2012年4月起，我們繼續為中環至半山自動扶梯系統提供一站式操作及維修保養服務。這系統連接德輔道中和干德道，由18條自動扶梯、3條自動行人道和有蓋行人道組成。特別在每天繁忙時間，該系統是當區行人不可或缺的交通工具。

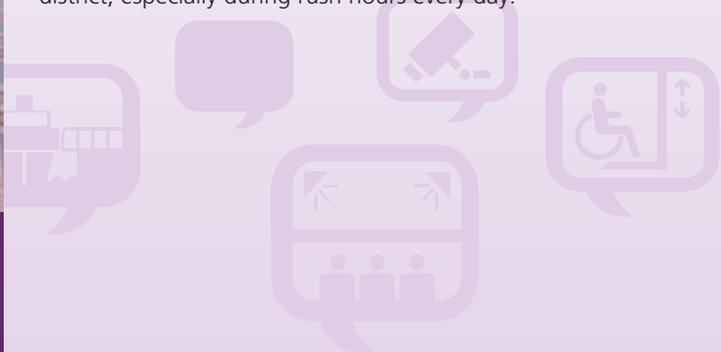


我們為中環至半山自動扶梯系統提供一站式操作及維修保養服務。這系統連接德輔道中和干德道，是當區行人不可或缺的交通工具。
We provide a one-stop-shop operation and maintenance service to the Central-Mid-Levels Escalator and Walkway System. Connecting Des Voeux Road Central and Conduit Road, the system has been indispensable in serving pedestrians travelling in the district.

Besides, our engineering services made progress in the development of sea transport infrastructure. During the year, at the new Kai Tak Cruise Terminal, we ensured the timely completion of our work, including the installation of the Seaport Passenger Boarding Bridges (SPBBs) on the apron, in preparation for the inaugural berthing of the Mariner of the Seas in June 2013. These SPBBs, each with five tunnel segments with a total length of 90 meters, were the largest movable SPBB ever manufactured in the world. With the full operation of the cruise terminal in 2013/14, we will begin providing maintenance services for the engineering systems at the terminal for the Tourism Commission. Furthermore, we signed a SLA with the Marine Department (MD) during the year for the replacement and upgrading of the Vessel Traffic Services (VTS) System. The new VTS system can detect and track up to 10,000 vessels, as compared to the existing capacity of 5,000 vessels. When it is completed in 2016/17, the new VTS system will strengthen MD's capability in providing reliable vessel traffic services for vessels visiting Hong Kong.

As for land transport, to ensure tunnel road users can enjoy uninterrupted Digital Audio Broadcasting (DAB) services, we completed the implementation of DAB re-broadcasting system at four government tunnels by December 2012. These re-broadcasting systems will provide seamless radio services to motorists inside tunnels and allow voice break-in messages to be broadcast through DAB programme channels in emergency cases when real-time traffic and safety information needed to be conveyed. Also, to ensure a stable and reliable tunnel ventilation system for safe and efficient tunnel operation, we provided project management services to the Transport Department (TD) to replace the tunnel ventilation supply fan system in the Lion Rock Tunnel. The project was completed in December 2012.

In terms of pedestrian traffic, with the renewal of a SLA with TD that commenced in April 2012, we continued to provide a one-stop-shop operation and maintenance service to the Central-Mid-Levels Escalator and Walkway System. With 18 escalators, 3 travellers and covered walkways connecting Des Voeux Road Central and Conduit Road, the system has been indispensable in serving pedestrians travelling in the district, especially during rush hours every day.



客戶的鼓勵
CUSTOMERS
ENCOURAGEMENT



機電工程營運基金派駐在郵輪碼頭工作的隊伍所表現的專業態度和責任心，令我們印象特別深刻。記得當郵輪碼頭今年6月首次啟用時，機電工程營運基金的維修保養隊伍自願留下隨時候命，提供全面的支援及協助「海洋水手號」的船長快速及安全地駛進碼頭停泊，令到郵輪上的乘客有一個愉快的旅遊體驗。事實上，郵輪碼頭啟用首日，我們的確在操作乘客登船橋時，遇到一些小問題，幸好有機電工程營運基金工作人員在場，他們協助我們迅速解決問題，最終沒有影響到乘客上落的流程。

We were particularly impressed with the professional attitude and the strong sense of responsibility shown by the EMSTF staff working at the Cruise Terminal. When it was inaugurated in June this year, the EMSTF maintenance team volunteered to be on standby to provide full support and help the captain dock the vessel, Mariner of the Seas, quickly and safely, ensuring a joyful travelling experience for the cruise passengers. As a matter of fact, we were spared some moments on the berth inaugural occasion where we encountered some problems operating the passenger boarding bridge door. Thanks to the on site EMSTF team that the hiccup was resolved quickly and the passenger flow was not affected.

商務及經濟發展局旅遊事務署高級經理（旅遊）
陳偉杰先生

Mr Thomas Chan,
Senior Manager (Tourism), Tourism Commission,
Commerce and Economic Development Bureau



<http://www.emsd.gov.hk/emsd/EMSTFar/1213/v1.html>

訪問短片 手機即看
Shoot and view our video



機電工程營運基金團隊的成員，憑藉其專業的知識及寶貴的經驗，克服種種困難，以及技術、時間上的限制，協助我們安裝數碼聲音廣播系統的轉播設備。我很高興該系統已通過測試，並在第一期工程的四條政府隧道內啟用。

由工程規劃、招標、安裝以至系統啟用的整個過程中，我們與營運基金團隊一起工作，實是樂事。我期待在不久的將來能再度合作，並繼續享用你們的優質服務。

The EMSTF team members, by deploying their excellent professional expertise and valuable experience in overcoming various hurdles, technical and time constraint, have assisted us in setting up the Radio Re-broadcasting System for Digital Audio

Broadcasting. I am glad to learn that the system has been successfully tested and put into operation for four government tunnels in the first phase of the project.

It has been a pleasure to work with your team throughout the project period from planning, tendering, installation to operation. I look forward to working with your colleagues again in the coming future, in anticipation of their continuous quality services.

運輸署總運輸主任/新界西南
阮康誠先生

Mr Yuen Hong-shing, Honson,
Chief Transport Officer/NT South West, Transport Department



在新屏山水圍公共圖書館，一位男孩把所借書籍放入特快還書箱。這本書之後會由營運基金設計和安裝的書籍分揀系統處理。
At the new Ping Shan Tin Shui Wai Public Library, a young boy is returning his borrowed book by dropping it into the express check-in box. The book will then be handled by the book sorting machine designed and installed by EMSTF.



有效率的書籍分揀系統能在短時間內把各類書籍整理歸類，方便市民閱覽。
An efficient book sorting machine enables books to be made available for library patrons quickly.



康樂與文化

從位於西營盤的中山紀念公園游泳池到位於屯門的新屯門西北游泳池，我們為全港公眾游泳池提供包括過濾系統的機電系統維修保養服務。這顯示我們不斷致力透過工程服務，為全港市民，不分年齡、性別和種族，打造現代化的世界級康樂設施。

新屏山水圍公共圖書館的書籍分揀系統，是我們致力配合市民需要的另一例子。該系統不但縮短了市民在繁忙時段的輪候時間，也讓圖書館得以在更短時間內整理和分揀大量歸還的書籍。此外，我們向康樂及文化事務署（康文署）提出改善圖書館空調系統的建議，為圖書館進一步改善室內空氣質素。



我們為剛啟用的屯門西北游泳池提供工程服務。這個游泳場館環境舒適，市民可盡享游泳樂趣。
The newly established Tuen Mun North West Swimming Pool where we contributed our engineering services offers a pleasant swimming experience to the public.

LEISURE AND CULTURE

At public swimming pools across the city, from the Sun Yat Sen Memorial Park Swimming Pool in Sai Ying Pun to the new Tuen Mun North West Swimming Pool in Tuen Mun, we provided maintenance services to the pools' electrical and mechanical systems, including the filtration systems. These are examples where our engineering services are contributing to the enjoyment of top class leisure facilities by Hong Kong's residents of all ages, genders and race.

The new Ping Shan Tin Shui Wai Public Library book sorting machine was our response to the community's request to reduce waiting times during peak periods. The machine also facilitated a larger number of books returned for clearing and sorting within a shorter period. In addition, we made proposals to the Leisure and Cultural Services Department (LCSD) for possible enhancement of air-conditioning systems at libraries with a view to improving air quality.



屏山天水圍公共圖書館職員正在使用書籍分揀系統分揀書籍。系統根據電腦條碼將書籍按類別放進不同的箱子。
A librarian at the Ping Shan Tin Shui Wai Public Library is using the book sorting machine. Using bar codes, the machine will sort books into different boxes according to the category of each book.



我們的專業人員為新屯門西北游泳池的過濾系統進行定期檢查。
Our professional staff is conducting regular inspection of the filtration system at the new Tuen Mun North West Swimming Pool.

在2012年，康文署為慶祝香港特別行政區成立15周年，分別在香港文化博物館和香港歷史博物館舉辦了名為「畢加索 — 巴黎國立畢加索藝術館珍品展」及「一統天下：秦始皇帝的永恆國度」兩項重要展覽活動。於展覽舉行期間在會場內為各項珍貴展品保持適當溫度和濕度，是我們的首要任務。此外，由於兩所展館的現有空調系統在設計上可能不足以應付預計的入場人潮，我們為康文署提供廣泛支援，提升及改裝展館的現有空調系統。讓市民能夠在舒適的環境下欣賞展品，正是我們的工作價值所在。

規劃署就展城館推出的互聯網互動服務，是我們與客戶部門攜手協作服務市民的又一例子。規劃署的構思，是透過互聯網科技，向市民發布展城館的最新展覽及活動資訊。我們就此為展城館開發了一個流動應用程式和饒富趣味的網站，為市民提供更便捷的途徑與展城館聯繫。

To commemorate the 15th Anniversary of the Establishment of the Hong Kong Special Administrative Region, LCSD presented two major events titled "PICASSO – Masterpieces from Musée National Picasso, Paris" and "The Majesty of All Under Heaven: The Eternal Realm of China's First Emperor" in 2012 at the Hong Kong Heritage Museum and the Hong Kong Museum of History respectively. It was a prime concern to maintain suitable temperature and humidity for holding invaluable relics on display. Moreover, as the design of existing air-conditioning systems in the two galleries would not be sufficient to cope with the anticipated crowd, we provided extensive supports to LCSD in upgrading and modifying the existing air-conditioning systems. The value of our work was to provide a comfortable environment for the public to appreciate the exhibits.

We collaborated with the Planning Department on its initiative in exploiting internet technology to let the public obtain latest information of the City Gallery exhibitions and events. We constructed a mobile application and an interesting website to encourage smoother public interaction with the City Gallery.



我們受規畫署委託研製流動應用程式和饒富趣味的網站介紹展城館，為市民提供更為便捷的途徑與展城館聯繫。
We were entrusted by the Planning Department to implement a mobile application and an interesting website to introduce City Gallery to encourage smoother public interaction with the gallery.

客戶的鼓勵

CUSTOMERS ENCOURAGEMENT



我對營運基金轄下團隊為中山紀念公園游泳池提供的專業支援和維修服務，致以衷心的感謝。團隊的專業意見及大力支持，對系統的維修策略及運作暢順，有莫大貢獻。

你們在緊急維修工作中付出的努力及提供的專業協助，使中山紀念公園游泳池能夠時刻為中西區居民提供優質卓越的服務。

I would like to express our sincere gratitude for the provision of professional support and maintenance services by EMSTF team for the Sun Yat Sen Memorial Park Swimming Pool. The team's expertise advice and generous supports contributed much to the maintenance strategies and smooth operation of the system.

Your esteemed professional assistance and the efforts delivered for the urgent maintenance work is indeed an engraftment of the best, excellent and quality swimming pool services to members of the public in Central and Western District.

康樂及文化事務署中西區助理康樂事務經理
蕭琇瓊女士

Ms Siu Sau-king, Michelle,
Assistant District Leisure Manager (Central & Western),
Leisure and Cultural Services Department

參與
Participation



智識
Knowledge

關懷
Caring

安全
Safety



支援
Support



溝通
Communications

培訓
Training

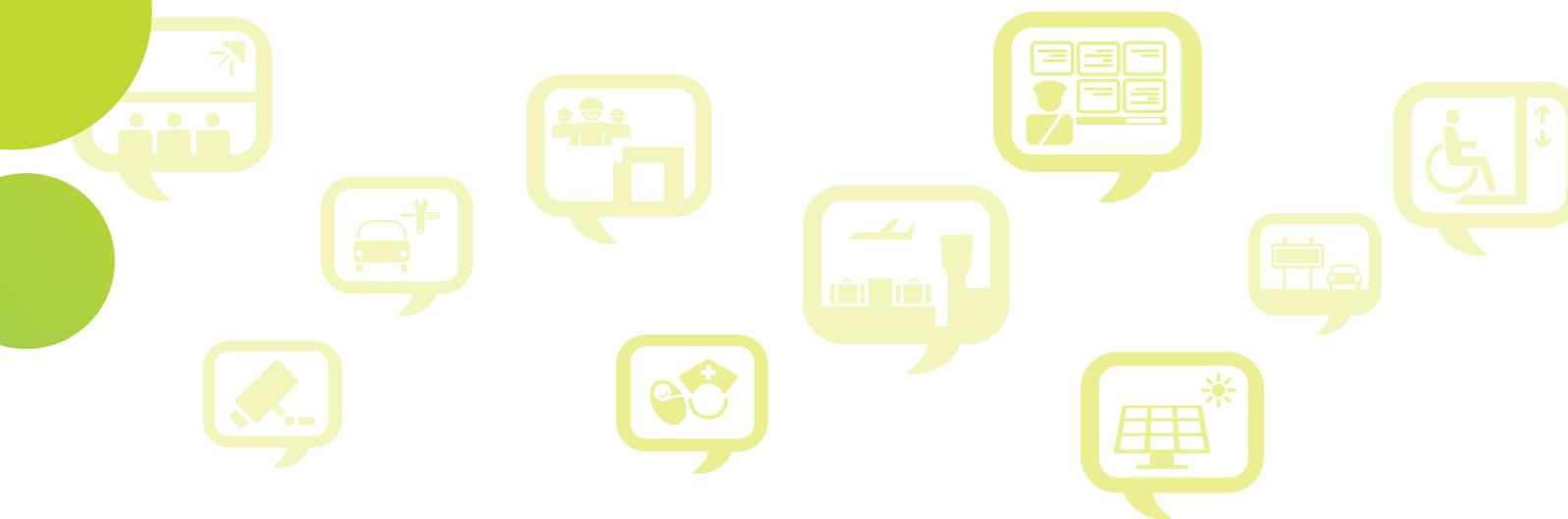


企業管理

Corporate Stewardship

我們在2012年秋天，舉行了一系列「策略制訂工作坊」，並訂定「透過與客戶的伙伴關係，創造公眾價值利惠市民」為新的五年企業目標。我們將通過實施五大策略，分別是：提供優質服務、成為業界典範、建立員工才能與關懷文化、優化知識管理及持續綠色作業，以實踐上述目標。

In the fall of 2012, we conducted a series of strategy formulation workshop to define the new five-year corporate goal of "creating public value for community betterment through partnership with our clients". We will achieve this goal through the implementation of five strategies, namely: delivering service excellence, becoming a trade model, building staff capacity and a caring culture, enhancing knowledge management, and sustaining green operation.





在 2013 年 1 月，逾 200 名員工參加了兩次綜合樓宇管理系統講座，探討更廣泛地利用該技術提供優質服務。
In January 2013, over 200 staff attended two seminars on integrated building management system to explore wider adoption of technology to achieve service excellence.



營運基金工程師參觀澳洲先進的實火模擬設施，為消防處將軍澳新消防訓練學校提供項目管理服務作準備。
EMSTF engineers visited state-of-the-art real fire simulators in Australia in preparation for project management services to be provided to Fire Services Department's new Tseung Kwan O Fire Services Training School.

提供優質服務

在2012年由獨立顧問進行的客戶意見調查，結果顯示客戶滿意度穩步提升，在以8分為滿分的準則下，2012年得分由2010年的6.01分躍升至6.12分。無疑，我們也找出有待改善的地方。

年內我們成立了一個由總工程師帶領的工作小組，制訂改善客戶服務的行動計劃。為了加強與客戶溝通，我們增加了客戶通訊《機電傳聲》的出版期數，由一年兩期增至四期。我們也開始將員工通訊《群聲》派發到客戶所屬的部門，藉此與客戶建立更密切關係。在加強承辦商監督方面，我們現正開發一個網上平台，以便更有效地監察由承辦商進行的維修工程進度。我們預計在2013年底便可以測試這個平台。我們亦優化工程合約的技術審計及擬備工程監督和合約管理指引，給我們提供服務的部別參考並加以應用。另外，我們也成立了兩個由助理署長擔任主席的工作小組，主要檢討外判工程合約，加強對工程質量的監察和承辦商的監督。

此外，我們正積極探討更廣泛地採用可在工作效率及可靠性方面提供優質服務的技術。在2013年1月，我們舉辦了兩場綜合樓宇管理系統講座，並邀請九位供應商與我們逾200名員工分享他們的經驗。隨後，我們選定了22個場地作試點，在未來幾年建立綜合樓宇管理系統。我們亦於2月舉辦講座，探討應用流動技術優化工作彙報。我們也重新審視資訊服務中心流程，改善與客戶溝通。

成為業界典範

為了吸引青少年加入機電行業，我們重新將2012年入職學徒定名為見習一級和二級技術員（前身為技術員學徒及技工學徒），同時由2013年起調升兩者薪酬。在2013年，我們將推出一個在薪酬及福利均具競爭力，為期四年的見習技術員訓練計劃，吸引從未接受技術訓練的中學畢業生。此外，在2012年中，我們與17個工會、商會及公共機構成立了香港機電業推廣工作小組，並於2013年3月合辦香港機電業（技術人員）— 就業及發展活動，吸引新血加入這個行業。有關宣傳活動吸引超過2,700人入場參觀。



在 2013 年初，我們成立了香港機電業推廣工作小組，並合辦「香港機電業（技術人員）— 就業及發展」活動，吸引新血加入這個行業。
In early 2013, we set up the E&M Trade Promotion Working Group and organised a joint publicity function "Hong Kong E&M Trade (Technical Personnel) – Career and Development" to attract new blood to join the industry.

DELIVERING SERVICE EXCELLENCE

The result of the 2012 customer opinion survey conducted by an independent consultant revealed a steady improvement for customer satisfaction, recording a score of 6.12 out of 8, up from 6.01 in 2010. Nevertheless, we also identified some areas for improvement.

A working group chaired by a chief engineer was formed during the year to formulate action plans for customer service improvement. To reinforce communication with clients, we increased the publication frequency of our client newsletter, VoiceLink, from two to four times a year. We also started to distribute our staff newsletter, Group Voice, to client departments to foster a closer relationship. As for strengthening contractor supervision, we are developing an online platform to better monitor the progress of maintenance tasks done by the contractor. A pilot use of this platform is expected in late 2013. Technical audits of works contracts were enhanced and guidelines for work supervision and contract management were prepared as reference for service divisions to develop. Moreover, two working groups chaired by assistant directors were established to review our outsourcing contract documents with a view to enhancing contract work quality and supervision.

Furthermore, we are actively exploring the wider adoption of technology to achieve service excellence in terms of efficiency and reliability. In January 2013, we organised two seminars on integrated building management system (iBMS). Nine suppliers were invited to share their experience to an audience of over 200 staff. Subsequently, we identified 22 sites for pilot implementation of iBMS in the coming years. We also organised a seminar on mobile technology application in February for enhanced job reporting. Moreover, we reviewed our information service centre operation for better customer communication.

BECOMING A TRADE MODEL

To attract more teenagers to join the E&M trade, we renamed our apprentice to technician trainee I and II for our 2012 intakes (formerly technician apprentice and craft apprentice respectively) with substantial salary increases from 2013. In the 2013 intake, a new four-year technician training scheme with competitive salary and fringe benefits will be launched to target secondary school leavers without prior technical education. Moreover, in mid-2012, we set up the E&M Trade Promotion Working Group comprising 17 related trade organisations and major utilities companies. We organised a joint publicity function "Hong Kong E&M Trade (Technical Personnel) – Career and Development" in March 2013 to attract new blood to join the industry. The function was well received with over 2,700 attendees.



我們根據過去事故所汲取的經驗和教訓，設計了一些以安全為主題的動畫推廣安全意識。
We designed a number of animations on lessons learned from past accidents to promote safety awareness.





我們首次舉辦家庭競技同樂日，來自不同部別的員工與家人一起組成隊伍參加十項遊戲，現場氣氛輕鬆愉快。
The Family Gala 2013 was a new initiative this year, where staff from different divisions, together with their family members, formed teams to participate in a total of ten games in a fun and relaxing atmosphere.

在加強工作安全方面，我們發起零意外事故獎勵計劃，並根據過去事故所汲取的經驗和教訓，設計了一些以安全為主題的動畫。年內，我們還推出一項活動，目的在識別及顯示在不同場地可能出現的「最常見的安全威脅」和減低相關危險的措施。對於承辦商，我們實施一系列安全警剔措施，例如派出首長級同事視察高危工地、分享事故經驗、審查承辦商的安全守則和工作程序以及監察被我們職安健督導委員評定為安全表現欠佳的承辦商。此外，我們亦成立了一個提高工程合約中機電安全的工作小組。

建立員工才能與關懷文化

員工是我們最寶貴的資產，因此我們重點投放大量資源於員工培訓。我們的培訓預算從2011/12年度的400萬元增至2012/13年度約600萬元。我們鼓勵員工參加本地或海外舉行的會議、講座和課程，從中學習新工程技術和創新的技術解決方案。此外，在2012年4月，我們舉辦了一個管理論壇，探討企業如何做到投訴有門，讚賞有道。四位重量級嘉賓應邀分享他們處理和管理投訴的經驗。我們在2012年6月和7月亦分別舉辦兩場論壇，並邀得營運基金管理層作演講嘉賓，分享他們對處理事故和傳媒管理的心得。另外，因應在2013年1月實施的新修訂《建造業工人註冊條例》及《建造業議會條例》，我們為約1,000位前線員工申請成為註冊建造業工人。



在家庭競技同樂日的遊戲中，我們的員工奮力衝線。
Our colleague sprinted to the finish line in a game at Family Gala 2013.

在推動關懷文化方面，我們更多探訪員工和與員工代表會晤，並革新我們的員工通訊，讓內容更以員工為本。另外於2013年1月及3月，我們分別為412名員工和37名退休員工舉辦長期優良服務獎頒獎典禮及榮休聯歡會，兩項活動均獲管理層出席，並在員工家屬面前，親自感謝員工在過去數十年所作的貢獻。此外，在同年3月，我們首次舉辦家庭競技同樂日，來自不同部別的500名員工與家人一起組成隊伍參加十項遊戲，現場氣氛輕鬆愉快。一如以往，我們在2012年11月舉行了年度署長簡報會，約有1,800名員工出席。簡報會為管理層提供平台，向員工扼要介紹部門方向及最新發展，而員工亦藉此機會直接向管理層提出他們關注的問題及意見。



In the area of enhancing work safety, we initiated a zero accident award scheme, and designed a number of safety animations on lessons learned from past accidents. We also conducted a programme to identify and display “top safety risks” and the associated mitigation measures at various venues during the year. For our contractors, we implemented safety vigilance initiatives. Examples included dedicated directorate officer safety visits to high risk sites, sharing lessons learned for accidents, reviewing contractor safety plans and work procedures and monitoring contractors with unsatisfactory safety performance under our Steering Committee on Occupational Safety and Health. Furthermore, a working group was formed for enhancing E&M safety in works contracts.

BUILDING STAFF CAPACITY AND A CARING CULTURE

We invested heavily in developing our staff, our most valuable asset. The training budget in 2012/13 was about \$6M, up from \$4M in 2011/12. We encouraged our staff to learn new engineering technologies and innovative technical solutions by attending conferences, seminars and courses, local and overseas as appropriate. Furthermore, in April 2012, we organised a management forum on how organisations could turn complaints into compliments. Four heavy-weight speakers were invited to share their experience on complaint

handling and management. Moreover, in June and July 2012, two forums were organised where EMSTF senior management was invited as speakers to share their insights on incident and media handling. Also, with the amendment of the Construction Workers Registration Ordinance and the Construction Industry Council Ordinance came into operation in January 2013, we arranged about 1,000 of our frontline staff to become Registered Construction Workers.

In terms of fostering a caring culture, we conducted more visits and meetings with staff representatives and revamped our staff newsletter with a more employee-oriented style. Moreover, in January and March 2013, we organised a long and meritorious service award presentation ceremony and a farewell tea party for 412 staff and 37 retiring staff respectively. Attended by senior management, these parties were our way to thank the staff, at the presence of their family members, for their contributions made in the past decades. Also, another new initiative took place in March the same year. This was the organisation of the first Family Gala, where 500 staff and family members from different divisions formed teams to participate in a total of ten games in a fun and relaxing atmosphere. As usual, we organised our yearly Director’s Briefing in November 2012. With about 1,800 staff attended, this briefing provided a platform for top management to brief staff on the direction and recent developments of the department, and for staff to raise their concerns and opinions directly to top management.



在「品質及安全日 2012」活動中，最佳職安健改善個案比賽得獎隊伍以生動有趣形式演繹他們的得獎個案。
The winning team for the Best OSH Enhancement Project Competition shared its project in a lively manner at the Quality and Safety Day 2012.



管理層與退休員工家人一起出席榮休聯歡會，感謝退休員工在過去數十年所作的貢獻。
Attended by senior management, the farewell tea party was our way to thank retiring staff, together with their family members, for their contributions made in the past decades.

優化知識管理

為了促進部門內不同職級及不同工程專業同事互相學習和交流，在2012/13年度，我們特別投放資源整合以往各知識管理渠道，籌備在部門成立知識群體。我們目標是在2013年4月推出知識群體的第一期，旨在為員工提供一站式網上搜尋、檢索及分享和工作相關機電知識的平台。此外，為支持知識群體，我們還會成立睿智小組及匯智論壇，並由總工程師領導，以鼓勵員工利用這些公開平台分享知識。另一項在籌劃中的知識管理措施是彙編政策手冊，目的是促進員工對政策的理解和闡釋政策的依歸。手冊安排於2013年年中發布。

此外，機電工程署的2012品質及安全日已於2012年11月舉辦。兩位應邀的演講嘉賓以安全、品質、客戶服務和環保為主題，分享他們的心得。其後，八隊於最佳改善個案比賽、最佳客戶參與個案比賽、最佳職安健改善個案比賽和最佳綠色個案比賽中勝出的隊伍獲邀在台上以生動有趣的形式演繹他們得獎個案。這次活動空前成功，有超過160名員工參加。

持續綠色作業

我們透過節約、環保和改善計劃，實踐我們持續綠色作業的承諾。例如，無紙化營運是全球趨勢。我們在2012/13年開始試行無紙會議系統，並以首長級人員率先成為我們第一批用戶。我們會根據試行結果優化該系統。

同時，我們正籌劃改造總部大樓，使其符合最新的綠色建築標準，為行業樹立榜樣。為此，我們委託顧問根據建築環境評估法的要求進行差距分析。



ENHANCING KNOWLEDGE MANAGEMENT

To foster a culture of learning and sharing among staff of different ranks and engineering expertise, we devoted resources in 2012/13 to consolidate our past efforts on knowledge management in setting up the Knowledge Communities (KC) in the department. Targeted to be launched in April 2013, the first phase of KC aims to provide a single access point online for staff to search, retrieve and share E&M knowledge relevant to their work. Furthermore, in support of KC, interest groups and forums led by chief engineers are being established to encourage staff sharing in an open platform. Another knowledge management initiative in the pipeline is the compilation of a policy manual, which provides ready references to promote staff's understanding and rationale of policies. The manual is scheduled to be published in mid-2013.

Moreover, the EMSD Quality and Safety Day 2012 was organised in November 2012. With safety, quality, customer care and environmental protection as its theme, two speakers were invited to share their insights on the subjects. Afterward, eight winning teams from the Best Improvement Project Competition, Best Customer Engagement Project Competition, Best OHS Enhancement Project Competition and Best Green Project Competition were invited on stage to share their projects in a lively manner. With over 160 staff attended, the event was a success.

SUSTAINING GREEN OPERATION

We sustain green operation through conservation, protection and improvement programmes. For instance, there is a world-wide trend towards paperless operation. We trial ran a paperless meeting system in 2012/13, with directorate officers taking the lead as our first group of users. The system will be upgraded based on the feedback of the trial.

Furthermore, we are planning to transform our headquarters to meet the latest green building requirements in order to set an example to the industry. Thus, we conducted a consultancy study on gap analysis based on the requirements of Building Environment Assessment Method (BEAM) Plus certification.



為促進部門內不同職級及工程專業同事互相學習和交流的文化，我們在2012/13年特別投放資源籌備成立「知識群體」，目標是在2013年4月推出。

Much effort was devoted in 2012/13 in the setting up of the Knowledge Communities (KC). Targeted to be launched in April 2013, the goal of KC was to foster a culture of learning and sharing among staff of different ranks and engineering expertise.



年內我們試行無紙會議系統，以實踐我們持續綠色作業的承諾。We set up a trial paperless meeting system during the year as part of our commitment to sustain green operation.





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關於本報告

這份機電工程署的環保報告，闡述我們年內在環保、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所擔當的角色。

範圍

本報告涵蓋機電工程署由2012年4月1日至2013年3月31日期間在本港的運作情況。報告內提供的數據均為實際數字，涉及機電工程署在全港各區的工作。在合適可行的情況下，各主要事項的數據已整合為可比較的數據。所有金額均以港元為單位。

原則

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

本報告的獨立核實聲明亦載於報告的最後部分。

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 2012 to 31 March 2013. 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.



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，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2011年的《亞太經濟合作會議檀香山領袖宣言》，致力在2035年前將能源強度降低45%。

經濟增長、人口增加及氣候變化對自然資源造成的壓力，已促使多國領袖專注研究如何為經濟增長和發展創造更多可持續的模式，並為此制訂更嚴格的排放管制規例。我們的規管服務所面對的挑戰，是掌握當前的國際發展形勢，協助政府建立一個便利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。

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

IMPACT OF SUSTAINABILITY ON THE ORGANISATION

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, clients 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's Honolulu Declaration 2011, and will seek to reduce 45% of energy intensity by 2035.

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

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

對營運服務的影響

目前全球經濟持續不穩，或會令我們的收益出現波動，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，明顯的例子是，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。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%，此措施也為我們的節約能源業務帶來更多商機。行政長官2010/11年施政報告中也重申，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。

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's 2010/11 Policy Address stated the aim of reducing the carbon intensity in Hong Kong 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

機電工程署的工作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《建築物能源效益條例》全面實施。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、環境和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 full operation of the Buildings 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.

環境

重點

- 於2012年8月推出強制性能源效益標籤計劃的新網頁「能源標籤網」，並於2013年1月推出第一期《能源標籤快訊》。
- 於2012年7月24日推出為電磁爐而設的自願性能源效益標籤計劃。
- 《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。
- 自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的風險。我們於2012/13年度從淡水冷卻塔抽取了893個水樣本，根據測試結果，要求業主採取《公眾衛生及市政條例》規定的減除妨擾工作。

前瞻

- 就自願性能源效益標籤計劃擴展至包括氣體煮食爐，進行籌備工作。
- 建議以雙管齊下的方式加快淘汰能源效益較低的鎢絲燈泡，而不單靠市場力量，並與供應商、零售商、商會及主要用家攜手推出一個「約章計劃」以減少鎢絲燈泡的供應和使用。
- 檢討《建築物能源效益守則》內照明裝置的能源效益標準。
- 根據《公眾衛生及市政條例》，於2013/14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。
- 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耗電量減少共5%。

ENVIRONMENTAL

Highlights

- Launched Energy Label Net, the dedicated website of the Mandatory Energy Efficiency Labelling Scheme in August 2012, and issued the first issue of the Energy Label Newsletter in January 2013.
- Launched a new Voluntary Energy Efficiency Labelling Scheme for Induction Cookers on 24 July 2012.
- Gazetted the Building Energy Code and the Energy Audit Code 2012 Editions, under the Buildings Energy Efficiency Ordinance in February 2012. The Ordinance came into full operation on 21 September 2012.
- With delegated powers under the Public Health and Municipal Services Ordinance (PHMSO), EMSD implemented measures since 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 2012/13, 893 water samples were taken from fresh water cooling towers, with abatement action taken under PHMSO according to test results.

Way Forward

- Prepare for the extension of the Voluntary Energy Efficiency Labelling Scheme to cover gas cookers.
- Propose a dual-pronged approach to expedite the phasing out of energy-inefficient incandescent light bulbs (ILB), instead of leaving it to market forces. These include the launching of a Charter Scheme with suppliers, retailers, trade associations and major users to reduce the supply and usage of ILB.
- Review energy efficiency standards of lighting installation of the Building Energy Code.
- Continue to conduct annual water sampling of about 800 fresh water cooling towers in 2013/14 and implement regulatory control of contaminated cooling towers under the PHMSO.
- Continue to reduce electricity consumption at EMSD venues by a total of 5% from 2009/10 to 2013/14 against the base year 2007/08.

社會

重點

- 每名員工年內平均接受5.44日培訓。
- 所有管工均接受管工安全培訓，加強工場安全。

前瞻

- 通過舉行各種促進職業安全及健康的活動，持續提高員工的安全意識。
- 努力達至每名員工平均每年接受最少4.5日培訓的目標。
- 於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。

經濟

重點

- 營運基金財政表現良好，收入為46.43億元，按稅後運作盈利計算的收入回報率達6.9%，固定資產回報率為38.1%。
- 共批出總值超過19.5億元的物料供應及服務合約，支持本港經濟。

前瞻

- 透過與客戶的伙伴關係，創造公眾價值利惠市民。
- 提供優質服務、成為業界典範、建立員工才能與關懷文化、優化知識管理及持續綠色作業。

SOCIAL

Highlights

- Achieved an average of 5.44 annual training days per staff member.
- Safety supervisor training arranged for all works supervisors to improve safety performance.

Way Forward

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

ECONOMIC

Highlights

- Achieved positive financial performance with revenue of \$4,643 million, 6.9% Return on Revenue (ROR) based on operating profit after tax and 38.1% Rate of Return on Fixed Assets for EMSTF.
- Supported the economy by letting out contracts totalling more than \$1,950 million for the provision of goods and services.

Way Forward

- Create public value for community betterment through partnership with our clients.
- Deliver service excellence, become a trade model, build staff capacity and caring culture, enhance knowledge management and sustain green operation.

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，我們的運作亦可能會對環境造成影響。因此，我們的首要任務是避免污染環境，或在無法完全避免的情況下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，各部別可微調其具體運作，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，我們簡化品質、環保和職業健康及安全管理等各套系統，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。

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。

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 clients 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 decentralised 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 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.

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.

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45%。作為亞太經合組織的成員，香港已採納宣言，並會致力達標。

以下是我們在2012/13年度，為配合政府推動能源效益和節約能源政策而進行的主要工作。

強制性能源效益標籤計劃

強制性能源效益標籤計劃第一及第二階段已全面實施，涵蓋五類產品，即空調機、冷凍器具、緊湊型熒光燈（慳電膽）、洗衣機和抽濕機，這五類產品必須附有能源標籤，讓消費者知悉有關能源效益表現。至2013年3月底，計劃已有約5,300個表列產品型號。

《建築物能源效益條例》

《建築物能源效益條例》已於2012年9月21日起全面實施。條例管制新建築物及進行「主要裝修工程」的現有建築物內的四類主要屋宇裝備裝置，即空調、照明、電力、升降機及自動梯裝置等須符合基本能源效益標準；商業建築物須為建築物內的中央屋宇裝備裝置每十年進行一次能源審核。

建築物能源效益資助計劃

機電工程營運基金自2009年4月起，一直為環境局提供專業技術支援，以實施環境及自然保育基金撥款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，制訂能源效益改善方案，並改善大廈的屋宇裝備設施，以提升能效表現。計劃已於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。

ENERGY EFFICIENCY CONSERVATION INITIATIVES

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

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

Highlighted below are key developments in 2012/13 to support government's policy to step up energy efficiency and conservation.

Mandatory Energy Efficiency Labelling Scheme

The initial and second phases of the Mandatory Energy Efficiency Labelling Scheme have been fully implemented, covering five products types: room air-conditioners, refrigerating appliances, compact fluorescent lamps, washing machines and dehumidifiers. All these five product types are required to bear energy labels to inform consumers of their energy efficiency performance. As at the end of March 2013, around 5,300 product models have been listed under the Scheme.

Buildings Energy Efficiency Ordinance

The Buildings Energy Efficiency Ordinance came into full operation on 21 September 2012. The Ordinance governs the minimum energy efficiency standards of four key types of building services installation including air-conditioning, lighting, electrical as well as lift and escalator in newly constructed buildings and "major retrofitting works" of existing buildings; and requires commercial buildings to carry out energy audit for the central building services installation every ten years.

Buildings Energy Efficiency Funding Schemes

The EMSTF has been providing professional support to the Environment Bureau since April 2009 on implementing the Buildings Energy Efficiency Funding Schemes of a total sum of \$450 million under the Environment and Conservation Fund, and also assisting it in vetting funding applications. The Schemes aim to help building owners conduct energy-cum-carbon audits of their buildings to identify areas for improvement, and implement projects to upgrade the energy efficiency performance of building services installations. The Schemes 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。2012年，在機電工程署3.94億元直接採購的貨品中，有1,391萬元的貨品是綠色採購單上的貨品。

我們也密切留意供應商提供的綠色產品和服務。如市場可普遍地提供綠色產品，我們會把有關綠色要求列為強制性的採購要求，以鼓勵供應商製造更多綠色產品。在2012/13年度，有244家供應商提供環保產品，機電工程署也相應更新了供應商名冊。

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

我們於2010年3月成立環保採購工作小組，目的是為各類機電工程選取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。

GREEN PROCUREMENT

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

We play an active role in green procurement by adopting the green product specifications of 103 products provided in the Environment Bureau Circular Memorandum No. 2/2012 (Green Procurement Circular) as far as possible in our purchases. In 2012, from the total amount of \$394 million for direct purchase of goods in EMSD, \$13.91 million was spent on purchases for the products on the green procurement list.

We keep track of the offers from suppliers for the green contents of their products. We 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 2012/13, 244 suppliers who were able to provide environmentally friendly 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 environmentally friendly vehicles such as hybrid vehicles and electric vehicles.

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

客戶的環保工程項目

機電工程署的營運服務一直協助客戶發掘節省能源的機會及推行環保工程項目，以提高節能效益及更多使用可再生能源。我們於本年度為政府各政策局及部門完成了18個節能項目，例如獨立太陽能街燈、高效太陽能熱水系統、為學校和政府大樓安裝節省用水器材、以水冷式空調系統取代風冷式空調系統和安裝高效能無油離心式製冷機組等。預計這些新設備可每年減省耗電量約230萬千瓦小時。

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。2012/13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：

- 2012年6月在紐西蘭威靈頓舉行的「亞太經合組織新及再生能源技術專家小組第38次會議」。
- 2012年10月在南韓舉行的「亞太經合組織能源資料與分析專家小組第24次會議」。
- 2012年11月在美國華盛頓舉行的「亞太經合組織能源工作小組第44次會議」。
- 2012年11月在中華台北舉行的「亞太經合組織能源效益及節能專家小組第40次會議」。
- 2013年3月在泰國蘇梅島舉行的「亞太經合組織能源工作小組第45次會議」。

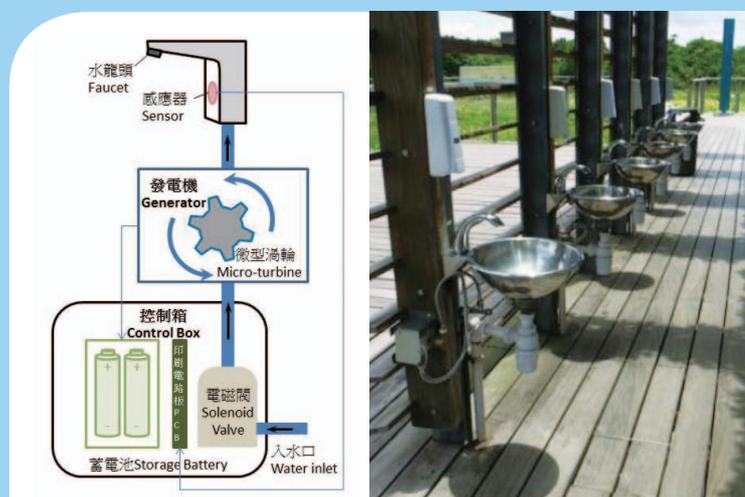
Green Projects for Clients

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 18 energy efficiency projects for government bureaux and departments, such as installations of stand-alone solar street lights, high energy efficiency solar hot water systems, water-saving devices for schools and government buildings, replacement of air-cooled chillers with water-cooled chillers, and high efficiency oil-free centrifugal chillers. It is expected that these new installations will generate an annual energy savings of around 2.3 million kWh.

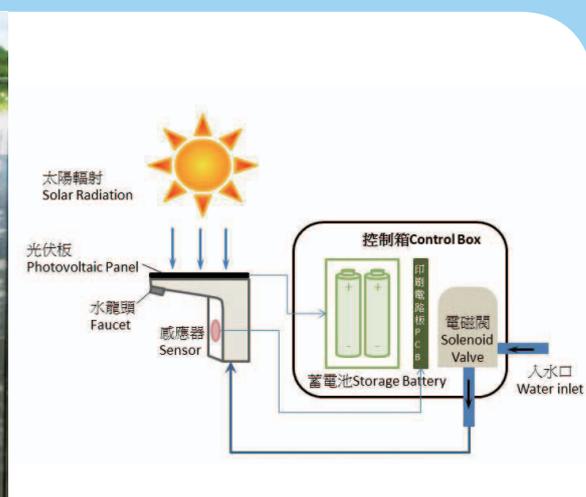
INTERNATIONAL EXCHANGE

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 2012/13, EMSD representatives attended a variety of regional and international conferences and meetings, and the key ones are as follow:

- The 38th Meeting of APEC Expert Group on New & Renewable Energy Technology, June 2012, Wellington, New Zealand.
- The 24th Meeting of APEC Expert Group on Energy Data & Analysis, October 2012, South Korea.
- The 44th Meeting of APEC Energy Working Group, November 2012, Washington, D.C. USA.
- The 40th Meeting of APEC Expert Group on Energy Efficiency and Conservation, November 2012, Chinese Taipei.
- The 45th Meeting of APEC Energy Working Group, March 2013, Koh Samui, Thailand.



香港濕地公園安裝的水力發電節水水龍頭的運作原理。
The diagram shows the operation principle of hydro-powered water-saving taps installed at the Hong Kong Wetland Park.



太陽能節水水龍頭的運作原理。由太陽光產生的電力可儲存於電池內，為水龍頭供電。
Operation principle of the solar-powered water-saving tap. Electricity generated from sunlight can be stored in batteries for powering the tap.

可再生能源水龍頭 節水兼節能

機電工程署配合水務署的節約用水措施，為政府建築物及學校的供水設備換上兼具節水及節能效益的水龍頭。

節水水龍頭配備控制水流量的自動感應裝置，有助節約用水，但控制裝置的運作卻要耗電。為解決這問題，機電工程署採用內置微型渦輪水力發電機的節水水龍頭，並於2011年在香港濕地公園裝設了28個這類水龍頭。此外，機電工程署亦於2012年在八所官立學校，安裝了74個裝有太陽能光伏電池的水龍頭。由太陽光所產生的電力會儲存於電池內，既為水龍頭供應部分電力，也可延長電池壽命。

自安裝工程開展以來，用家一直給予正面評價，讚揚設備的節水能效。同時，學校亦藉此推廣節約能源和資源的重要性，提高學生的環保意識。

Double Savings from Renewable Energy Taps

As part of the Water Supplies Department's water conservation initiatives, EMSD has been retrofitting water supply fixtures at government buildings and schools with water-saving taps that also conserve energy.

Water-saving taps are equipped with automatic sensing devices to control water flow, which helps conserve water. However, such control devices consume electricity in order to perform their functions. To overcome this dilemma, EMSD has selected water-saving taps with built-in hydro-powered micro-turbine, 28 of which were installed at the Hong Kong Wetland Park in 2011. In addition, 74 water taps with photovoltaic cells integrated with the tap were installed at eight government schools in 2012. The electricity generated can be stored in batteries to meet part of the power needs of the tap and prolong battery life.

Since the commencement of the installation works, the water-saving ability of the appurtenances has received positive feedback from users. At the same time, schools have also taken the opportunity to raise students' awareness of environmental protection and promote the importance of energy and resource conservation.

客戶的鼓勵 CUSTOMERS ENCOURAGEMENT



機電工程營運基金團隊為學校翻新喉管，並安裝紅外線自動感應水龍頭、低流量的水龍頭、紅外線感應小便器及雙掣式沖水坐廁，務求幫助學校節約用水。在施工期間，我們的老師和同學都沒有感到任何不便。相反，學校正好利用這個機會提高同學的環保和節能意識。

我們非常滿意機電工程營運基金團隊了解我們的需求，更在工程完成後主動跟進。他們對我們的要求和查詢都能迅速回應。

The EMSTF team retrofitted the plumbing appurtenances with automatic infrared sensor water taps and installed low flow faucets, infrared sensor urinal flushers and dual flush toilets to help conserve water in the school. During the project period, our teachers and students did not experience any inconvenience. On the contrary, the school took this opportunity to raise students' environmental protection and energy conservation awareness.

We were extremely pleased the EMSTF team understood our needs and was proactive in their follow-up work. They responded quickly to our requests and enquiries.

伊利沙伯中學舊生會小學分校校長
梁潤蓮女士

Ms. Leung Yun-lin, Lilian,
Principal, Queen Elizabeth School Old Students' Association
Branch Primary School



<http://www.emsd.gov.hk/emsd/EMSTFar/1213/v2.html>

訪問短片 手機即看
Shoot and view our video

節約營運資源

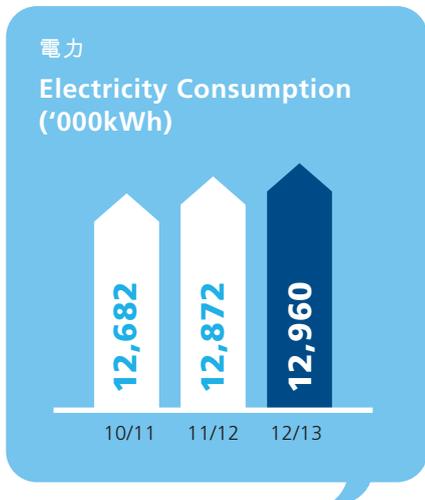
水電煤氣

下頁圖表載列機電工程署的水、電和煤氣使用情況。2012/13年度的用電量較2011/12年度增加0.7%，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2011/12年度減少9.5%。至於用水量，則較2011/12年度減少14.3%，原因是年內在機電工程署總部大樓進行的活動較上年度減少。至於煤氣用量，則與2011/12年度相若。

CONSERVATION OF OPERATIONAL RESOURCES

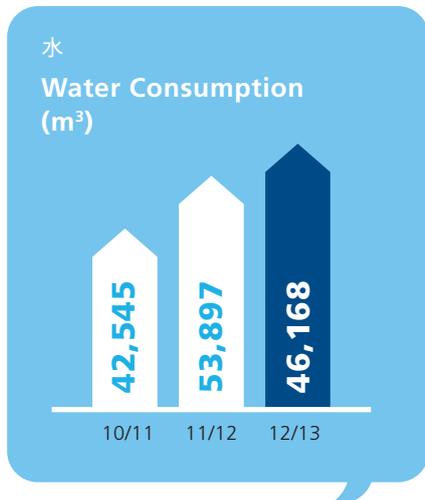
Public Utilities

Electricity, water and town gas consumption at EMSD is shown in the graphs on next page. Electricity consumption in 2012/13 increased by 0.7% compared to 2011/12 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 9.5% in electricity consumption compared to 2011/12. Water consumption decreased 14.3% compared to 2011/12 due to the decrease in activities in EMSD Headquarters. Town gas consumption in 2012/13 was similar to 2011/12 level.



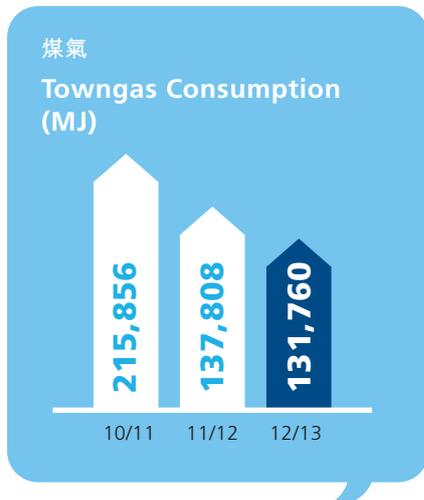
主要用電地點包括九龍灣總部大樓（連同企業數據中心）、加路連山工場、芬園車輛維修站、小蠔灣車輛維修站，以及香港國際機場空郵中心的機電工程署工場。年內用電量增加0.7%，如排除因為企業數據中心服務需求增加之因素，2012/13年度的用電量比2011/12年度減少9.5%。

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 0.7% 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 9.5% in electricity consumption.



主要用於空調、園藝灌溉、飲用和清潔等。年內用水量較2011/12年度減少14.3%，原因是機電工程署總部大樓進行的活動減少，導致用水量下降。

Water is mainly consumed for air-conditioning, gardening, drinking and cleaning. Water consumption decreased by 14.3% compared to 2011/12, which was due to the decrease in activities in EMSD Headquarters in the year.



加路連山工場是使用煤氣供應熱水的主要場地。2012/13年度的煤氣用量，相對2011/12年用量相若。

Caroline Hill workshop is the major venue relying on towngas for water heating. Towngas consumption in 2012/13 was similar to that in 2011/12.

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。2012/13年度的用紙量較原定上限少2.5%。由2001年起，我們已廣泛採用由循環再造纖維製成的環保紙。2012/13年度，環保紙佔部門總用紙量96.5%。原木紙只用於對外文件，而且盡量少用。我們在2012/13年度採購了3,279個碳粉盒，而由2005/06年度開始，我們已遵循政府措施，將用過的碳粉盒回收循環再用。

工場使用的物料

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

MATERIALS

Materials Used in Offices

Paper and toner cartridges are the main materials used in offices. We make every effort to reduce our paper consumption. In 2012/13, paper consumption was 2.5% below the set quota. Since 2001, we have adopted the extensive use of environmentally friendly recycled paper made from recycled fibre. In 2012/13, 96.5% 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 3,279 toner cartridges in 2012/13 and have followed government initiatives to recycle used toner cartridges since 2005/06.

Materials Used in Workshops

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

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。

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。2012/13年度，我們的運輸工具直接產生的二氧化碳約為1,338公噸，而通過耗電間接排放的二氧化碳則約為9,072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2013年3月31日，我們用作執行職務的車隊有227部車輛，包括貨車、客貨車、大型房車和電單車。此外，我們也為客戶部門的5,766部政府車輛提供維修服務。為確保車輛在運作及維修過程中的廢氣排放減至最少，我們實行良好的內務管理措施、妥善保養車輛、減少使用運輸工具，以及改用混合動力或電動車輛等。我們現有六部混合動力車，消耗的燃料比體積相近的傳統車輛少40%。我們還有一部電動車。在未來數年，電動車和混合動力車的數量將會增加。

其他資源耗用詳情及廢氣、排放物及廢物的數字，請參考「統計資料摘要」。

EMISSIONS, EFFLUENTS AND WASTES

Reducing and Recycling of Waste

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

EMISSIONS

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions are widely acknowledged as a cause of global warming and climate change, and reducing emissions such as CO₂ is one of our biggest challenges. EMSD's GHG emissions are mainly attributed to the consumption of electricity in our offices, workshops and transport. In 2012/13, direct emissions from our transport activities amounted to about 1,338 tonnes of CO₂ and our electricity consumption gave rise to about 9,072 tonnes of CO₂.

Transport

The use of transportation vehicles in EMSD operations consumes non-renewable fossil fuels and generates GHG emissions. As of 31 March 2013, we have a fleet of 227 vehicles including lorries, vans, saloon cars and motorcycles to deliver our services, and at the same time maintain 5,766 government vehicles for our client departments. We have to ensure that emissions from such activities are reduced to a minimum by good housekeeping, proper vehicle maintenance, reduced use of transportation vehicles or switching to hybrid or electric vehicles. We now have six hybrid vehicles, which consume 40% less fuel than conventional cars of similar size, and one electric vehicle. The number of hybrid vehicles and electric vehicles will be increased in the next few years.

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

機電工程署總部大樓太陽能光伏系統

機電工程署總部大樓的太陽能光伏系統是大樓的示範項目，可生產高達350千瓦電量的天然能源。自2005年完成裝置以來，一直為總部大樓提供清潔的可再生能源。至2013年3月底，該系統已累積生產183萬千瓦小時的能源。

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 2013 was 1.83 million kWh.



社會表現

SOCIAL PERFORMANCE

BEING A GOOD CORPORATE CITIZEN
良好企業公民



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員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。

員工之僱用和發展

僱用

截至2012/13年底，我們共有5,186名僱員。我們承諾維護平等就業政策，目前有217名員工為輕度殘疾人士，佔員工總人數約4.18%。

學習及發展

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

在未來兩年，我們會透過發展部門「知識群體」以加強知識管理。

見習工程師訓練計劃

我們的見習工程師訓練計劃自六十年代推行以來，已培訓了700多位見習工程師。這計劃一向公認是香港工程界的最佳在職培訓計劃之一，目的是確保本港能有足夠的受訓工程師，滿足業界的需要。在2012/13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16位見習工程師。

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.

STAFF EMPLOYMENT AND DEVELOPMENT

Employment

At the end of 2012/13, we have 5,186 employees. As a commitment to upholding the equal opportunity employment policy, we currently have 217 employees with minor disabilities, representing about 4.18% of our total workforce.

Learning and Development

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

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

Graduate Training Scheme

Since its inception in the 1960s, our Engineering Graduate Training Programme has attracted more than 700 graduate participants. The programme has long been considered one of the best on-the-job training schemes in the engineering profession in Hong Kong and has contributed to the provision of trained engineers to meet the needs of the local profession. In 2012/13, we recruited 16 engineering graduates specialising in electrical, mechanical, electronics, building services, information technology and biomedical engineering.

**見習技術員訓練計劃
(前稱學徒訓練計劃)**

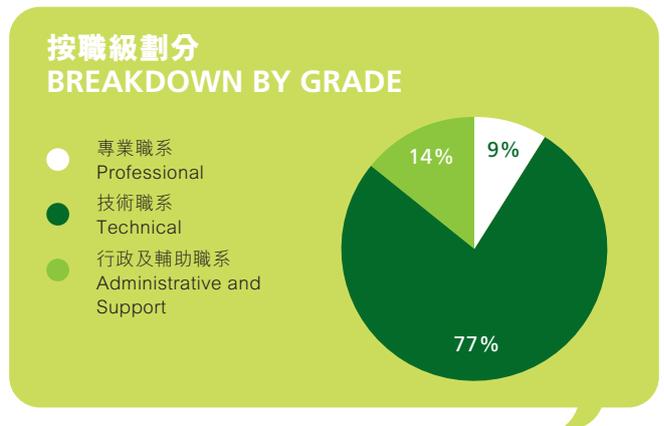
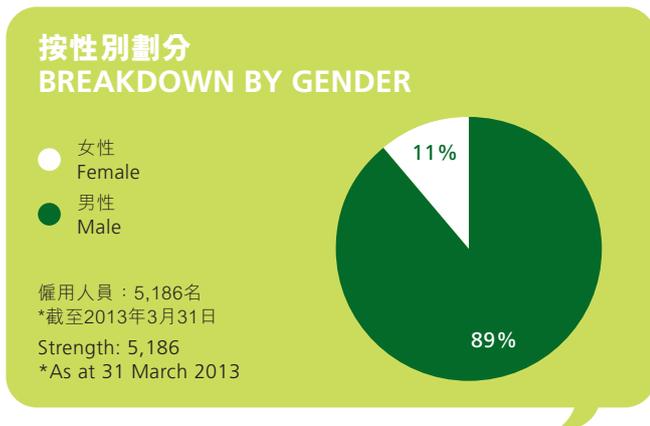
技術員及技工學徒訓練計劃是我們另一項主要培訓計劃，目的是提供有系統及高水平的訓練，以滿足機電工程署和社會目前及未來對技術員及技工的需求。計劃推行50多年來，為業界培訓了超過5,000名學徒。在2012/13年度，我們招募了53名見習二級技術員和69名見習一級技術員。除提供在職訓練外，我們亦資助學徒修讀香港專業教育學院的工藝證書課程和高級文憑課程。

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

**Technician Training Scheme
(formerly known as 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 5,000 apprentices for the profession. In 2012/13, we recruited 53 technician trainee II and 69 technician trainee I. Besides on-the-job training, we sponsored the apprentices to attend craft certificate courses and higher diploma courses in the Institute of Vocational Education.

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



培訓目標

在2012/13年度，每名員工的每年平均受訓日數為5.44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 2012/13, we achieved 5.44 training days per staff member per year on average, exceeding the 4.5 days target set for the year. We will continue to encourage and provide relevant training to enhance our services and develop new services, and to facilitate employees' career development.



健康安全的工作環境

職業健康及安全

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

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

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

在2012/13年，我們製作了一系列安全動畫，目的是提高員工的安全意識。為了提醒員工在工作場所潛在的安全威脅，我們在指定的場地展示高度的危險情況及相關的安全措施。對於承辦商員工的工作安全，我們在建築地盤安全手冊內，闡述合約上的工地安全要求，並將其納入我們的項目管理手冊，以促使承辦商遵從規定。同時，我們亦修訂承辦商績效報告中評定承辦商安全表現的記分卡。此外，我們的「職業安全及健康策導委員會」會定期審查合約工程的安全成效。我們亦為員工及承辦商舉辦工作安全簡報會。

員工病假

在2012/13年度，部門因員工放取病假而失去的工作天共17,388天，即相等於每名員工約3.35天。

A HEALTHY AND SAFE WORKING ENVIRONMENT

Occupational Health and Safety

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

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

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

In 2012/13, we produced a series of safety animations with the aim of increasing staff safety awareness. In order to alert staff members of potential safety hazards in work sites, the top safety risks and the related safety measures were displayed in selected venues. For work safety of contractor staff, we further elaborated and incorporated the contractual provisions on site safety given in the Construction Site Safety Manual into our Project Administration Handbook for compliance by our contractors. A revised version of the Safety Score Card for rating contractor's safety performance was adopted in the Contractor Performance Reports. In addition, the safety performance of our works contracts was regularly reviewed in the Steering Committee on Occupational Safety and Health. We also organised briefing sessions on contract work safety which were attended by many staff members and contractors.

Sick Leave

In 2012/13, a total of 17,388 working days were lost due to sick leave. This is equivalent to around 3.35 days per employee.



得獎同事出席頒獎禮。
Award winners at the prize presentation ceremony.

機場團隊獲機場安全運動比賽獎

機場工程分部同事於機場管理局每年舉辦的「飛行區及行李處理大堂安全運動」中奪得多個獎項。安全運動的目的，是鼓勵及推廣安全文化，並提高行李處理大堂工作人員的安全意識，從而達致零意外。頒獎禮已於2013年1月17日舉行，本署行李處理組同事陳國鋒先生和何志達先生，均獲頒「模範安全員工」獎，其出色表現備受表揚。

香港國際機場過去一年的客運量高達5,600萬人次，在機場維持高度安全的工作文化至為重要。我們一直都積極參與機場管理局的各種安全運動和措施，未來也會繼續支持。

Airport Team Wins Airport Safety Campaign Award

Our Airport Engineering Sub-division has won various awards at the annual Airfield and Baggage Hall Safety Campaign organised by the Airport Authority (AA). The campaign aims to achieve zero accidents through encouraging and promoting a safety culture by raising the safety awareness of the baggage handling staff. EMSD staff Mr Chan Kwok-fung and Mr Ho Chi-tat, both from our Baggage Handling System team, were awarded the Safety Role Model Award. Their outstanding performance was recognised at a prize presentation ceremony held on 17 January 2013.

With passenger traffic of over 56 million passengers last year, the Hong Kong International Airport demands a strong safety culture at the workplace. We have always been supportive of the AA's safety campaigns and initiatives and shall continue to do so in future.



管理層提醒所有承辦商，安全工作人人有責。
Our management reminded contractors that contract safety was everyone's responsibility.

工程合約安全簡介會

部門安全分部於2013年1月7日及11日，在總部大樓舉辦了兩場有關加強合約工程安全的簡介會，向出席講座的本署承辦商代表，講解各項加強工程合約安全的措施，讓承辦商更深入了解發展局及機電工程署對有關安全項目的要求。兩場講座共吸引了187個承辦商派出共325名代表，反應熱烈。

Contract Safety Briefing

The Safety Sub-division held two Briefings on Contract Safety at the EMSD Headquarters on 7 and 11 January 2013, sharing with participating contractors various measures to enhance contract work safety to increase their understanding of the Development Bureau's and EMSD's requirements of contract safety. The two briefings attracted 325 representatives from 187 contractors.

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2013/14年度進行。

員工諮詢途徑

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

承辦商及供應商

承辦商及供應商管理

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

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

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

STAFF RELATIONS

Staff Satisfaction Survey

We believe that it is important to measure and track staff satisfaction regularly. To gauge staff perception in order to facilitate organisational improvement is part of our commitment to caring for staff. Independent research specialists are appointed to conduct staff satisfaction surveys on a regular basis. In the latest 2011/12 survey, every employee at senior engineer rank or below was offered an opportunity to express his/her views through a survey questionnaire. The overall staff satisfaction rating from the survey was 6.5 (on a scale of 10), which was a slight improvement of 0.2 as compared to the previous survey in 2009. Overall satisfaction levels in the past years have shown a steady trend. The next survey will be conducted in 2013/14.

Staff Consultation Channels

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

CONTRACTORS AND SUPPLIERS

Contractor and Supplier Management

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

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

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

客戶

我們的營運服務，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已於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。

機電工程署於2012年委託獨立顧問公司進行了新一輪的客戶意見調查，以量度75個客戶部門對機電工程營運基金服務的滿意度。是次調查共發出1,803份問卷，收回的已完成問卷有1,019份。整體回應率為56.5%。以8分為滿分，整體客戶滿意指數由2010年的6.01分升至2012年的6.12分。為持續提升服務質素，我們會加強和客戶溝通，充分配合客戶的需要和期望，並且通知客戶有關工作進度。我們亦會加強監管承辦商，確保承辦商能提供優質的服務。

規管服務方面，我們的客戶聯絡小組及各安全諮詢委員會也定期與公眾代表開會，就規管工作及各種機電安全推廣活動與公眾直接交流意見，聽取公眾的看法和建議，從而定出改善措施。我們也定期進行公眾意見調查，了解市民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。

CLIENTS

Achieving customer satisfaction is a priority 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 was completed in May 2012. We will act upon the findings, aiming to further enhance customer satisfaction. The next survey will be conducted in early 2014.

EMSD appointed an independent consultant to conduct a new round of Departmental Customer Opinion Survey in 2012 to gather feedback from 75 client departments on our Trading Services. At the end of the exercise, 1,019 out of the 1,803 questionnaires dispatched were returned. The overall response rate is 56.5%. The overall Customer Satisfaction Index on an 8-point scale increased from 6.01 in 2010 to 6.12 in 2012. To enhance our service quality continuously, we will enforce communications with clients to ensure that their needs and expectations are fully taken care of, and that they are well informed of the progress of works. At the same time, we shall also strengthen our contractor supervision and management to ensure that contractors provide quality service.

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

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及營運基金客戶，推廣能源效益與節能的好處和最新發展。有關課題包括一般的最佳做法及個別範疇的有效節能措施。

政府部門研習能源效益知識

- 能源效益事務處於2012年7月在香港中央圖書館及科學館，為各政府部門舉辦了三場「2012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。講者包括政府產業署及建築署代表，分別跟與會者交流經驗。

- 本部門於2012年10月為機電工程署及政府部門的同事舉辦能源統計能力建設工作坊，增進參加者處理能源統計的知識。來自海外的日本經濟研究所和國際能源署以及本港的能源專家應邀分享經驗。

社區

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

公眾教育活動

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

Seminars and Forums for Government Departments and EMSTF Clients

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

Government Departments Learn More about Energy Efficiency

- Our Energy Efficiency Office held three briefings for government departments in July 2012 at the Central Library and Science Museum on the topic of "Government Departments' Energy Consumption Report and Monitoring 2012", 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 and Architectural Services Department also shared their experiences with participants.

- An energy statistics capacity building workshop was organised for both EMSD and government department colleagues in October 2012 to build up the knowledge on how to handle energy statistics. Overseas energy experts from The Institute of Energy Economics, Japan and International Energy Agency as well as local experts were invited to deliver talks and share experience.

COMMUNITY

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

Public Education Activities

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



我們的攤位吸引了大批市民參觀。
InnoCarnival visitors flocked to our booth.

創新科技嘉年華2012 展示邊界圍網保安系統

由創新科技署舉辦的「創新科技嘉年華2012」於2012年11月3日至11日假香港科學園舉行，機電工程署也有參與，並以互動展示形式，吸引了大批市民。是次活動有20多萬名市民到場參觀，透過展覽認識更多日常生活中的創新科技。

我們的攤位展示了香港邊境採用的先進保安和進出管制技術，透過一套結合震動感應電纜、熱能影像系統、閉路電視技術的模擬邊界圍網保安裝置，讓參觀者透過互動模擬系統，了解這套系統如何偵測和辨識入侵者。攤位內也設置了採用影像分析和生物辨識技術的先進進出管制設備，例如指紋和臉部辨識系統，讓市民親身體驗這些先進技術。

InnoCarnival 2012 Showcases Border Fence Security System

EMSD attracted a lot of interest from members of the public with its interactive demonstration system at the InnoCarnival 2012. Organised by the Innovation and Technology Commission, the Carnival was held at the Hong Kong Science Park from 3 to 11 November 2012. More than 200,000 visitors attended the event to learn more about innovative technologies in daily life.

The EMSD booth showcased the application of up-to-date technologies for security and access control at Hong Kong border. Visitors could interact with a border fence security model to realise how vibration sensor cables, thermal imaging system and CCTV technology are integrated to detect and identify intruders. State-of-the-art access control equipment using video analytics and biometrics technologies such as fingerprint and facial recognition systems were also set up for visitors to have first-hand experience on their application.



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

「淡水冷卻塔和建築物能源效益的規管及實務」技術研討會

能源效益事務處於2012年11月舉辦了兩場一年一度的「淡水冷卻塔和建築物能源效益的規管及實務」技術研討會，共吸引了約740名人士參加。研討會目的是向業界及持份者，包括大廈業主、物業管理公司、顧問公司和承辦商，宣傳淡水冷卻塔的規管及實務事宜，並推廣建築物能源效益。

研討會分享了有關淡水冷卻塔的加強規管、淡水冷卻塔計劃的最新發展、冷卻塔設計/操作及良好作業指引、成功更換水冷式空調的經驗、及預防退伍軍人病症的水處理管理事宜等，並簡介在2012年9月進入全面實施階段的《建築物能源效益條例》的框架及實施情況。

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

The annual forum, organised by the Energy Efficiency Office, was held in November 2012 and attracted about 740 participants to its two sessions this year. The forum provided a platform to promote the control and practice of fresh water cooling towers (FWCT) and buildings energy efficiency to the trades and stakeholders, including building owners, property management companies, consultants and contractors.

The forum covered topics such as the enhanced regulatory control of fresh water cooling towers, the latest developments of the FWCT Scheme, design and installation as well as good operation and maintenance practice of cooling towers, case studies of successful conversion to energy efficient water-cooled air-conditioning systems and water treatment management for the prevention of Legionnaires' disease. It also briefed participants on the Buildings Energy Efficiency Ordinance and its full implementation since September 2012.



是次活動反應熱烈，共吸引了約740名人士參加。
The Forum attracted about 740 participants.

《升降機及自動梯條例》簡報會

我們舉行了30場《升降機及自動梯條例》（條例）簡報會，向廣大市民、業主立案法團及物業管理機構宣傳有關條例。簡報會有超過2,900名公眾人士參加。簡報會主要介紹升降機及自動梯負責人的責任，也講述關於安全使用升降機及自動梯和七項優化現有升降機的建議。我們還派發了有關引進《升降機及自動梯條例》、升降機優化和升降機及自動梯的負責人責任的小冊子。屋宇署代表也應邀出席其中八場簡報會，講解有關強制驗樓及驗窗計劃，共吸引了1,608人參加。

Briefing Sessions on the New Lifts and Escalators Ordinance

Thirty briefing sessions were held to promote the Lifts and Escalators Ordinance (LEO) to the general public, owners' corporations, and property management agencies. Speakers explained the duties of the responsible persons for lifts and escalators under the LEO, the safe use of lifts and escalators as well as the seven proposals to modernise existing lifts. Over 2,900 members of the public attended the briefings. Participants at the briefings also received booklets on lift modernisation, LEO introduction, and duties of responsible persons of lifts and escalators under the LEO. Representatives from the Buildings Department also spoke on the statutory requirements under the mandatory building and window inspection schemes in eight of the briefings, which attracted 1,608 attendees.



2,900多名公眾人士出席簡報會，了解新條例如何影響大廈管理。

Over 2,900 members of the public attended briefing sessions on the new Ordinance regarding building management.



已簽署約章的車輛維修工場代表，與嘉賓於啟動典禮合照留念。
Representatives from workshops that have subscribed to the Charter, with guests at the launching ceremony.



約200名註冊車輛維修技工，參加於2012年12月為推出車輛維修工場約章而舉辦的「醒目車輛維修技工比賽」。
About 200 Registered Vehicle Mechanics took part in a Smart Mechanic Competition in December 2012 to mark the establishment of the Vehicle Maintenance Workshops Charter.

車輛維修工場約章啟動典禮

車輛維修工場約章啟動典禮於2013年1月舉行，標誌「車輛維修工場約章」正式推出。約章至今已吸引200位工場東主簽署，自願承諾遵守《車輛維修工場實務指引》並提供優質車輛維修服務。這些工場的資料均已上載至機電工程署網頁，讓公眾在選擇車輛維修商時有所依據。預計當更多的推廣活動陸續推出後，會有更多工場加入約章計劃。

車輛維修工場約章計劃，與早於2007年推出並已吸引約八成車輛維修技工參加的「車輛維修技工自願註冊計劃」將發揮相輔相成的協同效應，合力提升車輛維修業界的服務水平，為公眾帶來裨益。

Vehicle Maintenance Workshops Charter Launching Ceremony

The launching ceremony, held in January 2013, marked the establishment of the Vehicle Maintenance Workshops Charter which has so far attracted over 200 signatories of workshop owners. The signatories have voluntarily pledged to abide by the "Practice Guidelines for Vehicle Maintenance Workshops" to deliver quality vehicle maintenance services. Information of these workshops is posted on EMSD's web page, so that the public could make informed choices when selecting vehicle mechanics. It is expected that more workshops will subscribe to the Charter as more promotional activities are introduced.

This Scheme works in conjunction with the Voluntary Registration Scheme for Vehicle Mechanics which was launched earlier in 2007 and which have attracted about 80% of all vehicle mechanics to participate. The two schemes are expected to create a synergy effect that will in turn improve the vehicle maintenance trade's standards, thereby benefiting the public.

東區醫院步行籌款

機電工程署一直致力參與公益慈善活動，發揮社區共融的力量。我們的同事於2012年11月24日參加由東區尤德夫人那打素醫院舉辦的東區醫院日，並獲得院方特別頒發「最踴躍參與獎」及感謝狀。

PYNEH Fundraising Walkathon

EMSD has always been an active participant of various charity events that promote social inclusion. Our colleagues took part in the Pamela Youde Nethersole Eastern Hospital (PYNEH) Day on 24 November 2012 and received a "Participation Award (Other Organisations)" and a letter of appreciation from PYNEH.



醫院管理局港島東聯網總監暨東區尤德夫人那打素醫院行政總監劉楚釗醫生（後排左五），與機電工程署員工共襄善舉。
Dr Lau Chor-chiu, Chief Executive of the Hong Kong East Cluster of Hospital Authority cum Chief Executive of Pamela Youde Nethersole Eastern Hospital (5th from left, back row) and EMSD staff joined hands for the walkathon.



機電工程署同事於起步點整裝待發。
EMSD staff getting ready at the Ngong Ping Charity Walk starting point.

昂步棧道2013

一般法例部同事於2013年1月20日參加「昂步棧道2013」慈善步行籌款，參加者也包括其他政府部門、私營機構和社會人士。步行籌款由註冊非牟利組織香港青年旅舍協會由2007年起開始每年舉辦，該會宗旨是在本港提供友好、舒適、安全及實惠的青年旅舍住宿服務，籌得款項用作日常營運經費。

Ngong Ping Charity Walk 2013

Our colleagues from the General Legislation Division participated in the "Ngong Ping Charity Walk 2013" with other supporters from the government, private sectors and the community on 20 January 2013. Organised by the Hong Kong Youth Hostels Association, a registered non-profit organisation that aims to provide friendly, comfortable and safe accommodation to hostellers in Hong Kong at an affordable price, the annual charity walk has been raising funds for the Association's daily operations since 2007.



機電工程署同事參與由生命小戰士會舉辦的步行籌款。
EMSD staff participated in the fundraising walkathon organised by the Little Life Warrior Society.

為香港及國內兒童癌症病童步行籌款

機電工程署一直鼓勵員工參與慈善工作。我們的同事聯同家屬，於2012年12月16日在香港中文大學參加步行籌款。主辦機構生命小戰士會致力為患癌兒童、康復者及其家人提供援助。是次活動籌得的款項，將分別捐贈予八間本港和內地的慈善機構。

Fundraising Walkathon for Children with Cancer in Hong Kong and Mainland China

EMSD has always encouraged its staff to participate in charity events. Our colleagues and their families participated in a walkathon organised by the Little Life Warrior Society that took place at The Chinese University of

Hong Kong on 16 December 2012. The organiser aims to help children cancer patients, cancer survivors and their family members. Funds raised by the walkathon will benefit eight charitable organisations in Hong Kong and Mainland China.

伊利沙伯醫院金禧健步行同樂日

伊利沙伯醫院（伊院）於2013年1月13日舉行「伊院金禧健步行同樂日」，機電工程署衛生工程代表獲邀參加，並一同慶賀伊院成立50周年金禧紀念。當日，同事由尖沙咀香港文化中心出發，途經香港理工大學，最後返抵伊利沙伯醫院。是次體能活動，更能使同事提高健康意識。

Golden Jubilee First Celebration Activity - Walkathon

The walkathon was held by Queen Elizabeth Hospital on 13 January 2013. Representatives from our Health Sector Division were invited to join the walk and also celebrate the Hospital's 50th Anniversary. The walkathon started at the Hong Kong Cultural Centre, Tsim Sha Tsui to the Queen Elizabeth Hospital, by way of The Hong Kong Polytechnic University. Participation by our staff in the event could help raise their awareness of the importance of good health.



同事參與健步行可提高健康意識。
Participation in the Walkathon helped raise health awareness of staff.

經濟表現

ECONOMIC PERFORMANCE

CONTRIBUTING TO THE
LOCAL ECONOMY
貢獻本地經濟發展



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。兩者均創造就業機會，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2012/13年報告 (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 contributes to the economic development of Hong Kong. Our Trading Services arm provides services to our clients comprising government departments and public bodies, whereas our Regulatory Services provides services to the general public. In turn, these activities create jobs 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 strives to maintain a safe and energy efficient environment which is vital to attract business activities and investment to 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 accordingly, thus creating more business and innovation opportunities for the trades 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 for our Trading Services, and through the Administrative Budget for our Regulatory Services. More information can be obtained from the EMSTF Report 2012/13 (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

	2010/11 (千港元) (HK\$'000)	2011/12 (千港元) (HK\$'000)	2012/13 (千港元) (HK\$'000)
供應商及承辦商費用 Suppliers & Contractors Costs	72,384	82,012	110,900
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	131,102	58,861	36,196
總薪酬及福利 / 員工成本 Total Payroll and Benefits / Staff Costs	199,255	214,828	231,939

主要經濟指標摘要 — 營運服務

SUMMARY OF KEY ECONOMIC INDICATORS – TRADING SERVICES

	2010/11 (千港元) (HK\$'000)	2011/12 (千港元) (HK\$'000)	2012/13 (千港元) (HK\$'000)
營業額 Turnover	4,217,056	4,317,640	4,643,068
供應商及承辦商費用 Suppliers & Contractors Costs	1,781,660	1,857,162	2,140,828
總薪酬及福利 / 員工成本 Total Payroll and Benefits / Staff Costs	1,806,854	1,969,511	2,094,713
稅務 (名義) Taxation (notional)	98,770	95,560	82,699
固定資產回報率 Rate of Return on Fixed Assets	58.1%	45.5%	38.1%
收入回報率 (按稅後運作盈利計算) Rate of Return on Revenue (Based on operating profit after tax)	11.9%	9.0%	6.9%

新業務發展

在2012/13年財政年度，營運基金的新業務喜見穩定發展，除了現有的客戶與我們簽訂新合約，我們仍繼續努力不懈，尋找商機。

我們設立了成員包括高級工程師及工程師的專責小組，為發展局提供支援及與機管局項目團隊保持聯繫，探討新機場的工程技術能力，俾能應付機場第三條跑道工程所帶來的商機。我們會繼續跟進該項目的發展及專業/維修保養支援的業務機會。

我們的運輸、保安及中央工程部會繼續與路政署保持密切聯繫，探討營運基金參與港珠澳大橋香港口岸機電及空調的維修保養計劃帶來的商機。

營運基金協助政府物流服務署為政府各部門採購電動車。合約總值分別為3,164萬及902萬元，即86輛電動車及67輛電單車。

我們的衛生工程部早在新場地的工程策劃階段已參與工程計劃，如明愛醫療中心擴建及仁濟醫院重建計劃，以期獲取操作及維修保養服務的業務。此服務合約預計總值約2,000萬元。

我們與旅遊事務署商討，積極爭取為其轄下的啟德郵輪碼頭工程系統及設備提供操作及維修保養服務的機會。

我們就新油麻地戲院的操作及維修保養服務外判安排及採用以場地為基準的外判服務模式的成效已進行審查，稍後將會完成審查報告。

為了跟進潛在的大型公共工程項目，我們的工程策劃部和運輸、保安及中央工程部已於2012年5月成立基礎建設項目工作小組，並分別於2012年5月22日、2012年9月26日和2013年1月30日召開三次會議。期間，小組向與會者匯報現有和新的基礎建設項目的最新進展，以便為未來業務編制人力資源計劃。

NEW SERVICE DEVELOPMENT

In the fiscal year of 2012/13, the EMSTF saw steady business growth, retained existing clients with new SLAs and continued to work hard to explore new business opportunities.

We set up a Task Force comprising senior engineers and engineers to provide support to the Development Bureau, and liaise with the Airport Authority project team to explore new airport engineering technology competency to cope with the business opportunity arising from the Airport Third Runway Project. We will continue to keep track of the project development and the business opportunity on professional / maintenance support.

Our Transport, Security and Central Services Division will continue to liaise with the Highways Department on the engagement of the EMSTF for electrical, mechanical and air-conditioning maintenance for the Hong Kong-Zhuhai-Macao Bridge Hong Kong Boundary Crossing Facilities.

The EMSTF assisted the Government Logistics Department in procurement of electric vehicles for various government departments. The contract sums were \$31.64 million and \$9.02 million, representing a total of 86 electric cars and 67 motorcycles respectively.

Our Health Sector Division participated in project stages to secure O&M businesses at new venues such as Caritas Medical Centre extension and Yan Chai Hospital redevelopment. The potential O&M services contract is expected to be about \$20 million.

To explore further business opportunities with the Kai Tak Cruise Terminal, we have been actively liaising with the Tourism Commission for providing O&M services for the engineering systems and equipment in Kai Tak Cruise Terminal.

We reviewed and will finalise the report on the effectiveness of the O&M services outsourcing arrangement and the use of venue-based outsourcing service model for the new Yau Ma Tei Theatre.

To keep track of potential large scale public works projects, we formed an Infrastructure Project Working Group between Project Division and Transport, Security and Central Services Division in May 2012 and held three working group meetings on 22 May 2012, 26 September 2012 and 30 January 2013 respectively. During the meetings, the latest progress of existing and new infrastructure projects was updated for manpower planning of future businesses.

營運基金的電子工程師運用他們的專業知識為民眾安全服務隊提供有關採用數碼集群無線電通訊系統取代已過時的模擬廣播系統的項目管理服務；為香港海關購置及安裝於香港內河碼頭的全新流動X光車輛掃描系統用以提高貨車檢查效率及為香港電台新總部的電子系統提供技術支援。

未來，我們會向環境局建議簽訂服務水平協議，在不同的政府部門和停車場，提供電動車充電設施維修保養服務。

僱員

截至2013年3月31日止，機電工程署聘用5,186名員工，較上年度減少了2.2%，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23億元。

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高質的服務。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。2012/13年度，我們在承辦商及供應商方面的開支總額約為22.5億元。

The EMSTF's electronic engineering expertise was sought when the Civil Aid Service planned to replace their obsolete analogue radio system with the latest Digital Trunked Radio System. We also provided project management service and technical inputs for the procurement of a new mobile x-ray vehicle scanning system at River Trade Terminal for the Hong Kong Customs and Excise Department to enhance the efficiency of truck inspection, and supported Radio Television Hong Kong in installing electronics systems for its new headquarters.

In future, we will propose a SLA to Environment Bureau to provide maintenance service for the electric vehicle charging facilities at various government offices and car parks.

EMPLOYEES

As of 31 March 2013, EMSD employed 5,186 staff. This represents a 2.2% decrease on the previous year. Staff cost including payroll, Mandatory Provident Fund contribution, allowance, and fringe benefits was \$2.3 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 2012/13 were approximately \$2.25 billion.

與持份者溝通

Stakeholder Engagement

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。

我們於2012/13年度為下列主要持份者舉行了多項活動：

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

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

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

The following major stakeholder engagement activities were held in 2012/13:

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53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50次外展講座，而機電工程署教育徑也接待了225個參觀團，共約8,500位訪客，向各機構和學校宣傳能源效益和節能。
- 往全港幼稚園、小學及老人中心進行308次外展講座，向約33,000位參加者宣傳電力安全。
- 往全港幼稚園、青年中心及老人中心進行217次外展講座，向31,000多名參加者講解機動遊戲機、升降機和自動梯的安全使用方法。
- 舉行51次學校展覽，宣傳強制性能源效益標籤計劃。

PUBLIC AT LARGE

- Delivered / Organised 220 talks and visits to organisations / schools to promote energy efficiency and conservation.
- Delivered 53 presentations to various organisations for promotion of the new Buildings Energy Efficiency Ordinance on mandatory implementation of building energy code and energy audit.
- Organised 50 outreach talks and 225 visits to the Education Path of EMSD Headquarters for about 8,500 visitors from different organisations and schools to promote energy efficiency and conservation.
- Visited 308 kindergartens, primary schools and elderly centres with about 33,000 participants to promote electrical safety.
- Visited 217 kindergartens, youth centres and elderly centres with over 31,000 participants to promote the safe use of amusement rides, lifts and escalators.
- Conducted 51 school exhibitions on the Mandatory Energy Efficiency Labelling Scheme (MEELS).

公眾人士（續）

- 於2013年2月全面走訪全港有關的零售商，宣傳第一及第二階段的強制性能源效益標籤計劃。
- 於2012年6月及10月與2013年3月，就強制性與自願性能源效益標籤計劃舉行三次聯合簡介會。
- 於2012年6月26日就能源效益、節能與節能駕駛，舉行一場公開研討會。
- 就自願性能源效益標籤計劃所涵蓋的新家用產品，與工作小組成員及業界人士於2013年1月及4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33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2,900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30場簡介會、技術及安全講座與研討會。
- 於2012年12月13日舉行「醒目車輛維修技工比賽」，約有200名註冊車輛維修技工參加。
- 於2013年1月10日舉行車輛維修工場約章啟動典禮。
- 於2012年11月9日舉辦了兩場「淡水冷卻塔和建築物能源效益的規管及實務」技術研討會。
- 為業界、區議會及工程學會等舉行34場氣體安全簡介會。
- 推行註冊電業工程人員持續進修計劃，為註冊電業工程人員舉行202場講座 / 研討會。

PUBLIC AT LARGE (CONTINUED)

- Conducted a full-scale publicity visit to relevant retailers in February 2013 to promote the 1st and 2nd phases of MEELS.
- Conducted three briefing sessions on Energy Efficiency Labelling Scheme (both mandatory and voluntary) in June 2012, October 2012 and March 2013.
- Held a public seminar on energy efficiency and conservation as well as eco-driving on 26 June 2012.
- Held two meetings in January and April 2013 with task force members and trade members in preparation for the introduction of new household appliances under the Voluntary Energy Efficiency Labelling Scheme.
- Delivered 33 safety talks and seminars on the requirements of Electricity Supply Lines (Protection) Regulation to the trades, inclusive of government works departments, consultants, contractors, competent persons, general site staff, etc.
- Conducted 30 briefing sessions, technical and safety talks and seminars for over 2,900 trade representatives, lift / escalator owners, members of the incorporated owners and building management staff.
- Held the "Smart Mechanic Competition" on 13 December 2012 for around 200 Registered Vehicle Mechanics.
- Held the Vehicle Maintenance Workshops Charter Launching Ceremony on 10 January 2013.
- Conducted two sessions of Technical Forum on Control and Practice of Fresh Water Cooling Towers and Buildings Energy Efficiency on 9 November 2012.
- Conducted 34 briefings on gas safety for the trades, District Councils, engineering institutes, etc.
- Conducted 202 talks and seminars on the implementation of the Continuing Professional Development Scheme for Registered Electrical Workers.

我們的員工

- 規管服務於2012年11月22日及2013年1月18日舉行了策略工作坊。
- 機電工程營運基金於2012年9月19日及10月19日舉行了策略工作坊。
- 於2012年11月舉行三場署長簡報會。
- 首長級人員到訪了190個場地，進行員工親善探訪。
- 於2012年10月16日與部門11個工會舉行聯席會議。
- 於2013年3月舉行兩場部門專業人員周年論壇。
- 於2013年1月至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18次家訪、48次醫院探訪、51次工作間探訪、356次電話問候及12次吊唁探訪。

OUR STAFF

- Held the Regulatory Services' annual Strategy Formulation Workshop on 22 November 2012 and 18 January 2013.
- Held the EMSTF's annual Strategy Formulation Workshop on 19 September and 19 October 2012.
- Held three sessions of Director's briefing in November 2012.
- Conducted 190 ambassador visits by directorate officers at various venues.
- Conducted a joint meeting with 11 staff unions of EMSD on 16 October 2012.
- Held two sessions of the Yearly Forum for professional staff in March 2013.
- Held Yearly Forums for seconded inspectorate, technical and junior staff from January to March 2013.
- Conducted 18 home visits, 48 hospital visits, 51 workplace visits, 356 goodwill phone calls and 12 condolence visits to sick or hospitalised staff, by the Staff Welfare Unit.

客戶

- 在2012年4月3日和10月26日就數碼集群無線電通訊系統與消防處舉行兩次高層會議。
- 在2012年4月18日、5月18日、6月20日、7月18日、8月22日、9月19日、10月17日、11月21日、12月19日及2013年1月16日與消防處舉行高層會議，檢討服務表現和尋找新的商機。
- 在2012年5月3日及9月25日與民航處舉行工作層會議，檢討我們的服務表現。
- 在2012年5月30日、8月29日及11月20日與香港天文台舉行工作層會議，檢討我們的服務表現。
- 在2012年6月27日就懲教署車輛的操作及維修事宜到喜靈洲懲教所進行工作層面訪問。
- 在2012年7月9日與食物環境衛生署進行有關火葬場和骨灰龕的統籌會議。
- 在2012年10月12日至11月25日期間，就新的《升降機及自動梯條例》（第618章）下的「負責人指引」與多個客戶舉行高層座談會。
- 安排與醫院管理局進行多次親善探訪/高層座談會/工作層座談會等。

OUR CLIENTS

- Held two high level meetings on “Digital Trunked Radio System” with Fire Services Department on 3 April and 26 October 2012.
- Held high level meetings with Fire Services Department on 18 April, 18 May, 20 June, 18 July, 22 August, 19 September, 17 October, 21 November, 19 December 2012 and 16 January 2013 to review service performance and explore new business opportunities.
- Held working level meetings with Civil Aviation Department on 3 May and 25 September 2012 to review our service performance.
- Held working level meetings with Hong Kong Observatory on 30 May, 29 August and 20 November 2012 to review our service performance.
- Conducted a working level visit to Hei Ling Chau Correctional Institution on operation and maintenance of Correctional Services Department vehicles on 27 June 2012.
- Held a coordination meeting with Food and Environmental Hygiene Department on crematoria and columbaria on 9 July 2012.
- Held high level seminars for various clients on the Guidelines for all Responsible Persons under the new Lifts and Escalators Ordinance (Cap. 618) from 12 October to 25 November 2012.
- Conducted various courtesy visits / high level seminars / working level seminars for Hospital Authority.

獎項及嘉許

Awards and Recognition

獎項及嘉許

在2012/13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，表揚我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 2012/13, EMSD staff received several major awards both from the government and also external associations in recognition of our 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.



前香港工程師學會會長蔡健權教授（中）頒發優異獎給本署員工，表彰本署研發、名為「太陽能發電感應水龍頭和水利發電感應水龍頭」的雙效能節水省電發明。
EMSD staff received the Merit Award from Professor Choy Kin-kuen (middle), the then President of The Hong Kong Institution of Engineers, in recognition of our solar sensor water taps and hydro-powered sensor water taps invention.

綠色科技創意大獎

機電工程署一直致力透過推廣環保科技和可再生能源，提升市民的日常生活質素。這方面的工作，已在香港工程師學會首次舉辦的「卓越工程巡禮2013」中贏得殊榮。

本署人員研發的創意項目「太陽能發電感應水龍頭和水利發電感應水龍頭」，在「工程創意大獎」科技組別中獲頒優異獎。本署為政府建築物及學校研發的可再生能源水龍頭，都配備了微型渦輪水力發電機或太陽能感應器，由自動感應裝置控制水流量，發揮省電節水的雙重效能。

Innovation Award for Green Technologies

EMSD's efforts to improve the public's daily life through the promotion of environmental technologies and renewable energy were given recognition, at the Hong Kong Institution of Engineers' Inaugural Engineering Week 2013.

An innovation developed by our staff, the "Solar/Hydro-powered Sensor Water Taps", received the Merit Award under the Technology Category of the Innovation Award for Engineering Industry. The renewable energy taps developed for government buildings and schools were fitted with hydro-powered micro-turbine or solar-powered sensors for the automatic sensing devices to control water flow, thus conserving both electricity and water.



陳奇中先生（左）獲選為2012年度傑出學徒。
Mr Chan Ki-chung (left) won the 2012 Outstanding Apprentice Award.



范迪龍先生（左）獲選為2012年度優異學徒。
Mr Fan Dik-lung (left) won the 2012 Outstanding Apprentice and Trainee Award (Excellent Performance).



黃子健先生（左）榮獲2012年度最佳學徒（汽車維修業）亞軍。
Mr Wong Chi-kin (left) won the first runner-up award in the 2012 Best Apprentice Competition (Automobile Industry).

見習技術員再獲職訓局獎項

機電工程署見習技術員繼2009、2010及2011年連續三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，2012年再接再厲，見習二級技術員陳奇中先生奪得「傑出學徒」獎項，而見習一級技術員范迪龍先生則奪得「優異學徒」獎項。此外，見習二級技術員黃子健先生在最佳汽車學徒比賽中，也奪得亞軍殊榮。

Apprentices Won VTC Awards Again

EMSD technician trainees were recipients of the Outstanding Apprentices and Trainee Awards organised annually by the Vocational Training Council for three consecutive years in 2009, 2010 and 2011. Our staff won the awards again in 2012. Mr Chan Ki-chung, Technician Trainee II won “The Outstanding Apprentice” award, whereas Mr Fan Dik-lung, Technician Trainee I won “The Excellent Apprentice” award. EMSD Technician Trainee II, Mr Wong Chi-kin was the first runner-up in “The Best Vehicle Apprentice” competition.

瑪麗醫院即時嘉許獎勵計劃

衛生工程服務（香港西）分部在瑪麗醫院舉辦的「2012年即時嘉許獎勵計劃」中獲獎。同事憑着出色的表現，在短時間內為洗腎中心設計及提供一套淨水系統，同時致力為公眾提供優質服務，獲得公眾的認可。

Queen Mary Hospital Staff Award Scheme

Our Health Sector Services (Hong Kong West) Sub-division received an award under the Queen Mary Hospital Staff Award Scheme 2012 in recognition of our work for designing and providing a water purification system for the hemodialysis centre within a short period of time. The award is recognition for our colleagues who achieved outstanding performance and enhanced the quality of service to the public.



醫院管理局港島西聯網總監陸志聰醫生（前排中）、聯網總經理（行政事務）葉佩華女士（前排右二）和瑪麗醫院腎科醫生及護士與機電工程署員工合照。
Dr Luk Che-chung, Cluster Chief Executive of the Hong Kong West Cluster of Hospital Authority (middle, front row), Ms Yip Pui-wah, Cluster General Manager (2nd from right, front row) pictured with the Queen Mary Hospital Renal Unit's doctors and nurses, along with EMSD staff.



機電工程署監督的兩個合約工務工程地盤，在「2012年公德地盤嘉許計劃」中分別獲頒銅獎及優異獎。
Two contracts supervised by EMSD won the Bronze Award and Merit Award for two public work sites in the Considerate Contractors Site Award Scheme 2012.

參與2012年公德地盤嘉許計劃

我們一直致力推行工地安全、健康及環保的良好作業方式，並提名一些合約參加公德地盤嘉許計劃。在2012年的計劃中，我們其中一份升降機及自動梯維修保養合約奪得公共工程維修、保養、改建及加建工程公德地盤銅獎、模範前線工地監工獎和模範工人獎三個獎項。至於該計劃的新建工程類別，我們在啟德郵輪碼頭發展工程的岸上污水收集、食水供應和消防龍頭供水系統合約贏得優異獎。

Participation in Considerate Contractors Site Award Scheme 2012

EMSD is committed to good site safety, health and environmental practices, and often nominate selected contracts to join the Considerate Contractors Site Award Scheme.

In the 2012 Scheme, one of our lift and escalator maintenance contracts won three awards, including the Bronze Award for Repair, Maintenance, Alteration and Addition Works, the Model Frontline Supervisor and Model Workers awards. For the category of New Works in the Scheme, we also won a Merit Award for a contract for providing on-shore sewage collection, fresh water supply and fire hydrant water supply systems at the Kai Tak Cruise Terminal project.

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	A2 - A5	
機構簡介 Organisational Profile	2.1 - 2.10	B1, C1, D17 - D19, D29 - D32	
報告規範 REPORT PARAMETERS			
報告概況 Report Profile	3.1 - 3.4	D1	
報告範圍及界限 Report Scope and Boundary	3.5 - 3.11	D1, D40	
全球報告倡議組織內容索引 GRI Content Index	3.12	D40	
認證 Assurance	3.13	D42	
管治、承諾及參與度 GOVERNANCE, COMMITMENTS AND ENGAGEMENT			
管治 Governance	4.1 - 2, 4.4	B1, C1	
與持份者溝通 Stakeholder Engagement	4.14 - 4.16	D23 - D27, D33 - D36	
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	D6, D29 - D32
環境 Environmental	物料 Materials	EN1, EN2	D14, D41
	能源 Energy	EN3, EN5, EN6	D5, D9, D12 - D14
	水 Water	EN8	D12 - D14, D41
	排放物、污水及廢棄物 Emissions, Effluent and Waste	EN16, EN18	D15, D41
	產品及服務 Products and Services	EN26	D8 - D13
	交通運輸 Transport	EN29	D15
社會 Social	勞工措施及合理工作 Labour Practices and Decent Work		
	- 僱用 Employment	LA1	D17, D18, D32
	- 職業健康與安全 Occupational Health & Safety	LA6, LA7	D19, D20
	- 培訓與教育 Training and Education	LA10, LA11	D17, D18, D38
	- 多元化與平等機會 Diversity & Equal Opportunity	LA13	D17
人權 Human Rights			
	- 結社自由與集體談判權 Freedom of Association & Collective Bargaining	HR5	D21
社會 Society			
	- 社區 Community	SO1	D9 - D13, D23 - D27
產品責任 Product Responsibility			
	- 產品及服務標籤 Product & Service Labelling	PR5	D9

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

統計資料摘要

Summary of Statistics

資源 RESOURCE	2010/11	2011/12	2012/13
電力 (千瓦小時) # Electricity (kWh) #	12,682,496	12,872,172	12,960,001
煤氣 (兆焦耳) Towngas (MJ)	215,856	137,808	131,760
水 (立方米) Water (m ³)	42,545	53,897	46,168
柴油 (升) Diesel (l)	118,496	102,482	106,298
汽油 (升) Gasoline (l)	504,856	472,855	437,780
紙張 – A3、A4 (令) Paper – A3, A4 (ream)	27,778	27,587	27,245
油漆及溶劑 (升) Paint & Solvent (l)	34,788	27,947	20,273
潤滑油 (升) Lubrication Oil (l)	102,199	85,046	81,384
油脂 (公斤) Grease (kg)	1,002	1,674	1,464
製冷劑 (公斤) (例如R22及R134a) Refrigerant (kg) (e.g. R22 & R134a)	18,182	20,024	14,993
工業用氣體 (立方米) (例如氧、氬及乙炔) Industrial Gas (m ³) (e.g. Oxygen, Argon & Acetylene)	1,767	921	844
蓄電池電解液 (升) Battery Electrolyte (l)	660	535	165
原子車胎 (條) Tubeless Tyre (no.)	8,243	9,668	10,361
外車胎 (條) Outer Cover Tyre (no.)	2,857	2,648	2,760
車胎內膽 (條) Inner Tube (no.)	1,732	1,549	1,663
廢氣污水及廢物® EMISSIONS, EFFLUENTS AND WASTE®			
廢紙 (公斤) Waste Paper (kg)	22,296	18,476	24,475
碳粉盒 (個) Toner Cartridges (no.)	3,053	3,736	3,446
用罄電池 (公斤) Batteries (kg)	3,458	3,389	2,631
金屬廢料 (公斤) Metal Scraps (kg)	47,241	14,511	24,180
廢油 (升) Waste Oil (l)	124,148	101,675	94,576
舊車胎 (條) Used Vehicle Tyre (no.)	9,101	12,369	4,847
含水銀照明燈 (盞) Spent Mercury Lamp (no.)	136,454	145,073	119,359
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)	5.42	3.36	4.77
員工滿意度 (以10分為滿分) * Staff Satisfaction (out of a score of 10) *	不適用 Not Applicable	6.5	不適用 Not Applicable
培訓 (平均培訓日數目標 : 4.5日/每名員工) Training (average training targets : 4.5 days/staff)	4.86	4.62	5.44

不包括員工食堂和租用辦公室的電力消耗

@ 有關的廢物由持牌承辦商收集，供物料循環再造或棄置

* 員工滿意度調查每兩年進行一次

Electricity Consumption of canteen, rented offices not included

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

* Staff Satisfaction Survey is conducted once every two years.

核實聲明

Verification Statement



範圍及目的 SCOPE AND OBJECTIVE

香港品質保證局已對機電工程署（下稱機電署）社會及環保報告2012/13（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2012年4月1日至2013年3月31日於可持續發展方面的表現及成就。核實組成員沒有參與編制報告的數據和資料。

此核實聲明的目的是對外保證此報告所記載之內容為完整及準確。

Hong Kong Quality Assurance Agency (HKQAA) was commissioned by Electrical and Mechanical Services Department (hereinafter referred to as "EMSD") to undertake an independent verification of the Social and Environmental Report 2012/13 (hereinafter called "the Report"). The Report stated EMSD's sustainability performance and efforts made for the period from 1st April 2012 to 31st March 2013. The verification team did not partake in the compilation of the data and information of the Report.

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

方法 METHODOLOGY

核實工作是依據目前的最佳核實方法執行，以下為評估此報告的準則：

- 遵守社會及道德問責學會（Institute of Social and Ethical AccountAbility）AA1000保證標準所定的完整性、準確性、中立性、可比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。

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.

結論 CONCLUSION

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

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

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

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

香港品質保證局

Signed on behalf of Hong Kong Quality Assurance Agency

譚玉秀
策略業務助理總監
2013年10月

Jorine Tam
Assistant Director, Strategic Business
October 2013

鳴謝

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THE EMSD WOULD LIKE TO EXPRESS ITS SINCERE THANKS TO THE FOLLOWING DEPARTMENTS AND ORGANISATIONS FOR THEIR SUPPORT AND COOPERATION IN THE COURSE OF PREPARING THIS ANNUAL REPORT (LIST IN ALPHABETICAL ORDER).

香港機場管理局	AIRPORT AUTHORITY HONG KONG
建築署	ARCHITECTURAL SERVICES DEPARTMENT
懲教署	CORRECTIONAL SERVICES DEPARTMENT
香港海關	CUSTOMS AND EXCISE DEPARTMENT
衛生署	DEPARTMENT OF HEALTH
食物環境衛生署	FOOD AND ENVIRONMENTAL HYGIENE DEPARTMENT
香港消防處	HONG KONG FIRE SERVICES DEPARTMENT
香港警務處	HONG KONG POLICE FORCE
香港紅十字會輸血服務中心	HONG KONG RED CROSS BLOOD TRANSFUSION SERVICE
醫院管理局	HOSPITAL AUTHORITY
政府新聞處	INFORMATION SERVICES DEPARTMENT
康樂及文化事務署	LEISURE AND CULTURAL SERVICES DEPARTMENT
東區尤德夫人那打素醫院	PAMELA YOUDE NETHERSOLE EASTERN HOSPITAL
規劃署	PLANNING DEPARTMENT
伊利沙伯中學舊生會小學分校	QUEEN ELIZABETH SCHOOL OLD STUDENTS' ASSOCIATION BRANCH PRIMARY SCHOOL
旅遊事務署	TOURISM COMMISSION
運輸署	TRANSPORT DEPARTMENT





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