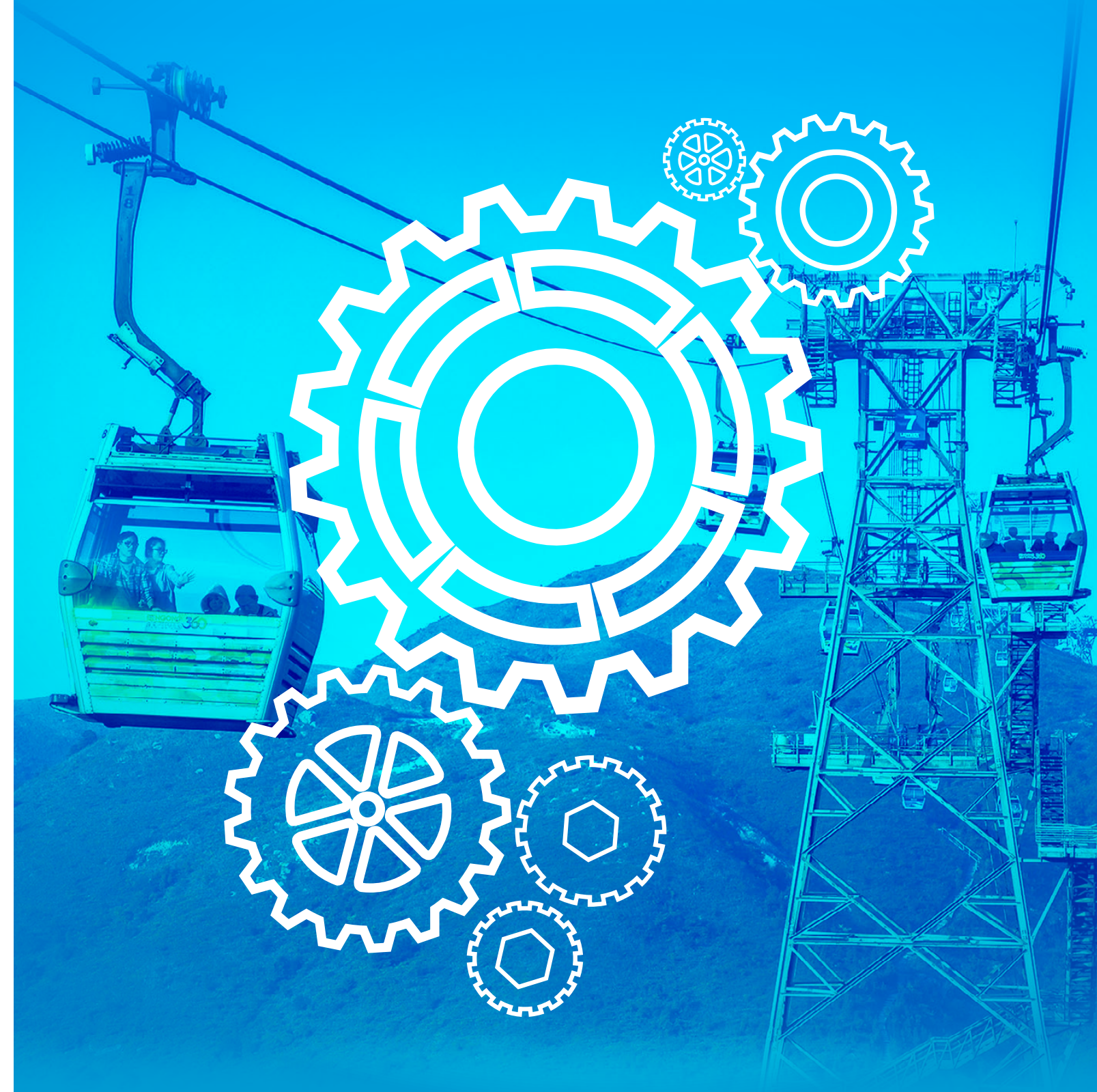
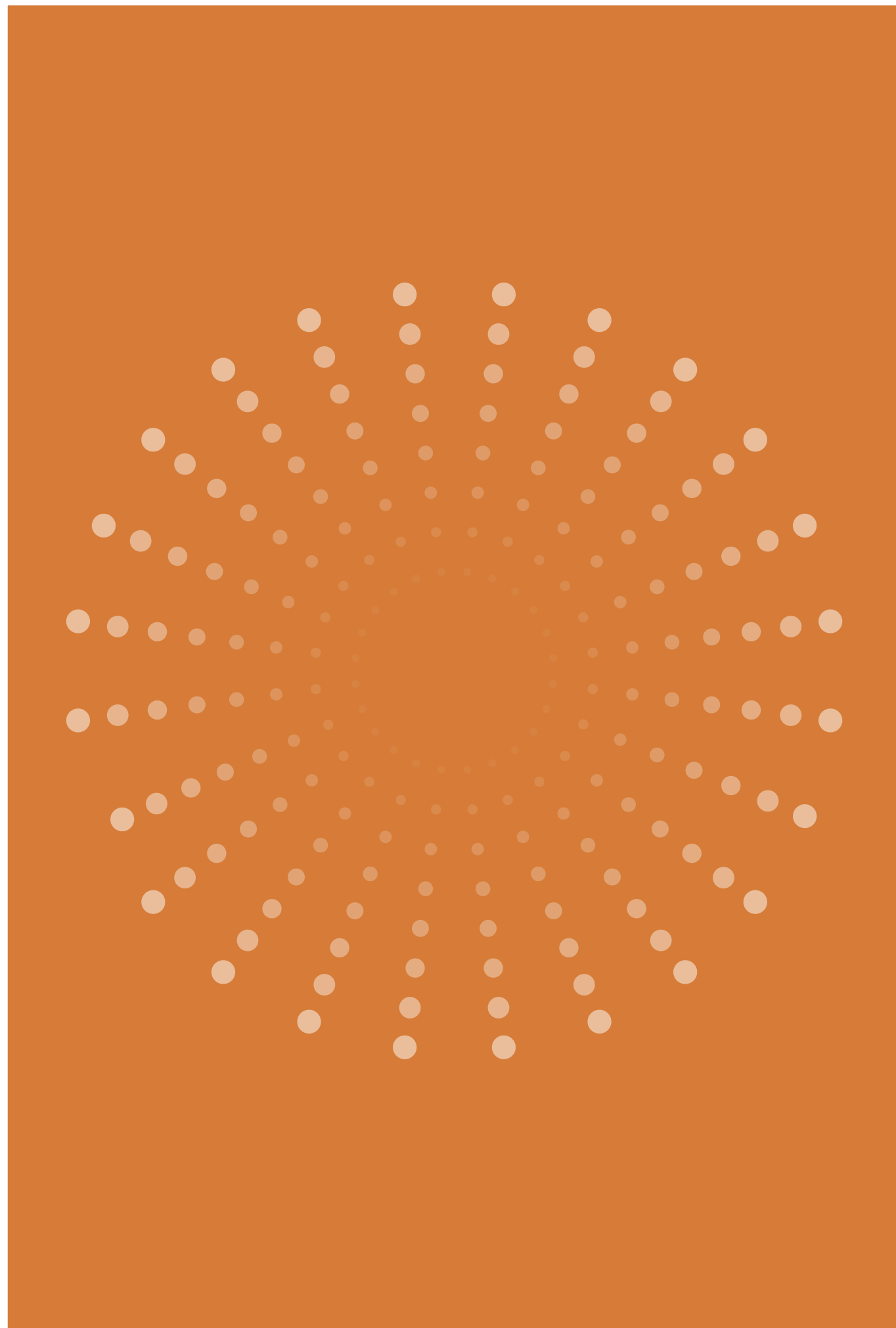


源於心 役於人
續創新 惠及民
Serving with Care
and Innovation



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

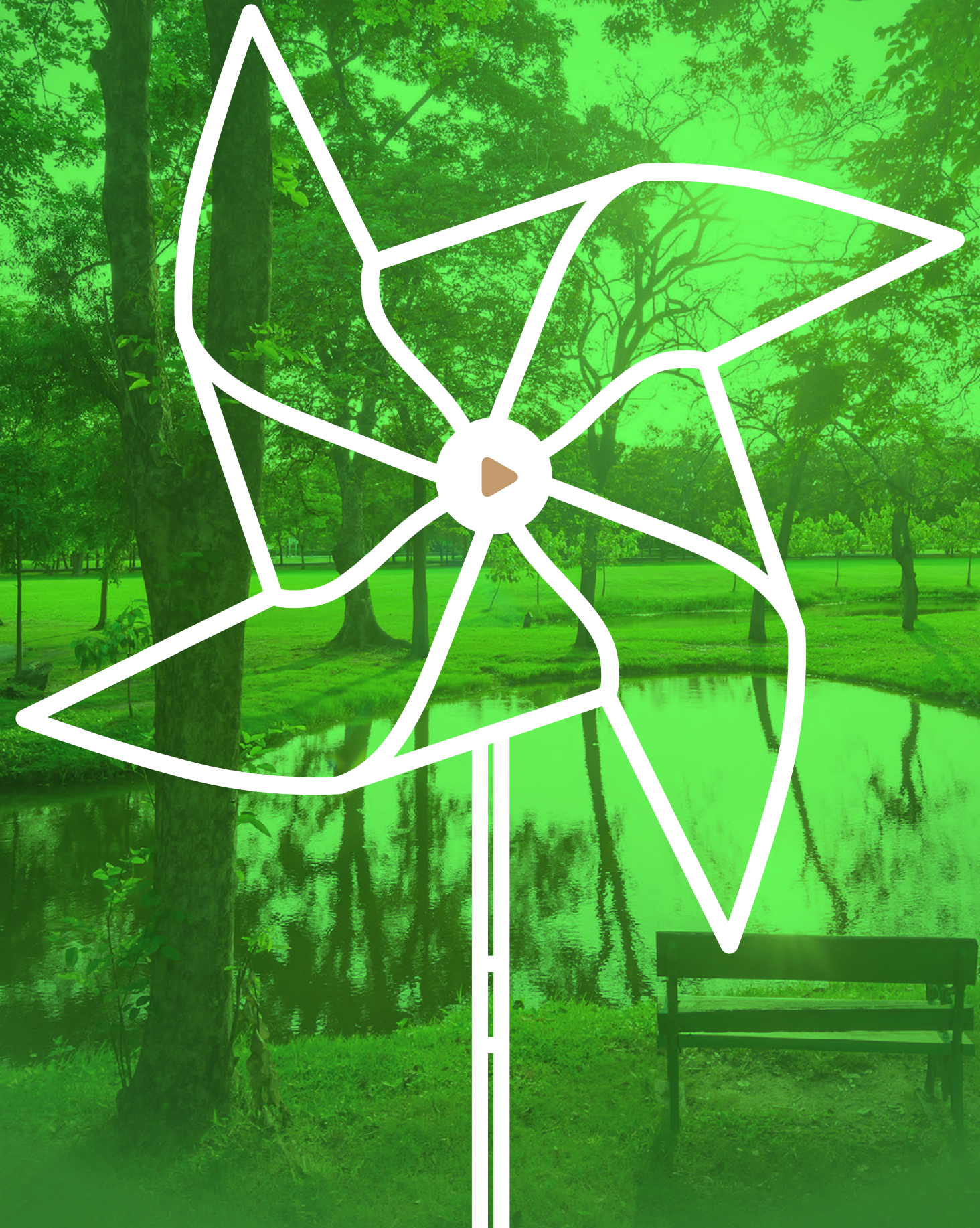




廿載營運 服務卓越

**20 Years of
Service and Excellence**

可持續發展
Sustainability



部門簡介及架構

ORGANISATIONAL PROFILE

AND STRUCTURE

機電工程署服務香港近70年，透過兩個團隊提供規管服務及營運服務，後者也稱為機電工程營運基金(營運基金)。機電工程署一直在為市民大眾確保機電安全、提高能源效益兩方面擔當重要角色，同時亦為其他政府部門、公營機構提供機電工程服務。

機電工程署的規管服務團隊是一個規管機構，透過執行法例和推動公眾教育，規管機電及氣體的安全、鐵路安全及推廣能源效益等。團隊的其他主要職能，包括根據「管制計劃協議」，監管電力公司的技術表現及發展計劃，以及在有需要時，為政府的一系列安全和環保計劃，提供專業及技術支援。團隊亦在社會推廣能源效益意識方面擔任關鍵角色，主導推行各種相關的公眾計劃，包括能源效益產品標籤計劃、建築物能源效益的法規及最佳實務做法，以及為新發展區引進區域供冷系統等。

作為市場上一家具競爭力的服務供應商，部門的營運服務團隊提供有效率的優質服務，亦為政府部門及公營機構提供機電、電子工程，以及屋宇裝備服務的技術知識及支援。我們的客戶場地包括機場、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、公共文娛及康樂設施等，服務惠及全港市民。

Serving the public for nearly 70 years, the Electrical and Mechanical Services Department (EMSD) performs its services through two separate teams, namely Regulatory Services (RS) and Trading Services (TS), also known as Electrical and Mechanical Services Trading Fund (EMSTF). EMSD has been playing an important role in ensuring electrical and mechanical (E&M) safety for the public and enhancing energy efficiency, as well as providing E&M engineering services for government departments and public bodies in Hong Kong.

EMSD’s RS team is a regulatory body in charge of regulating E&M and gas safety, railway safety, and energy efficiency, through law enforcement and public education. Other major responsibilities of the team include monitoring the technical performance and development plans of the electricity supply companies under the Scheme of Control Agreements, and offering professional and technical support to a variety of safety and environmental programmes initiated by the Government when necessary. As a key driving force to promote the general awareness on energy efficiency and the associated public schemes in Hong Kong, the RS team takes the lead to launch the energy efficiency product labelling schemes, release building energy efficiency ordinance and best practices, and introduce the district cooling system for new development area.

As a competitive market player that offers efficient and quality services, our TS team provides technical expertise and support for government departments and public bodies in the areas of E&M, electronic engineering (EE), and building services (BS). We serve client venues including airport, hospitals, schools, security forces, transport and highways, port and harbour, government offices and law court buildings, to public recreational and leisure facilities, touching the life of everyone in Hong Kong.

機電工程署

Electrical and Mechanical

Services Department

規管服務

Regulatory Services

- 電力及能源效益
Electricity & Energy Efficiency
- 氣體及一般法例
Gas & General Legislation
- 鐵路
Railways
- 電力小組
Electricity Team
- 部門行政
Departmental Administration

機電工程營運基金

Electrical and Mechanical

Services Trading Fund

- 工程服務一
Engineering Services 1
- 工程服務二
Engineering Services 2
- 企業支援及業務發展
Corporate Support & Business Development
- 財政
Finance

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提升生活質素 Enhancing Our Quality of Life

讓市民安全安心 Having a Safe and Secure City

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署長的話

MESSAGE FROM THE DIRECTOR

機電工程署(機電署)的規管服務和營運服務在2015/16年度的整體表現理想。在規管服務方面，涉及機電安全的事故持續處於低水平，而推廣能源效益的工作亦有不俗進展。營運服務的總收入為**57.64**億港元，收入回報率輕微下調至**4.8%**，符合我們「微利營運」的原則。

Both Regulatory Services and Trading Services under the Electrical and Mechanical Services Department (EMSD) saw remarkable performance in 2015/16. Our Regulatory Services recorded a continuously low level of E&M incidents while good progress was made in promoting energy efficiency. Our Trading Services posted HK\$5,764 million in total revenue, and its return on revenue saw a slight decrease to 4.8%, which was consistent with our “slim-profit” principle.

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



與時並進 安全至上

我們一直致力提升本港的機電安全，務求市民安全安心。各類機電安全的事故數目持續下降，反映規管服務過往積極向各界宣傳安全信息的努力奏效。近年，我們開展不同形式的活動和計劃，期望提升機電安全之餘，亦同時促使業界改善機電服務的質素，達到兩者相互益彰的效果。去年，我們推出「優質升降機服務認可計劃」及「車輛維修工場自願註冊計劃」，得到各界鼎力支持，成績令人鼓舞。

鐵路安全是規管服務去年的另一項重點工作。隨着多個新鐵路項目相繼進入完工階段，審批和巡查的工作量日益增加，而鐵路安全亦逐漸成為市民關注的議題。規管服務轄下鐵路科已在去年增加人手，包括開設兩個首長級職位，為迎接新挑戰作準備。鐵路科將繼續與本港、內地及海外的鐵路機構保持聯繫，掌握鐵路安全標準的最新發展，做好把關工作，讓市民安心享受鐵路新里程。

縱使本港整體的機電安全表現良好，但經濟、科技以至文化轉變所衍生的風險依然不容忽視。年內，我們修訂《電力(線路)規例工作守則》，旨在配合最新的技術及安全要求，提升電力安全。去年的黃大仙車房爆炸事故，引起市民對石油氣車輛維修的關注。有鑑及此，我們已加大力度，全面監察市面石油氣燃料缸的維修及覆檢情況。規管服務將密切留意行業生態及社會文化等轉變，適時調整規管策略。

KEEPING UP WITH THE TIMES PUTTING SAFETY FIRST

We have always endeavoured to enhance E&M safety in Hong Kong to bring peace of mind to the public. Efforts by our Regulatory Services over the years to promote E&M safety to the community have proved effective, evidenced by the continued decline in the number of E&M incidents. A diverse range of activities and programmes have been launched in recent years, not only to enhance E&M safety but also encourage the trades to improve their E&M service quality, achieving “win-win” for all. Last year we launched the Quality Lift Service Recognition Scheme and the Voluntary Registration Scheme for Vehicle Maintenance Workshops, both greeted with overwhelming support from many sectors in the community. The results are most encouraging.

Another focus of Regulatory Services last year was railway safety. Multiple new railway projects approaching completion has brought us increasing workload in vetting and inspection, while railway safety has also become a subject of increasing scrutiny by the public. To get ready for these challenges, the Railways Branch under Regulatory Services has stepped up its manpower last year, including the addition of two directorate posts. The Railways Branch will continue to stay in close touch with railway organisations in Hong Kong, the Mainland and overseas to keep abreast of the latest developments in railway safety standards. It also strives to become an ever more effective gatekeeper so that the public may enjoy a safe journey as a new chapter of railway development in Hong Kong unfolds.

Though Hong Kong performs well in overall E&M safety, we should not overlook the potential risks from economic, technological and cultural shifts and changes. During the year, we revised the Code of Practice for the Electricity (Wiring) Regulations to comply with the latest technology and safety requirements and enhance electrical safety. The explosion last year at a vehicle maintenance workshop in Wong Tai Sin triggered considerable public concern about the maintenance of LPG vehicles, and we have promptly stepped up our work to monitor the overall maintenance and revalidation work of LPG cylinders on the market. The Regulatory Services will continue to keep track of changes in the trade's practices and shifts in social trends, so as to adjust our regulatory strategies in a timely manner.

署長的話

MESSAGE FROM THE DIRECTOR

相濡廿載 共創價值

2016年，機電工程營運基金踏入20周年。憑藉前人的帶領，同事的拼勁，營運基金能夠走到今天，我們感恩。自營運基金成立那一刻開始，我們便踏上逆境求存的旅程。我們的業務組合沒有專營權，亦不受保護，市場上提供同類服務的公司多不勝數。物競天擇，適者生存。求存路上，我們毅然改變個人心態、思維，以至企業文化。今天，我們視工作為業務，工作增加等同業務增長；我們視客戶為伙伴，以專業、謙卑的態度去提供服務。

經歷多年的洗滌沉澱，我們建立以人為本、以公眾價值為前提的信念。以往，營運基金曾視回報率為營運指標，但其後我們明白，若從客戶的錢包多取分毫，客戶就少了經費，市民也就少了服務。因此，我們近年採納「微利營運」的方針，讓客戶保留更多資源投放其核心服務。微利營運猶如航空母艦在淺水區作業，營運基金所有人員將必須保持警覺，積極控制成本，持續提升生產力。

當下科技迅速發展，營運基金生存的方程式亦不再一樣，我們正探求以更科學化的管理方法應對挑戰。年內，我們推出「知識群體網站」方便員工網上知識共享，並着手建立員工才能矩陣，提升同事的專業能力。我們開展「顧客為本電子平台」的籌備工作，運用流動資訊科技持續優化客戶服務。我們亦繼續協助客戶為其機電設施取得ISO 55001資產管理認證。營運基金將深化新科技的應用，例如綜合樓宇管理系統、建築信息模擬技術等，務求進一步提升服務水平，為營運基金的下一個20年做好準備。

CREATING VALUE TOGETHER — 20 YEARS ON

2016 marks the 20th anniversary of the Electrical and Mechanical Services Trading Fund (EMSTF). We are thankful for everything that has enabled us to become what we are today, which would not have been possible without the leadership of our predecessors and the commitment of our colleagues. Ever since the establishment of the EMSTF, we have embarked on a journey of struggles to survive adversity. Our portfolio of services is not franchised, nor is it protected. What stands before us is fierce competition from numerous companies offering similar services. Knowing that only the fittest survive, we have promptly and resolutely transformed our attitude, mindset and corporate culture. Today, increase in workload bears a positive meaning of business growth. Clients are regarded as partners, to whom we serve with professionalism and humility.

Years of deep reflection and immersion in such a culture has enabled EMSTF to build a people-oriented belief on the basis of creating public value. There was a time when we regarded the rate of return as EMSTF's primary target, only to realise later that a dollar taken from our clients was a dollar less for the clients' provision of services for the public. We have therefore changed course in recent years to adopt a "slim-profit" model to enable our clients to retain more resources for their core services to the public. Running an operation with the slim-profit model is very much like steering an aircraft carrier in shallow waters. It is a manoeuvre that demands our full attention, we must strive to control operating cost and continuously raise productivity.

Rapid technological advancements these days means that EMSTF must adopt more scientific management methods to address impending challenges. During the year, we launched the "Knowledge Communities" website to facilitate online information sharing among colleagues and have begun to establish our Staff Competency Matrix to enhance staff professional capacity building. We have also commenced the preparatory work to set up a new "Customer-Centric e-Platform" which aims to improve customer service through the use of mobile information technology. We have continued to assist our clients in certifying their E&M facilities to ISO 55001 standard. The EMSTF will further promote the application of new technology, such as integrated Building Management System and Building Information Modelling technology, in a bid to take its services to a higher level and pave the way for its next 20 years.

節能減碳 續建綠城

部門去年的能源效益推廣工作饒有成果。我們推出《建築物能源效益守則》及《能源審核守則》修訂版，冀能進一步減少建築物的耗電量。「強制性能源效益標籤計劃」的新評級標準亦已正式實施，收緊三類電氣產品的能源效益要求，鼓勵市民選用更節能的電器。適時提升標準和修訂守則，均有助我們的節能策略與世界接軌。

我們支援環境局推行「全民節能」運動，舉辦多項大型青少年活動宣揚節約能源的訊息。以「慳電熄一熄青年獎」為例，超過2 000名青少年組隊參加，並聯同家人一起節能，而入圍隊伍更獲邀分享他們的節能妙法。另一活動「新能源、新世代」太陽能車設計比賽吸引逾百名中學及大學生參加，親自設計、製作和駕駛太陽能車，相信他們可從中獲得寶貴的經驗和啟迪。

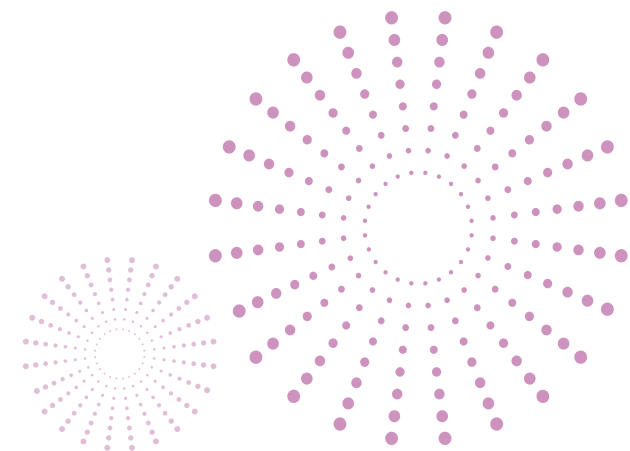
聯合國氣候變化大會確認落實《巴黎協定》，195個國家允諾共同遏止全球暖化，為應對氣候變化邁出了歷史性的一步。作為國際城市，香港的能源強度雖然已較許多歐盟和亞太地區為低，但面對全球性的氣候變化問題，香港亦不能放緩節能的步伐。我們會繼續推廣節能，朝着減少能源強度的目標進發，為香港構建低碳宜居的環境。

ON WITH OUR COURSE TO A GREEN COMMUNITY

Our Department's work in promoting energy efficiency was fruitful last year. We published the revised Building Energy Code and Energy Audit Code with a view to further reducing electricity consumption of buildings. To encourage consumers to use more energy-efficient electrical appliances, we implemented new grading standards under the Mandatory Energy Efficiency Labelling Scheme to tighten the energy efficiency requirements of three types of electrical products. Reviewing the codes and standards in a timely manner is important to help align our energy saving strategies with global trends.

We supported the Environment Bureau in launching its "Energy Saving for All" Campaign via large-scale youth activities to publicise energy saving. Take for example our Youth Energy Saving Award, which attracted over 2 000 young people to team up and work hard on energy saving projects with their family, and shortlisted teams were invited to share their energy saving insights. Another featured activity, the New Energy New Generation Solar Car Competition, attracted more than 100 secondary and tertiary students to participate. Having designed, produced and drove their own solar cars, the participants should have gained a valuable and inspiring experience.

The United Nations Climate Change Conference has adopted the Paris Agreement where 195 countries have committed themselves to limit global warming, a historic step in combating climate change. As an international city, Hong Kong's energy intensity is low compared to many of our counterparts in the EU and Asia-Pacific, yet in the face of global climate change, there is no reason to ease our pace of energy saving. We shall continue to promote energy saving and move towards the goal of reducing energy intensity, with a view to creating a low-carbon and livable environment for Hong Kong.



署長的話

MESSAGE FROM THE DIRECTOR

薪火相傳 延續傳奇

去年是機電署技術人才培訓計劃60周年紀念，標誌着本地機電業發展邁進重要里程。自1955年以來，我們一直肩負培訓機電人才的使命，為有志投身機電業的年青人提供學習、實踐、發展事業以至追尋夢想的機遇。歷屆畢業生在社會不同崗位，默默守護機電設備，令東方之珠得以閃耀璀璨。他們的奮鬥故事是香港發展歷程的寫照。

2016年年初的「教育及職業博覽」中，我們伙同業界及其他政府部門，以「機電大街」的展覽方式宣傳機電業的培訓計劃，除了鼓勵年青人入行外，亦希望增進社會對機電業的認識。未來五年，我們計劃動用超過六億港元，培育千多名機電技術員，配合業界及社會的長遠發展。自然資源匱乏的香港成功在於優秀的人力資源，而讓技術和知識承傳亦正是長流不息的工作，任重而道遠。

自七十年代起，香港經濟騰飛，大量基礎建設相繼落成。時至今日，不少機電設備已經使用超過40年，妥善維護和適時更新這些設備，對香港的可持續發展尤為重要。展望將來，香港正邁向低碳、智慧型都市進發，為我們帶來機遇和挑戰。我們的發揮空間會變得寬廣，但肩上的擔子亦同時變得沉重。無論如何，我們定必毋忘初衷，緊抱信念，繼續以專業及勇於承擔的態度，持續優化機電資產管理，推動社會發展，延續香江傳奇。

PASSING THE TORCH TO FURTHER THE LEGACY

Last year was the 60th anniversary of EMSD's Apprentice Training Scheme, an important milestone in the development of the E&M industry in Hong Kong. Ever since 1955, we have acted on our mission to train E&M talent by providing opportunities for young people interested in the E&M trade to learn and practise, and to pursue their careers and dreams. Over the years the graduates have devoted themselves to maintaining E&M facilities in their respective roles in the community, so that the Pearl of the Orient might continue to flourish and shine. Their stories capture the history of Hong Kong.

At the Education & Career Expo held in early 2016, we partnered with the E&M trade and other government departments to promote E&M training schemes using the "E&M Street" theme. In addition to encouraging young people to join the E&M industry, it is our hope that the public could better understand the trade. We also earmarked HK\$600 million in the next five years to train over a thousand E&M technicians to meet the long-term development of the trade and the community. Lacking natural resources, Hong Kong's success hinges on its quality human capital, and the effective transfer of skills and knowledge is in fact an important, never-ending task.

Hong Kong's economy took off in the 70s, and major infrastructure have come on stream ever since. Today, most of the city's E&M facilities have been in service for over 40 years. Their proper maintenance and timely upgrading are crucial to the sustainable development of Hong Kong. Looking ahead, Hong Kong is now on the course of transforming itself into a low-carbon smart city, bringing both opportunities and challenges. With a broader horizon for our future development comes greater responsibilities. In any case, we must not forget our original mission. We must hold on to our conviction and values, and continue to enhance E&M asset management with professionalism and commitment. We shall keep working to promote social progress and further the city's legacy.

致謝

我謹此向市民、客戶、業界、員工和各持份者致以衷心謝意。我亦十分感謝各政策局及政府部門給予的支持，以及傳媒、立法會議員及公眾人士對我們的持續監察。我們將繼續盡心竭力，以行動回應客戶和市民的期望。



陳 帆

機電工程署署長

機電工程營運基金總經理

VOTE OF THANKS

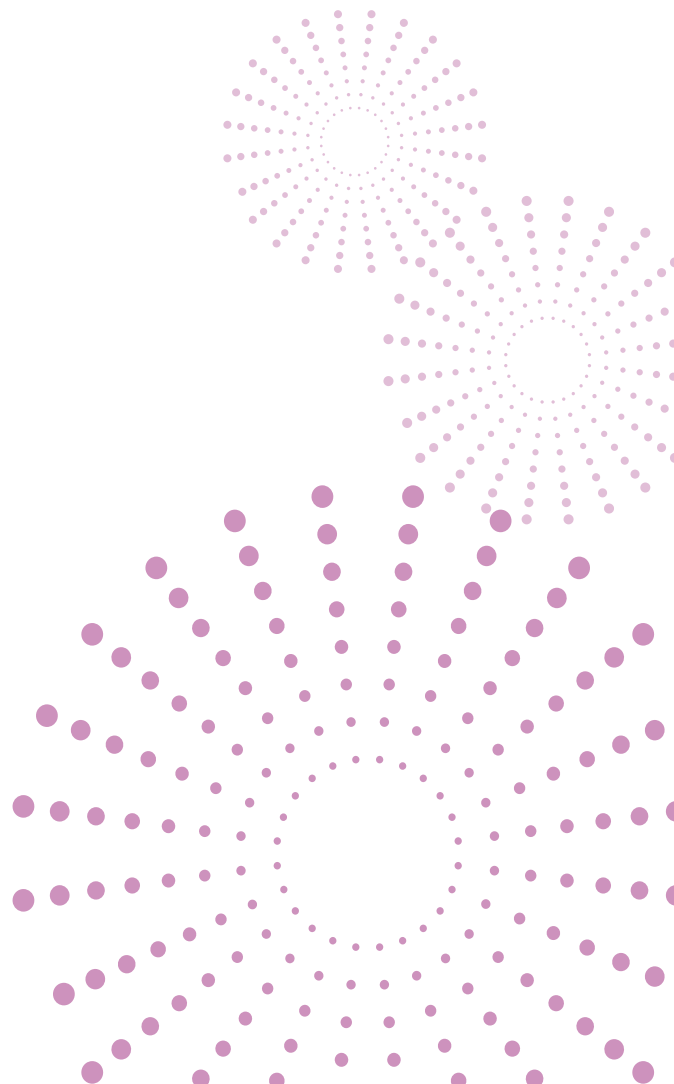
We would like to express our sincere thanks to the public, our clients, the trades, our staff and all stakeholders. Our appreciation also goes to various policy bureaux and other departments for supporting our work. We must also thank the media, the lawmakers and the public for their ongoing scrutiny. We shall endeavour to meet the expectations of our clients and the public via outstanding performance.



Chan Fan, Frank

Director of Electrical and Mechanical Services

General Manager, Electrical and Mechanical Services Trading Fund



署長與年青同事對話

DIALOGUES BETWEEN THE DIRECTOR AND OUR YOUNG STAFF



署長：
Director: 身為公務員，代表了……
Being a civil servant means ...

年青人：
Young people: 我們對部門有歸屬感及負責任，時刻警惕自己必須公正、廉潔，盡心盡力為市民提供服務。
We have developed a sense of belonging and responsibility towards the Department, and we must always keep in mind that we should discharge our duties fairly, justly and with integrity while serving the public.

署長：
Director: 最能鼓勵年輕職員的是……
Young staff is best motivated by ...

年青人：
Young people: 上司衷心讚賞，最能鼓勵年輕職員。團體活動，例如訓練營、體育及康樂活動等，亦能鼓勵年輕職員。
Praise from supervisors is always the best. Group activities like training camps, sports and recreational activities are useful as well.

署長：
Director: 你對十年後的機電署、自己有什麼願景？
Visualise EMSD and yourself, ten years from now ...

年青人：
Young people: 在市民眼中，我們這一代思想較開明。我們定能帶領機電署做得更好，而機電署將更為市民所認同，亦有更大的發展空間。
To the public, we are the generation who is more open-minded, so we should be able to lead EMSD to do better. EMSD will be more widely accepted by the public and enjoy more rooms for development.



年青人：
Young people: 機電署的未來發展是……
What will EMSD be like in the future?

署長：
Director: 過往規管服務憑藉清晰目標，經歷了不少風浪，未來應能平穩發展。營運基金方面，我們持續加強人才培訓，提升生產力，應付日益增長的業務。
With well-defined objectives, our regulatory services went through many ups and downs and challenges in the past years. Its future development is expected to be stable. For EMSTF, we have been working on capacity building, as well as increasing productivity, to cater for the growth in business.

年青人：
Young people: 若營運基金業務持續增長，可如何處理？
What is our plan if EMSTF's business keeps growing?

署長：
Director: 除了增聘更多公務員外，我們亦增加見習技術員，確保人才供應穩定。員工退休後的職位空缺，亦迅速填補。我們亦會靈活運用市場力量，萬一業務有所流失，營運基金可以將外判服務轉化內部處理作為緩衝。
Apart from recruiting more civil servants, we have increased the Technician Trainee intake so that there is a steady stream of new blood. Vacancies from retirees are also filled up promptly. We would be more flexible in using resources available in the market. Instead of outsourcing, we may use in-house staff to provide services as a buffer to deal with fluctuations in business.

年青人：
Young people: 如何令員工深入理解部門的服務信念？
How to strengthen colleagues' appreciation to the Department's service value?

署長：
Director: 事實上，各部別的職責範圍甚廣，要概括一個適用於各部別的信念實在不易。若我們能有一套容易讓員工秉承及理解的服務信念，那將更加理想。
In fact, our portfolio is diverse so it is not easy to come up with a service value that applies to all. Ideally, we hope to develop a set of service values that can be easily related to and comprehended by our staff.



規管服務業務概覽

REGULATORY SERVICES ACHIEVEMENTS OVERVIEW



抱負 VISION

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。
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.

使命 MISSION

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。
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.

信念 VALUES

- 專業才能 EXPERTISE
- 誠信 INTEGRITY
- 可靠 RELIABILITY
- 承擔 COMMITMENT

高層管理人員 SENIOR MANAGEMENT



- 1 陳帆太平紳士
Mr Chan Fan, Frank, JP
機電工程署署長
Director of Electrical and Mechanical Services
- 2 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
- 3 賴漢忠太平紳士
Mr Lai Hon-chung, Harry, JP
助理署長/電力及能源效益
Assistant Director/Electricity and Energy Efficiency
- 4 彭耀雄先生
Mr Pang Yiu-hung, Eric
助理署長/氣體及一般法例
Assistant Director/Gas and General Legislation

- 5 梁建民博士、太平紳士
Dr Leung Kin-man, JP
助理署長/鐵路
Assistant Director/Railways
- 6 何家儀女士
Ms HO Ka-yee, Camilla
部門會計師
Departmental Accountant
- 7 羅肇嫻女士
Ms Lo Siu-han, Cynthia
機電工程署主任秘書
Departmental Secretary, EMSD

嚴國豪先生出任機電工程署部門會計師至2015年12月13日
Mr Yim Kwok-ho was Departmental Accountant up to 13 December 2015

業務回顧 OPERATIONS REVIEW

規管服務於2015/16年度的多方面工作饒有成果，這實在有賴多年來同事的努力及業界和社會大眾的支持。

Years of hard work came to fruition in 2015/16 for the Regulatory Services in many areas, thanks to the efforts by our colleagues, as well as support from the trades and the community.



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

業務回顧 OPERATIONS REVIEW

多年努力 終見成果

以升降機安全為例，我們於2015年推出先導性的「優質升降機服務認可計劃」，以表揚升降機負責人在更新和維修升降機方面的出色表現，計劃共吸引逾1 200名升降機負責人參與。計劃的成功，除了是業界及同事多年努力的成果外，亦反映業界及大眾比以前更加了解和肯定升降機負責人的重要性。我們期望將來可進一步擴展該計劃。

經過同事過往的努力，2015年7月推出的「車輛維修工場自願註冊計劃」也漸見成果。在計劃推出首年以來，全港已有超過1 200間車輛維修工場自願註冊。我們期望透過車輛維修工場及技工自願註冊計劃，提升車輛維修服務水平和加強市民對車輛維修專業的認同，並為探討立法強制註冊安排作出準備。

能源效益事務處是年亦成果甚豐。《建築物能源效益條例》順利實施，其他節能計劃及公眾教育項目亦如期推展。我們於2015年推出的「全民節能」網站目前已有53個綠色及支持機構加入，這些機構以該網站作為向社區推廣其活動的中心平台，如此成績實在值得我們引以為榮。

安全至上 絕不妥協

儘管機電安全、氣體安全及鐵路安全方面的表現不斷進步，意外事故也日漸減少，然而規管服務依然面對不少挑戰。在本港機電安全持續改善的情況下，部分業界同人或會認為，我們堅持的安全標準及程序應可放寬，從而減少安全規定對他們的業務所構成時間及金錢上的影響，但為確保公眾安全，我們身為規管者，絕不能亦不會因商業或其他考慮因素而在安全事宜上妥協。公眾對我們的信任，乃建基於我們獨立的專業判斷，這點必須向所有持份者再三強調。

YEARS OF HARD WORK BEARS FRUIT

Take lift safety as an example, we launched the Quality Lift Service Recognition Scheme (QLSRS), a pilot scheme aimed at commending the outstanding performance of Responsible Persons (RPs) in lift modernisation and maintenance. The Scheme was launched in 2015 and attracted the participation of over 1 200 RPs. The success of the Scheme is not only the result of the hard work by the trades and our colleagues, it also indicates that the importance of RPs is being better understood and recognised by the trades and the public alike. We look forward to its further extension in the coming years.

Likewise, the Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW) launched in July 2015 is beginning to see results after great efforts by our colleagues in the past years. More than 1 200 workshops in Hong Kong have voluntarily registered since the first year of the Scheme. Through the voluntary registration schemes for vehicle maintenance workshops and vehicle mechanics, we aim to raise the service standard of the vehicle maintenance and enhance public recognition of the trade professionalism, as well as to prepare for the exploration of the feasibility of making registration arrangement mandatory through legislation.

It has also been a fruitful year for our Energy Efficiency Office. The Buildings Energy Efficiency Ordinance was smoothly implemented, whereas other energy saving schemes and public education programmes were also rolled out as planned. Launched in 2015, the “Energy Saving for All” website has become a hub for so far 53 green and supporting organisations to promote their activities to the community, which is truly a result to be proud of.

SAFETY MUST NEVER BE COMPROMISED

Continuous progress has been made in electrical and mechanical (E&M) safety, gas safety and railway safety as well, with incident numbers generally on a declining trend. Nevertheless, there remain many challenges facing the Regulatory Services. While E&M safety in Hong Kong is in the course of steady improvement, some members of the trades may expect that there is room for relaxation in the safety standards and procedures that we insisted on, thereby minimising impact on their operations in terms of time and cost due to safety requirements. However, to protect public safety, we as a regulator must not and will not compromise safety for commercial or any other considerations. Our independent and professional judgment underpins the trust that the public places in us. This is a message that we must stress to all stakeholders.



公眾對我們的信任，乃建基於我們獨立的專業判斷，這點必須向所有持份者再三強調。

Our independent and professional judgment underpins the trust that the public places in us. This is a message that we must stress to all stakeholders.



近年，我們拓展工作範圍，協助業界提高服務水平，因為服務水平上升有助提升安全表現。上述的「優質升降機服務認可計劃」及「車輛維修工場自願註冊計劃」便是其中兩個例子。我們相信更好的服務能讓公眾安心，享受優質生活，這與我們創造公眾價值的目標是一致的。

In recent years, we have expanded our scope of work to help the trades improve their service quality, as service quality often goes hand in hand with safety performance. Notable examples are the QLSRS and the VRSVMW mentioned above. We believe better services would bring the public peace of mind and quality of life, which is in line with our goal to create public value.

持續創新 推動節能

有賴能源效益事務處的努力，我們近年在能源效益及節能上的工作可謂進入收成期。隨着《能源效益(產品標籤)條例》、《建築物能源效益條例》及《區域供冷服務條例》相繼生效，規管框架已漸見成熟，而其他進行中的計劃及推廣活動亦取得不俗進展。

USING INNOVATION TO DRIVE ENERGY SAVING

Our work in energy efficiency and conservation has been enjoying a period of “harvest” in recent years, thanks to the efforts by the Energy Efficiency Office. With the Energy Efficiency (Labelling of Products) Ordinance, the Buildings Energy Efficiency Ordinance and the District Cooling Services Ordinance coming into force, a holistic regulatory framework is taking shape, while various other ongoing schemes and promotional initiatives have achieved promising progress.

啟德發展區的區域供冷系統順利運作，並連接更多租戶，包括工業貿易大樓及兩所小學。雖然部分水管仍在敷設中，但我們已開始累積營運區域供冷系統的經驗。這些經驗有助我們衡量擴展區域供冷技術至其他地區的可行性。

The District Cooling System (DCS) in Kai Tak Development is operating smoothly and more tenants in the area, including the Trade and Industry Tower and two primary schools, have been connected to the DCS. Although the laying works for some pipes are still underway, we have begun to accrue experience in operating the DCS, which will be useful for us to assess the feasibility of extending the DCS model to other districts.

業務回顧

OPERATIONS REVIEW

“

不斷創新一向是推進我們能效工作的動力，我們也致力應用各種先進技術幫助市民節能，希望發揮先導作用。

Innovation has always been the driving force behind our energy efficiency work. We endeavour to be always one step ahead by applying advanced technology to help the community save more energy.

”

其實，不斷創新一向是推進我們能效工作的動力，我們也致力應用各種先進技術幫助市民節能，希望發揮先導作用。最佳例子是我們推動啟德發展區區域供冷系統的工作，無論在項目性質和規模方面，該系統都是香港首創的。至於其他工作範疇，如產品能源標籤和推動可再生能源等，我們都不斷參照世界各地的先進技術和最新標準，務求把最適合本地需要的引進香港。

我們很高興見到社會大眾日漸接受節能低碳的生活方式，並會調動資源去繼續推動節能工作，同時拓展更多新的節能領域。

未雨綢繆 迎接挑戰

我們近年研究將「預警指標」概念應用於規管工作上，希望透過預警指標預測並評定受規管行業的潛在風險，以助我們及早採取相應措施。在2016/17年度，我們將調整和整合各個預警指標。鑑於各行業的需求不同，發展各異，負責的部別將為其規管的行業訂立合適的預警指標。

我們的另一工作重點，是處理老化的機電設施。本港經濟在七八十年代起飛，不少機電設施於同期落成啟用，至今已使用三四十年之久，難免對安全構成潛在威脅。這正是我們提倡為舊樓更新升降機的一大原因。至於其他機電及氣體系統，亦同樣面對老化問題。為此，我們將推出更多措施，協助社會更換老化的設施。

Indeed, innovation has always been the driving force behind our energy efficiency work. We endeavour to be always one step ahead by applying advanced technology to help the community save more energy. The best example is our work in DCS which is the first of its kind and scale in Hong Kong. In other areas such as energy efficiency product labelling and the promotion of renewable energy, we constantly keep monitoring of advanced technologies and the latest standards around the world in order to introduce the most appropriate ones into Hong Kong.

We are delighted that the community is increasingly receptive to an energy saving, low carbon lifestyle, and shall continue to deploy resources to sustain the momentum of our work as well as explore more new frontiers in energy saving.

STAY PREPARED FOR CHALLENGES AHEAD

In recent years, we have explored the applicability of “precursors” in our regulatory works, with a view to anticipating and assessing potential risks in the regulated trades and thereby developing corresponding measures at an early stage. In 2016/17, we shall fine-tune and consolidate our various precursors. As each trade differs in needs and dynamics, the responsible division will develop precursors that suit its regulated trades.

The other priority is to deal with the aging E&M assets. Most E&M facilities in Hong Kong were built in the 70s and 80s when the city's economy took off. These E&M facilities are now in their thirties and forties, which inevitably pose potential safety hazards. This is a major reason why we are promoting the modernisation of aging lifts in old buildings. The same applies to other aging E&M and gas systems. More initiatives will therefore be carried out to facilitate the overhaul or replacement of these facilities.

“

我們必須宏觀地了解業界動向，應對科技變遷，避免因循守舊、故步自封，方能發揮捍衛公眾安全的角色。

We must adopt a holistic perspective on the trade dynamics and adapt to the changing technologies. We must ensure that our role, as the gatekeeper of public safety, stays unhindered by statutory boundaries nor stereotyped mindsets.

”

每次發生機電事故，都提醒我們須時刻保持警覺，方能找出業界實際面對的安全問題，防止同類事故重演。意外事故亦讓我們可以深刻反思我們現時保障安全的方法。我們不能因為現時零事故或少意外便掉以輕心，以為安全規管系統一切正常。我們必須宏觀地了解業界動向，應對科技變遷，避免因循守舊、故步自封，方能發揮捍衛公眾安全的角色。

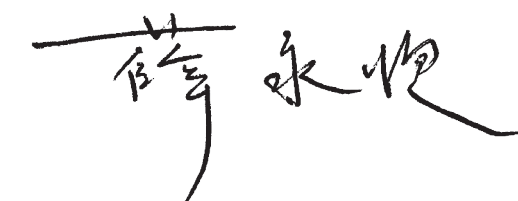
Each and every E&M incident is a reminder that we must stay alert at all times to be able to detect the real safety issues to which the trades are prone in order to prevent recurrence of similar tragedies. Accidents and incidents also make us take a deep, critical look at our current approach to ensuring safety. We should never take the currently zero or low incident numbers as an indication that everything about the safety regulatory system is working just fine. We must adopt a holistic perspective on the trade dynamics and adapt to the changing technologies. We must ensure that our role, as the gatekeeper of public safety, stays unhindered by statutory boundaries nor stereotyped mindsets.

感謝各界支持

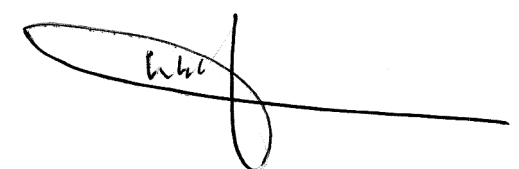
社會發展日新月異，協作和相互支持變得日益重要。因此，規管服務必須與時並進，保障業界及公眾安全，並讓能源使用更具效益，服務水平更見優良。2015/16年度的工作成果，全賴同事、各業界的工作小組及協會、學術界、專業機構、非政府機構、訓練學院及其他加入我們顧問及技術委員會的機構支持，我們謹致謝忱。我們亦要感謝相關決策局及部門的協作，以及海外機構無私地分享經驗。我們承諾來年將繼續致力做得更好。

GRATITUDE TO ALL WHO MADE IT POSSIBLE

In a society of rapid change, collaboration and mutual support grows increasingly important. The Regulatory Services must evolve with the times to protect the safety of the trades and the public, and to make energy use more efficient and service quality better. All this would not have been accomplished in 2015/16 without the support of our staff, the task forces and associations of the trades, academics, professional bodies, NGOs, training institutes and all organisations who served on our advisory and technical committees. Our gratitude goes to them all. We are also grateful to the relevant policy bureaux and departments for their collaboration and our overseas counterparts who generously shared their experience. We pledge to continue devoting ourselves to doing even better in the coming years.



薛永恒
機電工程署副署長/規管服務



Alfred W H Sit
Deputy Director/Regulatory Services, EMSD

里程碑 MILESTONES 2015

7月JULY

精明選擇車輛維修服務

推出車輛維修工場自願註冊計劃，提升業界服務水平及形象。截至2016年3月底，已吸引超過1 200間工場申請加入計劃。

WISE CHOICE OF VEHICLE MAINTENANCE SERVICE

Launched the Voluntary Registration Scheme for Vehicle Maintenance Workshops to enhance the service standard and image of the trade, attracting over 1 200 workshops to apply for registration as of end March 2016.



7月JULY

增強青年環保意識

慳電熄一熄青年獎及「新能源、新世代」太陽能車比賽開鑼，活動旨在增強青年對再生能源及能源效益的認識。「新能源、新世代」太陽能車比賽在2016年1月圓滿結束。

ENHANCEMENT OF YOUNG GENERATION'S GREEN AWARENESS

Launched the Youth Energy Saving Award and the New Energy New Generation Solar Car Competition to enrich young people's knowledge on renewable energy and energy efficiency. New Energy New Generation Solar Car Competition was later concluded in Jan 2016.



2015

10月OCTOBER

提高升降機服務水平

推出先導性的優質升降機服務認可計劃，共收到94份申請。由獨立顧問評核各升降機負責人在優化舊有升降機及管理升降機的表現。頒獎禮於2016年4月舉行。

UPLIFTING LIFT SERVICE QUALITY

Launched the pilot Quality Lift Service Recognition Scheme, attracting 94 applications from Responsible Persons of lifts whose performance in lift modernisation and management of lift service quality was assessed by independent consultants. The prizes were presented in April 2016.



11月NOVEMBER

邁向綠化之都

2015年11月25日，新能效評級標準全面實施，涵蓋強制性能源效益計劃下空調機、雪櫃及洗衣機三項產品。

TOWARDS A GREENER ENVIRONMENT

Full implementation of new energy efficiency grading standards took effect on 25 November 2015, covering room air-conditioners, refrigerating appliances and washing machines under the Mandatory Energy Efficiency Labelling Scheme.



里程碑 MILESTONES 2015

12月 DECEMBER

新《電力(線路)規例工作守則》提升安全水平

公布更新版的《電力(線路)規例工作守則》，以緊貼最新科技發展及安全規定。

NEW CODE OF PRACTICE FOR THE ELECTRICITY (WIRING) REGULATIONS BRINGS ENHANCED SAFETY

An updated edition of the Code of Practice for the Electricity (Wiring) Regulations was published to keep the trade abreast of the latest developments in technology and safety requirements.



12月 DECEMBER

增加人手 迎接新鐵路挑戰

鐵路科增設11個職位，包括兩名總工程師，對現有鐵路綫及新鐵路項目，加強鐵路安全監察及規管制度。

STRENGTHENED TEAM TO MEET NEW RAILWAY CHALLENGES

Created 11 new posts in the Railways Branch including two Chief Engineers to enhance safety oversight of existing railway lines and new railway projects, and strengthen overall railway regulatory regime.



12月 DECEMBER

建設低碳社區

2015年版《建築物能源效益守則》及《能源審核守則》刊憲頒布。兩份守則經多番諮詢業界和持份者而成，並將每三年檢討一次，反映最新技術及大眾需要。

BUILDING A LOW-CARBON COMMUNITY

The 2015 edition of the Building Energy Code and Energy Audit Code were gazetted and published after thorough consultations with the trade and stakeholders. Both Codes are reviewed and updated every three years to reflect the latest changes in technology and community needs.



3月 MARCH

新鐵路綫準備就緒

西港島綫西營盤站B3入口開幕，標誌西港島綫所有測試工作及安全檢查正式完成。與此同時，我們正密鑼緊鼓，檢查即將啟用的南港島綫(東段)及觀塘延綫，確保有關路線運作安全。

GETTING READY FOR THE NEW RAILWAY LINES

Entrance B3 of Sai Ying Pun Station of West Island Line was opened, thus completing all commissioning works and safety inspections for the line. Numerous safety inspections of railway systems are being conducted on the soon-to-be opened South Island Line (East) and Kwun Tong Line Extension to ensure their safe operation.



2016



瓶裝石油氣分銷商 安全表現評級計劃

LPG Cylinder Distributor
Safety Performance Recognition Scheme

1月 JANUARY

攜手確保氣體供應安全

推出瓶裝石油氣分銷商安全表現評級計劃，獲瓶裝石油氣註冊氣體供應公司轄下的184個分銷商全數參與。評級結果於2016年7月公布。

JOINT EFFORT TO ENSURE SAFE GAS SUPPLY

Launched the LPG Cylinder Distributor Safety Performance Recognition Scheme with all 184 distributors under the Registered Gas Supply Companies supplying LPG cylinders joining. The rating results were announced in July 2016.

重要數字 KEY FIGURES

電業工程人員

ELECTRICAL WORKERS

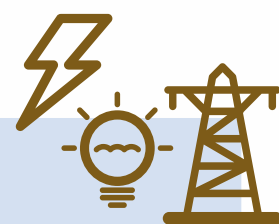


註冊電業工程人員
Registered Electrical Workers

76 000 名
Nos.

電力供應

ELECTRICITY SUPPLY



本地售電量
Local Electricity Sales

43 912 百萬度
GWh

升降機及自動梯

LIFTS AND ESCALATORS

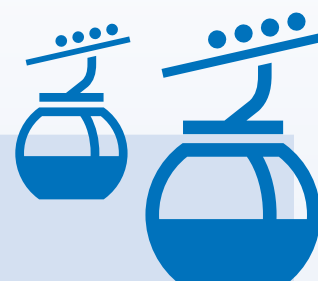


升降機
Lifts 63 561 部
Nos.

自動梯
Escalators 8 925 部
Nos.

纜車

ROPEWAYS



昂坪360架空纜車索纜長度
Rope Length of
Ngong Ping 360
5.8 公里
km

海洋公園登山纜車長度
Rope Length of
Ocean Park Cable Car
1.4 公里
km

鐵路

RAILWAY



鐵路路線總長度
Railway Total Route Length

221 公里
km

鐵路年度載客量
Railway Annual Patronage

1 884 百萬
Million

燃氣供應

GAS SUPPLY



氣體喉管網絡總長度
Total length of gas pipe network

3 583 公里
km

石油氣車輛

LPG VEHICLES



石油氣加氣站
LPG Filling Stations
67 個
Nos.

持牌石油氣車輛
Licensed LPG Vehicles
22 058 輛
Nos.

區域供冷

DISTRICT COOLING SYSTEM

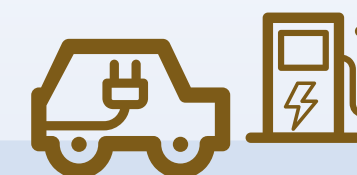


啟德區域供冷系統總供冷量
Total Cooling Capacity
of Kai Tak District Cooling System
284 兆瓦
MW_r

啟德區域供冷系統管道總長度
Total Pipe Length of Kai Tak
District Cooling System
40 公里
km

電動車

ELECTRICAL VEHICLES



電動車
Electric Vehicles

4 461 輛
Nos.

電動車充電站
Electric Vehicle Charging Points

1 611 個
Nos.

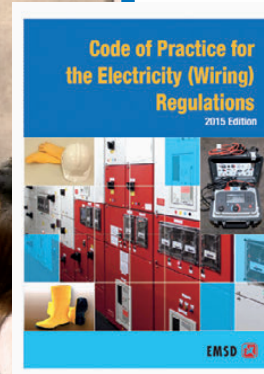
保障公眾安全 PROTECTING PUBLIC SAFETY

電力安全 ELECTRICAL SAFETY



我們舉辦安全講座及出版新《電力(線路)規例工作守則》，提高業界的安全意識。

We arranged safety talks and published the new Code of Practice for the Electricity (Wiring Regulations) to enhance the safety awareness of the trade.



電力安全

事故數字下降

在2015年，第三者損毀供電電纜事故宗數是自2001年全面實施相關規例以來的最低紀錄，由2014年的44宗減少至2015年的39宗；固定電力裝置事故宗數，亦由2014年的60宗減少至2015年的50宗；電氣產品事故則變化不大，2015年有56宗，2014年則有55宗。

事故數字下降對市民來說無疑是好消息，這意味着安全水平有所提高。事故數字下降，乃因承辦商的安全意識和工程人員的工程質素得以提升所致。我們會繼續主動採取積極措施，舉辦更多安全講座，視察工地，以及密切監察「目標」承辦商的安全表現，進一步提高業界的安全意識。

ELECTRICAL SAFETY

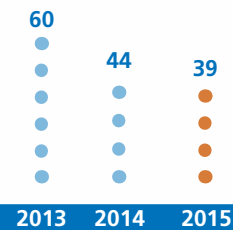
Fewer Incidents

The year 2015 saw a record low of third-party damage to electricity supply line incidents, from 44 in 2014 to 39 in 2015, since the relevant Regulation had come into full operation in 2001. Fixed electrical installation incidents also fell from 60 in 2014 to 50 in 2015, while electrical product incidents remained steady at 56 compared to 55 in 2014.

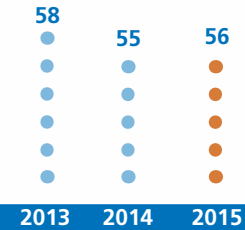
This is good news for the community as fewer incidents mean a higher level of safety for all. It had been made possible by raising contractors' safety awareness and the working parties' quality of work. We would continue to take proactive measures to further enhance the safety awareness of the trade by arranging additional safety talks and site inspections as well as closely monitoring the safety performance of "target" contractors.

電力事故數目 Electrical Incident Figures

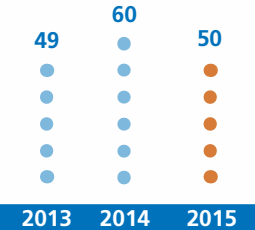
第三者損毀供電電纜事故
Third Party Damage to
Electricity Supply



電氣產品事故
Electrical Product Incidents



固定電力裝置事故
Fixed Electrical Installation
Incidents



出版新工作守則

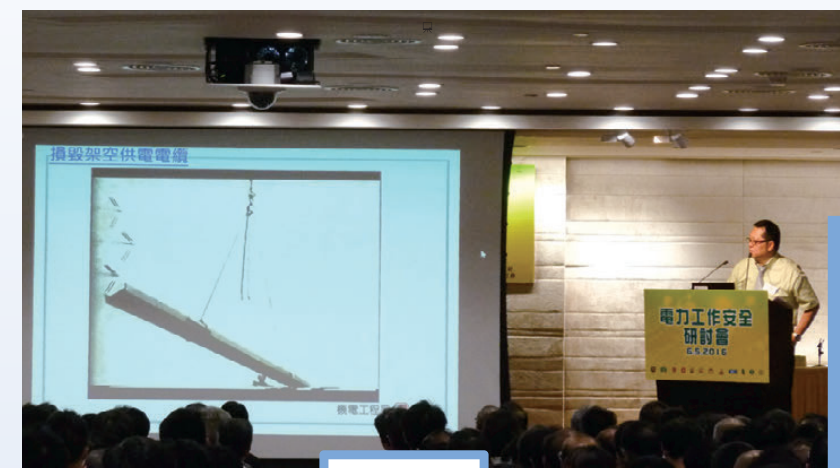
《電力(線路)規例工作守則》更新版於2015年12月出版，旨在配合最新的技術及安全要求，此乃年內的一項主要發展。新版本更新了2009年版的內容，反映工作小組經詳細討論後得出的成果，工作小組由來自電業界不同範疇的代表組成。新工作守則其中一個重大改進是納入在高壓裝置上進行工作的安全預防措施；另一重大改善，是要求使用備有上鎖功能的微型斷路器及模製外殼斷路器，這有助確保電力裝置鎖上，以免在施工時不慎被開啟。

2015年版的工作守則會於2017年12月全面實施，在兩年寬限期內，我們會積極向業界宣傳守則的內容。

New Code of Practice Published

A key development in the year was the publication of an updated edition of the Code of Practice (CoP) for the Electricity (Wiring) Regulations in December 2015, a major update on the 2009 edition, to keep abreast of the latest technology and safety requirements. This was the result of detailed deliberations by a working group comprising representatives from different sectors of the electrical industry. One of the significant enhancements of the new CoP is the incorporation of detailed safety precautions for work on high voltage installation. Another major enhancement is the requirement of using miniature circuit breakers and moulded case circuit breakers with lockable function to ensure that the devices can be locked off and will not be inadvertently turned on during electrical work.

The 2015 edition of the CoP will be fully implemented in December 2017 after a two-year grace period, during which we shall actively promote it to the trade.



與業界及其他政府部門舉辦電力工作安全研討會。

The Electrical Work Safety Seminar was held in collaboration with the industry stakeholders and other government departments.



保障公眾安全

PROTECTING PUBLIC SAFETY

電力安全 ELECTRICAL SAFETY

維繫業界與市民

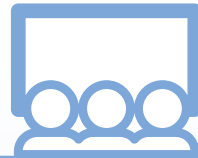
與電業界持份者保持聯繫，有助預防事故發生。2015/16年度，我們多次與電力公司高層進行會議，並舉辦超過300場實地視察暨安全講座。我們的安全意識計劃以註冊電業工程人員為重點目標，計劃內容包括舉辦2015傑出註冊電業工程人員選舉，比賽吸引了約80名參賽者。年內，我們亦推出了首個安全論壇，為合資格人士提供平台，提高業界相關安全意識及對規管要求的認知。他們的工作表現對預防第三者損毀供電電纜極為重要。

我們亦經各種宣傳和公眾教育渠道，包括大規模外展項目，直接聯繫市民。我們的專責外展工作大使走訪各學校、幼稚園及安老院舍，舉辦電力安全講座，年內接觸了35 000多名市民。

Engagement with Trade and Public

Engaging with stakeholders in the electrical business can help prevent incidents. In 2015/16, we held senior level meetings with the power companies and conducted over 300 joint site inspections cum safety talks. Registered Electrical Workers (REW) are a key target of our safety awareness programmes, such as the Outstanding Registered Electrical Worker Awards Scheme 2015 which attracted about 80 participants. We also launched during the year our first safety forum for Competent Persons as a platform to enhance their awareness of the relevant safety and regulatory requirements. Their work performance is vital to avoiding third-party damage to electricity supply lines.

We also directly engaged with the public via various publicity and public education channels, such as our extensive outreach programme. Our dedicated ambassadors visited schools, kindergartens and elderly homes to give lively electrical safety talks, reaching over 35 000 individuals in the year.



電力法例部的宣傳大使正教導幼稚園同學電力安全。
Ambassador from Electricity Legislation Division teaching electrical safety to kindergarten students.



舉辦傑出註冊電業工程人員選舉，表揚業界表現傑出者。
The Outstanding Registered Electrical Worker Awards Scheme was organised to commend trade members with remarkable performance.

鍥而不捨地調查意外事故

TO INVESTIGATE WITH PERSEVERANCE

屈兆鵬工程師
Pan Wut, Engineer



作為一個電力法例部的當值工程師，除了需要具備專業知識外，還需要具有鍥而不捨的精神，與團隊合作調查電力意外事故。電力法例部的工程師屈兆鵬先生，正正是其中一位當值工程師。屈先生於2016年2月的一個晚上，接到來電報稱有人在新界一個偏僻的地點觸電死亡，他隨即和其團隊趕赴現場調查意外事故。

屈先生和他的調查團隊從死者發生意外的地點開始調查，細心地檢查地點內的每一個電力裝置。由於事發的地點十分偏僻，設備簡陋且欠缺照明系統，大大增加了調查工作的難度。徹夜調查後，屈先生和他的調查團隊已於清晨檢查所有相關的電力裝置，可是仍未找出觸電的原因。他們並沒有氣餒，決定擴大調查範圍，包括發生意外地點以外的其他電力裝置，並且增派人手繼續調查。調查團隊馬不停蹄連續工作十八小時，直至當天的下午六時許，在事發地點附近的另一座建築物內發現事故原因。屈先生對這次意外事故的調查感到畢生難忘。

屈先生說：「事發現場往往一片混亂，單憑表面所見是很難下判斷的。我們必須心思慎密及觀察入微，更要抱着鍥而不捨的精神，才能找出箇中原因。」

As a duty engineer of the Electricity Legislation Division one must be equipped with not only professional knowledge but also perseverance to work with colleagues on the investigation of electrical incident. Mr Pan Wut of the Electricity Legislation Division serves as one of duty engineers. On a night in February 2016 he received a call about a fatal incident in a remote village house in the New Territories. Having heard that the victim was electrocuted, he immediately rushed to the spot with his investigation team.

Mr Wut and his team began their investigation at the site of the incident, digging into every corner to check each electrical installation. As it was far from the city, facilities nearby were primitive and lighting was inadequate. All these factors added to the difficulty of investigation so that the team was yet to discover the cause of the incident despite the completion of checking of all related electrical installations. Mr Wut and his team, however, did not give up. The extent of investigation was expanded to other electrical installations beyond the site and; manpower was added as well. Eventually by 6pm — after over 18 hours of work — the team found the cause in another building neighbouring the site. This investigation is surely an unforgettable memory to Mr Wut.

“Careful thought and condensed observation are the key, so is the perseverance that let you discover the underlying cause and make judgement amid the chaos,” he concluded.

保障公眾安全

PROTECTING PUBLIC SAFETY

電力安全 ELECTRICAL SAFETY

運用科技提升效益

為提升值班工程師處理事故時的工作效率，本署為他們提供最新的「值班裝備」平板電腦式電話。這個裝置結合所有通訊工具於一身，包括手提電話、電郵及相關應用程式，可加快訊息交流。我們現正將地理資訊系統納入電器產品商店的資料庫，以便更有效規劃巡查行程。

Using Technology for Better Efficiency

A new “duty kit” tablet-phone was made available to our duty engineers to help them work more efficiently during handling of incidents. This device integrates all communication tools including mobile phone, email and relevant apps on a single gadget to expedite information sharing. We are also working on integrating the GIS system with our database of electrical product shops to make inspection itinerary planning more effective.



使用最新的「值班裝備」以提升處理事故的工作效率。
Using new “duty kit” to enhance working efficiency in handling of incidents.



透過研討會向業界人士講解新版《電力（線路）規例工作守則》。
Explaining to members of the industry on the new Code of Practice for the Electricity (Wiring) Regulations through seminars.

來年新措施

踏進2016/17年度，我們將會舉辦更多活動，向業界推廣《電力（線路）規例工作守則》新版本，並會集中資源，巡查需特別關注的處所，如舊工廠大廈內的迷你倉及定期測試證明書已過期的舊樓。我們亦會就與「完工證明書」相關的電力工程（即新完成或改裝電力工程）加強執法。

同時，我們會研究大型戶外招牌的安全事宜，及對市場上新電氣產品進行更多監察測試，以監控其安全水平。

Initiatives Next Year

In 2016/17, there will be more promotion activities carried out for the new CoP for the Electricity (Wiring) Regulations to the trade. We shall focus our resources on conducting inspections for premises with special concerns, such as mini-stores in old factory buildings as well as old buildings with overdue periodic test certificates. We shall also further step up our enforcement actions on those “WR1” related electrical works, i.e. newly completed or alteration electrical works.

At the same time, we would look into the electrical safety aspects of large outdoor sign boards, and conduct more surveillance tests on new electrical products in the market to monitor their safety.



測試市場上的電氣產品，以監控其安全水平。
Conducting surveillance tests on electrical products in the market to monitor their safety.

? 冷知識 Did You Know?

香港首間發電廠於1890至1922年間在灣仔星街運作。
Hong Kong's first power station operated from 1890 to 1922 at Star Street, Wan Chai.

保障公眾安全 PROTECTING PUBLIC SAFETY

氣體安全 GAS SAFETY



機電工程署員工正稽察對家居氣體裝置的定期安全檢查工作。
EMSD staff auditing the regular safety inspection of household gas installation.

氣體安全

第三者損毀事故創新低

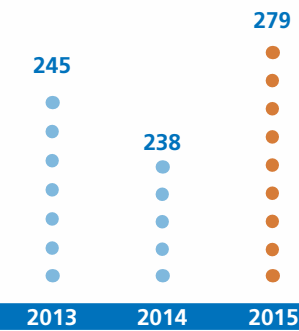
在2015年，由於承辦商的安全意識有所提高，令第三者損毀地下煤氣喉管事故宗數創近年新低，只有12宗。不過，氣體事故總數則由2014年的238宗增至2015年的279宗，相信是因為我們積極向氣體用戶及物業管理公司宣傳氣體安全知識，令他們對疑似氣體洩漏事件警覺性提高。我們仍會繼續致力推行教育和宣傳工作，務求提升大眾的氣體安全意識。

GAS SAFETY

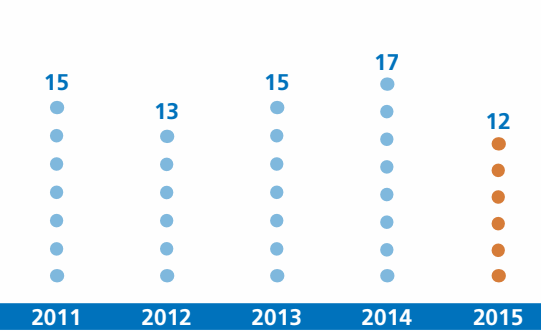
Record Low Third-Party Damage Incidents

In 2015 the number of third-party damage to underground town gas pipes hit a new low of 12 in recent years, thanks to contractors' heightened safety awareness. However, the total number of gas incidents increased from 238 in 2014 to 279 in 2015. The rise is believed to be ascribable to our proactive efforts in promoting gas safety to gas users/property management agents which in turn heightened their alertness to suspected gas leaks. We would sustain our educational and promotional impetus to strive for higher public awareness of gas safety.

氣體事故總數
Total Gas Incidents



第三者損毀地下氣體喉管事件
Third Party Damage to Underground Gas Pipe Incidents



致力監察註冊氣體承辦商的表現，提升公眾的對氣體安全的關注。
Striving to monitor Registered Gas Contractors' performance and promote gas safety to the public.

推廣定期安全檢查及地下煤氣網絡安全

為促進煤氣安全，我們已於2015/16年度推行數項新措施。每18個月進行一次住宅單位定期安全檢查非常重要，這有助定期檢測氣體用具的運作情況，以及盡早發現用戶喉及供氣分喉鏽蝕。不過，未能進入單位仍是一個難題，為此我們與房屋署及香港中華煤氣有限公司(煤氣公司)合作，於三個公共屋邨推出試行計劃，向多次拒絕定期安全檢查服務的住戶宣傳定期安全檢查的重要性。試行計劃相當成功，於計劃結束時，該些公共屋邨的目標住戶定期安全檢查服務的完成率已由48%提升至78%，並會分階段將此推廣計劃擴展至其他公共屋邨。

為加深市民對地下煤氣網絡安全的了解，我們與煤氣公司的代表合作，於2015年12月舉辦了一場新聞簡報會，向20多間傳媒機構分享確保地下煤氣網絡安全的規管策略及相關技術，同時示範使用多種測漏裝置。是次活動引起傳媒的廣泛興趣及報導。

Promoting Regular Safety Inspection and Underground Town Gas Network Safety

Several new initiatives were launched in 2015/16 to enhance town gas safety. Regular Safety Inspection (RSI) in a residential flat once every 18 months is important for regular monitoring of the operating conditions of gas appliances and early detection of installation pipe and riser corrosion, but unsuccessful access to flats remained an issue. In this regard, we had worked with the Housing Department and Towngas on a pilot scheme in three public housing estates for promotion of RSI to those households repeatedly rejecting RSI services. Upon the completion of the pilot, the RSI access rate of the target households in these estates raised from 48% to about 78%, and we have been extending the joint RSI promotion to other public housing estates by phases.

To help the public know more about underground town gas network safety, we organised in December 2015 a media briefing devoted to this topic. Together with Towngas representatives, we shared with over 20 media organisations our regulatory strategies and relevant technologies to ensure underground town gas network safety, with demonstration of leakage detection devices. The event generated wide media interests and coverage.

保障公眾安全

PROTECTING PUBLIC SAFETY

氣體安全 GAS SAFETY

向傳媒講解 煤氣管網安全 BRIEFING THE PRESS ON TOWN GAS NETWORK SAFETY

吳玉華工程師
Alice Ng, Engineer



2015年12月14日，氣體標準事務處舉辦了一場傳媒簡介會，向傳媒介紹我們提升煤氣管網安全的規管工作。簡介會由該事務處的工程師吳玉華帶領她的小組統籌。她指出，舉辦簡介會最困難的地方，在於如何準確及淺白地解釋相關技術事宜。

多番籌備後，簡介會於觀塘樂華南邨的空地正式開始。簡介會上，氣體標準事務處的人員首先介紹該事務處近期規管方面的工作成果，並示範各種檢測氣體洩漏的方法，如步行式洩漏測量、車載式洩漏測量、激光甲烷探測器，以及「飛行管道檢查器」。「飛行管道檢查器」是一部遙控模型飛機，能檢測位於斜坡、橋樑或其他難以到達位置的地點的煤氣喉管。簡介會有逾20位報業、電視台及電台的傳媒朋友出席，他們對「飛行管道檢查器」和該事務處為預防第三者損毀事故而最新制訂的「預警指標」特別感興趣。

簡介會獲廣泛報道，有助公眾更了解我們規管煤氣管網安全的工作。吳女士亦很榮幸參與籌備簡介會，讓她與傳媒合作，是她事業上一個寶貴的經驗。

The Gas Standards Office (GasSO) held a media briefing on 14 December 2015 to brief the media about our regulatory work to enhance town gas network safety. Alice Ng, engineer in GasSO, led a team to plan the event. "The challenge was how to explain technical matters in laymen terms that are accurate and easy to understand," she said.

After much preparation, the team held an outdoor press briefing at Lok Wah (South) Estate in Kwun Tong on GasSO's latest regulatory efforts, followed by demonstrations on the use of various inspection technologies including walking leakage survey, vehicle leakage survey, as well as laser methane gun to detect gas leakage, and a "flight pipeline inspector" which was a drone to detect leakage on gas pipes on slopes, bridges or locations that are difficult to access. The 20-plus media organisations from newspapers, TV and radio programmes attending the event were particularly interested in the drone and the "precursor" which was newly developed by GasSO to prevent third-party damage incidents.

The briefing generated wide and much positive coverage which helped the public understand more about our safety regulatory work on town gas network. Ms Ng also appreciated the opportunity to lead the event which gave her precious experience in working with the media.



瓶裝石油氣分銷商安全表現評級計劃

為進一步提升瓶裝石油氣業界的安全表現，機電工程署與註冊氣體供應商於2016年初攜手合作，推出「瓶裝石油氣分銷商安全表現評級計劃」，參與計劃者包括五間供應瓶裝石油氣的註冊氣體供應公司旗下所有184個分銷商。在是項計劃下，註冊氣體供應商委託獨立稽核公司，就分銷商運送氣瓶安排、氣體用具安全檢查、客戶單據資料紀錄、員工培訓紀錄和氣體安全作業紀錄的表現評級。

參與的分銷商中，33間獲評為最高的金級、22間銀級、129間銅級，分銷商名單及其安全表現評級刊登於機電工程署網頁。分銷商會於店內展示計劃標誌及評級證書，以茲識別。另外，市民亦已從電視及電台知悉有關計劃。



推出「瓶裝石油氣分銷商安全表現評級計劃」，進一步提升瓶裝石油氣業界的安全水平。

LPG Cylinder Distributor Safety Performance Recognition Scheme was launched to further enhance the safety performance of the LPG trade.

LPG Cylinder Distributor Safety Performance Recognition Scheme

To further enhance the safety performance of the liquefied petroleum gas (LPG) cylinder trade, EMSD and the Registered Gas Supply Companies (RGSCs) jointly launched the LPG Cylinder Distributor Safety Performance Recognition Scheme in early 2016. All the 184 distributors under the five RGSCs supplying cylindered LPG joined the Scheme. Under the Scheme, independent auditing companies commissioned by the RGSCs gave ratings to the distributors based on their performance in LPG cylinder delivery arrangement, safety inspection of gas appliances, customer data records, employee training records and gas safety operation record.

Among the participating distributors, 33 attained gold rating, the highest level of safety performance, while 22 and 129 received silver and bronze ratings respectively. The list of distributors and their safety performance ratings was available on the EMSD website. Distributors will display the Scheme logo and the rating certificate at their shops for easy identification. Also, the public was informed about the Scheme through TV and radio.

? 冷知識 Did You Know?

全港尚有4支煤氣燈，位於中環都爹利街，「晚六朝六」亮燈，為香港法定古蹟。
The only four existing Gas Lamps in Hong Kong are situated at Duddell Street, Central and are lighted up from 6p.m. to 6a.m. They are declared monuments in the city.

保障公眾安全

PROTECTING PUBLIC SAFETY

氣體安全 GAS SAFETY

到訪車輛維修工場
REACHING OUT
TO VEHICLE
MAINTENANCE
WORKSHOPS羅振雄工程師
Ronald Law, Engineer孫美寶統籌員
Mabel Sun, Coordinator

車輛維修註冊組的羅振雄工程師，可能是到訪最多車輛維修工場的一位同事。羅先生部分的工作，是推廣車輛維修工場自願註冊計劃。他與到訪大使團隊的統籌員孫美寶女士，足跡幾乎遍及全港2 700間車輛維修工場。

車輛維修工場自願註冊計劃於2015年7月推出，旨在提升車輛維修行業的服務水平及形象。到訪車輛維修工場，是向工場東主及營運者介紹計劃，爭取他們的支持。自2015年11月開始，羅先生和孫女士大部分時間會到訪工場，每周工作六天和平日亦常超時工作。幸而，不少經到訪的車輛維修工場對計劃反應熱烈。

羅先生和孫女士到訪工場時，察覺到一些值得注意的事項。孫女士說：「其實大多數工場都是小本經營，資源有限。然而，只要我們向他們清楚解釋計劃的內容，並協助他們填寫表格，提交申請，他們亦多樂意參加計劃。」羅先生亦充滿信心地指出：「我們將繼續到訪車輛維修工場，目標在2016年，推動全港達到七成的工場加入計劃。」

Probably no one has visited more vehicle maintenance workshops (VMWs) than Ronald Law, an engineer of the Vehicle Maintenance Registration Unit, as one of his duties is to promote the Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW). Working with Mabel Sun, the team coordinator of ambassadors, they have visited almost all of the 2 700 workshops in Hong Kong.

The VRSVMW was launched in July 2015 to enhance the service standards and image of the vehicle maintenance trade. The visits aimed to explain the objective of VRSVMW to the workshop owners/operators so as to convince them to support it. Ronald and Mabel spent most of their time since November 2015 for visiting workshops six days a week and work late during weekdays. Response from the visited workshops was enthusiastic.

Ronald and Mabel learned a few important things from their visits. "Most workshops are small businesses with limited resources, so they are more likely to join if we reach out to them to explain the scheme and help them with the paperwork for application," Mabel said. "The outreach visits are ongoing, with the goal to facilitate 70% of all workshops in Hong Kong to join in 2016," Ronald confidently emphasized.



覆檢石油氣燃料缸，確保安全。
Revalidating LPG fuel tanks to ensure safety.



保障石油氣車輛安全

去年，石油氣車輛安全方面大有進展。車用石油氣定期品質檢定測試運作暢順。根據《氣體安全（氣體供應）規例》規定，石油氣燃料缸必須每五年最少檢測一次。2015/16年度是燃料缸的覆檢高峰期，我們與石油氣燃料缸工場及分銷商通力合作，確保市場為石油氣的士及小巴供應足夠經覆檢的燃料缸。覆檢工作進行順利，沒有影響全港22 000輛石油氣車輛的運作。

2015年4月，黃大仙一間車輛維修工場發生事故，導致三死九傷。除了調查事故外，我們採取多項緩解措施，防止類似事故再次發生，包括持續加強巡查車輛維修工場。我們亦加緊監控市面的石油氣燃料泵，防止非法更換石油氣燃料泵。

此外，為方便車主、司機、車隊管理代理及市民識別提供石油氣系統維修工程的車輛維修工場，我們開始向所有共1 100名合資格的維修石油氣車輛燃料系統第六類勝任人士派發證明卡及證書，供他們在維修工場內展示。我們亦向能夠檢修石油氣車輛燃料系統的車輛維修工場派發識別標誌，但相關工場必須設有符合我們要求的安全設備及通風系統，以及聘用「第六類勝任人士」進行有關檢修服務。

Keeping LPG Vehicles Safe

Turning to safety in LPG vehicles, much progress was made last year. The regular monitoring of auto-LPG quality continued in a smooth manner. The cyclical peak of fuel tank revalidation of LPG vehicles, required once every five years under the Gas Safety (Gas Supply) Regulations, proceeded smoothly in 2015/16 without disruption to the operation of the city's 22 000 LPG vehicles. This was a result of our coordination with the LPG fuel tank workshops and distributors to ensure sufficient supply of revalidated fuel tanks in the market for LPG taxis and light buses.

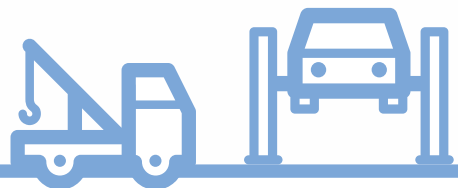
An incident happened in April 2015 at a vehicle repair workshop in Wong Tai Sin, killing three and injuring nine. Apart from investigating into the incident, we took various mitigation measures to prevent such tragedies from recurring, such as stepping up workshop inspections on an ongoing basis. We also tightened up the monitoring and control of LPG fuel pumps in the market to prevent unlawful fuel pump replacement.

Furthermore, to enable vehicle owners, drivers, fleet management agents and the public to easily identify vehicle maintenance workshops (VMWs) that are competent to carry out LPG fuel system servicing works, we started issuing identification cards and certificates to all 1 100 Competent Persons (Class 6) qualified to service LPG vehicle fuel systems for display in their workshop. We also issued identification signage to those VMWs capable of providing services to LPG vehicle fuel system, but only if we were satisfied that they were equipped with the necessary gas safety equipment and ventilation system and had employed Competent Person (Class 6) for carrying out such service.

保障公眾安全

PROTECTING PUBLIC SAFETY

氣體安全 GAS SAFETY



到訪車輛維修工場，向東主解釋「車輛維修工場自願註冊計劃」事宜。
Our team visited vehicle maintenance workshops to explain the Voluntary Registration Scheme for Vehicle Maintenance Workshops to workshop owners.

推出車輛維修工場自願註冊計劃

2015年7月，我們推出了「車輛維修工場自願註冊計劃」。這個計劃有助提升香港車輛維修工場的形象和服務水平，是2013年推出《車輛維修工場約章計劃》後的一個新里程。註冊車輛維修工場須承諾營運質素不低於《車輛維修工場實務指引》在技術、環保、安全、員工培訓、服務和文件紀錄等方面的要求。成功註冊的工場可展示計劃頒發的標誌，方便車主和司機作出識別服務可靠的工場。

截至2016年3月，全港2 700間車輛維修工場當中，已有超過1 200多間工場申請註冊。我們廣泛宣傳，幾乎走訪香港每一間車輛維修工場，鼓勵和協助工場負責人註冊，令註冊工場數目持續上升。

易燃雪種

現時廣泛使用於空調行業的非易燃氫氟烴雪種會導致全球暖化，並可能會根據全球協議的時限內被淘汰。部分現有氫氟烴雪種的替代品本質上是可燃燒的，有導致火警及爆炸的風險。

在2015年，我們與相關部門採取聯合行動，糾正於改裝冷氣系統時涉及使用易燃雪種或石油氣的個案。我們亦與空調及製冷業、物業管理業及機電承辦商的主要持份者會面，提高他們對使用易燃雪種相關法例要求及潛在風險的認知。

Voluntary Registration Scheme for Vehicle Maintenance Workshops Launched

A related development that would help VMWs in Hong Kong boost their image and service standards was the launch of the Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW) in July 2015. The VRSVMW is a step forward following the introduction of the Vehicle Maintenance Workshops Charter in 2013. To register under the scheme, VMWs should pledge to operate at a quality level not lower than that specified in the Practice Guidelines for Vehicle Maintenance Workshops in terms of technical, environmental, safety, staff training, service and documentation requirements, etc. The Registered VMWs can display the scheme's logo for easy identification of workshop that provide reliable services to car drivers and owners.

As of March 2016, over 1 200 out of Hong Kong's 2 700 workshops were registered under VRSVMW. The number is still growing as a result of our extensive outreach programme, in which we visited almost every workshop in Hong Kong with a view to encouraging and facilitating the workshop owners to register under the scheme.

Flammable Refrigerants

The current non-flammable hydrofluorocarbon (HFC) refrigerants widely used in the air-conditioning industry are of global warming potential, and will likely be phased out according to a time table to be established under a worldwide agreement. Some alternatives to existing HFC refrigerants are flammable in nature, and might pose fire or explosion risks.

We carried out joint operations with relevant government department in 2015 to rectify cases involving the use of flammable refrigerants or LPG in retrofitted air-conditioning systems. We also met the key stakeholders in the air-conditioning and refrigeration industries, property management sectors as well as E&M contractors to heighten their awareness of relevant statutory requirements and the potential risks of using flammable refrigerants.



業界人士及公眾出席「車輛維修工場自願註冊計劃」推廣日。
Vehicle maintenance trade members and the public attended the Promotion Day of Voluntary Registration Scheme of Vehicle Maintenance Workshops.

來年展望

2016/17年度將會推行數項與氣體相關的環保計劃，例如煤氣公司會把將軍澳新界東南堆填區經處理的沼氣注入至煤氣網絡作燃氣使用，充分利用原本會被浪費的沼氣，並達至減少碳排放的效果。在氣體安全方面，機電工程署負責審批堆填區沼氣處理設施的建設及現有煤氣裝置的相關改動。

同時，北大嶼山小蠔灣有機資源回收中心將於2017年正式啟用，中心內有機廢物生物分解時產生的沼氣將會用於製熱和發電。中心設有應具報氣體裝置，我們會審批其建造過程，以確保氣體安全。

來年會進一步加強規管石油氣車輛燃料缸，包括鼓勵業界開設新石油氣燃料缸工場，採用石油氣液體交換系統，以排走燃料缸內的石油氣，以及將所有石油氣燃料缸工場登記為註冊氣體供應公司，以更有效地管理工場運作。

在宏觀的層面及業界的支持，我們正準備於2016/17年度推出一個全面系統，以更有效地監控整個覆檢石油氣燃料缸和更換燃料泵的過程，包括引入設計使用期較長的新型石油氣燃料泵；於燃料泵的當眼處標示識別號碼，以便出售和更換燃料泵時作紀錄；以及引入保安標籤系統，確保維修石油氣燃料缸合乎法例要求。

同時，為協助車輛維修業提升服務水平，我們會繼續推廣「車輛維修工場自願註冊計劃」。我們的目標是在2016年，達到全港七成的工場加入計劃。

Developments Next Year

2016/17 will see a few gas-related green developments. An example is the new project where Towngas will utilise the treated landfill gas from the South East New Territories Landfill in Tseung Kwan O for injection into the town gas network as fuel gas. This will make good use of the landfill gas that would otherwise go to waste, and also generate carbon emission reduction benefits. In the gas safety aspect, EMSD is responsible for approving the construction of the landfill gas treatment facilities and associated modifications on existing town gas installations.

Meanwhile, the Organic Waste Treatment Facilities at Siu Ho Wan in North Lantau will commence operation in 2017. The biogas generated from the biological breakdown of the organic waste from the plant will be used for heating and power generation. As the facility comprises notifiable gas installations, we shall be vetting its construction to ensure gas safety.

The coming year will see further efforts to enhance regulatory control of LPG vehicle fuel tanks, including encouraging the trade to set up new LPG fuel tank workshops using LPG liquid transfer system to purge LPG fuel tanks, and registering all LPG fuel tank workshops as Registered Gas Supply Companies for better control of their operations.

On a macro level and with the trade's support, we are working on a comprehensive system to be launched in 2016/17 to better control the entire process of LPG fuel tank revalidation and pump replacement. This includes: introducing a new generation of LPG fuel pumps to the market with longer design life; marking identification number on a pump at a conspicuous spot that can be easily recorded during pump sale and replacement; and introducing a security label system to ensure lawful repair of the fuel tank.

At the same time, we shall continue to promote VRSVMW to help the vehicle maintenance trade raise its service standards. We target to have 70% of workshops in Hong Kong joining VRSVMW in 2016.

保障公眾安全 PROTECTING PUBLIC SAFETY

機械安全 MECHANICAL SAFETY



機電工程署員工正檢查海洋公園的登山纜車。
EMSD staff checking the Ocean Park cable cars.

機械安全

減少意外，提升安全意識

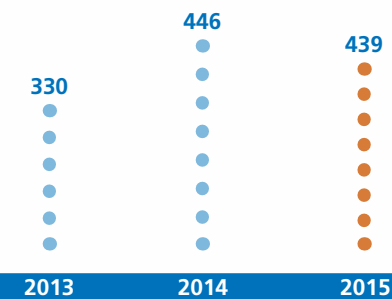
2015/16年度的重點繼續是預防事故發生和提升市民的安全意識，主要針對以下三方面：架空纜車、機動遊戲機、升降機及自動梯。以升降機及自動梯為例，有賴業界及市民的努力，升降機意外宗數由2014年的446宗減至2015年的439宗，自動梯意外宗數則由2014年的1 639宗減至2015年的1 590宗。值得注意的是，2015年因乘客行為導致的升降機及自動梯意外宗數均見下降，表示市民更注重安全。

MECHANICAL SAFETY

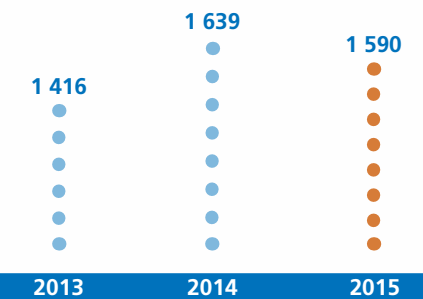
Fewer Incidents, Higher Safety Awareness

The focus in 2015/16 continued to be on incident prevention and raising public safety awareness in three key areas: aerial ropeway, amusement rides, lifts and escalators. Take lifts and escalators as an example. Thanks to the efforts by the trade and the public, the total number of lift incidents declined from 446 in 2014 to 439 in 2015, and the total number of escalator incidents fell from 1 639 in 2014 to 1 590 in 2015. It is noteworthy that both lift and escalator incidents caused by passenger behaviour have declined in 2015, a sign that the public have become more safety conscious.

已報告的升降事故 Reported Lift Incidents



已報告的自動梯事故 Reported Escalator Incidents



監督昂坪360纜車的導軌纜修正工程，大幅提升纜車的可靠度。
Reliability of Ngong Ping 360 saw a significant increase due to monitoring of the track rope "shifting" works.

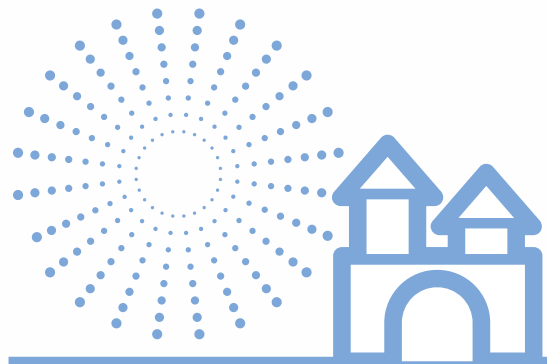
架空纜車改善工程

我們在架空纜車方面的發展重點，包括監督海洋公園登山纜車B線的系統升級工程，以及監察昂坪360纜車的導軌纜修正工程。在2015年，昂坪360纜車的可靠度進一步提升至99.89%，即是纜車平均運作每八小時，才只有不足半分鐘的停頓。

Ropeways Improvement Work

Some key developments in our work on aerial ropeway included overseeing the system upgrade of the Cable Car "B" line in Ocean Park, and monitoring the Ngong Ping 360 (NP360) track rope "shifting" works. Reliability of NP360 has further improved to 99.89% in 2015, meaning there was less than 0.5-minute stoppage for every eight hours of cable car operation.

保障公眾安全

PROTECTING PUBLIC SAFETY
機械安全 MECHANICAL SAFETY

透過嚴格的審批、完善的發牌機制及持續的監察，確保機動遊戲機能安全操作。
Serious assessment, a well-established licensing mechanism and continuous monitoring are key to amusement rides safety.



及時和嚴格審批臨時機動遊戲機

在2015年，我們亦忙於審批臨時機動遊戲機，以確保荔園Super Summer、歐陸嘉年華及東華慈善嘉年華這三個大型嘉年華會的機動遊戲機安全，於假日期間為本港市民及遊客帶來歡樂與刺激。雖然審批時間非常緊迫，我們仍然將保障市民安全放在第一位，在審批機動遊戲機時堅守極高的安全標準。

Timely and Stringent Vetting of Mobile Rides

We were also busy vetting mobile amusement rides in 2015 to ensure the safety of rides in three major carnivals. These included the Lai Yuen Super Summer, the Great European Carnival and the Tung Wah Charity Carnival, bringing fun and excitement to local citizens and tourists in the holiday seasons. Despite the tight timeframes for the events, we put safeguarding the public as the first priority and maintained very high safety standards in vetting and approving the rides.

冷知識 Did You Know?

全港最快及運行距離最長的雙層升降機位於環球貿易廣場，每秒可上升9米，總運行距離為425米。
The fastest double-deck elevator with the longest travelling distance in Hong Kong is in International Commerce Centre with a rated speed of 9m/s and a 425m travelling distance.

嘉年華機動遊戲機的審批
VETTING
CARNIVAL RIDES

溫家豪工程師
Jonathan Wan, Engineer



戶外嘉年華的機動遊戲機深受大眾歡迎。然而，對機動遊戲機的各方面進行審批，確保其安全運作，需要花費大量心力和時間。一般法例部的溫家豪工程師指出，2015年冬季首次同時有兩個大型嘉年華會在港舉行，嘉年華會的主辦商，往往希望在取得租用地後，在最短時間內開幕。雖然時間緊逼，審批工作亦必須確保無論在規管程序和安全標準上，都必須符合規定才可批核。

Outdoor carnival rides are major attractions to the public but it takes a great deal of work behind-the-scenes to vet and ensure their safety. "Winter 2015 was the first time to have two large-scale carnivals at the same period in Hong Kong. The challenge is always the tight time frame as operators are naturally keen to start the rides as soon as possible within a short period after occupancy of the site," Jonathan Wan, engineer in the General Legislation Division (GLD) said. "But we need to safeguard the safety and insist on full compliance with regulatory procedures and safety standards before granting approval", he supplemented.

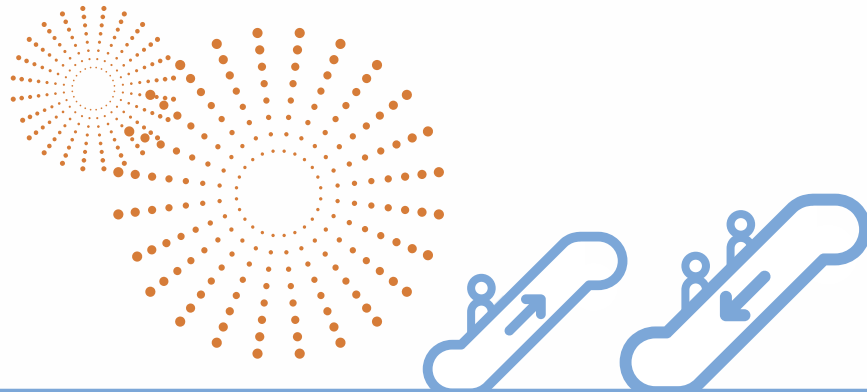
審批過程分為兩部分。首先是機動遊戲機的設計審批。當設計獲批准後，機動遊戲機便會開始安裝，安裝完成後由獨立檢測員檢測，並由一般法例部的負責人員在場監督整個過程。每台機動遊戲機均有一名已獲一般法例部考核及批准的主管人員來監督它的運作和保養工作。只有當符合所有法例要求之後，一般法例部會為機動遊戲機發出一張「使用及操作許可證」。當以為萬事俱備的時候，2015年12月突如其來的連日下雨，卻導致安裝延期。審批團隊唯有日以繼夜地加緊工作，以趕回進度。

The vetting has two stages. First is ride design vetting. With design approved, the rides are then installed and checked by an independent surveyor in the presence of a GLD officer. The operation and maintenance work of each amusement ride is supervised by a Competent Person assessed and approved by GLD. Only when all these requirements are complied with will GLD issue a "permit to use and operate" for the ride. Even with everything well planned, the unexpected rain in December 2015 delayed the installation work, and the team had to work day and night afterwards to make up for the time lost.

溫先生視安全為第一，並非常高興他們的工作不但能讓公眾安全乘坐機動遊戲機，更為他們帶來歡樂，共度佳節。

"Safety is always our priority," he said. "We are happy about our work as safe rides bring happiness to the public in the joyful seasons."

保障公眾安全

PROTECTING PUBLIC SAFETY
機械安全 MECHANICAL SAFETY

我們執行《升降機及自動梯條例》(第618章)，規管本港升降機及自動梯的使用及保養。

We regulate the use and maintenance of lifts and escalators in Hong Kong through the implementation of the Lifts and Escalators Ordinance (Chapter 618).

提升升降機及自動梯行業

為提升升降機服務質素，我們於2015年10月推出「優質升降機服務認可計劃」。這項試行計劃收到94份來自升降機負責人的申請，評分準則乃根據在優化升降機、管理承辦商，以及服務停頓紀錄的表現，由獨立顧問實地核查評分。頒獎典禮於2016年4月舉行，共有45位得獎者獲得嘉許。

香港現有超過60 000部升降機，約半數已使用超過20年。這項計劃有助鼓勵升降機優化工程及提高負責人管理升降機的能力。我們會檢討計劃，決定未來路向。

另一項提高升降機及自動梯承辦商安全表現的措施，是修訂「註冊承辦商表現評級」制度下，為註冊升降機/自動梯承辦商及工程師而設的「表現評估計劃」。已修訂的計劃涵蓋更多違規事項，更能反映承辦商的表現，並進一步協助升降機/自動梯擁有人選擇高質素的維修保養服務承辦商。修訂的計劃已由2016年2月1日起生效。

為提高業界的專業水平，除了舉辦各種技術研討會，向負責人介紹升降機及自動梯的新技術外，我們於2015/16年度向註冊升降機/自動梯承辦商、工程師及工程人員發出三份誠信指引。

審計署署長第66號報告書於2016年4月發表，內容包括對我們監察升降機及自動梯安全運作的意見和建議。有見及此，我們會實施各項必要措施，協助業界提升整體達標率。

Enhancements of the Lift and Escalator Trade

A new initiative to boost quality in lift service was the Quality Lift Service Recognition Scheme launched in October 2015. The pilot scheme attracted 94 applications from Responsible Persons of lifts, and assessment was based on their performance in lift modernisation, management of lift contractors and lift service stoppage records, with on-site verification by an independent consultant. 45 award winners received their prizes in a ceremony in April 2016.

As about 50% of the existing 60 000-plus lifts in Hong Kong are over 20 years' old, such a scheme could be very useful to boost lift modernisation and Responsible Persons' management quality of lift service. We shall review the scheme to decide on the way forward.

Another initiative to step up the safety performance of lift and escalator contractors was revising the Performance Assessment Scheme (PAS) for Registered Lift/Escalator Contractors and Engineers, under the Contractors' Performance Rating System. The revised PAS includes more non-compliance items so as to better reflect the performance of contractors and further assist lift/escalator owners in choosing quality contractors for maintenance and repair services. The revised PAS took effect on 1 February 2016.

To help raise professionalism of the trade, three probity guidelines for registered lift/escalator contractors, engineers and workers were issued in 2015/16, in addition to our holding of various technical seminars to introduce new technologies in lift and escalators to the Responsible Persons.

In response to the Director of Audit's Report No. 66 published in April 2016, which contained comments and suggestions about our work in monitoring the safe operation of lifts and escalators, we shall implement all necessary measures to help the trade raise its overall level of compliance.



修正移交核對表

與此同時，我們收集到業界及市民的意見後，稍為修正了「升降機或自動梯保養工作移交事宜核對表」，例如加入移交前必須由交出和接管保養的承辦商一起實地監察的新規定。我們會繼續私人住宅及商業樓宇升降機的保養價格調查，結果每半年公布一次，令價格更透明。

未來工作

踏入2016/17年度，我們會繼續密切監察海洋公園登山纜車A線的優化工程及昂坪360纜車的導軌纜更換工程，亦會更新現行的機動遊戲機指引，尤其針對受歡迎的臨時機動遊戲機。

升降機及自動梯方面，我們會展開新一輪的業界調查，了解業內人士的工作狀況及面對的挑戰，並與2014年的結果作比較，以協助業界尋找吸引和挽留高質素工人的方案。我們會繼續與職業訓練局(職訓局)合作，職訓局會於2016/17年度推出新的兼讀證書課程，讓經驗豐富的升降機/自動梯工人獲得註冊所需的學歷。

繼2015年12月出版《電梯快訊》創刊號後，我們會繼續出版這刊物，作為定期與負責人及業界分享安全資訊的另一渠道。



出版《電梯快訊》，加強機電工程署與業界、負責人和市民的溝通及信息的交流。
We publish the Lift & Escalator Newsletter to enhance communication and information exchanges between EMSD and the trade, Responsible Persons, as well as the public.

保障公眾安全 PROTECTING PUBLIC SAFETY

鐵路安全 RAILWAY SAFETY



機電工程署員工與工程人員一同檢查機場管理局新購入於香港國際機場營運的無人駕駛列車。
EMSD staff worked with engineering staff to inspect the newly purchased automated people mover by Airport Authority Hong Kong operating in the Hong Kong International Airport.

鐵路安全

事故減少令人鼓舞

去年，鐵路事故的宗數錄得有記錄以來的新低，現有及新鐵路安全規管方面的工作亦穩步發展。

由設備故障及員工行為引起的鐵路事故宗數，由2014年的90宗減少至2015年的新低84宗。過去一年，我們不僅深入調查事故，並且建議香港鐵路有限公司(港鐵)採取更多積極事故預防的措施。鐵路乘客數量上升，事故宗數反而下降，確實令人鼓舞。

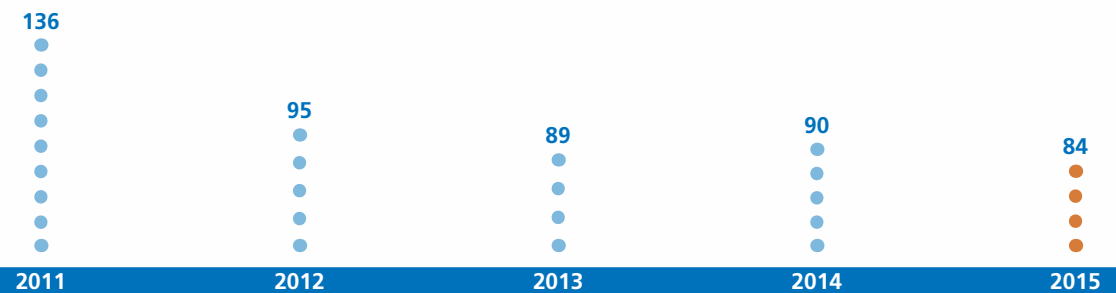
RAILWAY SAFETY

Fewer Incidents Show Encouraging Trend

The past year saw a new low in railway incidents record as well as steady progress in our safety regulatory work for both new and existing lines.

Railway incidents caused by equipment failure and staff behaviour decreased from 90 in 2014 to a new low of 84 in 2015. In the past year, we not only conducted in-depth investigation into incidents, but also suggested the MTR Corporation Limited (MTRCL) to take more pro-active incident prevention measures. The downward incident trend is particularly encouraging in view of the increase in rail passengers.

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



新鐵路線最新發展

繼西港島綫於2014年12月啟用和西營盤站於2015年3月投入服務後，唯一未開放的西營盤站B3出口亦於2016年3月落成，西港島綫所有驗收工作正式完結。另外，於2015年啟用的機場中場客運廊，透過配有新信號系統的無人駕駛列車延綫，連接至一號客運大樓。該無人駕駛列車的伸延於2016年1月獲批准於同年2月啟用，現已全面投入服務。

由於觀塘綫延綫及南港島綫(東段)預期於2016年度後期投入服務，我們忙於在緊逼的時限內檢查鐵路系統和設施。我們的目標是確認兩綫「安全正常」，符合嚴格的安全標準，可於預定日期啟用。

New Railway Lines Update

Further to the opening of the West Island Line in December 2014 and its Sai Ying Pun Station in March 2015, the only outstanding Exit B3 of that station was also opened in March 2016, thus completing all commissioning work for the line. In a different development, the Airport Midfield Concourse opened in 2015 is connected to Terminal 1 via an extension of the Automated People Mover (APM) system with a new signalling system. The APM extension was approved in January 2016 for opening in February in the same year and is in full operation.

As the Kwun Tong Line Extension and South Island Line (East) approach their respective target opening dates later in 2016, we have been busy with numerous inspections of their railway systems and facilities against very tight deadlines. Our target is to confirm both lines as "safe and sound" for operation to begin by the target opening dates, meeting a set of stringent safety standards.



港鐵西營盤站B3出口正式啟用，南港島綫及觀塘延綫亦即將投入服務。
Exit B3 of Sai Ying Pun MTR Station was formally opened; the South Island Line (East) and Kwun Tong Line Extension will soon commence services.

保障公眾安全

PROTECTING PUBLIC SAFETY

鐵路安全 RAILWAY SAFETY



檢查港鐵維修工場的機件，確保機件符合安全要求。
Checking the equipment at the maintenance workshop of MTRCL to ensure the equipment has met the safety requirements.

積極調查事故

2015年11月，荃灣綫荔景及葵芳站之間的鐵路發生路軌裂縫事故，突顯了我們處理事故的積極態度。雖然此乃個別事件，亦不影響鐵路安全，我們仍認真對待，聘請物料專家獨立檢測路軌裂縫，並審視港鐵提交的調查結果。我們亦與港鐵商討，敦促他們採取改善措施，包括加強路軌關鍵位置的人手測試檢查以及調整焊接位的位置，進一步減低同類事故再次出現的機會。

增添人手提升鐵路安全

2015/16年度，鐵路科增添了11個新職位，包括兩個總工程師職位。新添的人手有助我們加強對現有鐵路綫和新鐵路項目的安全監察工作，也加強整體鐵路規管制度。團隊如今更有能力於「點、線、面」三個層次進行日常規管工作，能更全面徹底地審批港鐵的安全系統及表現。「點」的層次是指署方會加強安全巡查的次數和深入程度；「線」的層次是指主動檢視港鐵的維修保養工作流程；「面」的層次則是指會從宏觀的策略角度，去檢討及調校目前用於港鐵的安全規管機制。新增人手亦令我們可調配更多資源與港鐵聯手合作，向市民宣傳安全知識。

Proactive Incident Investigation Approach

A rail crack incident in November 2015 that happened on a section of the rail between Lai King and Kwai Fong stations on the Tsuen Wan Line highlighted our proactive approach to incidents. Though the incident was an isolated case without impact on railway safety, we took it seriously and engaged a material expert to independently examine the rail crack and review the investigation results submitted by MTRCL. We also conferred with and urged MTRCL to take improvement measures including enhancement of manual test at critical locations and adjustment of the weld location to further reduce the possibility of recurrence of similar incidents.

New Capacity Boosts Railway Safety

A total of 11 new posts were created in the Railways Branch in 2015/16, including two Chief Engineers. The new capacity has already helped us enhance safety oversight of existing railway lines and new railway projects, and strengthen the overall railway regulatory regime. The team is also now better equipped to carry out its daily regulatory work at the “point”, “line” and “plane” levels for more comprehensive and thorough vetting of MTRCL’s safety systems and performance. At the “point” level, EMSD will increase the frequency and depth of safety inspections. At the “line” level, it will proactively look into the maintenance workflow of MTRCL. At the “plane” level, it will review and adjust the current safety regulatory regime applied to MTRCL from a macro and strategic perspective. Added capacity also means we can deploy more resources to promote safety to the public, via joint campaigns with MTRCL.

冷知識 Did You Know?

港鐵香港大學站深入地底約70米，是距離地面最深的車站。
HKU is the deepest MTR station with a depth of 70m from ground level.

沙中綫「東西走廊」 迎接八卡車廂列車 EIGHT-CAR TRAINS FOR SHATIN TO CENTRAL LINK-EAST WEST CORRIDOR

朱錦漢工程師
Cavell Chu, Engineer



現時在馬鐵及西鐵綫行駛的列車，將逐漸劃一改為八卡車廂，以應付預計日增的載客量，並確保列車能在沙中綫「東西走廊」的操作系統下運作。朱錦漢先生是鐵路科的工程師，負責監察西鐵綫列車由七卡車廂改為八卡車廂的安全事宜，貢獻良多。

朱先生指：「改裝工程完成後，西鐵綫整體載客能力可提升約百分之十四。」。現時，西鐵綫有28輛七卡列車，自2016年1月起於西鐵車廠逐漸改裝為八卡列車。改裝工程將於2019年完成，以配合沙中綫「東西走廊」的預計通車日期。改裝工序甚多，主要包括在七卡列車中添加一節新車廂，修改車載信號系統以對應八卡列車行駛，以及在車廂內增設動態路線圖及通道端螢幕。

當改裝完成後，港鐵及鐵路科會嚴格地對整列列車進行各種測試。朱先生強調：「改裝後的八卡列車須符合所有安全要求及通過相關測試，以確保列車能安全地接載乘客。」

All existing trains on West Rail Line and Ma On Shan Line have been converting to 8-cars progressively for increasing the overall passenger capacity and also ensuring the compatibility with the operation of the future SCL-EWC. Cavell Chu, engineer of the Railways Branch, made substantial contribution in overseeing the safety aspects of the train conversion of existing 7-car trains of West Rail Line to 8-car trains.

“Upon completion of the train conversion, overall carrying capacity on the West Rail Line will be enhanced by about 14%”, he said. West Rail Line has a total of 28 numbers of 7-car trains which have been progressively converting to 8-car trains by 2019 when SCL-EWC is scheduled to open. Conversion work of the West Rail Line 7-car trains began in January 2016 and is conducted in the West Rail depot. The major conversion work included the insertion of a new trailer car to form 8-car train configuration, modification of trainborne signaling system to cater for 8-car train operation, plus the provision of new features inside the trains such as dynamic route maps and gangway end displays.

Rigorous testing and commissioning of the entire train is conducted by MTRCL and the Railways Branch after the completion of conversion work. “All safety requirements must be satisfied and verified in order to ensure the converted 8-car train is safe for passenger service,” he emphasised.

保障公眾安全

PROTECTING PUBLIC SAFETY

鐵路安全 RAILWAY SAFETY

科技帶來進步

我們支持港鐵應用新科技，例如在即將啟用的南港島綫(東段)安裝超級電容器，用以提升能源效益。西鐵列車亦已安裝動態路線圖，以電腦屏幕顯示更新的資訊，令乘客更感方便。

Improvements via Technology

We are supportive of MTRCL's initiatives to apply new technologies. For example, super capacitors were installed on the to-be-opened South Island Line (East) to boost energy efficiency. Dynamic route maps, which are computer screens that can easily update display information, are being installed in West Rail trains for passengers' greater convenience.



觀塘延綫的何文田站已於2016年10月23日正式啟用。
Ho Man Tin Station of Kwun Tong Line Extension was officially opened on 23 October 2016.



西鐵列車亦已安裝動態路線圖，以電腦屏幕顯示更新的資訊，令乘客更感方便。
Dynamic route maps, which are computer screens that can easily update display information, are being installed in West Rail trains for passengers' greater convenience.



吸收海外經驗

從海外鐵路監管當局經驗中學習，對改善我們的工作非常重要。我們的團隊定期參與國際會議及交流活動，如2015年在南非舉行的國際鐵路安全議會。

為了學習調查事故的技巧，我們一名工程師遠赴英國克蘭菲爾德大學修讀精修課程，亦有其他同事前往新加坡，與當地的車輛管理處交流經驗。

Learning from Overseas Experience

Learning from overseas railway regulators is important to improving our work. Our team regularly participates in international conferences and exchange events, such as the International Railway Safety Council 2015 in South Africa.

To refresh our incident investigation skills, one of our engineers attended an intensive course at Cranfield University in the UK while other colleagues exchanged experience with the Land Transport Agency in Singapore.

來年重任

2016/17年度亦將會是忙碌的一年，除觀塘綫延綫和南港島綫(東段)計劃於本年度啟用外，主要的更新工程，如更換新信號系統，將會全面展開。我們還會準備為預期2018年開始付運的93輛新列車進行安全檢查。

Coming Highlights

2016/17 will be another busy year, as the Kwun Tong Line Extension and South Island Line (East) are scheduled to open this year, while major asset replacement works such as those on the new signaling system will be in full swing. Preparation work on the safety inspections of 93 new rolling stocks, scheduled to commence their delivery in 2018, will also gather speed.



南港島綫(東段)海洋公園站已進入籌備營運階段及展開鐵路系統測試。
Ocean Park Station of South Island Line (East) entered pre-operational phase and testing and preparatory work is underway.



推廣能源效益及節能

PROMOTING ENERGY EFFICIENCY AND CONSERVATION



舉辦「新能源、新世代」太陽能車比賽，提升年青人對可再生能源及能源效益的認識。
The New Energy New Generation Solar Car Competition was organised to enhance young people's knowledge in renewable energy and energy efficiency.

全面實施新能源效益標準

全面實施空調機、雪櫃及洗衣機的新能源效益評級是2015年強制性能源效益標籤計劃的重大成就。新評級標準已於11月25日正式實施，產品須提升其能源效益表現，以獲得一級能源效益標準。我們預計新評級標準將可每年節省約三億度電及減少約21萬噸二氧化碳的排放。為確保新評級標準順利推行，我們在全面實施初期三周內巡查了超過1 200間店舖，而巡查中我們並沒有發現任何不符合條例要求的個案。

FULL IMPLEMENTATION OF NEW ENERGY EFFICIENCY STANDARDS

A major achievement in 2015 was the full implementation of new energy efficiency grading standards for room air-conditioners, refrigerating appliances and washing machines under the Mandatory Energy Efficiency Labelling Scheme (MEELS). Coming into effect on 25 November, products are required to be more energy efficient in order to obtain Grade 1 energy label, and it is expected to save about 300 million kWh of electricity every year with an annual reduction of about 210 000 tonnes of carbon dioxide emission. To ensure a smooth transition to the new standards, over 1 200 shops were inspected without any non-compliance in three weeks' time upon the implementation.

「全民節能」活動

“ENERGY SAVING FOR ALL” CAMPAIGN EVENTS

「慳電熄一熄青年獎」
The Youth Energy Saving Award

2 000 名參賽者
Participants

第四屆「室內溫度節能約章」
The fourth Energy Saving Charter on Indoor Temperature

3 300 機構參加
Participating Organisations



擴大強制性能源效益標籤計劃涵蓋範圍

為協助市民選擇更具能源效益的電器，我們將擴大強制性能源效益標籤計劃的涵蓋範圍，並於本年諮詢及獲得立法會環境事務委員會、業界及其他持份者的支持。屆時，更多類別的電器將會納入計劃中，包括電視機、儲水式電熱水器和電磁爐，而現時空調機及洗衣機在計劃內的涵蓋範圍亦將會擴展。在計劃內現有及將納入的產品，合共佔家用每年耗電量約七成。條例的修訂正在準備中，並預計於2017年提交立法會進行審議。



機電工程署同事定期巡查電器舖，檢查供應商有否為電器妥善地貼上「U1能源標籤」。
EMSD staff performs regular inspection at electronic appliance shops to check if “U1 energy labels” are affixed on prescribed electrical products.

EXTENSION OF PRODUCT COVERAGE UNDER MEELS

Going forward, to help buyer make more energy efficient choices, preparation work to extend product coverage under MEELS has made remarkable progress this year through obtaining views and support from Legislative Council Panel on Environmental Affairs, trades and other stakeholders. More products will be covered, such as televisions, storage type electric water heaters and induction cookers. The existing coverage of room air-conditioners and washing machines will also be extended. Coupled with existing products under MEELS, they account for about 70% of total annual electricity consumption in the residential sector. The relevant draft legislative amendments for the Legislative Council are being prepared with a view to be submitted in 2017.

? 冷知識 Did You Know?

目前香港最大的太陽能光伏系統位於南丫島發電站，這個系統於2010年7月開始運作。
Currently the largest solar PV system in Hong Kong is at the Lamma Power Station which commenced operation in July 2010.

推廣能源效益及節能 PROMOTING ENERGY EFFICIENCY AND CONSERVATION



環境局與機電署推行「全民節能」運動，鼓勵青年人節約能源。左圖為「慳電熄一熄青年獎」頒獎典禮。
The Environment Bureau and EMSD jointly launched the “Energy Saving for All Campaign” to encourage energy-saving among teenagers. Left picture shows the Youth Energy Saving Award prize presentation ceremony.

「全民節能」活動

2015/16年度我們舉辦了多場節能活動，是繁忙而精彩的一年。在2015年5月開鑼的「全民節能2015」活動下，「慳電熄一熄青年獎」吸引了超過2 000名參賽者，以創意推動節能。勝出的隊伍於2016年6月的頒獎典禮中獲贈現金獎，他們將現金獎捐贈給心儀的非政府機構。優勝者更於2016年8月在署長帶領下前往丹麥及瑞典，參觀該國的低碳城市。他們將於2016年11月與公眾分享是次旅程的所見所聞。

與此同時，「新能源、新世代」太陽能車比賽成功吸引12隊大、中學隊伍參與。他們親自設計、製作及駕駛太陽能車，並於2016年1月在香港科學園的決賽日中，角逐多個獎項。

2015年夏季，我們舉辦了第四屆「室內溫度節約章」。除發展商、物業管理公司、商舖、辦公室、住宅及屋苑外，我們邀請非政府機構參與。是年度的約章吸引了上述界別逾3 000個機構參加，他們承諾於六月至九月將室內平均溫度控制於攝氏24至26度之間。

這些社區活動特別以年輕人及學生為對象，藉以希望他們影響其親友，並將節約能源的信息一傳十、十傳百。



“ENERGY SAVING FOR ALL” CAMPAIGN EVENTS

Many energy saving events made 2015/16 busy and vibrant. Under the “Energy Saving for All 2015” Campaign that began in May 2015, the Youth Energy Saving Award attracted over 2 000 participants to implement creative energy saving measures. The winning teams received cash prizes which were in turn donated to NGOs of their choice at a prize presentation ceremony in June 2016. The winners went on a study trip to Denmark and Sweden scheduled for August 2016, led by the Director of Electrical and Mechanical Services, to learn about low-carbon green cities. The trip will be followed by a sharing session with the public in November 2016.

Meanwhile, the New Energy New Generation Solar Car Competition attracted 12 teams from universities and secondary schools to take part in the solar car design, construction and race event. The finale took place in January 2016 when the teams’ solar cars competed at Hong Kong Science Park for several awards.

The summer of 2015 also saw the fourth Energy Saving Charter on Indoor Temperature, this time adding NGOs as a new category in addition to developers, property management companies, shops, offices, residential buildings and housing estates. The 2015 Charter attracted more than 3 000 participating organisations from all these sectors, pledging to maintain an average indoor temperature between 24 and 26 degree Celsius from June to September.

These community events aimed to engage youth and students in particular, so that they would influence their friends and families to create a multiplier effect in spreading the energy saving message.

學習能源效益 不分老幼 TEACHING CHILDREN ENERGY EFFICIENCY

鍾劍泉工程師
K. C. Chung, Engineer



艱深的算術、複雜的圖則，對我們的工程師也許是輕而易舉的事。不過，要讓小朋友明白何謂「能源效益」，可能會難倒不少工程師了。能源效益事務處的鍾劍泉工程師，2015年7月起接受了這項「艱鉅」的工作，務求用生動淺白的語言，教導小朋友節能，並鼓勵他們參加本署和環境局合辦的「慳電熄一熄青年獎」。

2015年7月10日，一群社區中心的小朋友，前往本署總部大樓參觀。鍾先生看着小朋友魚貫進入會議室，待他們坐好後，便播放簡報，開始介紹。首先映入小朋友眼簾的是一隻「慳神」，小朋友都認得這隻棕色的生物是「大咗鬼」，但鍾先生卻說，「大咗鬼」已學懂節能，進化成「慳神」。接着，鍾先生逐步向小朋友解釋節能的重要，並分享如何簡單地在家中節省能源，如關掉不須使用的電器，小朋友都聽得津津有味。

除了向本署參觀的訪客介紹「慳電熄一熄青年獎」外，鍾先生還在2015年9月新學年開始後，到訪多間學校，在禮堂裡向全校同學介紹此比賽。鍾先生的努力，吸引了逾2 000名大、中、小學生及公眾人士參與。比賽於2016年上旬結束，共30名學生分別獲得其所屬的組別的「白金級」，獲邀參加本地及海外學習團，鍾先生亦隨團出席。

Even difficult calculation and complicated graphs are rather easy to our engineers but how about teaching children what “energy efficiency” is? In July 2015, K. C. Chung, engineer of Energy Efficiency Office, accepted this challenge, trying to explain the concept of “energy efficiency” through vivid and simple words and to promote the Youth Energy Saving Award co-organised with Environment Bureau.

On 10 July 2015, a group of children visited EMSD Headquarters Building. Mr Chung looked at the children rushing into the Conference Room, waited for them to be seated, and started his powerpoint presentation. The children were happy to be greeted by “Hanson” but they all recognised it as Big Waster. Mr Chung told the children that Big Waster had evolved into Hanson and he is now a master in energy-saving. He continued to share with the children the importance of energy saving and some simple methods to save energy at home, like turning off unused electrical appliances. The children all listened to his sharing with great interest.

Mr Chung’s promotion of the Youth Energy Saving Award was not limited to visitors to EMSD. Once the school year had begun in September 2015, Mr Chung visited many schools, introducing this Award in large school halls to all their students. His endeavor bore fruits. Over 2 000 students from universities, secondary and primary schools, as well as the public joined the Award. The activity ended in early 2016, with 30 students gaining the “Platinum” award and were invited to attend local and overseas study missions, with Mr Chung also attending.

修訂技術指引

《可再生能源發電系統與電網接駁技術指引(2016年版)》現已推出，供使用太陽能光伏板發電的用戶參考。新版本的《指引》是2007年《指引》的修訂版本，反映了自2007年起的科技轉變。新《指引》闡釋了再生能源發電系統的各方面事項，如安全考慮、設備保護、可靠性、測試與試運等，並介紹如何向電力公司申請將再生能源發電系統接駁至電網。

TECHNICAL GUIDELINES UPDATE

To cater for the needs of those generating electricity with renewable energy power systems, we have published the latest Technical Guidelines on Grid Connection of Renewable Energy Power Systems (2016 Edition) to reflect technological changes since the 2007 edition. The Technical Guidelines address various aspects of renewable energy power generation systems such as safety, equipment protection, reliability, testing and commissioning etc, and outlines how to submit applications to the power company concerned for connecting the renewable energy power generation systems to its grid.

推廣能源效益及節能 PROMOTING ENERGY EFFICIENCY AND CONSERVATION



《建築物能源效益守則》2015年版及《能源審核守則》2015年版更緊貼科技發展。
The 2015 editions of Building Energy Code and Energy Audit Code were revised according to the latest technological development.

符合《建築物能源效益條例》要求表現良好

《建築物能源效益條例》於2012年推出後，大部分個案都符合《條例》要求，表現良好。2015/16年度，檢控數字為零，亦只有79宗不符《條例》要求的個案獲發敦促改善通知書。主要不符《條例》要求的個案，多見於舊樓宇或業權分散的大廈，它們往往無法如期於完成能源審核。幸好，大部分不符《條例》要求的個案，在我們發出敦促改善通知書後，已着手改善。我們將加強這方面的公眾教育，提醒業主及其代表者違反《條例》的後果。

《建築物能源效益守則》2015年版刊憲頒布

在推廣建築物能源效益方面，2015/16年度的一個里程碑是於2015年12月，據《條例》第40節，刊憲頒布《建築物能源效益守則》2015年版。《守則》針對新建建築物及現有建築物的部分分別於2016年6月及9月生效。

新版本的《守則》，經深入諮詢業界及其他持份者而成，全面地檢討及修訂2012版本《守則》的內容。據新版本的《守則》，建築物須設有日光感應控制、自動梯自動減速系統及升降機再生制動系統等能有效省電的設備，以進一步提升建築物能源效益及減少碳排放。

《能源審核守則》2015年版亦於2015年12月刊憲頒布，並於2016年6月生效。《能源審核守則》2015年版將採用與《建築物能源效益守則》一致的詞彙，以釐清《條例》對能源審核的要求。

由於兩份《守則》須每三年檢討一次，我們現已開始《守則》2018年版的諮詢工作。兩份《守則》亦是本署2015年12月周年傳媒聚會的焦點，而《守則》則於傳媒聚會後數天刊憲頒布。傳媒對《守則》深感興趣，並作廣泛報道。



GOOD COMPLIANCE WITH BEEO

Overall compliance with the Buildings Energy Efficiency Ordinance (BEEO) since the commencement of its implementation in 2012 has been good, with zero prosecution in 2015/16. A total of 79 improvement notices were issued in 2015/16 for non-compliance cases. The key non-compliances were failure to complete energy audits before the prescribed date, especially in old buildings with dispersed property ownership. Most of the non-compliances have been rectified upon the owners' receipt of our issued improvement notices. We shall step up public education work in this area and alert the property owners and their representatives to the consequences of non-compliance.

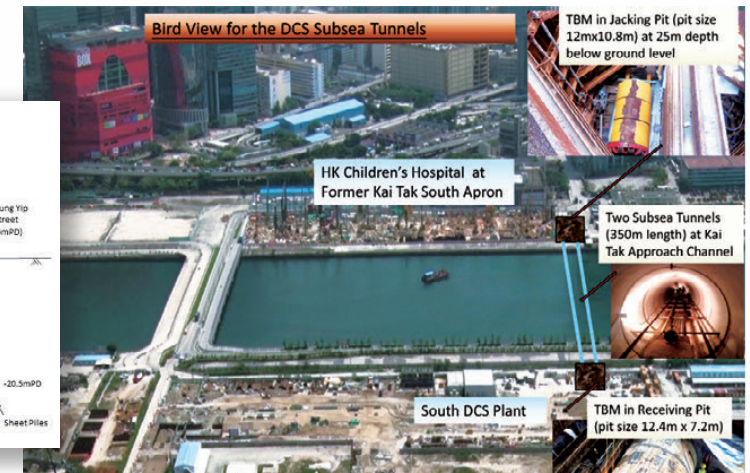
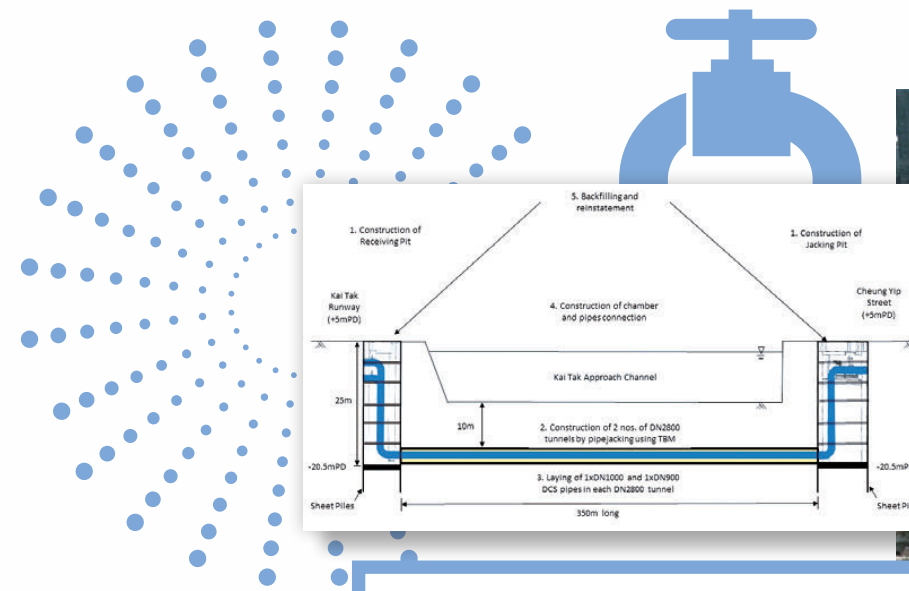
BUILDING ENERGY CODES 2015 EDITION GAZETTED

As to building energy efficiency, the milestone in 2015/16 was gazetting of the upgraded Code of Practice for Energy Efficiency of Building Services Installation in December 2015, pursuant to section 40 of BEEO. The Code will take effect in June 2016 for newly constructed buildings and September 2016 for existing buildings.

This 2015 edition of the Code is the outcome of detailed consultation with the trade and other stakeholders to review and upgrade the 2012 edition in a comprehensive manner. The aim is to further enhance building energy efficiency and reduce carbon emissions by, for example, requiring buildings to use technologies like daylight responsive control, automatic speed reduction for escalators and regenerative braking system for lifts which can substantially reduce electricity consumption.

Also gazetted in December 2015 was the upgraded Code of Practice for Building Energy Audit, effective in June 2016, giving more clarity to the energy audit requirements of the BEEO by improving the consistency of the Code such as the adoption of consistent terminologies. As both Codes are reviewed every three years, we have already started consultation work on the 2018 editions.

The Codes were also the focus of EMSD's annual media gathering held in December 2015, just a few days before the gazette date, generating much interest and coverage.



啟德區域供冷系統的客戶包括啟德郵輪碼頭、晴朗商場、工業貿易大樓及兩所學校。
The DCS at KTD provides district cooling services to the Kai Tak Cruise Terminal, Ching Long Shopping Centre, the Trade and Industry Tower, and two schools.



機電工程署員工正檢查啟德區域供冷系統的喉管及裝置。
EMSD staff checking pipes and installations at the DCS at KTD.

區域供冷系統的進展

在能源效益基礎建設方面，啟德區域供冷系統於2015/16年度屢有突破。系統現向啟德郵輪碼頭、晴朗商場及工業貿易大樓提供冷凍水，而本年度啟晴邨旁的兩所學校亦加入供冷系統的網絡。

我們已完成鑽挖一條25米深、穿越啟德明渠的海底隧道。該海底隧道將接駁區域供冷系統南廠及日後的用戶，如香港兒童醫院，相關喉管工程亦正進行。此隧道將連接原位於啟德南停機坪的建築物至區域供冷系統，甚為重要。

DISTRICT COOLING SYSTEM PROGRESS

On the energy efficiency infrastructure front, the District Cooling System (DCS) at Kai Tak Development made progress as planned in 2015/16, with two schools next to Kai Ching Estate newly connected to the system in addition to the three existing consumers, i.e. Kai Tak Cruise Terminal, Ching Long Shopping Centre and the Trade and Industry Tower.

Boring works for a 25-metre deep sub-sea tunnel across the Kai Tak Approach Channel that will connect the future consumers, including the Hong Kong Children's Hospital to the DCS South Plant was also completed, with pipework construction in progress. This tunnel is critical as it will connect future consumers in the former Kai Tak south apron area to the DCS South Plant.

推廣能源效益及節能

PROMOTING ENERGY EFFICIENCY AND CONSERVATION

向海外規管機構學習

能源效益事務處經常借鑑美國、歐盟、澳洲及南韓等海外同類型機構，參考其能源表現標準及做法。我們的工程師郭穎妍女士榮獲能源工程師學會「2016年亞太區能源管理經理」，以表揚她於區域內推廣能源效益的貢獻。

LEARNING FROM OVERSEAS REGULATORS

The Energy Efficiency Office is constantly benchmarking with its overseas counterparts in US, EU, Australia and South Korea in energy performance standards and related practices. We are also delighted that our engineer Ms Wendy Kwok was named “Asia Pacific Rim Region Energy Manager of the Year for 2016” by the Association of Energy Engineers for her contributions in promoting energy efficiency in the region.



能源效益事務處經常借鑑美國、歐盟、澳洲及南韓等海外同類型機構，圖示2016年世界能源工程會議。

The Energy Efficiency Office is constantly benchmarking with its overseas counterparts in US, EU, Australia and South Korea in energy performance standards and related practices. Photo showing World Energy Engineering Congress 2016.

推廣節能有方 榮獲學會肯定 AEE AWARD RECOGNISES LEADERSHIP ROLE IN PROMOTING ENERGY EFFICIENCY

郭穎妍工程師
Wendy Kwok, Engineer



能源效益事務處的郭穎妍工程師榮獲美國能源工程師學會「2016年亞太區能源管理經理」。此項殊榮肯定了我們在區域內推廣能源效益的領導實力。

郭女士於2009年加入能源效益事務處。自此，她協助草擬《建築物能源效益條例》、批核註冊能源效益評核人的申請，以及向環保機構推廣建築物能源效益。她亦主導籌劃及推出連串公眾教育活動，包括本署總部大樓教育徑的公眾導覽，以及學校外展計劃。早於2012年，郭女士已獲香港工程師學會頒授「年青綠色領袖」，以嘉許她推動環保教育及能源節約不遺餘力。

郭女士很高興能有機會參與各種工作，令她獲益良多。她亦感謝同事的支持，並說：「我們的同事積極探索新方法，令工作能及早完成目標。社區人士主動參與節能，亦令我們的工作事半功倍。」郭女士將於2016年9月遠赴華盛頓領取獎項，並藉此機會與海外人士交流，參觀當地的綠色建築。

Wendy Kwok, engineer in our Energy Efficiency Office (EEO), was named Asia Pacific Rim Region Energy Manager of the Year for 2016 by the US-based Association of Energy Engineers. The prestigious award recognises our leadership role in promoting energy efficiency in the region.

Since joining EEO in 2009, Ms Kwok has contributed to the early drafting stages of the Buildings Energy Efficiency Ordinance, the vetting of Registered Energy Assessor applications as well as promoting building energy efficiency with green organisations. She also led the planning and implementation of various public education programmes including the EMSD Headquarters Education Path guided tours for the public as well as school outreach programme. She won the “Young Green Leader Award” by the Hong Kong Institution of Engineers in 2012 for her contributions to green education and energy conservation.

She is grateful for the opportunity to have participated in a variety of rewarding initiatives, and appreciates the team's support. “Everyone in the office is enthusiastic and eager to explore new and better ways to achieve our objectives. It also helps that the community is supportive of energy efficiency, making our work more effective,” she said. She will receive the award in Washington D C in September 2016 when she will take the opportunity to network with overseas counterparts and visit green buildings.

推廣能源效益及節能

PROMOTING ENERGY EFFICIENCY AND CONSERVATION

2016/17年度重點

2016/17將會是忙碌的一年。社區層面上，「全民節能2016」運動下的「慳神大比拼」於2016年6月推出。此計劃旨在表揚一些採用能源效益科技、應用節能最佳操作模式，及向租戶和用戶推廣節能，而表現良好的機構。「慳神大比拼」的勝出者將協助我們，向其他指定界別的機構宣傳節約能源。

「節約章2016」在今年夏季新設「中小學和專上院校」組別。涵蓋範圍除原有維持室內溫度至適當水平外，將納入關掉不須使用的電器及採購具能源效益的電器。

HIGHLIGHTS IN 2016/17

2016/17 will be another busy year. At the community level, a new “Energy Saving Championship Scheme” will be launched in June 2016 as part of the “Energy Saving for All 2016” campaign. This new Scheme aims to commend organisations that have excellent energy saving performance in adopting energy efficient technologies and applying operational optimisation of energy consuming systems as well as promoting energy saving to their tenants and occupants. Winners of the Scheme will help promoting energy saving to other organisations in specific sectors.

The Energy Saving Charter 2016 this summer will include a new category of schools and post-secondary education institutions. The scope will also be extended to cover switching off electrical appliances when they are not in use and procuring energy efficient appliances, in addition to maintaining the appropriate indoor air temperature.



新建建築物須安裝自動梯自動減速系統。若自動梯閒置三分鐘，將停止運作，以節省能源。

Escalators in newly constructed buildings are required to install automatic speed reduction devices which stop the motion of escalators that have idled for three minutes to save energy.

冷知識 Did You Know?

啟德區域供冷系統總製冷量為284兆瓦，足以供應40座30層高商業大廈的冷量需求。
The cooling capacity of Kai Tak District Cooling System is 284 MWr, which is equivalent to cooling supply for 40 nos. of 30-storey high commercial buildings.

強性能源效益標籤計劃方面，如擴大涵蓋範圍的進展順利，我們希望條例的修訂草案可於2017年內提交立法會進行審議，以涵蓋更多產品，協助市民選擇更具能源效益的電器。

為達到2015年度行政長官《施政報告》當中「減少政府樓宇耗電量5%」的目標，我們將繼續監察最後一批政府建築物的能源審核進程，該批建築物被視為節約能源的重點。

《在村屋安裝的家庭式太陽能熱水系統指南》亦將於明年修訂。《水冷式空調系統實務守則》修訂版亦於下年出版，以符合最新國際標準。據最近調查顯示，儘管違規冷卻塔數目與2010年的調查結果相比下降約四成，但退伍軍人症數字卻於2015年錄得66宗的新高。因此，我們將持續監察冷卻塔，向建築物擁有人及業界宣傳正確安裝及維修冷卻塔。

On the extension under MEELS, if all goes well, we hope the legislative amendments for the Legislative Council would be submitted in 2017 to cover more types of products and help buyer make more energy efficient choices.

Meanwhile we shall continue to oversee the energy audits for the final batch of government buildings, which were identified as the key source of energy savings, to fulfil the target of 5% reduction in energy consumption within Government over five years in accordance with the Chief Executive's 2015 Policy Address.

It is also time for a new edition of our Guidance Notes for Household-scale Solar Water Heating Systems at Village House which will be reviewed next year. An updated Code of Practice for Fresh Water Cooling Towers will be published next year to better align with the latest international standards. Though a recent survey showed that the number of unauthorised cooling towers has dropped by some 40% since the previous survey in 2010, Legionnaires' disease cases hit a record high of 66 in 2015. We shall continue to inspect cooling towers and promote their proper installation and maintenance to building owners and the trade.



於「淡水冷卻塔和建築物能源效益的規管及實務」技術研討會介紹淡水冷卻塔計劃及《建築物能源效益條例》。

Our team introduced the Fresh Water Cooling Towers Scheme and the Building Energy Efficiency Ordinance at the Technical Forum on Control and Practice of Fresh Water Cooling Towers and Buildings Energy Efficiency.

提高公眾安全及節能意識 RAISING PUBLIC AWARENESS OF SAFETY AND ENERGY CONSERVATION



「優質升降機服務認可計劃」頒獎典禮，嘉許升降機負責人和註冊升降機承辦商的努力及傑出表現。

The award presentation ceremony of the Quality Lift Service Recognition Scheme which commended responsible persons and registered lift contractors for their endeavours and outstanding performance.

要令大眾安心，我們必要讓大眾遵從良好習慣，注意安全事項及能源效益。因此，規管服務一直着重推廣公眾教育。在2015/16年度，我們雙管齊下，緊密聯繫受規管的業界及大眾，活動重點如下。

聯繫業界

各部別已設有良好的溝通渠道，與受規管的業界保持聯繫，包括出版通訊、單張及小冊子、網上最新消息、定期會面、座談會及會議、持續進修發展計劃、獎勵計劃，以及特別為各工作小組和委員會而設的活動。我們亦積極地聯絡業界商會、工會、專業團隊及培訓機構，了解他們的看法，並就特別議題調解。

Public education is a priority at Regulatory Services, as only when most people in the community follow good practices in safety and energy efficiency can we enjoy peace of mind. In 2015/16 we have adhered to the two-pronged approach of communicating with the regulated trades and the general public. The following are the highlights.

ENGAGING WITH THE TRADES

Each of our Divisions has well established channels for ongoing communication with its regulated trades, ranging from newsletters, leaflets and brochures, online news updates, regular meetings, briefings/seminars and conferences, continuous professional development programmes, award schemes and special events to various working groups and committees. We also actively engage with trade associations, workers' unions, professional bodies and training institutes to solicit their views and resolve specific issues.

獎勵計劃

獎勵和比賽，不但能提高同業、公司及機構的認受及動力，並能鼓勵他們遵從相關規定，精益求精。舉例而言，我們每年度所推出的傑出註冊電業工程人員選舉，已成為電業界的一項盛事。

數項新獎勵計劃亦於2015/16年推出。優質升降機服務認可計劃於2015年10月推行，旨在鼓勵升降機負責人，加強更新升降機及管理升降機承辦商。此計劃得到各方熱烈響應，在94張申請名單中，有45位負責人獲獎。

瓶裝石油氣分銷商安全表現評級計劃亦於2016年初推出，共有184個本港五間註冊氣體供應公司轄下的分銷商加入。參加者將獲得計劃的標誌，以及列有金、銀或銅評級的證書一張，讓分銷商張貼在其店鋪內，以供公眾參閱。承蒙業界支持，此計劃進一步提升瓶裝石油氣業務的安全水平及透明度，惠及各界，至為重要。

註冊計劃

我們亦推出自願註冊計劃，讓業界提升其服務水準及專業形象。值得一提的是於2015年7月推出的車輛維修工場自願註冊計劃，成功註冊的工場可展示計劃頒發的證書和標誌，方便車主和司機識別。

Award Schemes

Awards and competitions provide recognition and incentives to trade practitioners, companies and organisations and are good tools to encourage compliance and best practices. An example is our Outstanding Registered Electrical Worker Awards Scheme 2015 which has become a signature event for the electrical trade.

Several new award schemes were introduced in 2015/16, such as the Quality Lift Service Recognition Scheme launched in October 2015 aiming to encourage Responsible Persons (RPs) of lifts to enhance their performance in lift modernisation and management of lift contractors. The scheme attracted an enthusiastic response of 94 applications and 45 RPs won the awards.

Another new scheme was the LPG Cylinder Distributor Safety Performance Recognition Scheme launched in early 2016. All 184 distributors under Hong Kong's five Registered Gas Supply Companies (RGSCs) joined the scheme and were awarded the scheme logo together with a certificate indicating the distributor's rating — gold, silver, or copper — for displaying at its shop for the public's reference. Thanks to support from the trade, the scheme is an important step to further raise the level of safety and transparency of the LPG cylinder business for everyone's benefit.

Registration Schemes

Voluntary registration schemes are another way to facilitate the trades to raise their service standards and boost their professional image. A case in point is a new scheme called Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW) launched in July 2015. Registered workshops can display the certificate and logo awarded under the registration scheme for easy identification by car owners and drivers.



業界人士和公眾出席「車輛維修工場自願註冊計劃」推廣日。

Vehicle maintenance trade members and the public attended the Promotion Day of Voluntary Registration Scheme of Vehicle Maintenance Workshop.

提高公眾安全及節能意識 RAISING PUBLIC AWARENESS OF SAFETY AND ENERGY CONSERVATION

諮詢業界

我們重視諮詢業界，以確保受規管的業界的意見及關注事項獲得充分考慮。我們因應需要，透過與委員會及工作小組會面，並舉辦會議，加強討論，以諮詢業界。諮詢業界，不但讓我們聆聽到業界對我們規管工作寶貴的意見，更讓我們成功推出多項嶄新的活動及計劃。

以能源效益的工作為例，2015年12月，我們刊憲頒布《建築物能源效益守則》及《能源審核守則》2015年版。兩份守則經技術工作小組多番修改，錘鍊而成。技術工作小組由六個工作小組組成，成員來自政府部門(包括本署)、業界商會、專業團體、顧問或承建商組織，以及學界，能廣泛地涵蓋各界的知識及意見。

類似的成果也見於規管升降機及自動梯方面。升降機及自動梯安全諮詢委員會對我們加強規管升降機及自動梯，提供多番協助。2016年2月，我們修改為升降機/自動梯承辦商而設的表現評級計劃時，委員會便提出不少意見。委員會亦讓我們了解到業界運作的事宜，如定價、薪金及工作環境等，這些事項亦與我們的工作息息相關。而車輛維修技術諮詢委員會，亦鼎力支持我們的工作，使我們於2015年7月順利推出車輛維修工場自願註冊計劃。



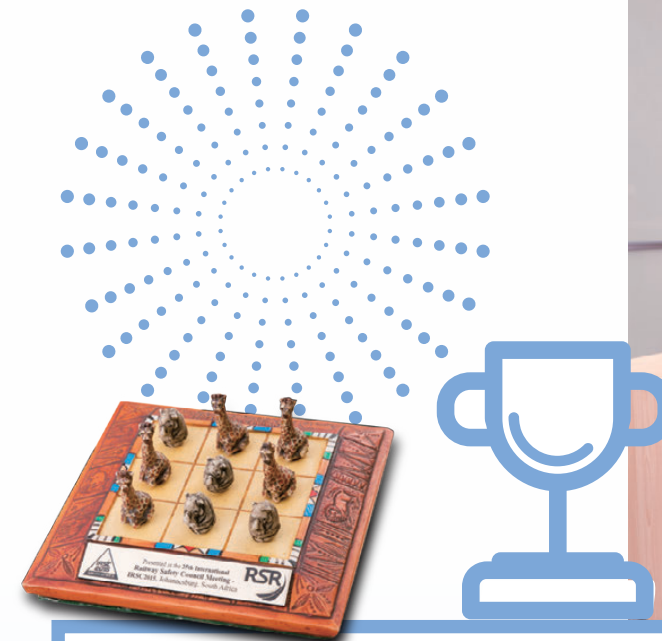
與升降機及自動梯安全諮詢委員會會面，聽取業界反映行業運作事宜。
Meeting with the Lift and Escalator Safety Advisory Committee has helped us understand practical trade issues.

Trade Consultation

Consultation with the trades is an important part of our work to make sure that the regulatees' views and concerns are taken into full account. Trade consultation is done via committees, working groups, meetings and discussions as necessary. These consultations have spearheaded the successful launch of many innovative trade events and schemes in addition to giving us precious feedback on our regulatory measures.

On the energy efficiency front for example, the upgraded 2015 editions of the Code of Practice for Energy Efficiency of Building Services Installation and the upgraded Code of Practice for Building Energy Audit, both gazetted in December 2015, were the results of numerous deliberations by a Technical Taskforce comprising six Working Groups. These consist of representatives from Government including EMSD, trade associations, professional institutes, consultant/contractor associations and the academia to reflect a wide spectrum of knowledge and views.

By the same token, the Lift and Escalator Safety Advisory Committee has helped us come up with enhancements to various regulatory tools, including the revised Performance Assessment Scheme for Registered Lift/Escalator Contractors that took effect in February 2016. This committee also provides channels for us to understand practical trade issues such as prices, wages and working conditions which are relevant to our work. In addition, the Vehicle Maintenance Technical Advisory Committee also gave us valuable support and input that led to the smooth launch of VRSVMW in July 2015.



2015年，鐵路科於南非舉行的議會榮獲「最佳論文獎」。
Railways Branch won a "Best Paper Award" at 2015 conference in South Africa.



持續專業發展

我們舉辦簡介會、講座及座談會，協助業界同人持續邁向專業。每年，本署均與港九電器工程電業器材職工會及香港電器工程商會舉辦年度技術座談會，深受電業界歡迎。

Continuous Professional Development

We are committed to facilitating the practitioners' continuous professional growth via briefings, seminars and symposiums. An example is the highly popular Annual Technical Seminar for the electrical trade, jointly organised by EMSD with the Hong Kong & Kowloon Electrical Engineering & Appliances Trade Workers Union and the Hong Kong Electrical Contractors' Association.

國際交流

互聯網讓市民實時了解世界各地的消息及資訊。而作為規管者，我們亦須時刻裝備自己，學習最新科技發展，緊貼社會熱潮，並向他國的規管機構借鏡。以能源效益事務為例，我們的同事定期出席亞太經合組織成員國舉辦的會議，積極結交參與者，了解更多最新發展。

International Exchange

As the Internet brings our citizens real-time news and information from all corners of the globe, we as regulators must constantly update ourselves on the latest technologies and social trends as well as learn from regulators in other countries. In energy efficiency matters for example, our colleagues regular attend various international APEC energy-related meetings and conferences to network and find out more about current developments.

鐵路科的同事每年都出席國際鐵路安全議會，更在2015年於南非舉行的議會中，憑〈使用自動月台閘門以減低安全風險〉榮獲「最佳論文獎」。我們多個部別，亦已成立學習團，學習外國同類機構的規管管理模式及日常運作。與內地交流方面，本署與國家質量監督檢驗檢疫總局的合作，已達十三年之久。雙方在資訊分享、培訓，以及就事件和不符標準的產品互相通報合作，成果豐碩。

Our Railways Branch attends the International Railway Safety Council (IRSC) every year, and won a "Best Paper Award" for our paper "Application of Automatic Platform Gates to Reduce Safety Risks" at IRSC 2015 in South Africa. Many of our Divisions have already set up study groups to learn about the regulatory regimes and practices of their overseas counterparts. As to the Mainland, EMSD's cooperation with the China General Administration of Quality Supervision, Inspection and Quarantine is now in its 13th year. The cooperation has yielded fruitful results in information sharing, training and mutual notification of incidents and non-compliant products.

提高公眾安全及節能意識 RAISING PUBLIC AWARENESS OF SAFETY AND ENERGY CONSERVATION

聯繫公眾

我們的規管工作，以讓公眾「安全安心」為本。多年來，我們了解到，要秉承此目標，我們必須時刻讓公眾了解本署的運作，亦須確保資訊能公開流通。當我們能向媒體提供充分的資訊，並以專業的態度，從速回應他們的查詢，公眾將能透過媒體報道，對我們的工作逐漸建立信任和信心，並感安心。

宣傳方面，我們採用各種線上及離線工具，並舉辦運動和活動，向男女老幼推廣機電安全及能源效益。本年，本署的網頁亦有所更新，操作簡易，更方便大眾瀏覽。

與傳媒合作

回應傳媒查詢，以及聯繫新聞從業員，是我們通訊工作中不可或缺的一環。我們非常重視與傳媒合作，時刻積極用心，開誠布公。最近一次的年度傳媒聚會，於2015年12月7日假本署總部大樓舉行，以數天後刊憲頒布的兩份建築物能源守則為主題，吸引了逾二十多位新聞從業員出席。會後，我們安排與會者參觀工業貿易大樓，介紹大樓內符合新守則的一些節能設備。

ENGAGING WITH THE PUBLIC

Over the years we have learnt that to enable the public to enjoy “safety and peace of mind” which is the ultimate goal of our regulatory work, we must be highly transparent in our operations and information dissemination. If we provide adequate information to the media and address their queries in a professional and timely manner, the public will gradually develop trust and confidence in our work via media reports, giving them peace of mind.

On the publicity side, numerous online and offline tools, campaigns and events were used during the year to promote E&M safety and energy efficiency to the general public of all ages. EMSD's website was also revamped during the year, with a more user-friendly design and is easier to navigate.

Working with the Media

Handling media enquiries and interacting with journalists is a key part of our daily communications work which we take very seriously, always striving to be pro-active and highly transparent. Our most recent annual media gathering was held at EMSD Headquarters on 7 December 2015, just a few days prior to the gazetting of the upgraded Building Energy Code, which made the new Code an apt theme for the event. Over 20 journalists attended the gathering, followed by a tour of the new Trade and Industry Tower nearby which showcased the latest energy saving features in its building services systems as required under the new Code.



於周年傳媒聚會介紹兩份建築物能源守則及政府大樓嶄新的節能裝置。
We acquainted journalists with the two Building Energy Codes and the new energy saving installations in government buildings at the annual media gathering.



邀請機電青少年大使乘坐香港摩天輪，並由工程師團隊介紹摩天輪的安全設計。
EMYA members were invited to ride on the Hong Kong Observation Wheel and were shown the safety design of the Ferris wheel.

機電青少年大使計劃及學校外展計劃

我們積極推廣多項青年運動，特別值得一提的是機電青少年大使計劃。此計劃旨在招納青年，成為機電大使，推廣機電安全、能源效益及機電業。去年，我們加強宣傳，會員人數大幅增加，至今已逾6 000人。我們更邀請會員出席各項教學活動，包括於2015年5月乘坐香港摩天輪，親身學習機電安全及節能事宜。

每月，大使都收到電子通訊，當中包括了不少安全小知識和節能小貼士。

公眾對我們學校外展計劃需求甚殷。於2015/16年度，各部別的全職校園大使走訪了338所機構，包括404所幼稚園、76所小學、22所中學、2所大專及訓練院校、3所特殊學校，以及112所老人及社區中心。我們共舉辦了42場展覽，並設有互動遊戲。據估計，年內132 336名人士，透過講座及展覽，學習到不少關於電器、升降機及自動梯、機動遊戲機安全的知識，以及節約能源的貼士。

與此同時，我們亦於總部大樓的教育徑舉辦導覽。2015/16年度，我們舉辦了458場導賞團，帶領來自學校、社區及青少年中心、本地專業組織及海外團體，於精心設計而舒適的環境下，並透過互動式展品，學習能源效益及機電安全。是年度，共17 286名人士參與。

E&M Young Ambassadors and School Outreach Programme

To step up our youth engagement programmes, in particular the E&M Young Ambassador (EMYA) Scheme which aims to empower young people to become ambassadors of E&M safety, energy efficiency and E&M engineering development, we held a recruitment drive last year which boosted EMYA membership to over 6 000. Members were invited to our various educational events, such as ride on the Hong Kong Observation Wheel in May 2015 where they learnt first-hand about mechanical safety and energy efficiency matters.

Every month EMYA members receive an e-newsletter, as well as useful tips on safety and energy efficiency from time to time.

Our school outreach programme saw great demand in 2015/16, with talks by our team of full-time school ambassadors from various Divisions at a total of 338 institutions, covering 404 kindergartens, 76 primary schools, 22 secondary schools, 2 tertiary or training institutes, 3 special schools and 122 elderly and community centres. A total of 42 exhibitions were also held at schools with interactive quiz games. It is estimated that 132 336 individuals received our messages through these talks and exhibitions during the year on the safe use of electrical and gas appliances, lifts and escalators and amusement rides as well as tips on saving energy.

Parallel with the school outreach programme are in-bound guided tours to the Education Path at our headquarters building. In 2015/16, we held a total of 458 guided tours for schools, community and youth centres, local professional bodies and overseas delegations. Visitors learnt about energy efficiency as well as E&M safety in a well designed, relaxing environment with interactive exhibits. A total of 17 286 individuals experienced the tour during the year.

提高公眾安全及節能意識 RAISING PUBLIC AWARENESS OF SAFETY AND ENERGY CONSERVATION

「新能源、新世代」太陽能車比賽

環境局及本署聯手推出「全民節能」運動下的「新能源、新世代」太陽能車比賽成功吸引12隊大、中學隊伍參與。他們親自設計、製作及駕駛太陽能車，並於2016年1月在香港科學園的決賽日中，角逐多個獎項。

New Energy New Generation Solar Car Contest

Under the “Energy Saving for All” Campaign jointly launched by the Environment Bureau and EMSD, the New Energy New Generation Solar Car Competition attracted 12 teams from universities and secondary schools to design, construct, and race their solar cars. The finale was held in January 2016 at the Hong Kong Science Park where the cars competed for several awards in the finale race.

慶祝學徒訓練計劃六十周年

本署於2015年9月慶祝學徒訓練計劃成立六十周年。多年來，計劃為本港各機構培訓了無數機電業人才。為隆重其事，我們舉辦了連串紀念活動，包括於本署總部大樓大堂舉辦回顧展，讓訪客及公眾一同參與。

Celebrating 60 Years of Apprentice Training

EMSD celebrated the 60th anniversary of its Apprentice Training Scheme in September 2015. The highly successful scheme nurtured thousands of outstanding E&M professionals and practitioners for many organisations in Hong Kong. A series of commemorative activities were held to mark the occasion, including a retrospective exhibition at our headquarters foyer for visitors and the public to enjoy.

學徒訓練計劃，現更名為技術員訓練計劃，每年繼續吸納及培育機電業後起之秀。

The Apprentice Training Scheme has been renamed Technician Training Scheme and continues to attract and nurture young E&M talent every year.



同事向參觀機電工程署總部大樓教育徑的同學介紹「慳電熄一熄青年獎」的比賽詳情。

Our staff explaining the details of the Youth Energy Saving Award to students visiting the Education Path of EMSD Headquarters.

教育徑訪客留心了解「慳電熄一熄青年獎」的遊戲規則。
Visitors of the Education Path listening to our engineer's presentation of the Youth Energy Saving Award.



慶祝學徒訓練計劃六十周年典禮於2015年9月舉行。
A ceremony was held in September 2015 to celebrate the 60th anniversary of the Apprentice Training Scheme.

機電工程署訓練組同事及見習員一連四日，於教育及職業博覽中推廣各訓練計劃。

Staff from the Training Unit and trainees of EMSD promoted the various training schemes in the four-day Education & Careers Expo.



參與教育及職業博覽2016，並於「機電工程日」邀請業界管理層及技術員分享入行挑戰。
EMSD joined the Education & Careers Expo 2016; managerial and technical staff of the E&M trade were invited to share with audiences potential challenges of joining the trade on the “Electrical and Mechanical Engineering Day”.

2016年教育及職業博覽的「機電大街」

由本署帶頭的香港機電業推廣工作小組，於2016年1月28至31日參與教育及職業博覽，為機電業招募人才。攤位以「機電大街」為主題，吸引了不少青年求職者。他們大多積極查詢本署的見習工程師計劃及技術員訓練計劃。

“E&M Street” in Education & Careers Expo 2016

The Hong Kong Electrical and Mechanical Trade Promotion Working Group, led by EMSD to attract new blood to E&M trades, took part in the Education & Careers Expo 2016 from 28 to 31 January. The booths used the “E&M Street” concept to attract young job seekers. Visitors’ response to our Engineering Graduate Training Scheme and Technician Training Scheme was very enthusiastic.

更新中央投訴系統

本署於2015年11月更新了中央投訴系統。新系統有助我們更有效地處理及回應投訴。我們致力向公眾提供優質服務的同時，亦視投訴為學習及改善的機會。經更新的系統，設有提示負責人員的功能，並能管理資訊，以便記錄、分析及參閱投訴個案。

Central Complaints Registry Revamped

EMSD’s Central Complaints Registry was revamped and launched in November 2015 with new capabilities to help us process and respond to complaints more effectively. Whilst we strive to provide excellent service to the public, we also regard complaints as opportunities to learn and improve. The upgraded Registry has reminder functions for subject officers, as well as information management functions to make documentation, analysis and reference of the complaint cases much easier.

機電工程營運基金報告

ELECTRICAL AND MECHANICAL SERVICES TRADING FUND REPORT



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支持。

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.

常務委員會 EXECUTIVE BOARD

主席 Chairman



韓志強 太平紳士
Mr Hon Chi-keung, JP
發展局常任秘書長(工務)
Permanent Secretary for Development (Works)

成員 Members



陳志明 太平紳士
Mr Chan Chi-ming, JP
發展局副秘書長(工務)2
Deputy Secretary for Development (Works) 2

秘書 Secretary



羅肇嫻 女士
Ms Lo Siu-han, Cynthia
機電工程署主任秘書
Departmental Secretary, EMSD



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)



戴德謙 太平紳士
Mr Tai Tak-him, JP
機電工程署副署長/營運服務
Deputy Director/Trading Services, 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 戴德謙 太平紳士
Mr Tai Tak-him, JP
機電工程署副署長/營運服務
Deputy Director/Trading Services, EMSD

3 張丙權 太平紳士
Mr Cheung Ping-kuen, Michael, JP
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Assistant Director/1, EMSD

4 麥家俊 先生
Mr Mak Ka-chun
機電工程署助理署長/2
Assistant Director/2, EMSD

5 張國輝 太平紳士
Mr Cheung Kwok-fai, JP
機電工程署助理署長/3
Assistant Director/3, EMSD

6 李碧雲 女士
Ms Li Pik-wan, Clara
機電工程署財政經理
Finance Manager, EMSD

7 王文剛 先生
Mr Wong Man-kong
機電工程署員工關係主任
Staff Relations Officer, EMSD

秘書 Secretary

8 羅肇嫻 女士
Ms Lo Siu-han, Cynthia
機電工程署主任秘書
Departmental Secretary, EMSD

* 李英明先生出任機電工程署助理署長/2至2016年1月22日
Mr Li Ying-ming, Larry was Assistant Director/2, EMSD up to 22 January 2016
* 羅雪芬女士出任機電工程署財政經理至2015年10月11日
Ms Law Suet-fan, Rebecca was Finance Manager, EMSD up to 11 October 2015
* 羅福基先生出任機電工程署員工關係主任至2015年7月8日
Mr Law Fuk-ki was Staff Relations Officer, EMSD up to 8 July 2015

* 韋志成太平紳士出任發展局常任秘書長(工務)至2015年4月6日
Mr Wai Chi-sing, JP was Permanent Secretary for Development (Works) up to 6 April 2015

業務回顧與前瞻 OPERATIONS REVIEW AND OUTLOOK

機電工程營運基金在2015/16年度的財務表現達標，符合業務計劃。期間承辦商費用雖不斷上升，但營運基金整體財務表現平穩，總收入為57.64億港元(2014/15年度：54.92億港元)，收入回報率為4.8%(2014/15年度：5.3%)，與我們以微利營運的方針一致。

The financial results of the Electrical and Mechanical Services Trading Fund in 2015/16 are consistent with our targets in the business plan. Despite rising contractor cost, EMSTF's overall financial performance was steady, with return on revenue (ROR) at 4.8% (2014/15: 5.3%) and total revenue at HK\$5,764 million (2014/15: HK\$5,492 million). This is in line with our slim-profit operating principle.

戴德謙太平紳士
Mr Tai Tak-him, JP
機電工程署副署長/營運服務
Deputy Director/Trading Services, EMSD



整體表現

此外，我們於2015/16年度也更新了關鍵績效指標，以更有效量度我們在各方面的整體表現及進行持續改善。成績亦載於此報告。至於策略業務及企業支援單位的服務匯報，則載於隨後的章節。

2015/16 年度重點

我們雖在2016年初流失了機場管理局部分投標項目，但年內整體營業額仍有增長，主要是由於為新落成的客戶場地提供服務，以及服務規模擴大。年內，醫院管理局也開始以新模式將電子醫療儀器及機電服務納入公開投標中，我們努力就此挑戰作好準備。

自2013/14年度以來，我們每年都就推行五年策略計劃的進度作出報告，以落實「透過與客戶的伙伴關係，創造公眾價值利惠市民」這企業目標。我們欣然報告在這個第三年度，策略推行續有進展，特別是在提供優質服務、建立員工才能及持續綠色作業方面，而優化知識管理和成為業界典範方面的進度，也見成果。五大策略環環緊扣，一個策略取得進展，也必帶動其他策略向前發展。

客戶服務水平持續提升

我們已於年內完成由顧問進行的可行性研究，為推出以顧客為本電子平台方式運作的全面革新客戶服務中心展開首階段工程。客戶在可行性研究期間，與我們及顧問分享寶貴意見，我們深表感謝。首階段工程預料於2017年年底完成，屆時系統便可在接到客戶報告故障的來電後自動指派工作，透過流動裝置通知相關員工。儘管如此，這只是建立新客戶服務中心的第一步，日後還有幾個階段進行。

另一改善措施是於2015年把每月客戶電話意見調查的受訪人數，由210人增至460人，務求聽取更多不同服務範疇的客戶意見。現時，任何客戶感到「不滿意」的個案，都會立即呈交由總工程師跟進，個案得到解決後，同事會與其他策略業務單位分享所得經驗和教訓，以免同類情況重演。

OVERALL PERFORMANCE

Furthermore, the Key Performance Indicators (KPIs) have been revised in 2015/16 to better gauge our overall performance in different aspects for continuous improvement, and the KPI results are included in this report. Services Review of our Strategic Business Units (SBUs) and corporate supporting units are set out in the subsequent chapters.

2015/16 HIGHLIGHTS

Our business volume has expanded mainly due to new venues we served and increase in scale of services, despite losing some tenders from the Airport Authority in early 2016. We also noted the new approach of the Hospital Authority to adopt open tendering for both biomedical equipment and electrical and mechanical services, and we had been working hard to prepare for this challenge.

Since 2013/14, we have reported every year our progress of the five-year strategic plan in achieving the corporate goal of “creating public value for community betterment through partnership with our clients”. We are pleased to report in this third year that there was continuous progress in the strategic implementation, most notably in the areas of delivering excellent service, building staff capacity and sustaining green operation. Also seeing progress were initiatives in enhancing knowledge management and becoming a trade model. Indeed, the five strategies are interrelated and advancement in one area would help drive the others forward.

CONTINUOUS CUSTOMER SERVICE ENHANCEMENT

Following the completion of a feasibility study by a consultant this year, the phase one work of a completely revamped Customer Service Centre (CSC) operating on a Customer-Centric e-Platform has already commenced. We are deeply thankful to our clients for sharing their views with us and our consultant in the feasibility study. Upon the targeted completion of phase one by late 2017, the system would be capable of automatically assigning jobs when fault calls come in, and the staff concerned would be notified in real-time via their mobile devices. That being said, this is only the first step towards building our new CSC, with remaining phases to be done.

A related initiative was expanding the sample size of our monthly telephone survey of clients from 210 to 460 respondents in 2015, thus covering more clients in different service types. Any “unsatisfactory” case is now promptly escalated to the chief engineer for his follow up. The lessons learnt are then shared with other SBUs to prevent recurrence.

業務回顧與前瞻

OPERATIONS REVIEW AND OUTLOOK

加強資產管理及承辦商管理

我們不斷努力為客戶加強機電資產管理，我們在將建築信息模擬和資產管理結合方面的創新工作，進展良好且獲業界認同。與此同時，我們也開始以一套在營運基金內部標準統一的方法，為客戶的機電資產重新分類，繼而採用更嚴謹的操作與維修保養程序，並特別着重更換和提升老化資產的工作，以減少故障及提升資產表現。

員工認為最近推行的提升「維修外判合約表現監察系統」在管理我們的承辦商上有效用。我們更善用承辦商表現評核機制，密切監察表現欠佳的承辦商，並敦促其作出改善，同時又可表揚出色的承辦商。我們也以各種途徑向承辦商宣傳安全訊息，提高其安全意識與水平。

提升員工能力及知識管理

年內，我們繼續研訂員工才能矩陣，以找出部門所需才能和培訓需要，從而提升同事的專業能力。由於營運基金的工作範疇極廣，牽涉的工程界別繁多，因此制訂才能矩陣的過程較原先構想的複雜。我們先在2016年年中完成編製專業職系的才能矩陣，然後便建立技術職系的才能矩陣。當研訂工作完成後，整套才能矩陣會為同事提供一套定義清晰且妥為記錄的才能指標，協助員工提升能力。我們也於2015年9月加強了技術員培訓計劃，讓學員更能把握日常操作所需。

另一範疇是提高對同事在財務和營運方面的匯報。日常事務如事故報告提交、承辦商發票付款安排等，必須適時處理。從重要事故中汲取的經驗和教訓也應妥為記錄，並與其他策略業務單位分享，促進企業學習和提升質量。此舉與我們優化知識管理、鼓勵分享和促進機構學習的策略一致。在財務管理系統中引入利潤中心，令管理層及各個負責利潤中心的同事，更有效監察和控制業務表現。

綠色作業有突破

為協助客戶達到政府所要求的目標，在2015年起的五年內節省5%用電量，我們已為他們構想出更多節能工程方案，特別是優化空調系統能效表現的重新校驗方案。此外，同事也就撥款申請的程序向客戶提供意見，並為客戶準備全面的撥款申請方案。

STRENGTHEN ASSET MANAGEMENT AND CONTRACTOR MANAGEMENT

We have kept our momentum in helping clients with their E&M asset management (AM). Our innovative development in integrating Building Information Modelling with AM was in good progress and well recognised by the industry. In parallel, we have started re-categorisation of clients' assets with a standardised methodology throughout EMSTF, followed by a more rigorous O&M regime and putting more emphasis on aging asset replacement and retrofitting to reduce faults and enhance asset performance.

The enhanced Performance Monitoring System for Maintenance Contract recently implemented was found useful for staff to manage our contractors. The contractors' appraisal performance system was better utilised, so that unsatisfactory performers can be monitored closely for improvement whilst outstanding contractors are praised. We have also promoted safety to our contractors through various channels to raise their safety awareness and standards.

STEPPING UP STAFF COMPETENCY AND KNOWLEDGE MANAGEMENT

Meanwhile, we have furthered our work in developing a Staff Competency Matrix which will enhance the professionalism of our colleagues by identifying the departmental competence and training needs. The process is more complicated than it appears, as the variety of our work is extensive and involves numerous engineering disciplines. We have compiled the matrix for professional staff in mid-2016, and the matrix for technical staff is to be followed. When completed, the overall matrix will give a set of better-defined, documented competency objectives for building up staff competency. In addition, we have enhanced our Technician Training Scheme in September 2015 for better equip our trainees for meeting operational needs.

Another area is to raise staff reporting in operational and financial aspect. Operational matters like incident report submission and payment of contractor invoices must be handled in a timely manner. Lessons learnt from major incidents must be well documented and shared with all SBUs for corporate learning and quality enhancement. This is consistent with our strategy to enhance knowledge management, sharing and organisational learning. With the implementation of the profit centres in the financial management system, management can monitor and control business more effectively with delegated staff responsible for profit centre financial performance.

GREEN OPERATION BREAKS NEW GROUND

To help clients fulfil the 5% electricity saving target over five years from 2015 as required by the Government, we have come up with more energy engineering solutions for them, in particular the retro-commissioning of air-conditioning systems to optimise their energy performance. We also managed to prepare a holistic bid and advised clients on the fund bidding process.

綠色作業的另一佳績，就是機電署總部大樓取得「綠建環評既有建築」的鉑金級認證。作為首幢取得這項認證的政府既有建築物，我們希望藉此為其他既有建築物樹立好榜樣。

客戶科技工作與未來「智能城市」

因應2014年的客戶意見調查，我們十分重視科技應用，並已成立數個由不同總工程師領導的工作小組，專門探討在電力、空調、升降機及自動梯、車輛、消防設施等方面的最新科技，目的是協助客戶制訂創新的方案，讓客戶進行環保而智能的操作。工作小組與業界及學界也有定期接觸和交流，包括各種科技及其他工程範疇的知識，如操作及維修保養與安全，並促進業界的長遠發展。

展望與致謝

近年營運基金最大的挑戰，是如何處理承辦商成本持續上升和資產老化的問題，同時要以有限的人手，有效地管理不斷擴大的服務組合，今年也不例外，而這也正是我們五大策略旨在解決的問題。我們也在機電服務方面作好準備，讓香港發展成為低碳及智能城市。

今年適逢機電工程營運基金20周年誌慶，我們在此先向客戶致謝。倘若沒有客戶確實的支持，營運基金根本無法生存。我們現時及以往的員工也同樣重要，有賴他們盡忠職守，努力不懈，群策群力，營運基金才能屢次化危為機，變得更關懷、更靈活。

我們衷心感謝常務委員會的指引和寶貴意見，也多謝各承辦商及業界的支持。2016年是機電工程營運基金成立20周年，我們期望看見營運基金的健康發展。

Another milestone in green operation was that the EMSD Headquarters Building obtained the BEAM Plus Existing Buildings Platinum certification. We hope that, being the first government existing building to receive such certification, our headquarters might set an example for other existing buildings to follow.

TECHNOLOGY FOR CLIENTS AND FUTURE “SMART CITIES”

In response to Customer Opinion Survey 2014, we attach great importance to technology applications. We set up several Working Groups led by chief engineers to explore advance technologies in areas such as electricity, air-conditioning, lifts and escalators, vehicles and fire service facilities. The aim is to help clients come up with innovative solutions for green and smart operation. The Working Groups also have regular contact and interaction with the trades and academics, covering technologies and other engineering aspects like operation and maintenance practices, safety as well as the long term development of the trade.

OUTLOOK AND APPRECIATION

The challenge, as in recent years, remains how to cope with rising contractor cost and aging equipment, and to manage effectively an expanding service portfolio with limited number of staff. This is precisely what our five strategies aim to tackle. We are also preparing from the E&M service side in supporting the community to meet the low-carbon and smart city development.

On this auspicious occasion of EMSTF's 20th anniversary, we must first thank our clients for their unfailing support throughout the years without which EMSTF would not have survived in the first place. Equally important is our current and former staff whose commitment, hard work and team spirit have made it possible for EMSTF to emerge from every crisis with greater care and resilience.

Our heart-felt appreciation also goes to the Executive Board for its guidance and advice. We also thank our contractors and the trades for their support. The year 2016 marks the 20th anniversary of the trading fund, and we look forward to seeing the healthy development of EMSTF.



戴德謙
機電工程署副署長/營運服務



Tai Tak-him
Deputy Director/Trading Services, EMSD

營運服務 TRADING SERVICES

建設綠色健康社區

香港擁有七百萬的龐大人口，而且人口老化問題日益嚴重，維護市民健康已成當務之急。我們決心成為市民及客戶的最強後盾，繼續竭盡所能，為公立醫院及醫療部門提供操作及維修保養服務。

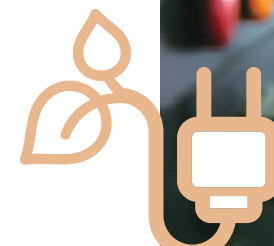
在2015/16年度，我們成功與政府化驗所續簽為期五年的服務水平協議，並投得為醫院管理局（醫管局）18家公立醫院提供生物醫療儀器維修保養服務的兩年合約。與此同時，因應醫管局將自2017年起為轄下醫院及診所的電力、機械、空調和樓宇服務系統、生物醫療工程系統，以及綜合電子系統的操作及維修保養服務作公開招標，我們已展開相關的投標籌備工作。

我們一直關注高能源效益技術的最新發展。為減少能源消耗，我們已開始為瑪麗醫院等多家醫院引入無油磁浮式製冷機，取代老化的風冷式製冷機。
We always keep an eye on the latest high energy-efficiency technology. To reduce energy consumption, we started replacing aging air-cooled chillers with the new oil-free chillers for hospitals including the Queen Mary Hospital.

BUILDING A GREEN AND HEALTHY COMMUNITY

With a huge population of over seven million and an ever-deteriorating aging problem in Hong Kong, the safeguarding of citizens' health has become a top priority for us. We are determined to be the strongest supporter of our citizens and clients by sparing no efforts in continuing to provide O&M services for public hospitals and healthcare departments.

In 2015/16, we successfully renewed our five-year Service Level Agreement (SLA) with the Government Laboratory and secured a two-year contract from the Hospital Authority (HA) for the maintenance of biomedical equipment at 18 public hospitals. We also started the preparation for the open tender for the O&M services for electrical, mechanical, air-conditioning and building services systems, biomedical engineering systems and general electronics systems at HA's hospitals and clinics from 2017 onwards.



透過「巡視式能源調查」，我們審視了伊利沙伯醫院等多家醫管局轄下急症醫院的能源使用模式，以協助客戶節省能源支出。
Through the "Walk-around Energy Survey", we carefully reviewed the energy usage patterns at HA's acute hospitals, such as the Queen Elizabeth Hospital, and helped our clients achieve energy cost saving.

服務模式由服務水平協議轉為公開招標，這個轉變對我們來說是項重大挑戰。醫管局是營運基金的最大客戶，我們期望憑藉過去近20年為醫管局提供優質服務的經驗，可讓我們繼續以可靠的醫院工程服務，為市民的健康和福祉作出貢獻。

我們重視每位客戶的意見及建議，因此在2015/16年度推出嶄新的「客戶探訪計劃」，以了解臨床醫護人員在運作上有何需要及期望，從而改善我們的技術支援和服務。計劃推出後反應正面，我們會繼續推行和加強這項客戶服務新猷。

年內我們亦協助消防處把救護車設計標準化。經優化的救護車更能滿足使用者的需求，並可以加快未來採購時由發出訂單至交付的流程，從而加快救護車的供應。

在醫療場地推廣能源效益和環保措施是我們另一項重要任務。在2015/16年度，我們進行了「巡視式能源調查」，仔細審視醫管局轄下多家急症醫院的能源使用模式，尋找能源管理機會，為醫管局制訂全面的能源組合方案。我們以全面的綠色作業策略，協助醫管局訂立路線圖，以節省能源成本和減少溫室氣體排放。

Our transition in service model from SLA to open tender had been quite a challenge for us. HA is the largest client of the EMSTF. We have been serving HA for nearly two decades and we are keen to continue delivering reliable hospital engineering services for the health and well-being of the community.

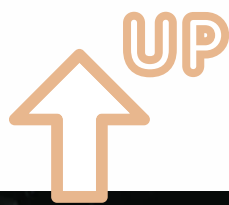
We treasure feedback and suggestions from every client and as such a new "client visit" programme was launched in 2015/16. The objective of this programme was to gain better understanding of the operational requirements and expectations of clinical staff in order to enhance our technical support and services offered to them. The programme was well received and we will continue to roll out and enhance this customer service initiative.

During the year, we also helped the Fire Services Department to standardise the design of its ambulances, so that user needs could be better satisfied, and the enhanced design would speed up the order-to-delivery process in future procurements, shortening the time for supply of ambulances.

Promoting energy efficiency and green initiatives at healthcare premises is another major mission of our team. In 2015/16, we critically reviewed the energy usage patterns in HA's acute hospitals through the "Walk-around Energy Survey" to identify energy management opportunities and developed a comprehensive energy portfolio for HA. By adopting a holistic green operation strategy, we assisted HA in charting a roadmap to achieve energy cost savings and greenhouse gas emission reduction.



營運服務 TRADING SERVICES



我們於伊利沙伯醫院為員工提供鍋爐檢修訓練，以提高他們的操作和維修保養知識及技術水平，薪火相傳。

We conducted on-site training in boiler maintenance at the Queen Elizabeth Hospital to enhance our staff's O&M knowledge and technical capabilities, thereby passing on expertise to younger colleagues.

掌握最新的環保節能技術，及協助客戶採用這些技術，對提升節能效益至為重要。我們已開始以新的無油磁浮式製冷機取代老化的風冷式製冷機。新型製冷機採用最新的節能技術，能有效減少醫院的能源消耗。為確保新型製冷機能高效運作，我們邀請海外專家舉行了一系列導師培訓工作坊，並舉辦多次內部培訓，以助員工掌握最新的技術和知識。

盡責的員工團隊是我們提供可靠醫療服務的關鍵。為鼓勵員工，我們安排高級管理人員親自頒發嘉許信以表揚他們的優秀表現，並會邀請有關員工與同事分享他們在工作上的成功經驗。

面對未來數年將有更多公立醫院及醫療場地落成，我們已作出準備，審視自身的資源安排，為新場地制訂高效可靠的服務計劃。同時，我們也致力裝備員工，提升其專業知識和技能，務求貫徹我們團隊的服務信念——盡心為醫護人員、病人及其家屬的福祉服務。

Commitment in mastering the latest green technologies and helping our clients to apply them is essential to the enhancement of energy efficiency. We began the replacement of aged air-cooled chillers with the new oil-free chillers, which employ the latest high energy-efficiency technology, to reduce energy consumption in hospitals. To equip our staff with advanced skills and knowledge to ensure the newly installed oil-free chillers always perform their best, a series of "Train the Trainer" workshops delivered by overseas experts as well as internal trainings were conducted.

A dedicated team of staff is essential to our provision of reliable services to the healthcare sector. We motivated our staff by arranging the senior management staff present appreciation letters to them in person in recognition of their work and by inviting them to share their success stories with colleagues.

With more new public hospitals and healthcare venues to be commissioned in the coming years, we have reviewed our setup and planned for the delivery of effective and reliable services for the new venues. We strive to equip our team with the essential knowledge and expertise, and will remain committed to our service values — serving in the best interest of patients and their families as well as healthcare workers.

體驗醫院前線工作

嘗試代入別人的角色有時的確可以促進溝通，這正是衛生工程部高級工程師梁雪輝先生當初構思「影子工作」計劃時的目的。他表示：「前線員工在員工滿意度調查中提出，希望管理人員能加強與前線員工溝通。」他受此啟發而構思出計劃，並邀請衛生工程部一位總工程師率先參與試驗，為同事樹立榜樣。

該名總工程師於2015年11月25日下午5時至晚上11時的值班時段，參與兩位監工和一位高級技工在屯門醫院機房的工作，包括清潔海水冷卻空調系統的隔濾器、除去當中的甲殼和其他垃圾、檢查機房設備和接聽呈報故障的電話，從中體驗前線同事的日常工作和感受他們面對的壓力。

梁先生說：「我們事前已向前線同事介紹這項計劃，並告訴他們這不是演戲，他們可放心把日常工作交給總工程師去做，即使是棘手的工作也不用擔心。」

衛生工程部另有幾位高級工程師和工程師亦先後參與了「影子工作」計劃，加深了他們對前線工作的了解，亦加強了與前線員工的溝通。

FRONTLINE WORK SHADOWING AT HOSPITALS

Trying to stand in someone else's shoes does help communication sometimes. This is indeed the purpose of the Work Shadowing initiative proposed by Mr Leung Suet-fai, senior engineer of the Health Sector Division. "A comment from frontline staff in the Staff Satisfaction Survey is that professionals should communicate more with them," he said. Inspired, he then developed the concept and invited his chief engineer to be the first to participate in the pilot programme to set an example for other colleagues.

The chief engineer joined the work of two work supervisors and a senior artisan in the plant room at Tuen Mun Hospital on the 5-11 pm shift on 25 November 2015. He cleaned the strainer for the sea water-cooled air-conditioning system, removed the barnacles and other rubbish inside, checked the condition of plant facilities, and took fault calls from clients in the hospital to experience the daily routine of the frontline staff and the pressure they faced.

"We briefed the frontline staff about the programme beforehand and told them it was not a show. They could just assign him any task they perform every day, without having to worry about the difficulty of such work," he said.

A few senior engineers and engineers from the division have also taken part in the work shadowing programme to better understand and communicate with frontline staff.



藉着「影子工作」計劃，我們的工程師(左)有機會在高壓電掣房親身體驗前線員工(右)的日常工作。Under the Frontline Work Shadowing Programme, our engineer (left) had a chance to experience first-hand the daily routine of a frontline staff (right) in a High Voltage Switch Room.



作為「影子工作」計劃的一部分，工程師(左)在前線員工(右)的協助下為冷卻塔的水樣本進行基本測試。As part of the Frontline Work Shadowing Programme, our engineer (left) conducted basic testing on a water sample extracted from a cooling tower with the assistance from a frontline staff (right).

營運服務 TRADING SERVICES

提升生活質素

前往街市購物是不少香港市民日常生活中不可或缺的環節。我們的市政服務團隊繼續利用綜合樓宇管理系統，遙距監測街市內的配電系統、升降機及自動梯等主要設施的操作狀況，務求為市民提升該等設施的可用性及可靠性。

我們與食物環境衛生署（食環署）緊密合作，於2015/16年度開始為37個街市更換機齡超過20年的老化升降機及自動梯，並計劃於未來兩年進行更多同類更換工程。鑑於街市設施的使用率極高，我們更換自動梯時會採用適合室外使用的設計，以提升可靠性。我們亦正着手為食環署街市的自動梯申請ISO 55001認證，以加強其資產管理，而認證的籌備工作應會在2016年第三季完成。

ENHANCING OUR QUALITY OF LIFE

Shopping at municipal markets is many Hong Kong citizens' daily routine. Our municipal services team has continued to use Integrated Building Management System (iBMS) to remotely monitor the operating status of key facilities in markets, such as power distribution systems and lifts and escalators, to maximise their availability and reliability for citizens.

Working closely with the Food and Environmental Hygiene Department (FEHD), we have started replacing aged lifts and escalators of over 20 years in 37 markets in 2015/16, with more such replacements planned for the next two years. In view of the heavy usage pattern in markets, the new escalators will be outdoor design for higher reliability. We have also been working on ISO 55001 certification for escalators in FEHD markets to enhance asset management. Preparations for certification should be completed by the third quarter of 2016.

我們把食環署轄下楊屋道街市一部老化的自動梯更換為適合室外使用的設計，以提升其效能。同事正利用平板電腦從綜合樓宇管理系統讀取新自動梯的實時數據。

We replaced an aging escalator with an outdoor design at Yeung Uk Road Market for FEHD to enhance its performance. Our colleague uses his tablet to get real-time data of the new escalator from iBMS.



綜合樓宇管理系統讓同事能取得土瓜灣市政大廈暨政府合署內各個機電系統的實時數據，從而進一步完善系統管理和提升設備的可靠性。iBMS enables our staff to acquire real-time data of various E&M systems in the To Kwa Wan Market and Government Offices Building, thus ensuring better system management and higher equipment reliability.



至於其他客戶場地，亦陸續應用各種科技。郵政總局於年內安裝了綜合樓宇管理系統，此舉不但令設備的可靠性提高，同時亦能節省營運成本。在能源效益方面，我們試行在香港文化博物館及中央郵件中心安裝能提高製冷機組能效表現的裝置，有關裝置可使兩個場地的用電量節省多達15%。我們計劃日後將綜合樓宇管理系統及製冷機組優化技術擴展至更多場地，讓市民可享用更可靠及更具能源效益的設施。

Technology was also applied to other client venues. During the year, iBMS was installed at the General Post Office, leading to higher equipment reliability and operation cost savings for the client. On the energy efficiency front, trial installations to optimise chiller plant performance were carried out at the Hong Kong Heritage Museum and the Central Mail Centre, which could save as much as 15% electricity consumption. Our plan is to extend iBMS and chiller optimisation to many more venues in future, so that the public may enjoy more reliable and energy efficient facilities.



(右)同事正檢查九龍灣中央郵件中心的製冷系統，確保運作可靠。
(Right) Our staff is conducting inspection to ensure reliability of the chiller system at the Central Mail Centre in Kowloon Bay.

我們利用紅外線熱能探測器定期監測製冷機電掣箱的溫度，防止出現過熱的情況。
Using an infrared thermal scanner to regularly monitor the switch panel of a chiller to prevent overheating.



營運服務 TRADING SERVICES

游泳是本港很受歡迎的消閒活動之一。鑑於外國曾發生泳客被泳池吸水系統吸住而遇溺的事故，我們於是檢視全港公眾泳池的設計，確保皆符合本港及外國標準。不過，為了令設施加倍安全，我們主動建議在其中三個泳池試用安全真空釋放系統，結果證明該系統是有效的額外安全裝置，可令循環泵在泳池排水口受阻時自動停止運作，釋放被吸住的泳客或物件。我們已建議修改泳池的設計指引，把安全真空釋放系統納入日後新建泳池的設計中。按情況需要，我們會與康樂及文化事務署(康文署)商討為現有泳池進行相應改裝。

與此同時，我們為高山劇場新翼提供的舞台燈光操作及維修保養服務，將會納入我們與康文署簽訂的服務水平協議內，以進一步整合我們在高山劇場的服務。我們更與康文署及食環署緊密合作，在2015年4月2日晚上11時起的21個小時內，完成更換駱克道數據中心一組老化的製冷機組。該數據中心對多項網上服務的運作非常重要，包括預約康文署康樂設施和申領酒牌等。經過周詳策劃和籌備、細心量度，以及多次一絲不苟的模擬測試，加上客戶及承辦商的通力合作，我們的團隊最終順利並準時完成工程，令客戶十分滿意。

Swimming is one of the popular pastimes in Hong Kong. Learning from overseas incidents where swimmers have been entrapped by the swimming pool water suction system, we initiated a review of the design of all public pools designs in Hong Kong and found that their design complied with local and overseas standards. However, to be doubly safe, we proactively recommended a trial application of the Safety Vacuum Release System (SVRS) to three swimming pools. The trial proved the SVRS to be an effective additional safety device as it could cause tripping of the circulation pump resulting in the release of trapped swimmer or object. We have recommended to revise the pool's design guidelines to include the SVRS in new swimming pools in future. Where appropriate, retrofitting proposals for existing swimming pools would be discussed with the Leisure and Cultural Services Department (LCSD).

At the same time, our O&M services for stage lighting at Ko Shan Theatre New Wing will become part of the Service Level Agreement with LCSD, making our services more seamless for Ko Shan Theatre. With close collaboration with LCSD and FEHD, we replaced an aging chiller plant at the Lockhart Road Data Centre within just 21 hours starting from 11 pm on 2 April 2015. The Data Centre was critical to the operation of many online services such as booking of LCSD recreational facilities and application for liquor licences. With meticulous planning and preparations, attention to detail in measurement and careful simulations, as well as good co-ordination with both clients and contractors, our team completed the task smoothly and on time, to clients' great satisfaction.



我們在香港文化博物館試行安裝能提高製冷系統能效表現的裝置，為客戶節省能源及成本，並為市民帶來難忘的綠色參觀體驗。

We carried out trial installations to optimise chiller plant performance at the Hong Kong Heritage Museum so as to save energy and cost for the client and give the public a more inspiring and greener museum experience.

空調方案具創意

市民可能未必知道，大會堂空調系統曾經在2015年6月5日因一條海水冷卻喉管損毀，導致空調供應短暫中斷。

負責大會堂空調系統維修保養事宜的市政工程師王銘鴻先生，迅速與他的團隊及客戶(康文署)合作，在大會堂紀念花園裝設一個臨時製冷機組。在6月6日，該機組已開始運作，讓大會堂的室溫維持在約攝氏25.5度。

王先生說：「我們在36小時內完成所有工作，包括安裝機組、接駁喉管和鋪設電線。」他的團隊與客戶攜手處理所有相關事宜，例如安全問題，以及在大會堂張貼通告讓使用者和訪客知悉空調供應的情況。期間客戶並沒有收到任何市民的投訴。我們的團隊能在短時間內為客戶多走一步，提供應急方案，深獲客戶讚賞。

INNOVATIVE AIR-CONDITIONING SOLUTION

The public might not be aware that a damaged sea water cooling pipe of the air-conditioning system caused a temporary suspension of air-conditioning at City Hall on 5 June 2015.

Mr Wong Min-hung, Kevin, the subject engineer in the Municipal Sector Division, promptly worked with the client LCSD and his team to install a temporary chiller plant at the City Hall Memorial Garden. By 6 June, the plant was already operating to maintain the venue's temperature at around 25.5 degrees Celsius.

"Everything was done within 36 hours, including installation, pipe connection and cable wiring," said Kevin. The team worked with the client to tackle all related issues like safety, and put up notices at the venue to alert users and visitors to the air-conditioning situation. No complaints were received from the public. The client appreciated the team's extra efforts in providing an interim solution in a short period of time.



為籌備實施都市固體廢物收費，我們的車輛工程分部最近協助環境保護署(環保署)完成一項為期三個月的試驗計劃，為政府垃圾收集車(垃圾車)安裝垃圾桶自動點算系統。我們協助為三輛垃圾車加裝一套在收集桶上應用射頻識別技術的系統，用作自動點算和記錄相關資料，例如垃圾桶所屬樓宇及傾倒次數等。有關數據會實時傳送到中央伺服器，以便日後推行收費機制。我們認為安裝自動點算系統不但便利客戶，還能提高市民減少製造廢物的意識。

To prepare for the implementation of municipal solid waste charging, our Vehicle Engineering Sub-division recently helped the Environmental Protection Department (EPD) complete a three-month trial of an automated bin-counting system installed on government refuse collection vehicles (RCVs). We helped retrofit three RCVs with a system which applied radio frequency identification technology on the collection bins that would automatically count and record information such as buildings to which the bins belonged and the number of bins collected. Data were transferred real-time to the central server that would facilitate the fee charging mechanism in future. We see such work as helping clients and raising awareness of citizens in minimising waste generation.



為協助環保署籌備實施都市固體廢物收費，我們為垃圾桶自動點算系統進行為期三個月的測試。測試期內系統錄得零故障，而測試結果亦令人滿意。

To help EPD prepare for the implementation of municipal solid waste charging, we conducted a pilot test on the automated bin-counting system. The three-month trial had zero fault, and the testing result was satisfactory.

營運服務 TRADING SERVICES

讓市民安全安心

我們的工作範疇廣泛，涵蓋與安全和保安相關的服務，包括項目設計與實行、測試和驗收，以及機電系統和設施的操作及維修保養。我們的工作與城市的安全、保安及治安息息相關。

2015/16年度其中一個里程碑，是完成消防處消防及救護學院的工程。位於將軍澳的消防及救護學院已於2016年3月由行政長官主持開幕儀式。我們就設計和興建特製的實火模擬事故訓練設施提供機電支援，其中最新安裝的模擬設施包括實物原大的飛機、船隻及火車實景模型，讓消防員可在高度像真的環境下接受訓練。我們將於2016年年底完成學院所有機電設施的接收工作，開始提供操作及維修保養服務。

HAVING A SAFE AND SECURE CITY

Our work covers a wide range of services related to safety and security, from project design and implementation to testing and commissioning and O&M services for E&M systems and facilities. The city's safety and security as well as law and order are all relevant to our work.

A milestone in 2015/16 was the completion of the Fire and Ambulance Services Academy (FASA) of the Fire Services Department for which we provided E&M support to design and build the specialised live fire training simulators. Located at Tseung Kwan O, FASA was opened in March 2016 by the Chief Executive. The latest simulators installed were life-size mock-ups of an aircraft, a ship, a train, etc. to facilitate drills for firefighters in a highly realistic setting. We shall complete the taking up of O&M services for all E&M facilities in the Academy by end of 2016.



位於將軍澳的消防及救護學院設有多項實物原大的實景模型，例如圖中的飛機模型。我們為這些火警模擬事故訓練設施的設計及興建提供機電支援，確保消防員在安全可靠的環境下接受訓練。

Full-size mock-ups such as this aircraft have been installed at the Fire and Ambulance Services Academy located at Tseung Kwan O. The E&M support we provided in designing and building the fire simulators ensures the safety and reliability of training for firefighters.

年內，香港海關為跨境貨櫃車檢測工作購置了兩部流動X光車輛。我們協助客戶安排採購，並為車輛提供日常維修保養服務。另外，香港警務處轄下於友翔道的新油麻地警署於2016年5月起投入服務，我們為該警署提供機電系統操作及維修保養服務。

我們另一項與治安相關的工作，就是為剛翻新並於2015年9月啟用的終審法院大樓提供服務。在這歷史悠久的大樓，我們為司法機構在多個法庭安裝了先進的視聽和即時傳譯系統。有關系統讓使用者能透過觸感顯示控制屏，閱覽呈堂證據及法庭文件，並能將法庭的聆訊過程即時轉播到大樓內不同地點，更可以進行視像會議，讓身在法庭以外其他地點的證人參與。由於大樓受《古物及古蹟條例》保護，機電設施安裝工作面對極大挑戰，必須採用創新的解決方法，確保大樓的文物價值不受任何影響。

During the year, the Customs and Excise Department has procured two mobile X-ray vehicles for inspection of cross-border container trucks. We helped the client arrange the procurement and provided ongoing maintenance of the vehicles. For the Hong Kong Police Force, we will take over the new Yau Ma Tei Police Station on Yau Cheung Road, scheduled for opening in May 2016, for O&M services for E&M systems.

Also related to law and order was our work at the newly renovated building of the Court of Final Appeal that began operation in September 2015. In this historic building, we installed for the Judiciary advanced audio-visual and simultaneous interpretation systems in the courtrooms. The system enables viewing of evidence and court documents on touchscreen control panels, supports real-time broadcast of court proceedings at various locations in the building, and video conferencing with witnesses at other locations. As the building was protected by the Antiquities and Monuments Ordinance, installation of E&M facilities was highly challenging, and innovative solutions were deployed to ensure zero impact on the heritage aspects of the building.

我們為新油麻地警署安裝了大型太陽能熱水系統。系統利用太陽輻射產生熱水，並可減省能源支出。
We installed a large-scale solar water heating system at the new Yau Ma Tei Police Station. The system harnesses the heat in solar radiation to produce hot water and saves energy cost.



新油麻地警署內的緊急發電機，是由我們提供操作及維修保養服務。

We provide O&M services for the emergency generator at the new Yau Ma Tei Police Station.



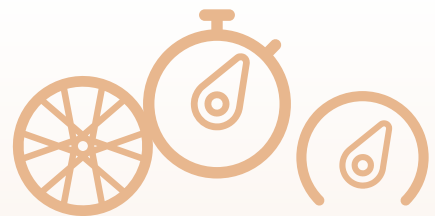
營運服務 TRADING SERVICES

年內，我們接收了由前中區政府合署東座和中座翻新而成的律政中心的機電設施，提供操作及維修保養服務。我們也正進行準備工作，於2016/17年度接收設有30多個法庭及先進設施的西九龍法院大樓，為這幢大型建築物的機電設施提供操作及維修保養服務。能為法律相關建築物的設施提供操作及維修保養服務，創造高效舒適的環境，以便法律程序順利執行，讓公眾在法治下享有公義平等，我們十分欣喜。

During the year, we also received the Justice Place, renovated from the former East Wing and Main Wing of Central Government Offices, for O&M services. Preparations are now underway to receive in 2016/17 the West Kowloon Law Courts Building, a major venue with over 30 courtrooms and state-of-the-art facilities, for O&M services. We are happy to have contributed in providing O&M services for the facilities in law-related buildings so as to bring about an efficient and pleasant environment where legal proceedings can be smoothly conducted to uphold justice and equity for the public based on the rule of law.



我們在終審法院安裝的視聽系統，能將法院聆訊即時轉播至大樓內多個地點。同事正於控制室內監察法庭的情況。
The audio-visual systems which we installed in the Court of Final Appeal can provide live broadcast of court hearings at various locations inside the building. Our colleague monitors the courtrooms from the control room.



2015/16年度，我們接收了律政中心的機電設施，由經驗豐富的操作及維修保養團隊提供專業服務。

Our experienced O&M team provides professional services for the Justice Place taken over in 2015/16.



不斷學習 教導後輩

KEEP LEARNING AND MENTORING YOUNG COLLEAGUES

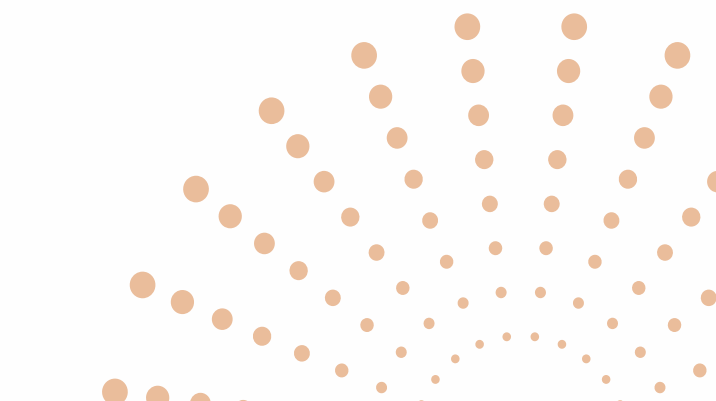


提到傳授技術給年青一輩，孫永良先生是機電署其中一位好導師。身為一級監工，他帶領14位同事，負責營運基金所有客戶部門的非道路流動裝置和運載工具（例如高爾夫球車、剪草機、拖拉機、鏟車和沙灘運輸車）的維修保養工作。他對機械設備的興趣濃厚，對同事和承辦商的技術水平要求也極高。他說：「我們的挑戰是流動運載工具的市場不斷推陳出新，科技日新月異，我們必須不斷學習，才能把工作做好。」

When it comes to imparting technical skills to the younger generation, Mr Sun Wing-leung is often cited as one of the good mentors in EMSD. As a Work Supervisor I, he supervises about 14 colleagues who handle the maintenance and repair of all EMSTF clients' non-road mobile plants and carriers such as golf carts, lawnmowers, tractors, forklifts and beach carriers. He has a passion for mechanical gadgets, and demands very high technical standards from colleagues and contractors. "Our challenge is that mobile carriers with new technologies develop rapidly in the market. We must keep learning to be able to do the work well," he said.

當被問及在教導年青同事時有沒有什麼「獨門秘方」，孫先生表示他會讓同事觀摩他的做法，再指導他們兩、三年，同事就可以勝任了；而耐心正是當中的關鍵。

Does he have a "secret formula" to mentor young colleagues? According to Mr Sun, he will let them observe him doing the work, coach them for two to three years, and they will pick up the skills. Patience is the key.



(左)透過綜合樓宇管理系統，我們在收到大樓的故障或預警信息後，可迅速搶修機電設備。
(右)粉嶺法院大樓是我們設於客戶場地的多個卓越中心之一，營運基金藉此培育員工的專業技能。
(Left) Immediate fault repairs can be carried out once our staff receives alarms or fault reports through iBMS.
(Right) Fanling Law Courts Building is one of our Centres of Excellence at client venues for sustaining EMSTF's in-house expertise.

營運服務 TRADING SERVICES

配合政府 慳電節流

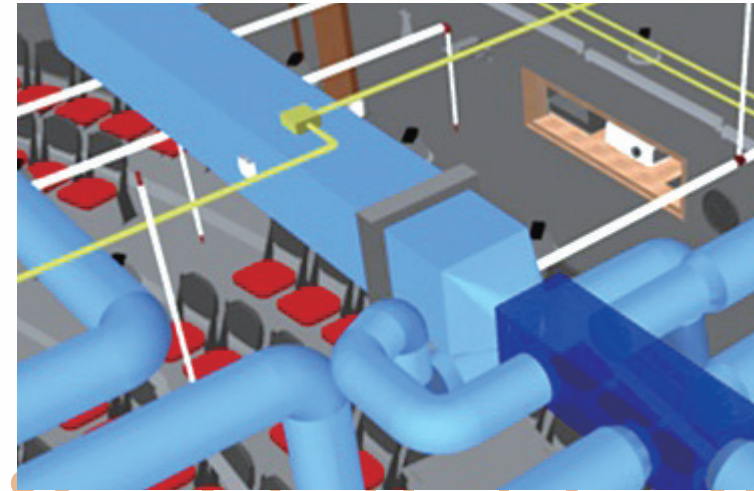
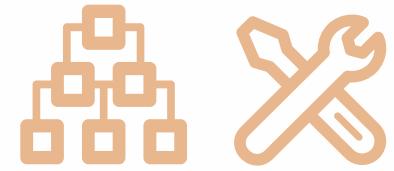
我們亦不時支援政府推行的其他新猷，例如行政長官在2015年的《施政報告》中提出，以2013/14年度為基線，在未來五個財政年度把政府建築物的用電量減少5%。作為政府建築物機電裝置的維修保養服務供應商，我們是協助客戶制訂相應能源策略計劃的最佳人選。我們擬訂了一份清單，列出用電量最高的344幢政府建築物。在環境局撥款資助下，我們於年內為清單上首150幢建築物進行能源審核並找出能源管理機會，以達到省電目標。我們將在下一個財政年度為清單上的另一批建築物進行類似工作。

營運基金已動員所有策略業務單位，特別是為政府建築物提供機電設施操作及維修保養服務的團隊，透過各類工程，協助客戶達到節能目標。我們提出的方案包括改善管理模式、改裝設備、採用更智能的操作方法以盡量提升系統的能效表現，以至涉及長遠投資的主要裝置更換計劃。我們亦應用嶄新科技，當中包括優化中央控制監察系統，以盡量提升空調系統的能效，以及採用無油磁浮式製冷機、變速驅動冷氣機及分體式冷凍機、發光二極管泛光照明裝置和配備電力再生裝置的變頻變壓式升降機。

HELPING GOVERNMENT SAVE ENERGY AND RESOURCES

From time to time we also support the Government in implementing other pioneering initiatives. A task arising from the Chief Executive's 2015 Policy Address was to save 5% electricity consumption in government buildings in the next five financial years, using 2013/14 as the baseline. Being the maintenance agent of E&M installations for government buildings, we are well positioned to help our clients develop energy strategy plans accordingly. A list of 344 government buildings with the highest electricity consumption was drawn up. Funded by the Environment Bureau, we have conducted energy audits for the top 150 buildings on the list and identified energy management opportunities to achieve the saving target. The coming financial year will see the next batch of buildings on the list going through a similar exercise.

EMSTF has mobilised all its Strategic Business Units, in particular the team that provides E&M operation and maintenance services to government buildings, to help clients achieve the energy saving goal via different types of works. The solutions range from better housekeeping, equipment retrofits, more intelligent operating methods to optimise system performance, to major plant replacements that require long-term investment. New technologies applied include Central Control Monitoring System upgrading to optimise energy efficiency of air-conditioning systems, as well as the use of oil-free chillers, variable speed drives for coolers and split-type units, LED floodlighting and variable voltage variable frequency lift drives with regenerative power, among others.



我們在機電署總部大樓推行先導計劃，將建築信息模擬技術與資產管理系統結合，以提升建築物操作及維修保養的效率和加強資產管理。圖片顯示我們演講廳的建築信息模擬模型。
We launched a pilot project to integrate BIM technology with Asset Management System at the EMSD Headquarters Building to enhance the efficiency of O&M services in buildings and reinforce asset management. The pictures show the BIM model of our Lecture Theatre.



此外，政府內部正推行「0-1-1」計劃，即在2015/16至2017/18三個財政年度內，合共節省2%經常性開支。本着與客戶同甘共苦的精神，我們在服務質素不變的情況下，主動就多項服務水平協議提供一次性減價，讓客戶節省開支。

Also related is the Government's service-wide "0-1-1 Envelope Savings Programme", i.e. a total of 2% recurrent savings over three financial years to be achieved from 2015/16 to 2017/18. In the spirit of supporting our clients through thick and thin, we have offered one-off price reduction in many Service Level Agreements without compromising our service quality, thus helping clients reduce cost.

一如去年提及，我們繼續支持發展局的倡議，探討把建築信息模擬技術應用到建築物操作及維修保養服務上的好處，並嘗試將建築信息模擬技術與資產管理系統結合，以求提升效率。在機電署總部大樓推行的獲獎先導計劃在2015/16年度繼續進行，而我們亦與其他工務部門、公營機構及業界分享經驗。

As reported last year, we continued to support the Development Bureau's initiative to explore the benefits of applying Building Information Modelling (BIM) technology to O&M services in buildings, and attempted to integrate BIM technology with Asset Management (AM) System for greater efficiency. Our award-winning pilot project at EMSD Headquarters Building continued during 2015/16 and we have been sharing experience with other works departments, public organisations and the trade.



我們參與「綠建環評社區」先導計劃的經驗，有助我們協助其他政府建築物加入「綠色」及社區友善設施。

Our experience in participating in the BEAM Plus Neighbourhood pilot scheme enables us to help other government buildings plan their "green" and community-friendly features.

營運服務 TRADING SERVICES

我們亦陸續與其他部門分享「綠建環評」認證工作的經驗。我們在2014/15年度已獲得「綠建環評既有建築」暫定鉑金級評級，並在2016年獲得最終認證。此外，我們已參與「綠建環評社區」先導計劃，邀請社區持份者及機電署同事構思為總部外的露天廣場加入「綠色」及其他社區友善設施。其他部門亦可能有興趣知悉我們參與該項先導計劃的經驗。

Another area where we have been sharing experience with other departments is BEAM Plus certification. We have obtained BEAM Plus Provisional Platinum Rating for Existing Buildings in 2014/15, and we have achieved final certification in 2016. Our experience in participating in the BEAM Plus Neighbourhood pilot scheme, under which we have engaged the community stakeholders and EMSD staff to plan “green” and other community-friendly features in our headquarters piazza, might also be of interest to other departments.



不論我們身在何方，均可透過與綜合樓宇管理系統連接的平板電腦，實時監測建業中心各個系統的操作狀況。

No matter where we are, the operating status of different systems in the APB Centre can be monitored in real-time via a tablet connected with iBMS.



照亮投票站

投票及點票站必須有足夠燈光，以清楚顯示票站的位置及讓票站內所有活動得以順利進行。營運基金負責為選舉事務處所有選舉的投票及點票站加裝照明設施，以確保票站光線充足。

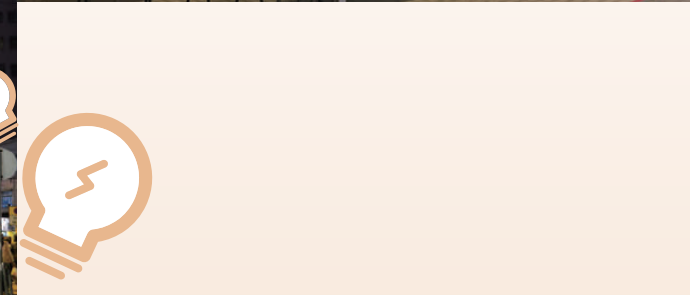
舉例來說，我們就2015年11月22日舉行的2015年區議會選舉，在兩個星期內為495個投票及點票站加裝28 000多個燈泡，而180位同事更在投票當日進行實地檢測，並提供候命支援服務。另一個例子是在2016年2月28日舉行的立法會新界東地方選區補選，我們為154個投票及點票站加裝多個燈泡。

由於票站通常是由官立學校、體育場地、社區會堂或鄉公所改裝而成，大多只能在投票日的前一天才交出場地讓工作人員布置準備，因此進行模擬票站測試極為重要。此外，在投票日安排足夠人手候命以處理故障維修工作，也是一項挑戰。

負責立法會補選票站照明工作的工程策劃部工程師王家強先生表示：「幸得團隊事前的充分準備和周密協調，當天只收到幾宗故障報告。」



(右)我們在2016年2月28日為立法會補選的各個投票及點票站提供照明裝置候命支援服務，以確保票站在投票日運作暢順。
(Right) We provided stand-by support services for the lighting installations at various polling and counting stations on 28 February 2016 so as to ensure their smooth operation on the polling day of the LegCo By-election.



為配合2015年區議會選舉，我們在兩個星期內為495個投票及點票站加裝28 000多個節能燈泡，以提供臨時照明。

To support the 2015 District Council Election, we provided temporary lightings at the 495 polling and counting stations which included more than 28 000 energy saving light bulbs within two weeks.

營運服務 TRADING SERVICES

路路暢通 全民得益

我們客戶部門的工作涉及香港的海陸空交通服務，而我們在2015/16年度的工作反映了我們為客戶在服務市民方面的進展。

香港國際機場新中場客運廊於2015年12月啟用，我們的機場團隊為有員工駐守中場客運廊的政府部門提供機電設施操作及維修保養服務。中場客運廊提供20個停機位，並利用旅客捷運系統的延伸部分連接至一號客運大樓，每年可處理多達額外1 000萬旅客人次。另外，我們也成功取得機場一般抽水系統的操作及維修保養服務合約，並正為助航燈系統維修保養合約的續約事宜作準備。

機場團隊也同時服務有員工駐守機場的其他政府部門，例如民航處。團隊已開始協助該處實施能源優化系統，包括把設備提升至更節能的型號，以及改變使用者的操作方法及行為。

PROVIDING A SMOOTH JOURNEY FOR ALL

The work of our clients encompasses air, sea and land transport services in Hong Kong and our work in 2015/16 reflected the progress we made for our clients in serving the public.

Our airport team provides O&M services for E&M facilities of the government departments with staff stationed at the new Midfield Concourse of the Hong Kong International Airport opened in December 2015. The Concourse provides 20 parking stands, connects to Terminal 1 via an extension of the Automated People Mover system and can serve up to an additional 10 million passengers every year. We also won the tender to provide O&M services for the airport's general pumping system, and have been preparing the renewal of the maintenance contract for the airfield ground lighting system.

The team also serves other government departments with staff stationed at the airport such as the Civil Aviation Department. We have begun to help it implement an energy optimisation system, involving both equipment upgrades to more energy efficient models as well as bringing about changes in operation practices and behaviour of users.



我們不分晝夜為機場新中場客運廊的滑行道助航燈提供維修保養服務，確保其運作正常。
We work round the clock to provide maintenance services for the airfield ground lighting of the taxiways of the new Midfield Concourse at the airport to ensure its normal operation.



我們協助海事處提升其船隻航行監察服務系統和提供維修保養服務，確保船隻航行及監察工作的效率。

We help the Marine Department upgrade and maintain its Vessel Traffic Services System to ensure efficient vessel navigation and monitoring.

2016年3月開始運作的海事處船隻航行監察服務系統(航監系統)，是本港海上交通服務的里程碑。航監系統現已發展至第三代，擁有高性能的電腦網絡、先進的數碼固態雷達，以及設於新的船隻航行監察中心(航監中心)的八台綜合操作員工作站。系統運用電腦屏幕，使船隻追蹤和導航援助服務可全部於無紙環境下完成。我們的項目團隊過去數年一直協助客戶更新和提升航監系統，他們於2016年農曆新年期間為新的航監系統及航監中心進行測試和校驗，工作尤為忙碌。我們的角色是協助客戶提升香港水域船隻導航和監察工作的質素。

市民或已注意到，啟德郵輪碼頭日益繁忙，停泊量上升至每年110至120艘。我們的團隊已不斷增加人手，應付需求日增的機電服務。我們喜見郵輪碼頭正逐漸成為旅客到訪香港及亞洲各地的重要門戶。

陸上交通方面，政府於2016年8月接收東區海底隧道(東隧)，而我們也一直忙於相關的準備工作。政府接收東隧後，我們負責監察隧道營辦商的機電設施操作及維修保養服務。同時，城門隧道交通管制及監察系統的更換工程亦已完成。

A milestone in sea transport was the commencement of operation of the Marine Department's Vessel Traffic Services (VTS) System in March 2016. The VTS, now in its third generation, comprises a network of powerful computers, sophisticated digital solid state radars and eight integrated operator stations at the new Vessel Traffic Centre (VTC) where vessel tracking and navigational assistance services can be all done on screen in a paperless environment. Our project team that has been helping the client replace and upgrade VTS in the past few years was particularly busy during the Chinese New Year in 2016 with the testing and commissioning of the new VTS System and VTC. Our role was to facilitate the client to enhance the quality of vessel navigation and monitoring in Hong Kong waters.

The public may have noticed that the Kai Tak Cruise Terminal has been getting busier, with the number of cruise calls rising to about 110 to 120 per year. Our team there has been stepping up manpower in order to satisfy the increasing E&M service needs. We are delighted that the Cruise Terminal is becoming an increasingly important gateway for tourists visiting Hong Kong and other places in Asia.

As to land transport, we have been working busily on preparation work related to the takeover of the Eastern Harbour Crossing by the Government in August 2016. After the takeover, we are responsible for monitoring the O&M services provided by the tunnel operator for E&M facilities. Meanwhile, replacement of the Traffic Control and Surveillance System at Shing Mun Tunnels has also been completed.

營運服務 TRADING SERVICES



我們資訊服務中心的人員提供24小時服務，處理客戶的故障報告。

Our staff at the Information Services Centre is ready round the clock to handle clients' fault reports.



政府於2016年8月接收東區海底隧道後，我們將負責監察隧道營辦商的機電設施操作及維修保養服務。

After the takeover of the Eastern Harbour Crossing by the Government in August 2016, we would be responsible for monitoring the O&M services for E&M facilities of the tunnel operator.

年內，我們完成了全港交通燈監察系統與地理資訊系統平台結合的工作。同時，全港行人天橋升降機及自動梯的監察系統、行人及行車隧道的抽水系統及所有主要客戶部門總部大樓的配電系統，亦已經與地理資訊系統結合。有了由地理資訊系統支援的實時遙距監察功能，我們便可更快地回應客戶的故障報告和進行維修。此外，我們的資訊服務中心也變得更有效率，因為當任何設施出現故障時，已結合地理資訊系統的平台就會即時顯示故障位置，以便採取行動。

快將落成的港珠澳大橋是連接內地的陸路運輸新通道。興建中的人工島上的新過境設施，將包括供我們的客戶部門（例如路政署、入境事務處、香港海關、香港警務處、消防處等）使用的各種機電系統。屆時我們的機電操作及維修保養業務範疇將大幅擴大，而我們現時正進行一切必要的準備工作。

During the year, we completed the integration of the city's traffic light monitoring system with the Geographic Information System (GIS) platform. Likewise, the monitoring systems of all footbridge lifts and escalators, pedestrian and vehicle subway pumping systems as well as power distribution systems at headquarters buildings of all major client departments have also been integrated with GIS. The GIS-enabled real-time remote monitoring has made fault response and rectification for clients much faster. Our Information Services Centre is now also more efficient as any facility with a reported fault can be instantly located on the GIS-integrated platform for action.

Also on the horizon is the Hong Kong-Zhuhai-Macao Bridge which will provide a new land transport link to the Mainland. The new boundary crossing facilities on an artificial island being built will include various E&M systems for our client departments, such as the Highways Department, the Immigration Department, the Customs and Excise Department, the Hong Kong Police Force, the Fire Services Department, etc. This would expand our O&M portfolio significantly and we are making all necessary preparations.

保養偏遠地區的雷達站以守護航空安全

機電工程營運基金為客戶提供的服務有時涉及偏遠地點，例如大欖角機場多普勒天氣雷達站便坐落屯門一個山頂，面向香港國際機場。機場及車輛工程部高級工程師胡偉傑先生的團隊負責其維修保養工作，他表示在他的團隊所負責的雷達站之中，大欖角機場多普勒天氣雷達站已算是較易到達的一個。

大欖角機場多普勒天氣雷達站於2014年落成啟用，安放了香港天文台新的風切變氣象雷達。該雷達可搜集氣象數據，並即時向於機場升降的飛機發出有關風切變的預警，以保障航空安全。胡先生的團隊為雷達站提供定期的維修保養及故障維修服務。由於航班安全十分重要，因此雷達站的任何故障都必須立即修妥。他說：「雷達站在過往兩年運作良好，而我們的團隊也一直24小時隨時候命。」

TAKING CARE OF RADAR STATIONS IN REMOTE LOCATIONS FOR AVIATION SAFETY

EMSTF's client work sometimes takes us to far-flung locations. The Brothers Point Terminal Doppler Weather Radar (TDWR) Station, for example, sits on a mountain top in Tuen Mun directly facing the Hong Kong International Airport. According to Mr Wu Wai-kit, Eddie, Senior Engineer of the Airport and Vehicle Engineering Division, whose team handles its maintenance and repair, this is already one of the more accessible radar stations serviced by his team.

Commissioned in 2014, the TDWR Station was constructed to house the Hong Kong Observatory's new windshear weather radar, which collects meteorological data and provides timely windshear alerts to flights to and from the airport for safeguarding aviation safety. Mr Wu's team provides regular maintenance and fault repair services for the station. As flight safety is critical, any fault in the station must be repaired immediately. "The station has been operating smoothly in the past two years and our team is on 24-hour stand-by at all times," he said.



雖然大欖角機場多普勒天氣雷達站坐落屯門偏遠的山頂上，但當有需要時，我們都會馬上趕赴現場進行維修。
Although the TDWR Station sits on a remote mountain top in Tuen Mun, we are ready to provide repair services anytime.



我們為香港天文台的大欖角機場多普勒天氣雷達站提供機電設施維修保養服務，保障本港的航空安全。
To ensure aviation safety in Hong Kong, we provide maintenance services for the E&M facilities at the TDWR Station of the Hong Kong Observatory.





服務香港市民並提升他們的生活質素是我們的首要任務。我們以五大策略為行動綱領，引領我們如何為客戶部門提供服務，以及如何向員工、承辦商、自然環境、弱勢社群及全體市民履行我們的社會責任。

適逢營運基金慶祝成立20周年，就讓我們在此回顧營運基金成立至今，在企業支援及管治工作方面走過的漫長歷程。早期由不同部別負責的培訓、溝通、品質、安全及資訊科技支援等工作，經過多年來的演變和發展，如今已整合成為一套全面且不斷改進的企業支援及管治職能，在一名助理署長的帶領下，由營運基金內其中一個科別根據目前的策略框架執行，再配合其他單位及部別給予的支援，為部門提供服務。此外，為了更全面反映及監察營運基金的表現，在2015/16年度我們採用一套新的關鍵績效指標。

以下是2015/16年度的工作重點。

五大策略及企業進展

提供優質服務

為客戶部門提供優質機電工程服務是我們的首要工作。我們在2016年年初已積極籌劃「2016年客戶意見調查」，並廣邀客戶參與。該項調查已於6月22日至8月3日期間進行。根據上一次在2014年進行的同類調查，以8分為滿分計，我們的客戶滿意指數創下6.22分的歷史新高。儘管2016年的調查是在2015/16年度之後進行，但我們欣然報告，客戶滿意指數在2016年再創新高，以8分為滿分計，我們取得6.45分。這也反映了我們在過去兩年不斷改進服務的成果。

與此同時，我們優化了每月客戶電話意見調查的機制，包括增加抽樣訪問的次數由每月210次至460次，同時亦把訪問涵蓋的範圍由維修保養擴大至包括工程策劃，此舉有助我們擴展至接觸更廣闊的客戶層面及搜集更多的意見。

Serving the people of Hong Kong to improve their quality of life is our top priority. Our tool is a framework of five strategies which guides not only how we work for client departments, but also how we discharge our social responsibilities towards our staff, contractors, the environment, the disadvantaged in the community and indeed every citizen of Hong Kong.

As we celebrate EMSTF's 20th anniversary, it is interesting to note the long journey in corporate support and governance work that we have undertaken since the earliest days of EMSTF. What started as dispersed activities like training, communication, quality, safety and IT support, etc., have evolved and progressed over the years to become a coherent set of dynamic corporate support and governance functions grouped under a branch led by an Assistant Director, guided by our current strategic framework, with the support of other units and divisions, to provide services to the Department. Moreover, we adopted a set of newly defined Key Performance Indicators in 2015/16, in order to comprehensively reflect and monitor the performance of EMSTF.

This is an update of our endeavours in 2015/16.

OUR FIVE STRATEGIES AND CORPORATE PROGRESS

Deliver Excellent Service

Our first duty is to provide excellent E&M engineering services to client departments. As of early 2016, we commenced the preparation for the Customer Opinion Survey (COS) 2016 and soliciting clients' participation in the survey which was conducted between 22 June and 3 August. The previous COS in 2014 achieved a record high Customer Satisfaction Index (CSI) of 6.22 out of 8. Though the 2016 COS was beyond the timeframe of 2015/16, we are delighted to report that it achieved a new record high CSI of 6.45 out of 8, as a result of various improvements we made in the past two years.

Meanwhile, we have enhanced our monthly telephone survey mechanism including an increase of sample size from 210 to 460 cases per month and an extension of coverage from maintenance to project works. The enhanced survey mechanism has helped us broaden our reach to more customers and solicit more comprehensive feedback.

關鍵績效指標 Key Performance Indicators	2015/16	
	目標 Target	成績 Result
1. 收入回報率(%) Return on Revenue (%)	3.4	4.8
2. 新收入(\$百萬) New Business and Growth of Business (\$M)	145	267.97
3. 客戶滿意指數[以8分為滿分] Customer Satisfaction Index [on an 8-point scale]	—	6.22 ¹
4. 年內續訂的服務水平協議(%) Percentage of Service Level Agreement (SLA) Renewed during the Year (%)	95	95.84
5. 每月電話調查客戶滿意度(%) Percentage of Satisfaction Level Based on Monthly Customer Feedback (%)	95	99.14
6. 每名營運基金員工接受訓練的日數 Training Days/Staff (no. of training days per staff for EMSTF)	4.5	4.29 ²
7. 員工滿意指數[以10分為滿分] Staff Satisfaction Rating [on a 10-point scale]	—	6.4 ¹
8. 員工建議計劃 Awards for Staff Suggestion Scheme Proposal (no.)	75	134
9. 達到服務水平協議所訂的表現目標(%) Percentage of SLA Service Performance Target Compliance (%)	99	99.84
10. 每千名營運基金員工須呈報的意外宗數(每千人計算) Reportable Accidents per 1 000 EMSTF Staff (no. per 1 000 staff)	5	3.82
11. 違反法例次數 Statutory Non-compliance (no.)	0	0
12. 耗電量(千瓦小時)[機電工程署總部大樓、數據中心及各策略業務單位] Electricity Consumption (kWh) [EMSD Headquarters, Corporate Data Centre and all SBUs]	10 838 767 ³	10 750 467 ⁴

¹ 2014年調查所得的指數。下一次調查將會在2016/17年度進行。
These were the results from the surveys conducted in 2014. The next surveys would be conducted in 2016/17.

² 培訓管理系統正進行提升以記錄所有的員工培訓活動。
Training Management System is being upgraded to record all training activities attended by staff.

³ 2013/14年度的耗電量扣除客戶使用量。
Baseline electricity consumption (exclude client usage) as of FY2013/14.

⁴ 正常化後2015/16年度的耗電量扣除客戶使用量。
Normalised electricity consumption (exclude client usage) as of FY2015/16.

資訊服務中心是我們與客戶就故障及維修工作進行溝通的主要平台。年內，我們就如何改善和優化資訊服務中心的服務，完成了一項可行性研究，目標是把中心提升為一個嶄新的「顧客為本電子平台」，作為日後設立的客戶服務中心的骨幹。該客戶服務中心將比現時的資訊服務中心更先進，並大量應用流動資訊科技。有關工作已開始分階段推行。此外，我們已全面革新中央投訴登記冊。這個具備提示功能的中央系統能幫助我們回應及記錄客戶及市民的投訴，以方便管理層監察及作出跟進行動。

現時是流動通訊的年代，通訊應用程式不但帶來各種方便，同時也能提高生產力。我們推出一個全新的智能電話流動網上平台，以利便客戶在網上呈報非緊急故障維修事項。我們亦推出一個名為「維修外判合約表現監察系統」的流動應用程式，以加強監察承辦商在維修保養工作方面的表現，讓負責有關工程項目的人員能更適時地向客戶匯報工作進度。

品質是優質服務的重要一環。在企業層面上，我們已為營運基金六個策略業務單位和各個企業支援單位的品質管理系統及環境管理系統認證，全面提升至最新的ISO 2015年版本。我們亦會將各單位個別的綜合管理系統合併，整合成單一及更統一的綜合管理系統，當中包含一個ISO 9001系統、一個ISO 14001系統及一個OHSAS 18001系統。有關的合併和過渡工作將分別於2016及2017年完成。

Our Information Services Centre (ISC) is our hub of fault-and-repair communications with clients. We completed a feasibility study during the year to revamp and upgrade the ISC to a higher level where a new Customer Centric e-Platform will provide the backbone for a future Customer Service Centre, a more advanced version of the current ISC, making use of mobile technology. Phased implementation has already begun. Also, we have revamped the Central Complaint Registry to help us respond to and document complaints from clients and the public in one centralised system, with the implementation of bring-up reminder functions to facilitate management monitoring and take follow-up actions.

In this age of mobile communication, applications can boost convenience and productivity. A new mobile web platform on smart phones for reporting non-emergency fault repair cases online was launched, making fault reporting much easier for clients. A mobile application named Performance Monitoring System for Maintenance Contract was also launched to enhance monitoring of maintenance jobs performed by contractors so that project officers can report progress to clients in a more timely manner.

Quality is an integral part of service excellence. At the corporate level, we have adopted a holistic approach in transiting our various Quality Management System and Environmental Management System certifications to the latest ISO 2015 versions for all six Strategic Business Units (SBUs) and Corporate Supporting Units. All our Integrated Management Systems (IMS) for different units will then be merged and converted to become a single, more unified and aligned IMS, comprising one ISO 9001, one ISO 14001 and one OHSAS 18001 system. The merging and transition will be completed in 2016 and 2017 respectively.

企業管理 CORPORATE STEWARDSHIP



超過200位同事及嘉賓參與「品質及安全日2015」，一同分享和表揚同事在提升服務質素及工作安全方面的經驗和成果。

More than 200 staff members and guests participated in the Quality and Safety Day 2015. We shared and appreciated the contribution of our staff in enhancing quality and safety at work.

在員工層面上，我們繼續邀請同事參加營運基金常設的「品質、環境及生產力推廣計劃」，以提出新的理念，改善服務質素和提升職安健水平。2015年12月，我們舉辦了一年一度的「品質及安全日」。我們就此收到百多份員工建議書，競逐「最佳增值個案服務獎」及「最佳職安健改善個案獎」，而得獎者已於活動當天進行簡報和領獎。

贏得公務員體制的獎項，是營運基金服務優質的證明。年內，營運基金有三位同事獲頒發2015年公務員事務局局長嘉許狀，另有兩個團隊分別在2015年公務員優質服務獎勵計劃的「部門合作獎」及「隊伍獎（一般公共服務）」中奪得獎項。

年內，我們試行把「新工程合約」表格應用於部分合約。我們透過使用新的表格，協助各個策略業務單位採購工程服務。在2016年，我們在機電署總部完成了一項有關融合建築信息模擬技術及資產管理的先導計劃，以加強建築物的資產管理，以及操作和維修保養工作。該項計劃將會在2016/17持續推行。

At the staff level, we have continued to invite new ideas from colleagues to improve quality, occupational safety and health under our ongoing Quality, Environmental and Productivity Promotion Programme. For our annual Quality and Safety Day held in December 2015, over 100 submissions were received from staff competing for the Best Service Delivery Enhancement Award as well as the Best Occupational Health and Safety Enhancement Project Award. Winning entries were showcased and given awards on that day.

Winning civil service awards is a good testimony to EMSTF's service excellence. Three staff members were honoured with the Secretary for the Civil Service's Commendation Awards in 2015, while two EMSTF teams received awards in the Civil Service Outstanding Service Award Scheme 2015 under the "Partnership Award" and "Team Award (General Public Service)" categories respectively.

The New Engineering Contract forms were adopted for some trial contracts in the year. We have assisted various SBUs in procuring engineering services by using the new forms. Subsequent to the completion of a pilot test at EMSD Headquarters in 2016, our pioneering work in applying Building Information Modelling cum Asset Management System to enhance O&M work and asset management in buildings will be continued during 2016/17.



機電署三位優秀同事在2015年獲頒公務員事務局局長嘉許狀。典禮當日，行政長官梁振英先生與獲獎同事握手道賀及拍照留念。

Three of our outstanding staff members were awarded the Secretary for the Civil Service's Commendation Awards in 2015. The Chief Executive the Honourable C Y Leung shook hands with the awardees and posed for a photo together.



革新後的機電署網站引入多項新元素，例如流動裝置兼容版本，並榮獲「2015最佳.hk網站獎」的榮譽嘉許。

The revamped EMSD website includes many new features such as the mobile-compatible version and has attained the Honourable Mention in the "Best .hk Website Awards 2015".

機電署網站年內也進行了大革新。已於2015年11月推出的新網站，更切合流動電話格式及更易於瀏覽，而版面設計也更加以人為本。新網站在香港互聯網註冊管理有限公司舉辦的「2015最佳.hk網站獎」比賽中獲得榮譽嘉許。

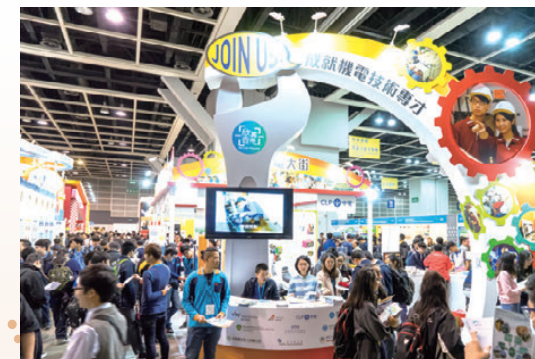
成為業界典範

香港公共基建工程持續如火如荼地進行，市場對機電業工人及專業人員的需求甚殷。作為由19家機電機構組成的香港機電業推廣工作小組的領導機構，我們在年內再推出多項機電業推廣及招聘活動，包括參與一連四天假香港會議展覽中心舉行的「教育及職業博覽2016」，以「機電大街」的方式吸引年青人入行。展覽期間舉行的「機電業主題日」也深受求職者歡迎。

The EMSD website also underwent a major revamp during the year. The new site, launched in November 2015, is mobile phone-friendly, easy to navigate and comes with a more people-oriented design. It won the Honourable Mention award in the Hong Kong Internet Registration Corporation Limited "Best .hk Website Awards 2015".

Become a Trade Model

As public infrastructure continues to boom in Hong Kong, demand for E&M workers and professionals remains high. As the leader of the Hong Kong E&M Trade Promotion Working Group comprising 19 related E&M organisations, we have again spearheaded many promotion and recruitment activities including participation in the four-day Education & Careers Expo 2016 at the Hong Kong Convention and Exhibition Centre, using the "E&M Street" approach to attract young talents to the industry. The Electrical & Mechanical Day held during the Expo also proved popular with job seekers.

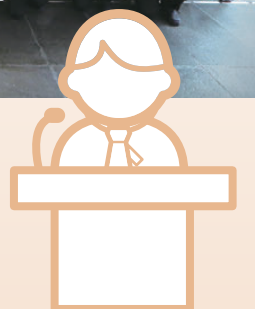


在「教育及職業博覽2016」，機電署首次採用「機電大街」的方式，透過一站式的行業展覽及專題講座，向青年人介紹機電業的前景及發展。

In the Education & Careers Expo 2016, EMSD for the first time adopted the "E&M Street" approach, featuring a one-stop industry exhibition and topical seminars, to introduce youngsters to the career prospects and development of the E&M industry.



過去60年，政府技術人才培訓計劃成功培育逾5 000名機電業技術人才。新一屆學徒會秉承前人的精神，繼續以專業才能貢獻社會。In the past 60 years, the Government Apprentice Training Scheme has nurtured more than 5 000 E&M professionals. Our new trainees will continue to uphold the legacy of their predecessors and make contribution to the community through their professionalism.



企業管理 CORPORATE STEWARDSHIP

為期三天的「『你』想機電探索日」共吸引逾1 200名市民入場參觀，活動讓年青人有機會認識機電署的日常工作，加深對機電業的了解。

The three-day E&M Discovery Day drew more than 1200 visitors, offering youngsters a golden opportunity to gain an insight into our daily work and develop a better understanding of the E&M trade.



2015年是機電署技術人才培訓計劃60周年紀念，我們藉此機會舉辦一連串慶祝活動，包括在機電署總部大堂舉行的回顧展覽。我們也透過「教師發展日」和「『你』想機電探索日」等推廣活動，招募新血參加見習工程師訓練計劃及技術員訓練計劃。

以營運基金在機電市場的領導地位，我們有責任在操作及維修保養工作方面採用最佳做法並保持高安全標準，以及向業界其他人士推廣這些做法。年內我們為我們的承辦商舉辦了兩場承辦商研討會，分享最新的安全心得及資訊，並推出流動電話應用程式，方便承辦商在維修保養期間以智能電話隨時隨地取得在假天花內進行工程的許可證。

我們完成檢討部門的《安全及健康手冊》，當中涵蓋業界提供的寶貴意見。我們根據勞工處於2015年年中向業界提出的最新安全要求，加強了針對高空工作的安全措施。

The year 2015 marked the 60th anniversary of EMSD's Apprentice Training Scheme, an occasion for a series of celebration events including a retrospective exhibition at the lobby of EMSD Headquarters. We also leveraged the occasion to recruit new blood to join our Engineering Graduate Training Scheme and Technician Training Scheme, via promotional activities such as Teacher's Day and E&M Discovery Day.

Given EMSTF's leading position in the E&M service market, we have the responsibility to adopt best practices in O&M work and maintain high standards of work safety, as well as to promote these to others in the trade. For our contractors, we held two Contractor Forums in the year to share the latest safety tips and information, and launched a mobile application so that contractors could obtain permit-to-work for ceiling void works anytime anywhere on their smart phones during the maintenance period.

We completed reviewing our Safety and Health Handbook with valuable input from the trade. We enhanced the measures for work-at-height in accordance with the Labour Department's latest requirements introduced to the trade in mid-2015.



我們在年內舉辦了「假如我畫署長」繪畫比賽，讓同事發揮無限創意，並提高他們對部門的歸屬感。圖為冠軍作品。

We organised the "If I Draw 3Ds" drawing competition in 2015. Our staff can give full play to their creativity, and their sense of belonging can also be enhanced. Pictured are the winning pieces.

建立員工才能與關懷文化

建立員工才能固然重要，但營造一個關懷員工的環境，讓同事既能協助營運基金實現業務目標，又可從工作中得到滿足感、促進個人成長和平衡工作與生活，也同樣重要。

年內我們已制訂員工才能矩陣，並於2015年9月推出經優化的技術員訓練計劃，有關計劃更着重實務訓練的成效，以切合各個策略業務單位的業務需要。另一重點工作是在主要客戶場地設立更多卓越中心，這些中心旨在讓營運基金員工建立和提升為主要機電系統進行操作及維修保養的專業技能，並成為其他客戶場地的典範，同時也作為前線員工及見習人員的實習基地。

為了更緊密維繫員工，年內我們除了舉辦定期活動，例如兩年一度的家庭同樂遊藝會（是次主題為營運基金20周年），還推出不少新猷供員工參與，包括邀請見習技術員投票選出新的見習技術員制服設計；邀請所有員工參與「機電署宣傳大使」招募及選舉，協助提議和揀選適合機電署的宣傳大使；還有舉行「假如我畫署長」繪畫比賽，全部都深受同事歡迎。另一項新活動是於2015年11月舉行首個「啟迪論壇」，讓來自各策略業務單位的同事分享心得，主題為標書評審及投標前準備。至於工會方面，自2016年開始，機電工程署署長與11個工會的聯席會議由每年舉行一次改為每半年一次。

一如往年，我們繼續委託香港家庭福利會為所有員工提供輔導服務，而借調往其他部門的機電署員工也可享用這項服務。同時，我們也舉行各種有關情緒、精神和身體健康的工作坊，幫助同事平衡工作與生活，保持身心健康。

Build Capacity and Caring Culture

Staff capacity building is important, so is fostering a caring environment for our colleagues so that they can help EMSTF achieve its goals while attaining job satisfaction, personal growth and work-life balance.

As we developed the Staff Competency Matrix, an enhanced Technician Training Scheme was also launched in September 2015 with greater emphasis on practical training effectiveness to suit the SBUs' business needs. Another focus was to launch more Centres of Excellence (CoEs) at major client venues. CoEs aim to build up and sharpen in-house O&M expertise of major E&M systems and become trade models for other venues. CoEs also double as on-the-job training ground for frontline staff and trainees.

To better engage staff, a number of new initiatives were introduced, in addition to regular activities like the biennial fun fair with a theme on EMSTF 20th Anniversary for staff involvement. The new initiatives included inviting technician trainees to vote for a new technician trainee uniform design, a departmental Mascot Hunt cum Mascot Survey that invited all staff to help propose and indicate their preferred mascot for EMSD, and an "If I Draw 3Ds" drawing competition, all well received by colleagues. Another new event was the first Enlightenment Forum held in November 2015 which focused on sharing knowledge about tender evaluation and pre-tender preparations with colleagues from all SBUs. As to 11 unions, the Joint Union Meeting with the Director of Electrical and Mechanical Services became a half-yearly instead of an annual event from 2016 onwards.

As in past years, we continued to commission the Hong Kong Family Welfare Society to provide counselling services to all staff. EMSD staff seconded to other departments can also enjoy the service. Meanwhile, various workshops on emotional, mental and physical health were held to help colleagues achieve work-life balance and well-being.

企業管理

CORPORATE STEWARDSHIP



管理人員及一眾嘉賓共同主持家庭同樂遊藝會的開幕儀式。
Our management staff and guests officiated at the opening ceremony of the fun fair.

流動通訊科技與員工息息相關，為使用輪椅的員工及常以手推車運送貨物和文件的同事通行無阻，我們推出了一項以智能電話操控方式，代替現有的通行證進出總部大樓先導計劃，配合「遙控開門」應用程式，可利用智能電話遙距開啟總部大樓內的部分門鎖，而不影響保安。目前已有約100位機電署員工在流動電話上安裝了應用程式，以測試系統操作。預期現有的出入控制系統會逐步被取代和更新，屆時員工及訪客在總部大樓內出入便會更方便快捷。

優化知識管理

在籌備多時之後，全新的「知識群體網站」已於2015年8月推出，方便員工建立網上知識分享群體。新網站的主要特色之一，是設有三個以主題為本的智庫，分別為工作小組智庫、事故報告智庫及工程策劃團隊智庫。網站同時具備可讓同事合作撰寫文件的新功能，使員工協作更為便捷。

為配合部門制訂員工才能矩陣的工作，我們引進和試行一個名為「知識地圖」的全新知識管理工具，以助各策略業務單位及部別確定和編集矩陣之下任何重要的知識需求。「知識地圖」有助員工就具體的操作程序搜尋專門知識，而高層管理人員也可用以制訂人力資源策略。我們已於2015/16年度完成有關的先導計劃，並會於2016/17年度推出更多「知識地圖」。

知識管理對建立員工才能、提高品質和生產力都十分重要，也有助我們記錄和分享知識，以作出正確的決定，並繼續走在工程與管理領域的前端。我們會繼續為員工加強和推廣各種知識群體和知識管理工具。

Mobile technology is relevant to staff engagement. To create a barrier-free environment for staff using wheelchairs and staff frequently transporting goods and documents in trolleys, we have begun a pilot for wireless smart access control system with a “mobile door control” application that can unlock doors in our headquarters building via smart phones, instead of access card, from a distance while maintaining security. Around a hundred EMSD staff members have already installed the application for a system trial, and gradual implementation is expected when the existing access control system is replaced to improve convenience for colleagues and visitors alike.

Enhance Knowledge Management

After much preparation, a new Knowledge Communities Portal was launched in August 2015 to better facilitate the set-up of virtual knowledge sharing communities. A key feature of the new portal is three theme-based knowledge hubs, namely knowledge hub for working groups, knowledge hub for incident reports and knowledge hub for project teams. The portal also has a new co-authoring function that makes collaboration among staff much easier.

To tie in with EMSD's initiative to develop a Staff Competency Matrix, we introduced a new knowledge management pilot tool called the Knowledge Map (K-map) for all SBUs and divisions to identify and codify any critical knowledge needs under the Matrix. K-maps will be useful to individuals looking for expert knowledge in specific operational processes, and to senior management in planning human resource strategies. The pilot project was completed in 2015/16 and more K-maps would be produced in 2016/17.

Knowledge management is vital to capacity building as well as quality and productivity improvements. It also helps us document and share knowledge, enabling us to make the right decisions and stay at the forefront of the fields of engineering and management. We shall continue to improve and promote our various knowledge communities and knowledge management tools to our staff.



遊藝會當日，總部地下廣場人頭湧湧，同事與親友都樂在其中。

The piazza of our headquarters was packed with colleagues and visitors who all had a blast that day in fun fair.



持續綠色作業

我們的目標，是以可持續發展的方式執行每項工作及與所有持份者溝通。我們為日常運作不同方面（例如綠色採購及節省電力、用水和用紙等天然資源）訂下各種量化指標，並全部達標。我們近年也一直努力在總部大樓進行多項工作，務求以身作則，於2016年使大樓成為首幢獲得「綠建環評既有建築1.2版」最終白金級評級認證的政府大樓。

另外值得一提的是，我們參加了「綠建環評社區」先導評估，反映我們重視與鄰近社區持份者建立綠色和諧的關係，有關評估已於2016年完成。此外，由2016/17年度起，我們開始籌備把總部大樓與啟德發展區的區域供冷系統連接起來，把我們的空調系統由目前以獨立的製冷機組操作，改裝為以區域供冷方式提供空調，屆時可大大節省能源和減少碳排放，讓營運基金的運作更環保。

Sustain Green Operation

Our aim is to operate in a sustainable manner in everything we do and in our interactions with all stakeholders. Numerous quantitative targets have been set and achieved in our daily operations such as green procurement and saving natural resources like electricity, water and paper. To lead by example, we have also been working hard on our headquarters building in the past few years with the aim of making it the first government building to obtain BEAM Plus Existing Buildings V1.2 Final Platinum Rating in 2016.

Also worth noting is our participation in the BEAM Plus Neighbourhood pilot-assessment, which was completed in 2016. The pilot assessment underscores the importance we attach to a green, harmonious relationship with stakeholders in our immediate neighbourhood. In a different development, we have started making preparations in 2016/17 to connect our headquarters building to the District Cooling System in Kai Tak Development. This will convert our air-conditioning system from a local chiller plant to that of district cooling supply, thus saving energy and reducing carbon emissions significantly to make our operations more environment-friendly.



知識群體網站的新用戶版面更易於使用，並且新增了更多機電知識區。

The new menu of Knowledge Communities Portal is more user-friendly, and the Portal is enriched with more E&M Knowledge Areas.

為增加機電署總部大樓的綠化面積，我們在大堂設置一幅垂直室內綠牆。

To increase the greening areas in the EMSD Headquarters Building, we took the initiative to install a vertical indoor “green wall” at the lobby.



社會及環保報告

SOCIAL AND ENVIRONMENTAL REPORT



關於本報告
ABOUT THIS REPORT

報告目的

香港特別行政區政府機電工程署欣然發表社會及環保報告2015/16(本報告)。本報告重點闡述我們於2015/16年度，在經濟、環境及社會方面的措施和表現。

透過出版本報告，我們展示在過去財政年度的成果，以及部門努力不懈改善可持續發展表現，從而為社會提供更佳服務的承諾。

匯報原則

本報告參照全球報告倡議組織G4可持續發展報告指引的核心選項，以及環境保護署的《環境管制人員適用環保報告指引》而編製。

全球報告倡議組織的內容索引收錄於本報告末段部分，列載指標並將之與本報告的相關內容對照以供參考。本報告已通過獨立第三方驗證，以核實報告的質素及準確度，並確保報告內容符合全球報告倡議組織G4可持續發展報告指引核心選項的要求。

報告範圍

本報告主要匯報機電工程署由2015年4月1日至2016年3月31日期間，在可持續發展方面的各項主要措施及績效。於報告期內，機電工程署的規模、架構、權責關係，及其供應鏈均無重大改變。除另外說明，報告中的數據乃據部門所知悉截至2016年3月31日止的實際數字。財務數據亦同樣是截至2016年3月31日止的財政年度匯報。所有金額均以港元為單位。

REPORTING OBJECTIVES

Electrical and Mechanical Services Department of the Government of the Hong Kong Special Administrative Region (HKSAR) is pleased to present our Social and Environmental Report 2015/16 (the Report). The Report highlights our initiatives and performance on economic, environmental and social aspects in 2015/16.

Through publishing the Report, we are able to demonstrate our achievement during the last fiscal year, and to assure you of our commitment to serving the society better with continuous efforts and improvement in sustainability.

REPORTING PRINCIPLES

The Report has been prepared in accordance with the Core option of the G4 Sustainability Reporting Guidelines, published by the Global Reporting Initiative (GRI), as well as the Environmental Protection Department’s A Guide to Environmental Reporting for Controlling Officers.

The GRI Content Index is provided at the end of the Report, which correlates GRI indicators with associated sections. An independent third-party assurance was conducted to verify the quality and accuracy of the Report and ensure its attainments to the Core option of the GRI G4 Sustainability Reporting Guidelines.

REPORTING SCOPE AND BOUNDARY

The Report focuses on EMSD’s key sustainability initiatives and achievement from 1 April 2015 to 31 March 2016. During the reporting period, there were no significant changes regarding EMSD’s size, structure, ownership, or its supply chain. Data in the Report are presented as absolute figures as of 31 March 2016 (unless otherwise stated) to the best of our knowledge. Financial data are reported for the financial year ended 31 March 2016. All monetary values are in Hong Kong Dollars.

作為本報告的編製過程一部分，我們會分階段邀請不同持份組別一同參與¹，以探討他們對本署工作的關注。年內，我們推行了一項參與活動，透過問卷調查，收集機電工程署同事的意見。我們根據持份者參與活動的結果，得出一系列重要的議題。

As part of the report preparation process, we invite stakeholder groups in stages¹, to explore their concerns about our work. This year, an engagement exercise was conducted to collect feedback from EMSD’s staff through questionnaire survey. A list of material aspects is identified based on the results of the stakeholder engagement.

類別 Category	方面 Aspect	範圍 Boundaries	
		機電工程署的運作 Operations of EMSD	主要供應商的運作 Operations of Our Major Suppliers
經濟 Economic	財務表現 Financial Performance	√	
	部門的採購政策 Departmental Procurement Practices	√	
環境 Environmental	物料使用 Use of Materials	√	
	節約能源 Energy Conservation	√	
	節約用水 Water Conservation	√	
	廢氣控制 Emissions Control	√	
	污水及廢物處理 Effluents and Waste Treatment	√	
	評估供應商/承辦商的環境表現 Supplier/Contractor Environmental Assessment	√	
社會 Social	員工政策 Employment	√	
	職業健康及安全 Occupational Health and Safety	√	√
	平等機會 Equal Opportunity	√	
	員工培訓 Employee Training	√	
	員工投訴機制 Grievance Mechanisms (Labour Practices)	√	
	避免對員工強迫勞動 Avoid Forced Labour	√	
	產品及服務標籤 Product and Service Labelling	√	

本報告的完整版本可於網上查閱，歡迎讀者直接與我們聯繫(電郵：bssd@emsd.gov.hk)，就我們在可持續發展方面的績效或報告方式，提出寶貴意見。

The full version of the Report is published online. Readers are welcome to provide feedback on our sustainability performance or reporting approach by contacting us directly at bssd@emsd.gov.hk.

¹ 我們根據機電工程署的業務營運，邀請較相關的持份者組別參與發表意見。

¹ Stakeholder groups are engaged and invited to express their views with reference to their relevance to EMSD’s operations.

實現可持續發展 SUSTAINABILITY AT EMSD

為支持政府對可持續發展的承諾，及回應客戶對節省能源、提高能源效益日益殷切的需求，機電工程署在提供服務及邁向可持續發展的營運時，致力應對各種挑戰及機遇。

可持續發展對機構的影響

肩負起規管機構及工程服務供應商的雙重角色，部門深明推廣可持續發展，以及應對相關挑戰和機遇的重要性。

對規管服務的影響

於2015年年底，聯合國制訂出一套明確的目標，旨在減低氣候變化的影響及促進全球的可持續發展。在此以前，香港特區政府已對氣候變化議題作出正面回應，發表了《香港氣候變化報告2015》，以及《香港都市節能藍圖2015~2025+》，當中更訂下十年內將能源強度減少四成的進取目標。為將能源強度減至最低，政府現擬擴大「強制性能源效益標籤計劃」，以涵蓋更多電器產品，並加強在社區推廣低碳生活。此外，政府將與電力公司商討新的「管制計劃協議」，進一步改善規管安排、提高能源效益，以及推動可再生能源的發展。

此外，機電工程署正面對着掌握國際及地區當前可持續發展的挑戰及機遇，以協助政府完善能源效益規管架構、履行國際碳排放與節能的責任，及達成相關的績效指標。我們在可持續發展方面，對公眾及企業就提高能源效益，及節約資源的教育上，成績令人欣慰。

對營運服務的影響

為協助客戶的建築物及設施達至可持續營運，我們的營運服務團隊致力掌握最新的可持續發展技術及對客戶的建築物引入能源管理、節約能源和應用可再生能源等措施。近年，我們亦與其他政府部門緊密合作，安裝或更換一些效能較佳的工程系統。

To support the government's commitment to sustainable development and respond to the clients' increasing demands on energy saving and efficiency, EMSD has made every effort to address both challenges and opportunities when delivering our services and moving our operation towards sustainability.

IMPACT OF SUSTAINABILITY ON THE ORGANISATION

Through our dual roles as regulatory body and engineering service provider, we understand the importance and need of promoting sustainability, and addressing the associated challenges and opportunities.

Impact on Regulatory Services

At the end of 2015, the United Nations endorsed a set of clear objectives with the aim of mitigating climate change and fostering global sustainability. Prior to this, the HKSAR Government has already responded positively by publishing the Hong Kong Climate Change Report 2015, as well as introducing the Energy Saving Plan for Hong Kong's Built Environment 2015~2025+ that sets an aggressive target to reduce energy intensity by 40% in ten years. To help minimise energy intensity, the Government is planning to expand the scope of the Mandatory Energy Efficiency Labelling Scheme to cover more electrical appliances and strengthen the promotion of low-carbon living in the community. In addition, the Government will discuss with the power companies to further enhance the regulatory arrangement, improve energy efficiency and promote the use of renewable energy under the Scheme of Control Agreements.

More than ever, EMSD faces the challenge and opportunity of keeping abreast of the latest development on sustainability in the world and in the region, in order to facilitate the Government to enhance its energy efficiency regulatory framework and to help achieve associated performance indicators to meet its international obligation on carbon emission and energy saving. However, it has been a rewarding undertaking for EMSD to continue educating and motivating the businesses and general public to increase energy efficiency and conserve resources.

Impact on Trading Services

To assist our clients' buildings and facilities in achieving sustainable operations, our Trading Services team strives to keep abreast of latest sustainable technologies and introduces best practices with regard to energy management, energy saving, and renewable energy application in clients' premises. We have worked closely with other government departments in recent years to install or replace a number of engineering systems with higher efficiency ratings.

有見於政府在節能計劃中所訂立的目標，很多政府部門及公營機構，都各自為其後數年制訂節能目標。我們會繼續與客戶合作，運用更多先進及高效率的新科技以提升設備的水平。

我們樂於與客戶分享與ISO 50001的國際標準相符的能源管理方法。我們亦會向客戶傳授節約能源技巧的知識及經驗，讓更多人都能實行節能措施，選擇低碳的生活方式。

機構對可持續發展的影響

機電工程署於日常運作中，着重透過不同方式為可持續發展帶來正面的影響，例如規管服務團隊一直執行相關法例，以及推廣各項公眾宣傳活動和計劃；而營運服務團隊則執行環境及社會可持續發展的最佳實務方法。

規管服務

對於政府推廣節約能源和可再生能源的計劃及措施，機電工程署一向以來均全力支持。我們的規管服務協助推行《建築物能源效益條例》、香港建築物能源效益註冊計劃、電氣產品的自願性及強制性能源效益標籤計劃、空調系統使用淡水冷卻塔計劃，以及推廣使用電動車。

作為以上可持續發展計劃及措施的一部分，我們安排了公眾宣傳活動，如傳媒推廣、教育活動、公開演講、外展環節、出版刊物及舉辦展覽，以提高市民對節能生活方式的認識。我們希望透過這些活動，令更多人了解節能及保護自然資源的重要，為香港的可持續發展作出貢獻。

營運服務

為更有效控制我們對品質、環境和職業安全健康的影響，我們建立了一套符合現行ISO 9001、ISO 14001，以及OHSAS 18001標準的綜合管理系統。這套系統讓我們能夠以系統化方式檢視各項程序、避免不合規行為的風險、從過往經驗學習及找出可改善之處，從而達至持續改進的目標。

In view of the target stipulated in the Government's energy saving plan, many government departments and public bodies have laid out their own energy saving objectives and targets for the coming years. We will continue to collaborate with our clients to deploy more advance and efficient technologies for equipment upgrading.

We are eager to share with our clients on energy management methodology in line with the international standard ISO 50001. We also pass on our knowledge and experience on energy saving techniques to our clients, empowering more people to exercise energy-conscious measures and live a low carbon lifestyle.

ORGANISATION'S IMPACT TO SUSTAINABILITY

In day-to-day operations, EMSD continues to place great emphasis on driving positive impacts on sustainable development, by imposing legislative enforcement, promoting public campaigns and schemes through our Regulatory Services, and applying best practices for environmental and social sustainability through our Trading Services.

Regulatory Services

EMSD has been an active promoter for the Government's programmes and initiatives on energy saving and efficiency, and renewable energy. Our Regulatory Services have supported the implementation of the Buildings Energy Efficiency Ordinance, Hong Kong Energy Efficiency Registration Scheme for Buildings, Voluntary and Mandatory Energy Efficiency Labelling Schemes for electrical appliances, the Fresh Water Cooling Towers Scheme for air-conditioning systems and encouraged the adoption of electric vehicles.

As part of these programmes and initiatives, we have arranged public promotional activities such as media campaigns, educational events, public speeches, outreach sessions, publications and exhibitions to raise public awareness on energy saving. Through these activities, we hope to encourage more and more people to understand the importance of conserving energy and natural resources, and contribute to the sustainable development of Hong Kong.

Trading Services

In order to better control our impacts in relation to the quality, environmental and occupational health and safety aspects, we have established an integrated management system (IMS) in accordance with the prevalent standards ISO 9001, ISO 14001 and OHSAS 18001. Aiming to continual improvement, the IMS enables us to review various processes in a systematic manner, avoid non-compliance risks, learn from past experience, and identify areas for enhancement.

實現可持續發展 SUSTAINABILITY AT EMSD

為客戶提供機電服務時，我們對可持續發展的承諾，不僅體現於執行項目的階段。我們的能源效益及可再生能源項目，可為環境及社會帶來長遠的正面影響，並可制訂成功的個案，鼓勵其他業界作為借鑑。

就以《建築物能源效益條例》、「室內溫度節能約章」、「『不要鎢絲燈泡』節能約章」為例，我們樂於與環境局分享技術知識及行業心得，協助將這些重要的環保措施和計劃，推廣至全港的企業及市民。

獎項及嘉許

機電工程署一直尋求進一步提升服務水平的機會，我們鼓勵員工參與各項比賽和計劃，以更加了解最新科技及機電服務的最佳實務方法。

When delivering E&M services to clients, our commitment to sustainable development goes beyond merely the project execution phase. Our energy efficiency and renewable energy projects can often generate a long-term positive impact on the environment and society, creating successful cases to encourage more industrial players to follow suit.

Taking the Buildings Energy Efficiency Ordinance, the two Energy Saving Charters on Indoor Temperature and No Incandescent Light Bulbs for example, we are pleased to share our technical know-how and industrial insights with the Environment Bureau to help promote these important green initiatives, which will impact the businesses and residents across Hong Kong.

AWARDS AND RECOGNITION

EMSD always seeks opportunities to further enhance our service quality. We encourage staff to participate in external competitions and schemes to better understand the latest technologies and best practices related to electrical and mechanical services.

2015年傑出學徒獎勵計劃

年內，參與技術員訓練計劃的兩位見習技術員，獲得職業訓練局舉辦的傑出學徒/見習員獎勵計劃嘉許。林卓祺先生及鄧偉倫先生分別獲頒「傑出學徒」及「優異學徒」獎項。林先生早前獲安排與其他得獎者到新加坡考察，到訪當地的工藝教育局中區學院，了解當地學徒制度的最新發展。

2015 Outstanding Apprentice Awards

During the reporting year, two trainees of our Technician Training Scheme received recognition from the Outstanding Apprentice/Trainee Awards organised by the Vocational Training Council. Mr Lam Cheuk-ki and Mr Chow Wai-lun were conferred the Outstanding Apprentice award and the Apprentice of Excellent Performance award respectively. Mr Lam Cheuk-ki joined an exchange programme to Singapore with other awardees to visit the Institute of Technical Education College Central and learn about the latest development in apprenticeship training in the country.



首次在公德地盤嘉許計劃中獲得金獎

為了在工地推廣注重公德的工作態度，發展局自1995年起舉辦公德地盤嘉許計劃。於2015年，我們其中四個承辦商分別獲得金獎、銅獎及兩個優異獎，在工地安全、健康和環境方面都展示了良好態度及做法。

First Gold Considerate Contractor Site Award

The Development Bureau has organised the Considerate Contractors Site Award Scheme since 1995 aiming to promote a considerate attitude for works sites. In 2015, four EMSD contracts were presented with a Gold Award, a Bronze Award and two Merit Awards. The four winning contractors were recognised for their highly considerate attitude as well as good work practices in site safety, health and environment.

機場安全嘉許計劃

我們的機場工程分部，為機場飛行區助航燈系統設計的「便攜式電源櫃」提供有效安全的臨時電力。項目於2016年4月舉行的2015/16機場安全嘉許計劃頒獎典禮上，獲機場管理局頒發「優良安全建議」獎項。

Airport Safety Recognition Award

Our Airport Engineering Services Sub-division designed the “Portable Power Cubicle” for airfield ground lighting (AGL) system to provide temporary power supply for the AGL system efficiently and safely. The project was awarded the Good Safety Suggestion by Airport Authority in the 2015/16 Airport Safety Recognition Award Presentation Ceremony held in April 2016.

國際鐵路安全議會一最佳論文

機電工程署的鐵路科於2015年，在國際鐵路安全議會舉辦的全球論壇上發表論文，獲選為最佳的鐵路安全論文。該文闡述鐵路科與港鐵公司的合作、鐵路科應對挑戰的經驗，以及如何解決月台空隙與現有訊號系統、列車及月台構造限制所帶來的相關安全風險。

International Railway Safety Council — Best Paper

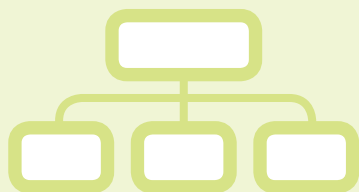
The Railways Branch of EMSD presented a paper in the global forum organised by the International Railway Safety Council in 2015, and was awarded the best paper on railway safety of this international event. This paper described our collaboration with the MTR Corporation Limited, and the Railways Branch's experience in overcoming the challenges and resolving the safety risks associated with platform gaps and limitations of the existing signalling system, trains and platform structure.

實現可持續發展

SUSTAINABILITY AT EMSD

機電工程署的主要持份者

EMSD's Key Stakeholders

員工
Staff客戶
Clients受規管行業
Regulated trades公眾人士
General public供應商及承辦商
Suppliers and contractors培訓機構
Training institutes專業團體、行業公會
Professional and trade associations傳媒
Media各政策部門
Policy bureaux

持份者的參與

我們與不同持份者維持緊密聯繫，獲取他們的寶貴意見，有助我們找出改進服務的空間。為使持份者及廣大市民了解我們的工作，我們也推行持份者參與活動。為達至這些目標，機電工程署在維繫持份者關係方面採取三管齊下的方法。

首先是策略性的客戶及業界參與計劃，以維持緊密的工作關係。第二方面，我們亦建立多個恆常溝通渠道，讓廣大市民充分了解機電安全和能源效益的知識。第三方面，我們於本年推行了一項持份者的參與活動，以掌握持份者對機電工程署可持續發展表現的關注重點。部門員工應邀對機電工程署營運的可持續發展，作出評價及提出意見。他們的意見經整合後，已用於決定此《社會及環保報告》的報告範圍。

此外，我們亦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，以及參與國際性的工程組織，維持本港工程專業的高水準。

承辦商及供應商管理

承辦商、顧問公司和供應商都是我們的重要工作伙伴，與我們一起為客戶及社會大眾提供可靠的優質服務。機電工程署現時與大約2 200個供應商及承辦商合作，主要提供售賣和安裝機電系統服務、及維修保養支援服務。在甄選承辦商時，我們堅守公開和公平的基本原則，在合適情況下盡量採用競爭性投標。

我們主動與承辦商、顧問公司和供應商積極溝通，確保他們清楚知悉各項重要資訊及最新要求。我們也定期為有關員工安排合約管理、承辦商管理、合約安全及誠信管理的簡介會，加強他們對承辦商的管理技巧。

我們透過定期會議和實地視察，監察承辦商的工作，跟進工程進度，盡量減低工程對公眾及客戶造成的不便和滋擾。在整個工程期間，我們會定期評估及檢討承辦商的表現，直至完工為止。

本報告年度內，我們未有發現任何工程及供應商有重大的強迫勞動風險。

STAKEHOLDER ENGAGEMENT

We engage various stakeholders to obtain valuable feedback and aid to identify room for improvement in our services. We also carry out engagement activities in order to introduce our work to stakeholders and the community at large. To achieve these goals, EMSD adopts a three-pronged stakeholder engagement approach.

Firstly, we have launched a strategic client and trade engagement programme to enable us to maintain close relationship with our clients and industry partners. Secondly, we have established various communication channels to engage the general public on a regular basis, so that the community at large is well informed about E&M safety and energy efficiency matters. Thirdly, we carried out an engagement exercise this year to understand stakeholders' concerns on EMSD's sustainability performance. Staff members were invited to evaluate and provide feedback on sustainability issues related to EMSD's operation. Their feedback was consolidated and used to determine the scope of this Social and Environmental Report.

Furthermore, we also support and encourage colleagues to join the Council, various Boards and Committees of the Hong Kong Institution of Engineers and participate in suitable international engineering organisations to uphold the high standards of the engineering profession in Hong Kong.

CONTRACTOR AND SUPPLIER MANAGEMENT

Contractors, consultants and suppliers are our important partners to provide reliable and quality services for our clients and the community. Currently, EMSD engages around 2 200 suppliers and contractors who mainly sell and install electrical and mechanical systems, and provide operation and maintenance support. When selecting contractors, we follow an open and fair process, and adopt competitive tendering wherever applicable.

We proactively communicate with our contractors, consultants and suppliers to ensure that important messages and latest requirements are clearly conveyed to them. We also conduct briefings on contract management, contractor management, contract safety and integrity management for relevant staff to strengthen their contractor management skill.

We monitor the performance of our contractors by conducting regular meetings and site visits to keep track of the project progress as well as to minimise inconvenience or disturbance caused to the public and our clients. We also carry out regular reviews to assess contractors' performance throughout the project.

During the reporting period, we did not identify any operations and suppliers having significant risk of forced labour.

環保成效
ENVIRONMENTAL PERFORMANCE

提升部門及社區的環保表現，是機電工程署秉承的基本原則之一。憑藉專業技能，我們致力減少總部及我們所保養的設施的環境足跡。我們亦負責實施主要的能源效益法例及政策措施，支持香港成為一個可持續發展的城市，並為氣候變化作好準備。

目標及方針

面對氣候變化及環境破壞所帶來的巨大挑戰，確保下一代繼續享有足夠資源和宜居的環境就非常重要。機電工程營運基金恪守「持續綠色作業」的承諾，並在提供規管服務的同時，我們亦盡可能考慮環境因素。

除卻在提供核心服務過程時考慮會帶來的環境影響外，我們透過於總部大樓落實各項環保措施，致力節約資源、減少廢棄物及預防於運作中產生污染問題。我們亦鼓勵承辦商、供應商及其員工共同努力，盡可能減少對環境的影響。

環境管理系統

自2000年起，我們制訂及實施環境管理系統，為部門運作提供管治框架，持續提升部門在環保方面的表現。機電工程署一直密切關注相關國際標準的發展，並相應地提升我們的管理系統。

Enhancing departmental and community-wide environmental performance is one of the underlying principles imprinted on EMSD. Taking advantage of our technical expertise, we strive to reduce the environmental footprint of our headquarters and facilities that we maintain. We are also responsible for implementing major energy efficiency legislations and policy initiatives, supporting Hong Kong to become a sustainable and climate-ready city.

OUR APPROACH

Facing the immense challenges arising from climate change and environmental degradation, it is important to ensure the availability of resources and secure a livable environment for future generations. Our EMSTF strictly follows the commitment of “Sustain Green Operation”. We also integrate environmental considerations as far as practicable when delivering our Regulatory Services.

Apart from considering environmental impacts in the course of delivering our core services, we have made every effort to conserve resources, minimise waste and prevent pollution in our own operation through implementing various green measures at our headquarters. We also encourage and work with our contractors, suppliers and their staff to minimise environmental impacts as far as practicable.

Environmental Management System

Since 2000, we have developed and implemented an Environmental Management System to govern our operations to improve the Department’s environmental performance continuously. EMSD has closely followed the development of relevant international standards and upgrade our management systems accordingly.



機電工程署採用環境管理系統的里程碑
MILESTONES OF ADOPTING ENVIRONMENTAL MANAGEMENT SYSTEMS IN EMSD



發揮香港的節能潛力

作為亞太經合組織的成員，香港支持該組織進取地將亞太區內的能源強度目標，訂定為於2035年¹或以前減少45%，並一同邁向目標。2015年，香港特區政府發表節能藍圖，為本港制訂於2025年之前減少40%能源強度的短期目標。

為了達至整體經濟的能源強度目標，並減輕城市對氣候變化的影響，我們需要發揮建築物及交通運輸等方面重大的節能潛力。在宣傳能源效益、推動香港更廣泛使用再生能源方面，機電工程署擔當其中一個重要角色。本文介紹我們於2015/16年度支持政府節能政策方面的重點工作。

REALISING ENERGY SAVING POTENTIALS IN THE CITY

As a member economy of the Asia-Pacific Economic Cooperation (APEC), Hong Kong supported APEC’s target to work toward an ambitious and aspirational goal of a 45% reduction in APEC-wide energy intensity by 2035¹. In 2015, the HKSAR Government published the Energy Saving Plan which sets a local and near term target of reducing energy intensity by 40% by 2025.

To meet the economy-wide energy intensity target as well as to lessen the city’s contribution to climate change, significant energy saving potentials are to be realised in the buildings, transport sectors, etc. EMSD is one of the key players to promote energy efficiency and encourage the wider use of renewable energy in Hong Kong. Our key developments in 2015/16 in support of the Government’s energy saving policy are highlighted in this chapter.

¹ 2005 年為基準

¹ 2005 as baseline

環保成效

ENVIRONMENTAL PERFORMANCE

《建築物能源效益條例》

《建築物能源效益條例》於2012年9月正式實施。根據條例要求，進行以下類別的工程時，需遵行《建築物能源效益守則》所訂明的最低能源效益標準：

- (i) 四個針對新建屋宇的主要屋宇裝備安裝工程類別，包括空調、照明、電器、升降機及電梯；及
- (ii) 現存建築物的大型改建工程。

《建築物能源效益條例》亦規定商業大廈須根據《能源審核守則》，每十年進行一次能源審核。機電工程署現時正跟進第四批進行首次能源審核的建築物。

機電工程署會每三年對《建築物能源效益守則》進行一次檢討，以配合技術發展和新的業界作業模式，首次檢討已於2015年完成。透過於2015年版《建築物能源效益守則》內採用較嚴格的標準，預期會在2025年前，累計節省約50億千瓦小時能源，相當於減少約350萬噸溫室氣體排放量。

強制性能源效益標籤計劃

「強制性能源效益標籤計劃」已於2009年11月及2011年9月，分兩階段實施。計劃要求製造商及進口商在指定的電器上貼上能源標籤，更清楚地為消費者提供產品的能源效益表現。計劃現時涵蓋五種產品，包括冷氣機、冷凍器具、緊湊型熒光燈(慳電膽)、洗衣機及抽濕機。截至2016年3月，約有7 700款產品型號被列入計劃名單中。

為進一步鼓勵供應商為顧客推出更多具能源效益產品，我們已於2015年11月25日開始，向冷氣機、冷凍器具及洗衣機，全面實施更嚴格的能源效益等級標準。

機電工程署現正計劃實施第三階段的「強制性能源效益標籤計劃」，以涵蓋更多電器產品。第三階段標籤計劃估計可達至的額外節能量，每年約1.5億千瓦小時，相當於每年減少105 000噸碳排放量。

Buildings Energy Efficiency Ordinance

The Buildings Energy Efficiency Ordinance (BEEO) was enforced in September 2012. Under the BEEO, the following areas are abided by the minimum energy efficiency standards stipulated in the Building Energy Code (BEC):

- (i) four key types of building services installations, including air-conditioning, lighting, electrical as well as lift and escalator in newly constructed buildings; and
- (ii) major retrofitting works of existing buildings.

The BEEO also requires commercial buildings to carry out energy audit in accordance with the Energy Audit Code every ten years. EMSD is currently following up the fourth batch of buildings to carry out the first energy audit.

EMSD shall review the BEC every three years to cope with technological advancement and evolving trade practices, with the first review completed in 2015. By adopting more stringent standards in BEC 2015 edition, it is expected to bring about a cumulative energy saving of 5 billion kWh by 2025, equivalent to a reduction in greenhouse gas emissions of about 3.5 million tonnes.

Mandatory Energy Efficiency Labelling Scheme

The Mandatory Energy Efficiency Labelling Scheme (MEELS) has been implemented in two phases since November 2009 and September 2011 respectively. MEELS requires manufacturers or importers to affix prescribed electrical appliances with energy labels, with an aim to better inform consumers about the products' energy efficiency performance. The MEELS currently covers five prescribed products including room air-conditioners, refrigerating appliances, compact fluorescent lamps, washing machines and dehumidifiers. As of March 2016, around 7 700 product models have been listed under the Scheme.

To further encourage suppliers to provide more energy efficient products for consumers, more stringent energy efficiency grading standards for room air-conditioners, refrigerating appliances and washing machines have been fully implemented on 25 November 2015.

EMSD is currently planning for the third phase of MEELS to cover more electrical products under the Scheme. The additional energy saving potential yielded by the third phase of MEELS is estimated at around 150 million kWh per year, equivalent to reduction in carbon emissions of 105 000 tonnes per year.



建築物能源效益資助計劃

自2009年4月開始，機電工程營運基金一直為環境局提供專業技術支援，以實施由自然保育基金撥款資助的「建築物能源效益資助計劃」。該資助計劃於2009年至2012年期間接受申請，合共為建築物業主提供約4.5億元資助，以進行能源及二氧化碳排放綜合審計，並推行能源改善項目。機電工程營運基金一直協助撥款機構，監察涉及超過6 400座建築物獲批准計劃的進度，直至計劃完成為止。據估計，獲批准計劃每年將節省約共1.8億千瓦小時的能源，相等於減少約120 600噸碳排放量。

啟德發展計劃區域供冷系統

政府實施啟德發展區的區域供冷系統，為新發展區域建築物的中央冷氣提供冷水。此計劃的一期及二期工程已完成，現正進行第三期甲的工程。

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 (BEEFS) with the funding support from the Environment and Conservation Fund. The BEEFS were open for application during 2009 to 2012, which provided about \$450-million-worth subsidies for building owners to conduct energy-cum-carbon audits and carry out energy efficiency improvement works. The EMSTF continues to assist the funding agent in monitoring progress of all the approved projects, involving over 6 400 buildings, until their completion. It is estimated that the approved projects would yield a total energy saving of around 180 million kWh per annum, equivalent to about 120 600 tonnes reduction in carbon emissions.

District Cooling System at the Kai Tak Development

The Government has implemented a district cooling system (DCS) at the Kai Tak Development (KTD) to supply chilled water to buildings in the new development area for centralised air-conditioning. The Phase I & II of this project were completed and the Phase IIIA is underway.

啟德發展計劃區域供冷系統用戶(2016年中期)

USERS OF DCS AT KTD (AS OF MID-2016)



啟德郵輪碼頭
Kai Tak Cruise Terminal



工業貿易大樓
Trade and Industry Tower

晴朗商場
Ching Long Shopping Centre



保良局何壽南小學
Po Leung Kuk Stanley
Ho Sau Nan Primary School

聖公會聖十架小學
S.K.H. Holy Cross Primary School

環保成效

ENVIRONMENTAL PERFORMANCE

隨着啟德地區的新發展，預計區域供冷系統的用戶，將會在未來數年陸續增加。《區域供冷服務條例》(第624章)已於2015年3月27日實施，賦予政府法定權力，向啟德發展計劃區域供冷系統用戶收費，服務費可於不久將來抵銷營運成本。

一般情況下，區域供冷系統較傳統製冷空調系統的耗電量低35%。據估計，在啟德發展計劃完成後，區域供冷系統每年可節省高達8 500萬千瓦小時電力，相當於每年減少59 500噸二氧化碳排放量。

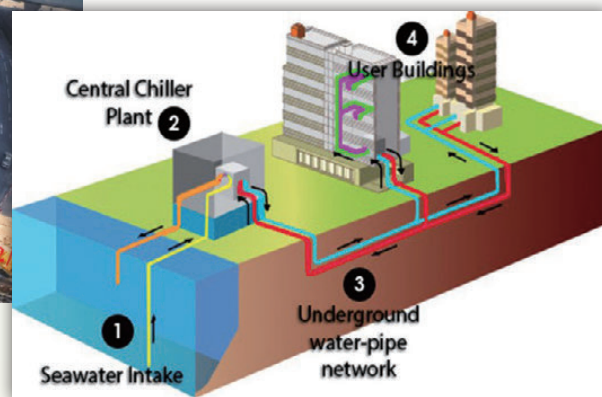
Along with the new development in Kai Tak, it is anticipated that the number of DCS users will increase in coming years. Following the enforcement of the District Cooling Services Ordinance (Cap. 624) on 27 March 2015, which bestows the government with the statutory authority to collect charges from DCS users at KTD, the service fees can offset the operating costs in the near future.

In general, a DCS will consume up to 35% less electricity than traditional air-cooled air-conditioning systems. It is estimated that upon completion of the KTD, the DCS will save up to 85 million kWh of electricity annually, equivalent to a reduction of 59 500 tonnes of carbon dioxide emissions per annum.

啟德發展區
Kai Tak Development



區域供冷系統
District Cooling System



為主要政府建築物進行能源審核

機電工程營運基金受環境局委託，在2017/18財政年度或之前，為大約340座主要的政府建築物進行能源審核，並根據每座建築物的運作和技術特性，尋找能源管理機會。新措施旨在協助政府決策局及部門實踐節能目標，即由2015/16至2019/20的五個財政年度內，於相若的運作環境下，以2013/14財政年度的操作環境為基礎，為政府建築物節省5%的用電量。

Conducting Energy Audit at Major Government Buildings

The EMSTF was entrusted by the Environment Bureau to conduct energy audit for about 340 major government buildings by 2017/18, and to identify energy management opportunities specific to the operational and technical characteristics for each of these buildings. The new initiative aims to facilitate government bureaux and departments to achieve the overall target of 5% saving in electricity consumption of government buildings in the coming five years from 2015/16 to 2019/20 under comparable operating conditions, using 2013/14 as the baseline.

綠化總部大樓

我們於總部大樓採用了一系列有效的環保措施，以提升機電工程署的整體環保表現，提高員工的環保意識，並宣揚綠色文化。

節約環境資源

機電工程署總部大樓於2015/16年度的電力、水及煤氣使用量列表如下。總用電量包括建築物(例如：總部大樓、工場、租用辦公室和數據中心)及基建設施(例如：連接總部的行人天橋和無線電站)，但不包括第三方營運的員工食堂。

GREENING OUR HEADQUARTERS

We have adopted a number of effective green measures in our headquarters to improve our overall environmental performance, raise the environmental awareness amongst our staff and promote a green culture at EMSD.

Conservation of Environmental Resources

Electricity, water and towngas consumption at EMSD in 2015/16 is shown in the table below. The total electricity consumption shown below includes buildings (e.g. the headquarters, depots, rented offices and data centres) and infrastructure (e.g. the footbridge connecting to headquarters, and radio stations) but excludes the staff canteen operated by the third party.

機電工程署的電力、水及煤氣用量

ELECTRICITY, WATER AND TOWNGAS CONSUMPTION AT EMSD

	2013/14	2014/15	2015/16
電力 (‘000 千瓦小時) Electricity (‘000 kWh)	14 785	14 974	15 060
水 (立方米) Water (m ³)	49 912	42 547	40 226
煤氣 (兆焦耳) Towngas (MJ)	223 728	19 392	0 ¹

¹ 主要使用煤氣供應熱水的加路連山工場於2014/15年度關閉，因此，在2015/16年度，該工場沒有使用煤氣。
The Caroline Hill workshop, which used towngas for water heating, was closed in 2014/15. Hence there has been no towngas consumption in 2015/16.

環保成效
ENVIRONMENTAL PERFORMANCE

紙張及碳粉盒是辦公室的主要耗材。我們於2015/16年度耗材量的節約成效和措施如下：

- 用紙量較原定上限減少1.8%；
 - 環保紙佔部門總用紙量100%；及
 - 回收所有舊碳粉盒。
- paper consumption was 1.8% below the set quota;
 - 100% of our total paper consumed was recycled paper; and
 - recycled all the used toner cartridges.



節省政府建築物用電

我們的政府建築物由2013/14至2015/16財政年度的用電量列表如下：

Electricity Saving in Government Buildings

Electricity consumption of our government buildings from 2013/14 to 2015/16 is tabulated below:

	用電量 Electricity consumption (百萬千瓦小時) (million kWh)	於相若運作情況下的用電量 Electricity consumption under comparable operating conditions (百萬千瓦小時) (million kWh)
2013/14 (基準baseline)	14.738	不適用 Not Applicable
2014/15	14.920 (+1.2%)	14.578 (-1.1%)
2015/16	14.998 (+1.8%)	14.582 (-1.1%)

我們的政府建築物用電量，於2013/14至2015/16年度增加了1.8%，主要原因包括工場的新增設備和部門數據中心的新增伺服器機架。實施各種內務節能措施後，包括使用LED照明設備，以及檢討通風系統的運作時間等，在2013/14年度相若的運作情況下，2015/16年度節省的用電量達1.1%。

The electricity consumption of our government buildings from 2013/14 to 2015/16 was increased by 1.8%, taking into consideration the major factors including additional equipment in workshops and additional server racks in the Corporate Data Centre. Under comparable operating conditions of 2013/14, the saving in electricity consumption in 2015/16 was 1.1%, after implementing the housekeeping electricity saving measures including the use of LED lightings, review of operation schedule of the ventilation system, etc.

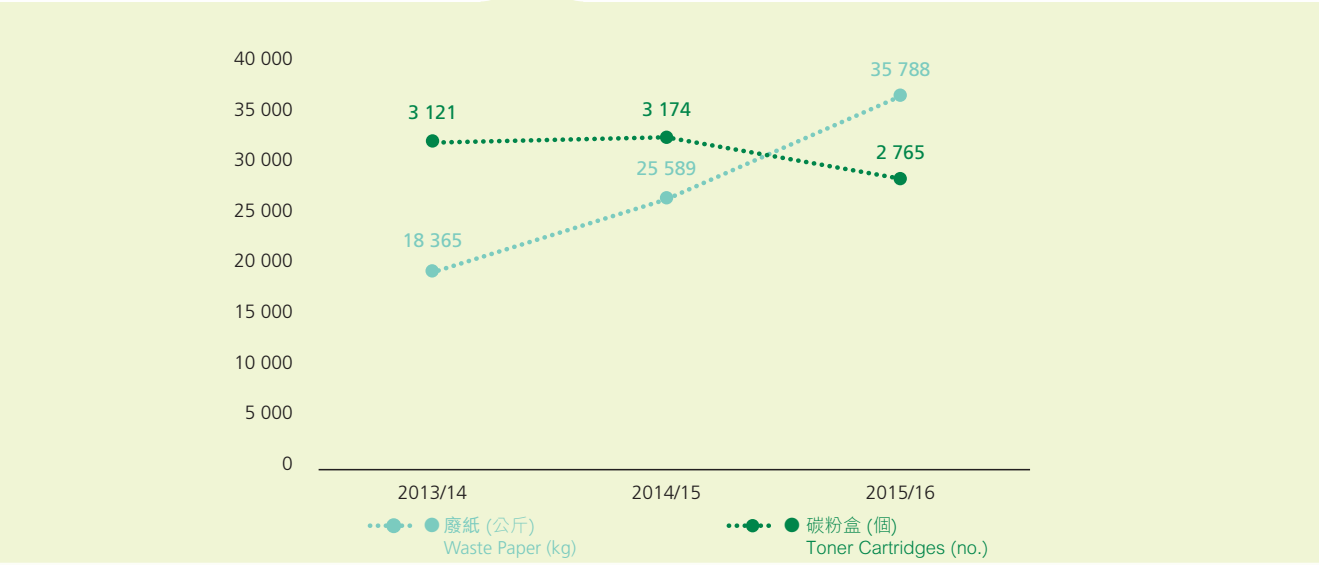
減少廢棄物及循環再用

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

Reducing and Recycling of Waste

Our prime waste management strategies are to minimise waste generation and maximise material recycling. Wastes are primarily generated from two streams — our offices and 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.

辦公室廢物循環再用量
AMOUNT OF RECYCLED OFFICE WASTE



附註 如欲了解更多關於廢物棄置及回收循環再用的資料，請參考統計資料摘要。
NOTE For more information on waste disposal and recycling, please refer to Summary of Statistics.

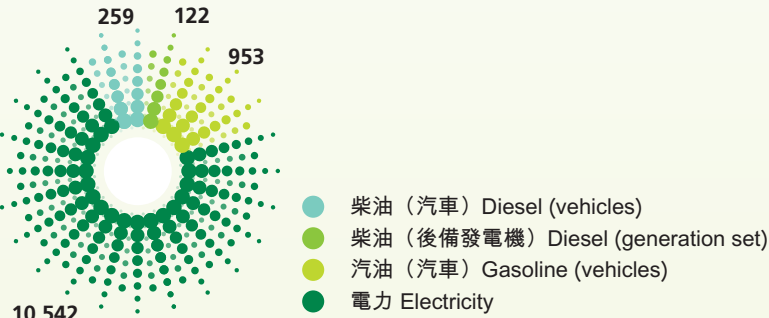
溫室氣體排放

溫室氣體排放已被公認為全球暖化和氣候變化的原因，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。

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions are widely acknowledged as a cause of global warming and climate change. EMSD's GHG emissions are mainly attributed to the consumption of electricity in our offices and workshops, and transport.

2015/16年度的碳足跡 (公噸)
Carbon Footprint in 2015/16 (tonnes)



環保成效

ENVIRONMENTAL PERFORMANCE



機電工程署總部大樓連接電網的太陽能光伏系統
Grid-connected photovoltaic system at EMSD Headquarters

在總部大樓所安裝的太陽能光伏系統，是機電工程署總部大樓減低碳足跡的標誌性項目。自2005年起，該系統已產生最高輸出達350千瓦的再生能源。

運輸

機電工程署日常營運所使用的傳統運輸工具，耗用不能再生的化石燃料，並排放溫室氣體。截至2016年3月31日，我們用作執行職務的車隊有219部車輛，包括貨車、客貨車、大型房車、電單車等。此外，我們亦為客戶部門的5 761部政府車輛提供維修服務。我們實行良好的內務管理措施，妥善保養車輛及減少使用運輸工具，並改用混合動力或電動車輛，盡力減少車輛運作及維修過程中的廢氣排放。現時，我們擁有九部電動車輛，及七部混合動力車輛，所消耗的燃料，較體積相近的傳統車輛少40%。基於環保效益，我們將於未來數年，增加使用混合動力車和電動車。

環保採購

環保採購是我們的主要政策之一，以達至減少廢棄物、鼓勵廢物回收及循環再造。為支持政府的環保採購政策，機電工程署已於日常的採購過程中納入環保要求。

As a signature initiative to reduce the carbon footprint of EMSD Headquarters, the photovoltaic system installed in the EMSD Headquarters has been generating renewable energy with a maximum output of 350kW since 2005.

Transport

The use of conventional vehicles consumes non-renewable fossil fuels and generates GHG emissions. As of 31 March 2016, we have a fleet of 219 vehicles including lorries, vans, saloon cars and motorcycles, and at the same time, we are responsible for maintaining 5 761 government vehicles for our client departments. We have made every effort to minimise emissions from such activities by good housekeeping, proper vehicle maintenance and reduced use of vehicles. As an alternative, we now switch to use hybrid vehicles and electric vehicles. Currently, we have nine electric vehicles, and seven hybrid vehicles which consume 40% less fuel than conventional cars of similar size. In view of the environmental benefits, we will increase the use of hybrid vehicles and electric vehicles in the next few years.

Green Procurement

Green procurement is one of our key policies to encourage waste reduction, recovery and recycling. To support the Government's green procurement policy, EMSD has been incorporating environmental requirements into our procurement practices.

我們遵從環境局第6/2015號通告的綠色採購規定，並相應地更新我們的採購規格。我們亦密切監察供應商所宣稱的綠色產品規格。為了更進一步推展綠色採購，我們正與相關供應商聯絡，以採用其他目前未包括在通告內的綠色規定。2015/16年度，機電工程署供應商名冊新增了167家可提供環保產品的供應商，使名冊中的環保供應商增至1 083個。此外，部門亦共斥資4,068萬元購買環保產品，佔部門總採購金額4.1461億元的9.8%。

我們已於機電工程署的內聯網，提供一個環保採購參考庫，收錄現行各項環保採購指引、實務守則、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，協助實施環保採購。

我們於2010年成立環保採購工作小組，為各類機電工程選定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，研究在機電工程中推廣使用，從而令客戶和公眾受惠。

綠建環評社區先導計劃

「綠建環評社區」先導計劃已於2016年完成。此計劃旨在促進建築群的集體成效，以及建立綠色社區。在實際運作上，先導計劃會邀請建築物的發展商和業主，在其建築邊界的500米範圍外，規劃更好的配套設施，如巴士站和花園等。完成評核後，機電工程署總部大樓獲得鉑金級評級。另外，總部大樓更獲香港綠色建築議會頒發「綠建環評既有建築1.2版」最終鉑金級證書。

客戶的環保工程項目

根據2015年的《施政報告》，行政長官承諾在未來五個財政年度，將政府建築物的用電量，在運作環境相若的基礎上減少5%（以2013/14財政年度用電量為基準），以繼續推展綠色運動，在本港加強推動低碳的居住環境。

We adhere to the green specifications of products stipulated in the Environment Bureau Circular Memorandum No. 6/2015 and update our procurement specifications accordingly. We also closely monitor the green product features claimed by our suppliers. To make a step forward, we are liaising with relevant suppliers to adopt other green specifications which are currently not covered in the circular. In 2015/16, the updated EMSD Suppliers Lists contained an additional of 167 suppliers who are able to provide environment-friendly products, making up a total no. of 1 083 environment-friendly suppliers on the supplier list, and spent a total of \$40.68 million (9.8%) purchasing green products out of our total purchase amount of \$414.61 million.

To facilitate implementation of green procurement, we have maintained a reference library on EMSD's Intranet. 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.

Since 2010, a Working Group on Green Procurement in Electrical & Mechanical Works has been established to oversee the identification of green materials and products, systems and construction methodologies in E&M works. The Working Group also examines the implications of new green technologies with a view to promoting them in E&M works, so as to benefit our clients and the public.

BEAM Plus Neighbourhood Pilot Scheme

In 2016, the BEAM Plus Neighbourhood Pilot-assessment was completed. The scheme aims at promoting collective performance of building clusters that forms a neighbourhood. In practical terms, it asks building developers and owners to look 500 metres beyond their building boundary to better plan supporting facilities such as bus stops and gardens. Upon completing the assessment, the EMSD Headquarters Building has achieved Platinum rating. As a high-quality green building, EMSD Headquarters Buildings was also awarded BEAM Plus Existing Building V1.2 Final Platinum Rating from the Hong Kong Green Building Council in 2016.

GREEN PROJECTS FOR CLIENTS

In 2015 Policy Address, the Chief Executive pledged to achieve a target of 5% saving in electricity consumption for government buildings under comparable operating conditions (based on the electricity consumption in the financial year 2013/14) in the next five financial years. This is a continuous green drive to foster a low-carbon built environment in Hong Kong.

環保成效

ENVIRONMENTAL PERFORMANCE

粉嶺和興體育館 空調系統改進工程

客戶：康樂及文化事務署
年期：2015–2016

機電工程營運基金受委託，為粉嶺和興體育館進行空調系統改善工程，以風冷製式無油磁浮式製冷機（無油製冷機），取代兩個350千瓦的傳統風冷式製冷機。

相比傳統風冷式製冷機，無油製冷機有較高的性能系數，特別是在冷凍要求不高時，可達至節能效果。此外，無油製冷機的體積，比其他高效節能的製冷機（例如：水冷式製冷機）更小，因此，可設置於現有的機房。

IMPROVEMENT WORKS ON THE AIR-CONDITIONING SYSTEM AT WO HING SPORTS CENTRE, FANLING

Client: Leisure and Cultural Services Department (LCSD)
Period: 2015–2016

The EMSTF was entrusted to conduct an improvement works on the air-conditioning system at Wo Hing Sports Centre located at Fanling. Two 350kW conventional air-cooled chillers were replaced with air-cooled packaged oil-free chillers.

Oil-free chillers have a higher coefficient of performance over conventional air-cooled chillers, especially when the cooling demand is not high, thus can achieve energy saving. Moreover, oil-free chillers are smaller in size than other high energy efficient chillers (e.g. water-cooled chillers) and they can be housed in existing plant room.



為民航處總部的 空調系統實施 能源優化方案

客戶：民航處
年期：自2015年10月開始

機電工程署與民航處合作，嘗試為民航處總部大樓現有的中央冷氣系統進行能源優化方案。能源優化方案是一項先進的控制系統，能因應現行系統的負載及天氣狀況的變化，監察和控制空調系統。能源優化方案可改進能源消耗狀況，提升中央空調系統的日常運作，從而產生顯著的節能潛力，預計能源優化方案能為民航處達至5%的節能目標。

於2015年10月，我們為能源優化方案主要組件進行安裝、測試及啟用。自2015年11月起，能源優化方案已投入測試運作，現正進行全年的成效監察及評估工作。

IMPLEMENTATION OF ENERGY OPTIMISATION SYSTEM FOR AIR-CONDITIONING SYSTEM OF CAD HEADQUARTERS

Client: Civil Aviation Department (CAD)
Period: Since October 2015

EMSD has been working with CAD on a trial application of the Energy Optimisation System (EOS) to the existing central air-conditioning system at the CAD Headquarters. The EOS is an advanced control system which monitors and controls the air-conditioning system in response to the prevailing system loads and changes in weather conditions. The EOS optimises energy consumption and enhances daily operations of the central air-conditioning system and thus creates significant energy saving potentials. It is anticipated that the EOS would enable CAD to achieve the 5% energy saving target.

Installation of major EOS components as well as testing and commissioning of the EOS were completed in October 2015. The EOS has been put into trial operations since November 2015 and a full year performance monitoring and evaluation is being conducted.



為建業中心取得綠建 環評室內建築評級

客戶：建築署
年期：2015

機電工程營運基金為建業中心文樓一樓的辦公室翻新工程提供技術建議。在2015/16年度，該項目取得香港綠色建築議會頒發「綠建環評室內建築」鉑金級評級證書，是首個香港政府辦公室獲頒有關殊榮。

該項目結合各種創新的建築技術，例如天花空調系統和發光二極管照明板，亦採用日光及動作感應器、二氧化碳感應器、區域管制等。辦公室亦配置能源分項計量設備，監察不同屋宇裝備系統的能源消耗量，包括機械通風及空調、電力、照明及小功率器件，以鑑別改善能源管理的機會。我們亦在鄰近主要入口的位置安裝環保顯示屏，讓職員能更了解他們的實時用電量。該項目成功地展示了可持續辦公室的裝修配置，標誌着我們實踐可持續建築，及促進香港綠色發展的承諾。

ACHIEVED BEAM PLUS INTERIORS PLATINUM RATING FOR APB CENTRE

Client: Architectural Services Department
Period: 2015

EMSTF offered technical advice in the fitting-out of office accommodation at 1/F Main Block of APB Centre. In 2015/16, the project is the first government office in Hong Kong to achieve the Platinum Rating under Hong Kong Green Building Council BEAM Plus Interiors Accreditation.

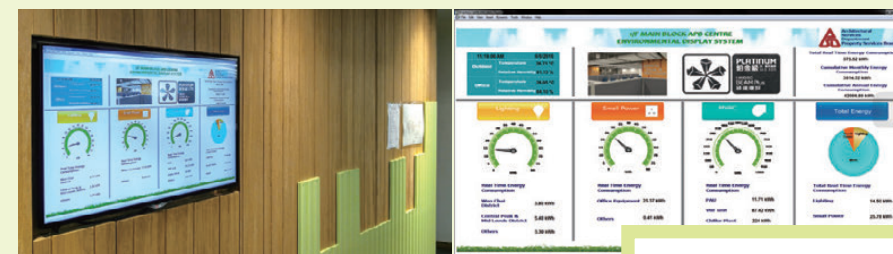
This project incorporated various innovative building technologies such as chilled ceiling system and LED lighting panels. Daylight and motion sensors, CO₂ sensors, zoning control have also been adopted. The office is also equipped with energy sub-metering to better monitor the energy consumption of different building services systems including Mechanical Ventilation and Air-conditioning (MVAC), electrical, lighting and small power, with an aim to identify energy management opportunities for further improvement. An environmental display panel has been installed near the main entrance for the staff to learn more about their real time energy consumption. This project has successfully demonstrated a best practice of a sustainable office renovation, which symbolises our commitment in promoting sustainable building practices and green development in HKSAR.



天花空調系統及發光二極管照明板
Chilled ceiling system and LED lighting panels



裝設於燈光系統的日光及動作感應器、
裝設於機械通風及空調系統的二氧化碳、
溫度及濕度感應器
Daylight and motion sensors for lighting,
CO₂, temperature and relative humidity sensors for MVAC



能源監察系統及實時能源顯示屏
Energy monitoring system and real time energy display panel

環保成效

ENVIRONMENTAL PERFORMANCE

重點與前瞻

重點

- 由2000年推出淡水冷卻塔計劃起，截至2015/16年度，已收到995份申請表。當中2 096座淡水冷卻塔已經落成並投入運作。預計完成安裝後，每年可節省4.12億千瓦小時用電量，相當於每年減少約290 000噸二氧化碳排放量。
- 自2011/12年度起，機電工程署根據《公眾衛生及市政條例》授予的權力，針對污染的淡水冷卻塔作出規管。於2015/16年度，我們從多個淡水冷卻塔抽取932個水樣本進行測試。如水樣本含有的退伍軍人桿菌含量超過其上限值，我們會要求冷卻塔的業主採取行動，以減低傳播退伍軍人症的潛在公眾衛生風險。
- 2015年，機電工程署對在香港未經批准的淡水冷卻塔進行研究(即在淡水冷卻塔使用的水源來自未經水務署批准的供水裝置)。研究發現未經批准的淡水冷卻塔，由2010年的9 700座，大幅減少至2015年的5 600座；由2010年至2015年期間，超過40%未獲批准的淡水冷卻塔已被拆除。這項研究結果令人鼓舞，並能大幅減少傳播退伍軍人症的潛在公眾衛生風險。

前瞻

- 根據《公眾衛生及市政條例》，將於2016/17年度繼續抽驗800個淡水冷卻塔的水樣本，並就受污染的淡水冷卻塔作出規管。
- 新版本的水冷式空調系統及淡水冷卻塔計劃工作守則小冊子，將於2016年年底出版。
- 新版本的預防退伍軍人症工作守則小冊子，將於2016年年底出版。

HIGHLIGHTS AND WAY FORWARD

Highlights

- Up to 2015/16, 995 applications have been received since the launch of the Fresh Water Cooling Towers Scheme in 2000. Among them, 2 096 fresh water cooling towers (FWCTs) have been completed and put in operation. It is estimated that these completed installations could save up to 412 million kWh electricity consumption annually, which is equivalent to the reduction of carbon dioxide emissions by around 290 000 tonnes annually.
- EMSD has been implementing measures since 2011/12 to regulate contaminated FWCTs with delegated powers under the Public Health and Municipal Services Ordinance (PHMSO). In 2015/16, 932 water samples were taken from FWCTs, and the owners of the FWCTs were requested to carry out abatement action to reduce the potential public health risk of spread of Legionnaires' disease if water samples with total legionella count at or above the upper threshold value.
- In 2015, EMSD conducted surveys on the unauthorised FWCTs (UFWCTs, the use of water from the waterworks that have not been approved by the Water Authority for using in FWCT system) in Hong Kong. The findings of the survey indicated that the number of UFWCTs has greatly decreased from about 9 700 in 2010 to about 5 600 in 2015 with more than 40% UFWCTs demolished during the period from 2010 to 2015. The findings were encouraging and the potential public health risk of spreading of Legionnaires' disease could be greatly reduced.

Way Forward

- EMSD would continue to conduct annual water sampling for testing of about 800 FWCTs in 2016/17 and implement regulatory control of contaminated FWCTs under the PHMSO.
- New edition of Code of Practice for Water-cooled Air Conditioning System and FWCT Scheme brochure will be published by the end of 2016.
- New edition of Code of Practice for Prevention of Legionnaires' Disease will be published by the end of 2016.

社會成效

SOCIAL PERFORMANCE

機電工程署致力與員工、客戶、社會大眾建立和諧關係。多年來，我們竭盡企業公民的本分，確保員工的福祉和發展、追求達至高安全水平、為客戶提供優質服務，並深入社區，建設更美好的社會。

目標及方針

員工是我們最寶貴的資產，是我們履行職責和社會責任的基石。根據我們的人力資源發展政策，我們致力為員工提供安全和健康的工作環境，並提供全面的培訓機會，提升他們的專門知識和專業水平。除了關顧員工外，我們亦積極參與社會活動，將我們的關懷延伸至社區。

機電工程署連續第二年榮獲香港社會服務聯會頒發的「同心展關懷」標誌，表揚我們在實踐社會責任方面的努力。未來，我們將繼續履行我們的社會責任，並與其他持份者攜手服務有需要人士。

我們的員工

聘任

我們遵循公務員事務局的行為守則規範，確保提供一個公平的工作環境，以及平等的就業機會。作為一個對社會負責任的僱主，我們竭力令所有員工樂於在機電工程署工作，以維持穩定的工作團隊。

年內，我們共有5 144名僱員。截至2015/16年底，我們僱用了209名輕度殘疾人士，佔員工總人數約4.06%，全力支持社會共融。

EMSD strives to establish a harmonious relationship with staff, clients and the community at large. Throughout the years, we demonstrate strong corporate citizenship through ensuring the well-being and development of staff, pursuing a high standard of safety, providing quality service to our clients and reaching out to the community to build a better society.

OUR APPROACH

Staff are our most valuable asset and the cornerstone to discharge our duties and social responsibilities. As stipulated in our Human Resources Development Policy, we are committed to providing a safe and healthy working environment for our staff, and offering all-round training opportunities to them in order to develop their expertise and professionalism. Apart from taking care of our staff, we also actively participate in social activities to extend our care to the community.

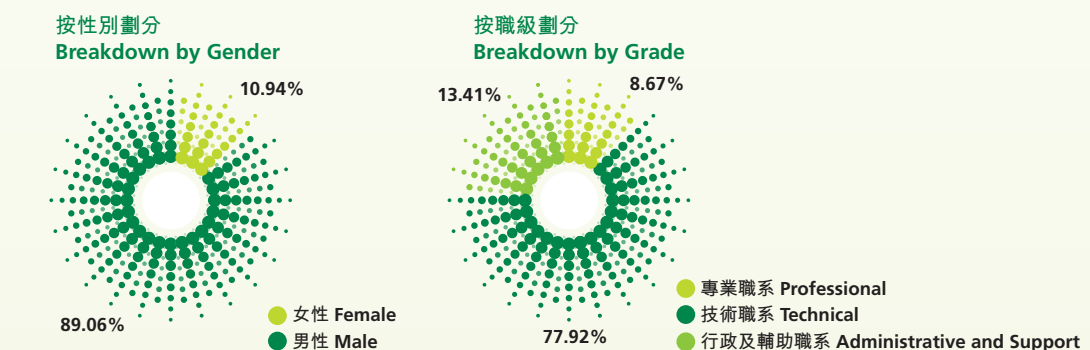
In recognition of our dedicated effort to practice social responsibility, we are awarded the Caring Organisation Logo by the Hong Kong Council of Social Service for the second consecutive year. We will continue to uphold our social responsibilities and join hands with other stakeholders to serve people in need.

OUR STAFF

Employment

We follow the Civil Service Bureau's codes of conduct to ensure a fair workplace and offer equal opportunities employment. As a socially responsible employer, we strive to ensure all staff enjoys their services at EMSD in order to maintain a stable workforce.

During the year, we have a total of 5 144 employees. We fully support social integration and have employed 209 staff with minor disabilities, representing about 4.06% of our total workforce as at the end of 2015/16.



僱用人員 Strength : 5 144名
* 截至2016年3月31日 As at 31 March 2016

社會成效

SOCIAL PERFORMANCE

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

在2015/16年度，部門因員工放取病假共損失19 837個工作天，即相等於每名員工損失約3.86個工作天。

員工發展

我們通過對員工提供全面的培訓和培育人才，致力建立一支有能力的工作團隊。多年來，我們定期為員工訂定和檢討培訓和發展需要，以加強他們的專業水平。

學習及發展

鑑於我們的服務涉及多個範疇，包括電力、機械、燃氣及鐵路安全，以及能源效益等，因此提升員工能力和競爭優勢，讓他們務實地履行職責至為重要。

我們的人力資源管理委員會，由機電工程署署長擔任主席，並由各職系首長級及一般和共通職系的高級管理人員組成，負責檢討部門的培訓計劃和活動。由委員會訂立明確方向後，我們持續為員工訂合適的學習和發展機會，為他們提供最新的知識和促進個人成長。

為了促進部門之間的知識交流和分享良好作業模式，我們提升了「知識管理網站」，鼓勵透過互動模式分享知識。未來一年，我們會就各種專門的工程知識及管理技能範疇，計劃進一步發展部門的「知識群體」，讓同事有更多機會深入分享和積累知識。

見習工程師訓練計劃

為了向年輕工程師提供實習機會，我們自六十年代開始推行見習工程師訓練計劃。多年來，此計劃已培訓了超過700位見習工程師，亦被公認為香港工程界的最佳在職培訓計劃之一。計劃旨在培育人才，讓他們學習實用技能和行業知識，以滿足本地行業的人才需求。在2015/16年度，我們挑選了共24位來自電機、機械、電子、屋宇裝備、資訊科技和生物醫學等範疇的工程系畢業生，參加此計劃。

We continue to take part in the Talent-Wise Employment Charter and Inclusive Organisations Recognition Scheme as an Employer Organisation to promote the employment of persons with disabilities.

In 2015/16, a total of 19 837 working days were lost due to sick leave. This is equivalent to around 3.86 working days lost per employee.

Staff Development

We are committed to delivering comprehensive training to our staff and nurturing new talents in building up a competent workforce. Over the years, we have identified and reviewed the training and development needs regularly for our staff to strengthen their professionalism.

Learning and Development

In light of our multi-functional services involved in the areas of electrical, mechanical, gas and railway safety, and energy efficient aspects, it is crucial to enhance the capabilities and competitive strengths of our staff to discharge their duties pragmatically.

Chaired by the Director of Electrical and Mechanical Services, and composed of representatives of Heads of Departmental Grades and senior managers of General and Common Grades, a Human Resources Management Committee is in place to review the training programmes and initiatives of the Department. With the clear direction defined by the Committee, we offer continuous support in devising suitable learning and development opportunities to equip our staff with latest knowledge and foster personal growth.

To facilitate knowledge exchange and share good practices within the Department, we have enhanced our Knowledge Management Portal to encourage knowledge sharing in an interactive mode. We are planning to further develop a departmental “Knowledge Communities” in the coming year in specialised areas of engineering knowledge and management soft skills, so as to strengthen in-depth sharing and development of knowledge.

Graduate Training Scheme

To offer practical training to young engineers, we launched the Engineering Graduate Training Programme in the 1960s. Over the years, the programme has trained more than 700 graduates and has been recognised as one of the best on-the-job training schemes in the field of engineering in Hong Kong. The programme aims to nurture new talents and equip them with practical skills and industry know-how to meet the needs of the local profession. In 2015/16, 24 engineering graduates from the field of electrical, mechanical, electronics, building services, information technology and biomedical engineering have been selected to join the programme.

技術員訓練計劃

技術員訓練計劃是機電工程署舉辦的另一個重要培訓計劃，旨在提供有系統和高水準的訓練，以滿足相關行業目前及未來對技術員的需求。此計劃已推行60年，成功為業界培訓了接近6 000名學徒。

為提升訓練計劃的形象、吸引更多年輕人才報讀，我們已於2012/13年度將學徒這職位名稱改為見習技術員。為配合技術員訓練計劃的招聘活動，我們推出恆常的外展宣傳活動，吸引來自學校、業界及公眾的人才。

在2015/16年度，我們招募了64名見習二級技術員（三年訓練制）、34名見習二級技術員（四年訓練制）、44名見習一級技術員（三年訓練制）及14名見習一級技術員（四年訓練制）。除了提供在職訓練外，我們亦資助見習技術員修讀香港專業教育學院的工藝證書課程和高級文憑課程，以提升他們的知識和取得專業資格。

培訓目標

為了不斷發展員工的能力和提升他們的技術，在報告年度我們舉辦超過2 000項培訓及發展活動，共有超過19 500位參加者參與。在2015/16年度，每名員工每年平均受訓日數為4.37天¹。

員工溝通

我們明白員工在支援部門發展上擔當重要角色。因此，我們建立了多個溝通渠道，定期與員工對話，聆聽並回應他們的意見及關注事項。

員工滿意度調查

我們重視員工對部門作出的貢獻，亦會着重評估員工對部門的滿意度及了解他們對部門的看法，從而釐定部門的管理方針。為此，我們委託獨立的專業調查公司，定期進行員工滿意度調查，收集員工的意見，以衡量我們的表現及研究改善的空間。

Technician Training Scheme

The Technician Training Scheme is another key training programme offered by EMSD, with the aim to provide systematic and high standard training to satisfy the present and future needs in related fields. The long-standing scheme has been run for over 60 years and successfully trained up about 6 000 apprentices for the profession.

To enhance the image of the scheme and attract more young talents, the “apprentice” post title has been changed to “technician trainee” since 2012/13. To step up the recruitment for the scheme, we have arranged on-going outreach publicity programmes attracting new talents from schools, trades and the public.

In 2015/16, we recruited 64 technician trainees II (three-year training programme), 34 technician trainees II (four-year training programme) and 44 technician trainees I (three-year training programme) and 14 technician trainees I (four-year training programme) to join the scheme. Besides offering on-the-job training to the trainees, we have sponsored them to attend craft certificate courses and higher diploma courses in the Hong Kong Institute of Vocational Education to further enhance their knowledge and acquire professional qualification.

Training Targets

With our continuous commitment to develop staff competence and enhance their capabilities, over 2 000 numbers of training and development activities were arranged and attended by more than 19 500 participants during the reporting year. We achieved 4.37 training days per staff member per year on average¹ in 2015/16.

Staff Communication

We understand that staff play a critical role in supporting the development of the Department. We have established several communication channels to regularly engage them in dialogues, listening and responding to their feedback and concerns.

Staff Satisfaction Survey

We value our staff’s contribution, while it is important to assess staff satisfaction level and understand staff perception of the Department in order to shape our management approach. To this end, we have engaged an independent research specialist in conducting staff satisfaction surveys on a regular basis to obtain feedback from staff in order to gauge our performance and identify room for improvement.

¹ 僱用人員包括部門/一般/共通職系/非公務員合約僱員，不包括見習技術員及見習工程師。

¹ Strength of the Departmental/General/Common Grade/Non-Civil Service Contract staff, excluding all technical trainees and engineering graduates.

社會成效
SOCIAL PERFORMANCE

最近的調查於2014/15年度完成，透過問卷收集所有高級工程師及以下職級員工的意見。調查顯示，員工整體滿意度平均分數為6.4（10分為滿分），與過去數年的得分相若，一直維持在6.3至6.6之間。下一次調查將於2016/17年度進行。

員工諮詢途徑

機電工程署已建立多個不同的渠道，以加強員工之間的溝通。為促進管理層與特定員工組別的溝通，我們設有四個部門協商委員會和五個個別協商委員會。員工亦可自由參加部門11個工會和一般政府人員工會組織。此外，我們會定期與部門的員工協會會面和舉行會議，商討並回應員工關注的事項。

The last survey was conducted in 2014/15 to collect feedback from all employees at senior engineer rank or below through a questionnaire survey. The overall staff satisfaction rating was 6.4 on a scale of 10, which remained steady (from a range of about 6.3 to 6.6) in the past few years. The next survey will be conducted in 2016/17.

Staff Consultation Channels

EMSD has established different channels to enhance communication among our staff. To facilitate communication between particular groups of staff and management within EMSD, four departmental consultative committees and five divisional consultative committees are established. Staff members are also free to join the 11 staff unions of EMSD, as well as the general government staff unions. In addition, regular gatherings and meetings are held with the EMSD staff unions to discuss and address issues of staff concerns.

員工活動列表 LIST OF ENGAGEMENT ACTIVITIES



在報告年度，我們舉辦了多項員工活動。部分列表如下：
A number of staff engagement activities were organised during the reporting year. Some of them are listed below.

- 規管服務於2015年12月3日及2016年3月4日舉行了本年度的管理工作坊。
Held the Regulatory Services' annual Management Workshops on 3 December 2015 and 4 March 2016.
- 機電工程營運基金於2015年10月13日舉行了本年度的策略工作坊。
Organised the EMSTF's annual Strategy Formulation Workshops on 13 October 2015.
- 機電工程營運基金於本年度舉行了五次針對內部客戶意見調查的焦點小組會議，收集前線業務單位的意見。
Held five sessions of EMSTF Internal Customer Opinion Survey – Focus Group Meeting to collect opinion from front-line business units.
- 於2015年11月至12月舉行兩場署長簡報會。
Arranged two sessions of Director's Briefing in November and December 2015.
- 首長級人員到訪了188個場地，進行員工親善探訪。
Carried out 188 ambassador visits by directorate officers at various venues.
- 2015年10月9日與部門11個工會舉行聯席會議。
Conducted a joint meeting with 11 staff unions of EMSD on 9 October 2015.
- 於2016年2月至3月為部門的專業員工、外調的督察級、技術級及初級員工舉行六次周年論壇。
Ran six sessions of the Yearly Forums for professional staff, seconded inspectorate, technical and junior staff from February to March 2016.
- 員工福利組為抱恙或住院員工進行了7次家訪、37次醫院探訪、12次工作間探訪、407次電話問候及64次吊唁探訪。
Conducted 7 home visits, 37 hospital visits, 12 workplace visits, 407 goodwill phone calls and 64 condolence visits to sick or hospitalised staff, by the Staff Welfare Unit.

工作安全與健康政策

機電工程署高度重視職業安全與健康（職安健）。作為部門政策的一部分，我們的職安健政策，肯定了我們對職安健的承擔，訂明在提供機電服務時必須確保工作安全，以減少工作場所的危險，確保員工及承辦商的健康和福祉。我們亦採用職安健的最佳作業措施，在可行情況下持續提升工作安全。

部門內個別部別已設有安全管理系統，為規劃及實施安全措施、評估及持續改進安全表現，提供管理框架。我們亦建立了以下的委員會，監察部門的安全管理策略、措施及表現。

HEALTH AND SAFETY

EMSD attaches great importance to Occupational Safety and Health (OSH). As part of the corporate policies, the Safety and Health Policy of EMSD affirms our commitment to OSH, stipulating that work safety is of high importance in delivering our E&M services, in order to minimise workplace hazards, ensuring the health and well-being of our staff and contractors. We also adopt best OSH practices where practicable to achieve continual improvement in work safety.

Safety management systems established in various divisions have been in place as a framework which governs the planning and implementation of safety initiatives, as well as the evaluation and continual improvement of safety performance. We have also established the following committees to oversee safety strategies, initiatives and performance.

職業安全及健康策導委員會
Steering Committee
on OSH

- 由高層管理人員組成
comprise senior management staff
- 制訂政策及監察部門執行職安健措施的情況，持續改進安全表現
formulate policies and monitor implementation of initiatives for continuous improvement in safety performance
- 檢討內部及承辦商的意外事件
review in-house and contractor accidents
- 督導部門職業安全及健康委員會
steer DOSHC

部門職業安全及健康委員會
Departmental OSH
Committee

- 由各科/部別的管理層和員工代表，及部門的協商委員會組成
comprise management and staff representatives from branches/divisions as well as departmental consultative committees
- 監察部門職安健政策的實施情況
monitor implementation of the department safety and health policy
- 向員工推廣職安健
promote occupational safety and health among staff
- 有需要時為特別工作成立臨時工作小組及委任小組成員
set up ad-hoc working groups for specific tasks and co-opt working group members where needed
- 為其他職安健議題提供討論平台
serve as a forum for other safety and health matters

部門職業安全及健康委員會設有員工代表。因應推行安全管理系統，我們不時檢討職安健方面的相關風險。於2015年，我們就叢林地方進行戶外工作方面識別相關風險，並為該類工作推出了一系列的安全指引。

Staff are represented in the Departmental Occupational Safety and Health Committee. Under the operation of safety management systems, we review the OSH-related risks from time to time. In 2015, we identified the risk of outdoor work in shrubby areas and implemented a series of safety guidelines for such work type.

社會成效

SOCIAL PERFORMANCE



2015/16年度「品質、環境及生產力推廣計劃」推行三個比賽，其中包括新推出的「最佳環保個案比賽」。
We launched three competitions under the 2015/16 Quality, Environmental and Productivity Promotion Programme, including the Best Green Project Competition.

最佳環保個案比賽

2015/16年度，我們推出名為「最佳環保個案比賽」的全新比賽，鼓勵員工提出新的企業措施。此比賽旨在通過收集員工的建議，從而改善機電工程署在職安健、節約資源及環境可持續發展等多方面的表現。比賽共有36名參加者、分成七個隊伍參賽，最後由提出雨水收集項目以節約水資源的隊伍勝出。

The Best Green Project Competition

In 2015/16, we launched a new competition, named the Best Green Project Competition, which encourages staff to come up with new corporate initiatives. The competition aims to improve EMSD's sustainability performance through collecting proposals from staff in areas including OSH, resources conservation, and environmental sustainability. A total of seven teams, consisted of 36 members, participated in the competition. The champion went to the team that proposed a rainwater collection project to conserve water resources.

我們的客戶

營運服務方面，我們致力以合理價格，為客戶提供優質服務，同時確保自身業務營運的經濟效益。為了持續提升我們的服務質素，我們用心聆聽及了解客戶的意見。作為一項恆常做法，我們每兩年委託一家獨立的市場研究公司，進行客戶意見調查。於2016年的調查當中，我們的客戶滿意度指數是6.45分（8分為滿分），創歷史新高，足證我們過去兩年推行多項改善措施的成效。透過是次調查，我們收集了很多客戶寶貴的意見。我們已根據客戶的回應，制訂出優化客戶服務的計劃，進一步提高客戶的滿意度。

OUR CLIENTS

In delivering our Trading Services, we strive to provide our clients with quality E&M services at a fair price, while ensuring the economic viability of our business operation. We endeavor to listen to and learn from our clients, with a view to enhance our service quality continuously. As an on-going practice, we commission an independent market research company to conduct a Customer Opinion Survey (COS) every two years. In the COS conducted in 2016, the Customer Satisfaction Index has risen to a record high 6.45 (on an eight-point scale), which is a testimony of various improvement measures implemented in the past two years. Much valuable opinions have also been solicited from our clients through the survey. We have formulated customer service enhancement plans according to our clients' feedback, aiming to further enhance customer satisfaction.

規管服務方面，我們的客戶聯絡小組及各個安全諮詢委員會，會定期與公眾代表開會，就規管工作的推廣活動，直接與公眾交流意見，聽取他們的看法和建議。我們亦會進行意見調查，了解市民對機電安全和能源效益的認識，並進行業界調查，探討業界對規管服務的意見。

社區參與

除了致力於提供專業的機電服務外，我們亦積極參與社區活動以服務社會。我們透過成立機電工程署義工隊為社區服務，已超過十年。部門的專業人員亦熱衷於參與不同的本地及國際學會和協會，促進行業的發展。

社區活動

我們相信公眾教育對宣傳機電安全和能源效益十分重要。因此，我們與各政府部門及公營機構緊密合作，舉行不同的社區活動。

國際環保博覽2015 — 邁向可持續發展的綠色未來

國際環保博覽是由香港貿易發展局主辦、環境局協辦的年度活動，展示來自世界各地環保產業的創新產品。一如往年，部門的能源效益事務處繼續參與展覽。我們向參觀者介紹「強制性能源效益標籤計劃」、「自願性能源效益標籤計劃」、「建築物能源效益條例」、電動車的最近發展，以及一些節省能源的貼士。活動期間，我們還介紹了「強制性能源效益標籤計劃」的更強方案，以及最新推出的「全民節能」網站。

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 feedback on our regulatory promotion activities. We also conduct surveys to assess public awareness of E&M safety and energy efficiency, as well as trade surveys to understand the trade's views of Regulatory Services.

COMMUNITY ENGAGEMENT

Other than dedicating our professional knowledge in E&M services, we serve the community by actively participating in public engagement activities. We have set up the EMSD Staff Voluntary Service Team to act as a focal point of our community services over a decade. Our professionals are also keen on serving in different local and international institutes and associations to foster the growth of the industry at large.

Engagement Activities

We believe public education is important to promote E&M safety and energy efficiency. We therefore work closely with other government departments and public organisations to conduct different community activities.

Embracing a Green and Sustainable Future at Eco Expo Asia 2015

Eco Expo Asia is an annual event organised by the Hong Kong Trade Council and supported by the Environment Bureau to showcase the latest innovations in environmental industries from around the world. This year, our Energy Efficiency Office continued to participate in the exhibition. We introduced the Mandatory Energy Efficiency Labelling Scheme (MEELS), the Voluntary Energy Efficiency Labelling Scheme, the Buildings Energy Efficiency Ordinance, latest development in electric vehicles as well as some energy saving tips to our visitors. The enhancement of the MEELS and the newly released "Energy Saving for All" website were also introduced during the event.

行政長官梁振英先生及環境局局長黃錦星先生在我們的攤位留影。
The Chief Executive, Mr C Y Leung, and Secretary for the Environment, Mr Wong Kam-sing, at our booth.



社會成效 SOCIAL PERFORMANCE

創新科技嘉年華2015

在2015年，創新科技署舉辦了以「創新・科技・邁向無限未來」為主題的創新科技嘉年華2015。我們的生物醫學工程師和見習工程師，聯同香港工程師學會的生物醫學工程學科，於嘉年華設立展覽攤位，向公眾介紹組織工程、復康儀器，到人體力學等最新的生物醫學科技。該活動的其中一個焦點，是現場演示手術用的內窺鏡及智能互動「機械腳托」。這些裝置採用頂級的工程技術協助病人康復，並改善醫療服務。參觀者對生物醫學工程的最新發展，以至本地工程師的貢獻留下深刻印象。

InnoCarnival 2015

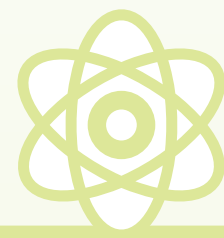
The InnoCarnival 2015 themed “InnoTech – Key to a Boundless Future” was organised by the Innovation and Technology Commission. Our biomedical engineers and engineer trainees joined hands with the Biomedical Discipline of the Hong Kong Institution of Engineers to set up and host a booth in the Carnival to introduce the latest biomedical science and technology to the public, from tissue engineering, rehabilitation devices, to biomechanics. One of our highlights in this event was the live demonstration of an endoscope for surgery and an interactive exoskeleton ankle robot. These devices apply top engineering techniques to assist patients in recovery and improving healthcare services. Visitors were impressed by the recent development of biomedical engineering and the contribution of local engineers.



我們在「創新科技嘉年華2015」為香港工程師學會生物醫學分部架設展覽攤位。Setting up the exhibition booth of the Biomedical Division, Hong Kong Institution of Engineers, at InnoCarnival 2015.



攤位同事向參觀者介紹最新醫療儀器的使用方法。Our staff introducing new biomedical device to visitors.



淡水冷卻塔和建築物能源效益技術研討會

技術研討會是部門能源效益事務處的年度活動焦點。本年度，我們在2015年12月4日舉行技術研討會，吸引超過600位人士參加。

研討會分兩部分舉行。在研討會的第一部分，講者分享了「淡水冷卻塔計劃」的最新發展和成功個案，並介紹有關淡水冷卻塔的水質規管工作，淡水冷卻塔的正确設計和安裝，以提升業界對計劃的認識。該場次亦令參加者對《水務設施條例》及《水務設施規例》中，就淡水冷卻塔供水的相關法定要求有更深入了解。在研討會的第二部分，講者闡述《建築物能源效益條例》及相關實務守則的最新發展，包括2015年版的《建築物能源效益守則》及《能源審核守則》。會上並討論五宗與拖延首次能源審核相關的檢控個案，重申準時為建築物進行能源審核的重要性。

研討會接近尾聲時，我們亦安排了關於電動車的分享環節。我們的講者闡述於香港採用的最新電動車及充電器規格，並討論電動車的未來發展及更廣泛使用電動車的挑戰。

Technical Forum on Fresh Water Cooling Towers and Buildings Energy Efficiency

The technical forum is an annual highlight of the EMSD Energy Efficiency Office. This year, we organised the forum on 4 December 2015, which attracted over 600 participants.

The forum comprised two sessions. During the first session, speakers shared the latest developments and successful cases in the Fresh Water Cooling Towers (FWCTs) Scheme and regulatory control of water quality of FWCTs to enhance industry knowledge of the scheme and the proper design and installation of FWCTs. This session also provided attendees with better understanding of the statutory requirements for using fresh water for FWCTs under Waterworks Ordinance and Waterworks Regulations. In the second session, speakers explained the latest development of the Buildings Energy Efficiency Ordinance and relevant codes of practice, including Building Energy Code and Energy Audit Code 2015 Edition. Five cases leading to prosecution in relation to the delay of the first energy audits were discussed to emphasise the importance of conducting energy audits for buildings on time.

Near the end of the forum, we also arranged a sharing on electric vehicle. Our speaker explained the latest specifications of electric vehicles and chargers that could be adopted in Hong Kong. The direction for future development and challenges in promoting the use of electric vehicles were also discussed.



技術研討會吸引了超過600位業界人士參加。Over 600 industry practitioners joined the forum.



機電工程署代表與嘉賓講者於研討會上合照。Guest speakers and EMSD representatives at the technical forum.



社會成效

SOCIAL PERFORMANCE

機電安全健步嘉年華2015

「機電安全健步嘉年華2015」由香港機電工程師商聯會與香港機電業工會聯合會合辦，於2015年12月6日在屯門虎地舉行，獲得機電工程署60多位員工及家屬齊齊參與。活動旨在團結及加強業界的伙伴關係。署長陳帆先生在開步禮致辭時，提到基建對香港經濟發展的重要性，並呼籲業界注意工業安全。



機電工程署員工及家屬齊齊參與健步嘉年華。
EMSD staff and their family members participated in the walk.

E&M Safety Walk and Carnival Fair 2015

The E&M Safety Walk and Carnival Fair 2015 was jointly organised by the Hong Kong Federation of Electrical and Mechanical Contractors and the Federation of Hong Kong Electrical and Mechanical Industries Trade Unions on 6 December 2015 in Fu Tei, Tuen Mun, with over 60 EMSD staff and their family members participated. The event aims to unite and strengthen partnership within the E&M industry. Mr Chan Fan, Frank, Director of Electrical and Mechanical Services, delivered the opening speech and pointed out the importance of the infrastructure development to the local economy. He also urged the industry practitioners to pay attention to safety management.

東區醫院日2015

東區醫院日是由東區尤德夫人那打素醫院舉辦的一年一度籌款活動，旨在促進醫院和社區的伙伴合作。活動所籌得的善款會用於改善病人服務及醫院設備。重點活動包括「慈善步行」及「正向生活嘉年華」。今年，機電工程署獲院方頒發「最踴躍參與獎」，表揚我們的支持和捐獻。

Pamela Youde Nethersole Eastern Hospital Day 2015

The Pamela Youde Nethersole Eastern Hospital (PYNEH) Day is an annual fund raising event that aims to promote community partnership. All fund raised will be used to improve the services and facilities of PYNEH. Main activities of the Day include Charity Walkathon and Positive Living Carnival. This year, EMSD was presented the Best Participatory Award for our active participation and donation.



參與東區醫院日2015的部門義工。
EMSD volunteers at the PYNEH Day 2015.

其他社區活動 (公眾人士)

我們亦舉辦以公眾人士為目標的多項社區活動。2015/16年度的主要活動如下：

- 共有35家發展商及管理公司(代表150家商場)、620家零售店、260座商業大廈、1 200家機構的辦公室、420幢住宅樓宇及屋苑，以及360個非政府組織場地，簽署了2015年的「室內溫度節能約章」，承諾在2015年6月至9月期間，維持平均室內溫度在攝氏24至26度之間。
- 為機構或學校舉行144場講座或探訪，宣傳能源效益及節能。
- 為多個機構舉行29場簡報會，宣傳有關《建築物能源效益條例》下，《建築物能源效益守則》及《能源審核守則》的強制實施事宜。
- 舉行73次外展講座，也接待了458個參觀團參觀機電工程署教育徑，共17 286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264次外展講座，向約35 000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453次外展講座，向29 000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68次學校展覽，宣傳「強制性能源效益標籤計劃」。
- 於2015年8月全面走訪全港有關的零售商，宣傳「強制性能源效益標籤計劃」。

Other Engagement Activities (Public at Large)

We also organises a wide range of engagement activities that target the public at large. Major events took place in 2015/16 are listed below.

- 35 developers and property management companies (representing 150 shopping malls), 620 retail shops, 260 office buildings, offices of 1 200 organisations, 420 residential buildings and housing estates and 360 premises of non-governmental organisations signed the Energy Saving Charter on Indoor Temperature in 2015. They pledged to maintain an average indoor temperature of 24 – 26 degrees Celsius from June to September 2015.
- Delivered or organised 144 talks and visits to organisations/schools to promote energy efficiency and conservation.
- Delivered 29 presentations to various organisations to promote the mandatory implementation of the Building Energy Code and Energy Audit Code under the Buildings Energy Efficiency Ordinance.
- Organised 73 outreach talks and 458 visits to the Education Path of EMSD Headquarters for a total of 17 286 visitors from different organisations and schools to promote energy efficiency and conservation.
- Visited 264 kindergartens, primary schools and elderly centres, reaching about 35 000 participants to promote electrical safety.
- Visited 453 kindergartens, youth centres and elderly centres, reaching over 29 000 participants to promote the safe use of amusement rides, lifts and escalators.
- Conducted 68 school exhibitions on the Mandatory Energy Efficiency Labelling Scheme (MEELS).
- Held a full-scale publicity visit to relevant retailers in August 2015 to promote MEELS.

社會成效
SOCIAL PERFORMANCE

- 於2015年9月，就「強制性能源效益標籤計劃」的新能源效益級別舉行簡介會。
 - 為業界人士就《供電電纜（保護）規例》的要求，舉行36場安全講座及研討會，參加者包括政府工務部門、顧問公司、承辦商、合資格人士、一般工地員工等。
 - 為業界代表、升降機/自動梯擁有人、業主立案法團成員，和物業管理公司員工，舉辦14場簡介會、技術及安全講座與研討會。
 - 舉行九場研討會及走訪1 600車輛維修工場，向車輛維修業界推廣車輛維修技工自願註冊計劃及車輛維修工場自願註冊計劃。
 - 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147場講座及研討會。
 - 截至2015年12月已走訪5 000多個已識別的淡水冷卻塔，並提醒淡水冷卻塔持有人有關正確設計、安裝及使用淡水冷卻塔的規定。
 - 與食物環境衛生署合辦了六場氣體安全講座，目標在提高食物業牌照申請人，對於在食肆及食物製備場所內，作供應飲食用途石油氣裝置規定的了解。
 - 探訪了21個寮屋和村屋區的居民，講解家居氣體安全。
 - 為氣體業界及不同的工程承辦商，舉辦了22場氣體安全講座，並進行了207個工地巡查，宣傳有關避免損毀氣體喉管的方法。
- Carried out briefing sessions in September 2015 on the new energy efficiency grading of MEELS.
 - Delivered 36 safety talks and seminars on the requirements of Electricity Supply Lines (Protection) Regulation to the trades, including government works departments, consultants, contractors, competent persons, general site staff, etc.
 - Conducted 14 briefing sessions, technical and safety talks and seminars for trade representatives, lift/escalator owners, members of incorporated owners and building management staff.
 - Organised nine briefing sessions and visited over 1 600 vehicle maintenance workshops to promote the two Voluntary Registration Schemes for Vehicle Mechanics and Vehicle Maintenance Workshops to the vehicle maintenance trade.
 - Conducted 147 talks and seminars on the implementation of the Continuing Professional Development Scheme for Registered Electrical Workers.
 - Visited about 5 000 identified fresh water cooling towers (FWCTs) as of December 2015 to remind FWCTs owners of the requirements for proper design, installation and adaptation of FWCTs.
 - Conducted six seminars on gas safety with the Food and Environmental Hygiene Department, targeting on applicants of food business licences to improve their understanding of the requirements of liquefied petroleum gas installations for catering purposes in restaurants and food preparation establishments.
 - Visited 21 squatter areas and villages to promote domestic gas safety to the residents.
 - Conducted 22 gas safety seminars for gas traders and different contractors, and 207 trench inspections to construction sites to promote safety practices on avoiding damage to gas pipes.



一般標準披露
GENERAL STANDARD DISCLOSURES

一般標準披露 General Standard Disclosures	描述 Description	互相參照/註釋/省略資料的原因 Cross-reference/Comments/Reasons for Omissions	外部認證 External Assurance
策略及分析 STRATEGY AND ANALYSIS			
G4-1	機構最高決策人的聲明 Statement from the most senior decision-maker of the organisation	機電工程署二零一五至一六年年報 EMSD Annual Report 2015/16	√
機構簡介 ORGANISATIONAL PROFILE			
G4-3	機構名稱 Name of the organisation	關於本報告 About this Report	√
G4-4	主要品牌、產品及服務 Primary brands, products, and services	實現可持續發展 Sustainability at EMSD	√
G4-5	機構總部位置 Location of the organisation's headquarters	香港 Hong Kong	√
G4-6	機構營運所在地之數目 Number of countries where the organisation operates	只在香港 Only in Hong Kong	√
G4-7	擁有權的性質及法律形式 Nature of ownership and legal form	屬於香港特區政府的一部分 Part of the Hong Kong SAR Government	√
G4-8	所服務的市場 Markets served	香港 Hong Kong	√
G4-9	機構規模 Scale of the organisation	社會成效 Social Performance	√
G4-10	僱員總數 Number of total employees	數據摘要 Summary of Statistics	√
G4-11	受集體協商協議保障的總僱員百分比 Percentage of total employees covered by collective bargaining agreements	沒有 None	√
G4-12	機構的供應鏈 Organisation's supply chain	實現可持續發展 Sustainability at EMSD 主要來自香港 A majority of our suppliers are based in Hong Kong	√
G4-13	於報告期內機構規模、架構、擁有權或供應鏈的重大改變 Significant changes during the reporting period regarding the organisation's size, structure, ownership, or its supply chain	關於本報告 About this Report	√
G4-14	機構是否及如何按預警方針及原則行事 Report whether and how the precautionary approach or principle is addressed by the organisation	實現可持續發展 Sustainability at EMSD	√
G4-15	機構對外界發起的經濟、環境及社會約章、原則或其他倡議的參與或支持 Externally developed economic, environmental and social charters, principles, or other initiatives to which the organisation subscribes or which it endorses	實現可持續發展 Sustainability at EMSD	√
G4-16	機構參與的聯會及(或)本地/國際倡議組織 Memberships of associations and/or national/international advocacy organisations	機電工程署屬於以下協會的成員。 EMSD holds membership in the following associations. 1) 能源工程師學會 Association of Energy Engineers 2) 香港綠色建築議會 Hong Kong Green Building Council 3) 香港照明學會 CIE (Hong Kong) Limited 4) 國際大型電力系統組織 International Council on Large Electric Systems (CIGRE)	√
已確定的重要議題 IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	機構綜合財務報表或同等文件內包含的實體 Entities included in the organisation's consolidated financial statements	關於本報告 About this Report	√
G4-18	界定報告內容及議題界限的過程，以及機構如何於已界定的報告內容實行報告原則 Process for defining the report content and the Aspect Boundaries and how the organisation has implemented the Reporting Principles for Defining Report Content	關於本報告 About this Report	√

一般標準披露

GENERAL STANDARD DISCLOSURES

已確定的重要議題 IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-19	決定報告內容過程中界定的重要議題 Material Aspects identified in the process for defining report content	關於本報告 About this Report	√
G4-20	機構內各重要議題的界限 Aspect Boundary of each Material Aspect within the organisation	關於本報告 About this Report	√
G4-21	機構外各重要議題的界限 Aspect Boundary of each Material Aspect outside the organisation	關於本報告 About this Report	√
G4-22	解釋重整舊報告所載信息的結果及原因 Effect of any restatements of information provided in previous reports, and the reasons for such restatements	為更準確呈現數據，更新了2014/15年度用水量 Water consumption figure in 2014/15 updated for better accuracy	√
G4-23	報告的範圍及議題界限與以往報告的重大分別 Report significant changes from previous reporting periods in the Scope and Aspect Boundaries	關於本報告 About this Report	√
持份者之參與 STAKEHOLDER ENGAGEMENT			
G4-24	機構的持份者群組清單 List of stakeholder groups engaged by the organisation	實現可持續發展 Sustainability at EMSD 社會成效 Social Performance	√
G4-25	界定及挑選相關持份者之基準 Basis for identification and selection of stakeholders with whom to engage	關於本報告 About this Report 社會成效 Social Performance	√
G4-26	與持份者溝通的方式 Approach to stakeholder engagement	關於本報告 About this Report 社會成效 Social Performance	√
G4-27	於持份者參與的過程中提出的主要項目及關注事項，以及機構的應對 Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns	關於本報告 About this Report	√
報告概況 REPORT PROFILE			
G4-28	匯報期 Reporting period for information provided	關於本報告 About this Report	√
G4-29	上一份報告的日期 Date of most recent previous report	2015年12月 December 2015	√
G4-30	匯報周期 Reporting cycle	關於本報告 About this Report	√
G4-31	查詢報告或報告內容的聯絡方式 Contact point for questions regarding the report or its contents	關於本報告 About this Report	√
G4-32	GRI內容索引，包括揀選的「符合」選項及外部認證參考（如有） GRI Content Index, the ‘in accordance’ option the organisation has chosen and the reference to the external assurance (if any)	關於本報告 About this Report 全球報告倡議組織內容索引 GRI Content Index	√
G4-33	為報告尋求外部認證的政策及現行措施 Policy and current practice with regard to seeking external assurance for the report	關於本報告 About this Report	√
管治 GOVERNANCE			
G4-34	機構的管治架構 Governance structure of the organisation	機電工程署二零一五至一六年年報 EMSD Annual Report 2015/16	√
G4-36	機構有否任命管理階層負責檢視經濟、環境和社會議題 Appointment of executive-level position(s) with responsibility for economic, environmental and social topics	我們的高級管理層參與了品質、環境及生產力策導委員會以及內部環保採購工作小組。 Our senior management staff participates in Quality, Environmental & Productivity Steering Committee and internal working group on green procurement.	√
道德與誠信 ETHICS AND INTEGRITY			
G4-56	機構的價值觀、原則、標準和行為規範 Organisation's values, principles, standards and norms of behavior	機電工程署二零一五至一六年年報 EMSD Annual Report 2015/16	√

特定標準披露

SPECIFIC STANDARD DISCLOSURES

特定標準披露 Specific Standard Disclosures	描述 Description	互相參照/註釋/省略資料的原因 Cross-reference/Comments/Reasons for Omissions	外部認證 External Assurance
類別：經濟 CATEGORY: ECONOMIC			
財務表現 ECONOMIC PERFORMANCE			
G4-DMA	管理方法披露(DMA) Disclosures on Management Approach	機電工程營運基金二零一五至一六年報告 ¹ EMSTF Report 2015/16 ¹	√
G4-EC1	機構產生和分配的直接經濟價值 Direct economic value generated and distributed	機電工程營運基金二零一五至一六年報告 ¹ EMSTF Report 2015/16 ¹	√
部門的採購政策 PROCUREMENT PRACTICES			
G4-DMA	管理方法披露(DMA) Disclosures on Management Approach	實現可持續發展 Sustainability at EMSD	√
G4-EC9	在重要運營地點，向當地供應商採購支出的比例 Proportion of spending on local suppliers at significant locations of operation	物料供應分部的服務及產品主要購自本地供應商/ 承辦商或分銷商 Acquisition of services and goods handled by Supplies Sub-division are mainly from local suppliers/contractors or local agents	√
類別：環境 CATEGORY: ENVIRONMENTAL			
物料 MATERIALS			
G4-DMA	管理方法披露(DMA) Disclosures on Management Approach	環保成效 Environmental Performance	√
G4-EN1	所用物料的重量或體積 Materials used by weight or volume	數據摘要 Summary of Statistics	√
能源 ENERGY			
G4-DMA	管理方法披露(DMA) Disclosures on Management Approach	環保成效 Environmental Performance	√
G4-EN3	機構內部的能源消耗量 Energy consumption within the organisation	數據摘要 Summary of Statistics	√
水 WATER			
G4-DMA	管理方法披露(DMA) Disclosures on Management Approach	環保成效 Environmental Performance	√
G4-EN8	按源頭說明的總耗水量 Total water withdrawal by source	數據摘要 Summary of Statistics	√

¹ 請參閱《機電工程營運基金二零一五至一六年報告》單行本內之財務報告，該報告已上載至機電工程署網站。
Please refer to the Financial Report in the separately published Electrical and Mechanical Services Trading Fund Report 2015/16 which is available on EMSD website.

特定標準披露

SPECIFIC STANDARD DISCLOSURES

排放 EMISSIONS			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	環保成效 Environmental Performance	√
G4–EN15	直接溫室氣體排放量 (範疇一) Direct greenhouse gas (GHG) emissions (Scope 1)	數據摘要 Summary of Statistics	√
G4–EN16	能源間接溫室氣體排放量(範疇二) Energy indirect greenhouse gas (GHG) emissions (Scope 2)	數據摘要 Summary of Statistics	√
污水和廢物 EFFLUENTS AND WASTE			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	環保成效 Environmental Performance	√
G4–EN23	按類別及處理方法分類的廢棄物總重量 Total weight of waste by type and disposal method	數據摘要 Summary of Statistics	√
供應商的環境評估 SUPPLIER ENVIRONMENTAL ASSESSMENT			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	環保成效 Environmental Performance	√
G4–EN32	使用環境標準篩選的新供應商的比例 Percentage of new suppliers that were screened using environmental criteria	環保成效 Environmental Performance	√
類別：社會 CATEGORY: SOCIAL			
勞工措施和工作 LABOUR PRACTICES AND DECENT WORK			
僱員關係 EMPLOYMENT			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	社會成效 Social Performance	√
G4–LA1	按年齡組別、性別及地區劃分的新進員工和離職員工總數及比例 Total number and rates of new employee hires and employee turnover by age group, gender and region	數據摘要 Summary of Statistics	√
G4–LA2	按重要運營地點劃分，不提供給臨時或兼職員工，只提供給全職員工的福利 Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	署內的臨時員工乃經由人力資源中介所聘請，而該些中介所均經過嚴謹的甄選過程方會獲得任命，確保臨時員工能得到合理的報酬。 Our temporary employees are employed by a human resources agency, and such agency is appointed through a stringent procedure to ensure reasonable remuneration for temporary employees.	√

職業健康與安全 OCCUPATIONAL HEALTH AND SAFETY			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	社會成效 Social Performance	√
G4–LA5	由勞資雙方組建的職工健康與安全委員會中，能幫助員工監督和評價健康與安全相關專案的員工代表所佔的百分比 Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programmes	社會成效 Social Performance	√
G4–LA7	從事職業病高發職業或高職業病風險職業的工人 Workers with high incidence or high risk of diseases related to their occupation	社會成效 Social Performance	√
培訓與教育 TRAINING AND EDUCATION			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	社會成效 Social Performance	√
G4–LA10	為加強員工持續就業能力及協助員工管理職業生涯終止的技能管理及終生學習計劃 Programmes for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	社會成效 Social Performance	√
多元化與平等機會 DIVERSITY AND EQUAL OPPORTUNITY			
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	社會成效 Social Performance	√
G4–LA12	按性別、年齡組別、少數族裔成員及其他多元化指標劃分，治理機構成員和各類員工的組成 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	社會成效 Social Performance	√

特定標準披露

SPECIFIC STANDARD DISCLOSURES

員工申訴機制				
LABOUR PRACTICES GRIEVANCE MECHANISMS				
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	員工可根據部門通告訂明的投訴指引， 為員工政策及人事等相關問題作出投訴。 Staff may lodge a complaint on employment related issues in accordance with our departmental circular on staff complaints.	√	
G4–LA16	經由正式申訴機制提交、處理和解決的勞工問題申訴的數量 Number of grievances about labour practices filed, addressed, and resolved through formal grievance mechanisms	部門處理了一宗由臨時員工提出的申訴個案。 The Department resolved one complaint case raised by a temporary worker.	√	
人權				
HUMAN RIGHTS				
強迫與強制性勞工				
FORCED OR COMPULSORY LABOUR				
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	實現可持續發展 Sustainability at EMSD	√	
G4–HR6	已發現具有嚴重強迫或強制勞動事件風險的運營點和供應商，以及有助於消除一切形式的強迫或強制勞動的措施 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour	實現可持續發展 Sustainability at EMSD	√	
產品責任				
PRODUCT RESPONSIBILITY				
產品及服務標籤				
PRODUCT AND SERVICE LABELLING				
G4–DMA	管理方法披露(DMA) Disclosures on Management Approach	社會成效 Social Performance	√	
G4–PR5	客戶滿意度調查的結果 Results of surveys measuring customer satisfaction	社會成效 Social Performance	√	

統計資料摘要

SUMMARY OF STATISTICS

環境Environment

	單位 Unit	2013/14	2014/15	2015/16
物料Material (G4-EN1)				
紙張 Paper	令 ream	26 992	26 344	26 645
油漆及溶劑 Paint & Solvent	升 L	20 057	17 289	13 371
潤滑油 Lubrication Oil	升 L	100 169	66 339	75 621
油脂 Grease	公斤 kg	1 708	1 457	2 161
製冷劑 Refrigerant	公斤 kg	13 302	14 988	11 963
工業用氣體 Industrial Gas	立方米 m³	751	418	410
蓄電池電解液 Battery Electrolyte	升 L	201	219	185
原子車胎 Tubeless Tyre	條 No.	10 656	10 982	9 569
外車胎 Outer Cover Tyre	條 No.	3 108	2 435	1 444
車胎內膽 Inner Tube	條 No.	1 975	1 773	524
能源Energy (G4-EN3)				
柴油 Diesel	升 L	285 444	131 762	139 926
汽油 Gasoline	升 L	370 354	373 451	351 939
電力 Electricity	‘000千瓦小時 ‘000 kWh	14 785	14 974	15 060
煤氣 Towngas	兆焦耳 MJ	223 728	19 392	0
水Water (G4-EN8)				
水 Water	立方米 m³	49 912	42 547	40 226
溫室氣體排放GHG Emissions (G4-EN15, G4-EN16) ¹				
直接排放(範疇一) ² Direct Emissions (Scope 1) ²	噸 tonnes	Figure not available 未能提供數據		1 333.7
能源間接排放(範疇二) Energy Indirect Emissions (Scope 2)	噸 tonnes	10 352	10 482	10 542
污水及廢物Effluent and Wastes (G4-EN23)				
廢紙 Waste Paper	公斤 kg	18 365	25 589	35 788
碳粉盒 Toner Cartridges	個 No.	3 121	3 174	2 765
用罄電池 Batteries	公斤 kg	16 040	18 697	17 204
金屬廢料 Metal Scraps	公斤 kg	27 484	22 974	21 907
廢油 Waste Oil	升 L	93 216	99 876	91 970
舊車胎 Used Vehicle Tyre	條 No.	11 862	13 323	10 464
含水銀照明燈 Spent Mercury Lamp	盞 No.	126 146	136 535	154 624

¹ 參考《香港建築物(商業、住宅或公共用途)的溫室氣體排放及減除的審計和報告指引》(由環境保護署及機電工程署發佈)
Made reference to the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purposes in Hong Kong (by EPD & EMSD)

² 包括柴油、汽油及煤氣的相關溫室氣體排放
Including emissions associated with diesel, gasoline and towngas consumption

統計資料摘要

SUMMARY OF STATISTICS

社會 Social

僱員人數 Employees Statistics (G4-10, G4-LA12)^{3, 4}

		截至2016年3月31日 As of 31 March 2016
總人數 Total number		5 191
男女分佈 By Gender		
男性 Male		4 621
女性 Female		570
合約類型分佈 By Employment Type		
公務員 Civil Servants		3 819
其他 Other terms		1 372
年齡分佈 By Age Group		
50歲或以上 Aged over 50		1 721
30 – 49歲 Aged 30 – 49		2 598
29歲或以下 Aged under 29		872

2015/16 新入職員工 2015/16 New Hires (G4-LA1)

		截至2016年3月31日 As of 31 March 2016
總人數 Total number		507
年齡分佈 By Age Group		
50歲或以上 Aged over 50		7
30 – 49歲 Aged 30 – 49		177
29歲或以下 Aged under 29		323
男女分佈 By Gender		
男性 Male		444
女性 Female		63

³ 不包括承辦商的員工
Contractors’ employees are not included

⁴ 所有員工均在香港工作
All staff are based in Hong Kong

離職員工 Turnover (G4-LA1)

		截至2016年3月31日 As of 31 March 2016
總人數 Total number		599
年齡分佈 By Age Group		
50歲或以上 Aged over 50		231
30 – 49歲 Aged 30 – 49		183
29歲或以下 Aged under 29		185
男女分佈 By Gender		
男性 Male		528
女性 Female		71

管理層的結構 Composition of Senior Management (G4-LA12)

		截至2016年3月31日 As of 31 March 2016
總人數 Total number		136
年齡分佈 By Age Group		
50歲或以上 Aged over 50		100
30 – 49歲 Aged 30 – 49		36
29歲或以下 Aged under 29		0
男女分佈 By Gender		
男性 Male		128
女性 Female		8

其他社會指標 Other Social Indicators

	單位 Unit	2013/14	2014/15	2015/16
須予呈報意外宗數 Reportable Accidents	宗/千名員工 No./1 000 staff	5.59	4.5	4.09
員工滿意度 Staff Satisfaction	分(滿分為10分) Score (out of 10)	不適用 Not Applicable	6.4	不適用 Not Applicable
平均培訓日數(目標：4.5) Average Training Days (Target: 4.5)	日/員工 Days/staff	4.74	4.72	4.37

核實聲明

VERIFICATION STATEMENT



香港品質保證局

範圍及目的 SCOPE AND OBJECTIVE

香港品質保證局已對機電工程署二零一五/一六年社會及環保報告(以下簡稱「報告」)內容進行獨立驗證。報告陳述了機電工程署在2015年4月1日至2016年3月31日於社會及環保方面的承諾和表現。

此核實聲明的目的是對報告內容的完整性及準確性提供合理保證。機電工程署社會及環保報告依循全球報告倡議組織(GRI)的第4代可持續發展報告指南(下稱G4)的核心選項進行報告。

Hong Kong Quality Assurance Agency (“HKQAA”) conducted an independent verification of the Social and Environmental Report 2015/16 (hereinafter referred to as “the Report”) of Electrical & Mechanical Services Department, HKSAR (hereinafter referred to as “EMSD”). The Report states EMSD’s commitments and progress in social and environmental aspects for the period of 1st April 2015 to 31st March 2016.

The aim of this verification was to provide a reasonable assurance on the completeness and accuracy of the information stated in the Report which was prepared in accordance with the Core Option of the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines.

核實方法 ASSURANCE METHODOLOGY

核實的程序包括審閱相關之文件、與負責編製報告內容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。對所選樣本的數據及證據已進行徹底審查。

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

獨立性 INDEPENDENCE

香港品質保證局不涉及收集和計算此報告內容的數據或參與編撰此報告。香港品質保證局的核實過程是獨立於機電工程署。

HKQAA was not involved in collecting and calculating the reporting data, or in the development of the Report. HKQAA’s activities are independent from EMSD.

結論 CONCLUSION

是次的核實結果肯定了機電工程署用作管理和報告其可持續發展表現資料的系統和流程為有效。我們確定報告內所陳述的資料可靠和準確。可持續發展報告G4框架和環境、社會及管治報告指引中載述的要求、元素和關鍵績效指標得到適切地涵蓋。報告的內容結構完整合理，能平衡及一致地反映有關機電工程署重要可持續發展範疇於2015/16年的實踐表現。

機電工程署一直積極地主動與持份者保持良好溝通。持份者的意見極受重視並且成為機電工程署建立可持續發展策略和編製報告內容的基礎。同時，機電工程署亦能及時回應持份者的關注及期望，報告也記載了有關例子。總括而言，報告清楚載述了有關機電工程署在重要可持續發展範疇的承諾，實踐及表現。

The results of our verification provided confidence in the systems and processes used by EMSD for managing and reporting sustainability performance information. It is confirmed that the contents stated in of the Report are accurate and reliable. The requirements, aspects and key performance indicators specified in the G4 Sustainability Reporting Guidelines have been adequately addressed. The information presented in the reporting contents articulate a balanced account of EMSD’s sustainability performance during the reporting period.

EMSD has established effective mechanism to proactively engage with its stakeholders. Feedbacks from stakeholders were taken into account very seriously for incorporating into the company’s sustainability strategies and for preparing the reporting contents. Also, EMSD has been responsive to stakeholder concerns and expectations with a number of examples shown in the Report. Overall, the material sustainability issues of EMSD’s commitments, progress and achievement were included in the Report.

香港品質保證局

Signed on behalf of Hong Kong Quality Assurance Agency

譚玉秀
企業業務總監
2016年11月

Jorine Tam
Director, Corporate Business
November 2016

鳴謝

ACKNOWLEDGMENTS

在年報製作過程中，承蒙下列部門及機構提供協助，機電工程署特此鳴謝。

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

民航處

Civil Aviation Department

律政司

Department of Justice

環境保護署

Environmental Protection Department

食物環境衛生署

Food and Environmental Hygiene Department

政府產業署

Government Property Agency

路政署

Highways Department

香港消防處

Hong Kong Fire Services Department

香港天文台

Hong Kong Observatory

香港警務處

Hong Kong Police Force

香港郵政

Hongkong Post

醫院管理局

Hospital Authority

房屋署

Housing Department

司法機構

Judiciary

康樂及文化事務署

Leisure and Cultural Services Department

海事處

Marine Department

香港鐵路有限公司

MTR Corporation Limited

昂坪360有限公司

Ngong Ping 360 Limited

海洋公園公司

Ocean Park Corporation

三和車房

San Woo Garage

香港中華煤氣有限公司

The Hong Kong and China Gas Company Limited

旅遊事務署

Tourism Commission

運輸署

Transport Department

黃銳汽車服務有限公司

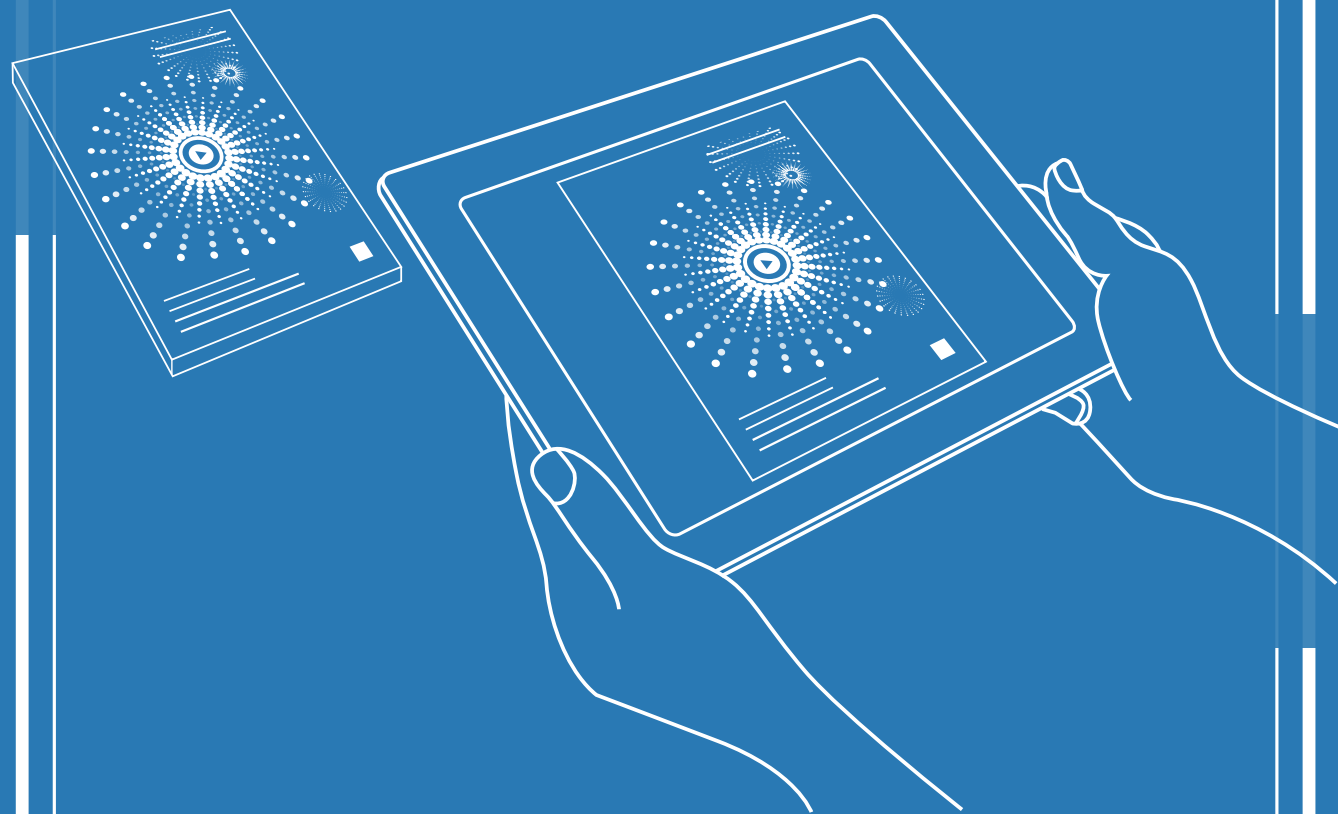
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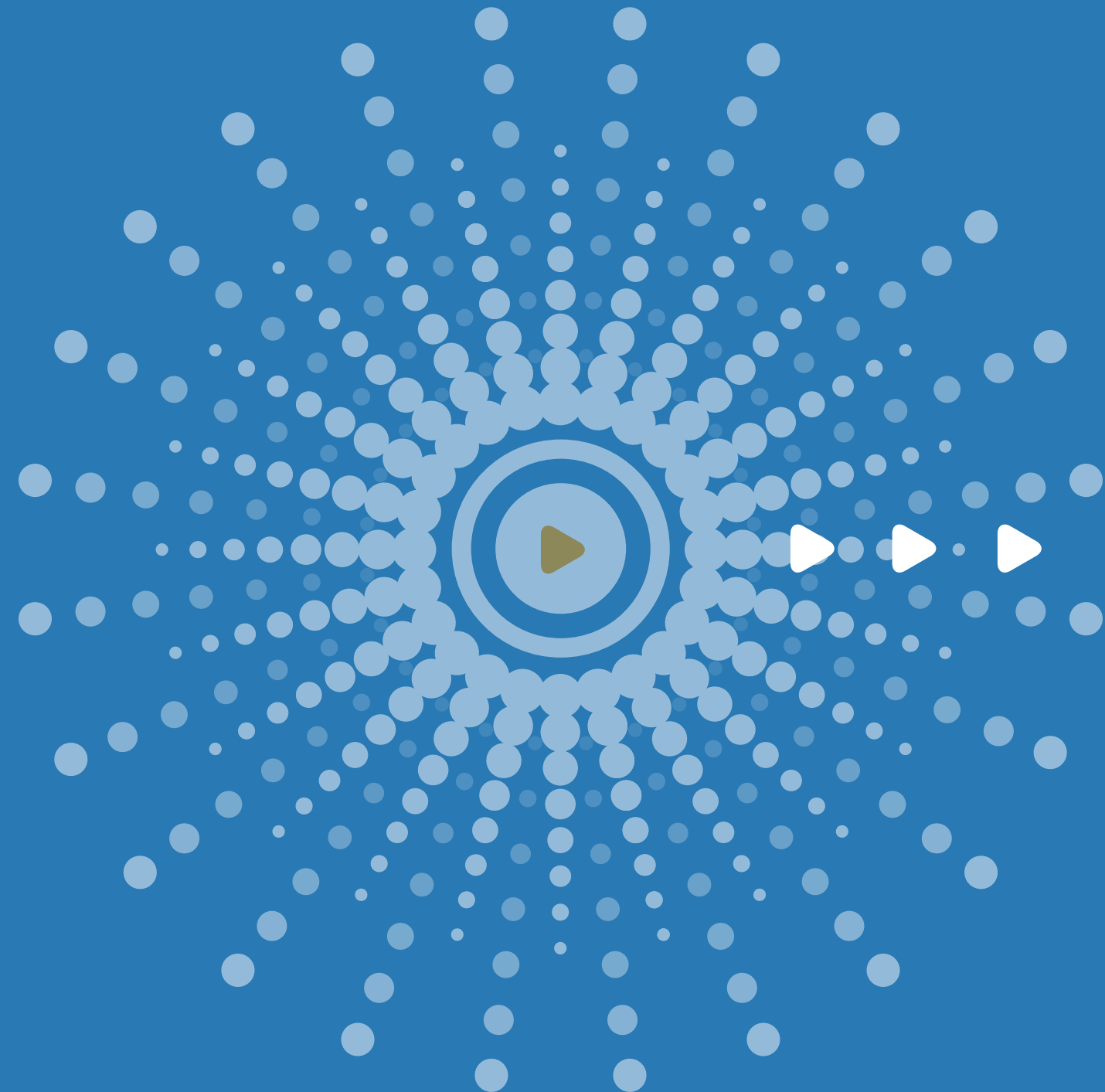
機電工程署
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EMSD
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活動代碼: EMSDAR1516
Event Code: EMSDAR1516





機電工程署

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營運廿載 源於心 役於人
機電未來 續創新 惠及民

Serving with Care and Innovation
20 Years and Beyond

政務司司長 於2016年9月15日機電工程營運基金20周年感恩典禮致辭

SPEECH BY THE CHIEF SECRETARY FOR ADMINISTRATION AT EMSTF 20TH ANNIVERSARY THANKSGIVING CEREMONY ON 15 SEPTEMBER 2016

很高興出席機電工程營運基金20周年慶典，祝賀基金邁向新里程。

我與機電工程營運基金甚有淵源。在九十年代我任職財政科(即現時的庫務局)，負責策劃公營服務改革政策，見證營運基金的成立。當時我們引進「營運基金」的概念，是希望針對某些有商業運作性質的公營服務，以更貼近市場的模式營運，加強部門的自主和靈活性，改善工作效率和服務質素。

轉眼間，機電工程營運基金已成立20年。在這20年裏，基金曾經面對業務流失的風險，經歷2003年「沙士」的衝擊，但仍能夠成功協助特區政府舉辦一些重要大事，包括2006年世貿部長會議和2008年奧運馬術項目，也與其他部門合力完成了多項基建項目，包括近年順利投入運作的郵輪碼頭、北大嶼山醫院和消防及救護學院等。自2002年起，各政府部門可自行決定是否繼續使用營運基金的服務，或選用其他服務供應商。這改變雖然進一步引入競爭，但基金憑藉盡責、可靠、專業的一站式服務，已成為客戶部門最信賴的伙伴。

機電營運基金20年來的財務表現一直符合財政司司長所釐定的指標。業務亦一直保持穩步發展，範圍更推展至節能技術等領域。儘管基金的人手編制由1996年的5 000多人調整至2016年約4 300人，但基金總收入在2015/16年度達57億元，較1996/97年度的25億元，增長超過一倍。更令人感到鼓舞的，是基金近年的客戶意見調查，客戶滿意指數達到等於以100分為滿分的81分，這個歷史新高，比基金成立初期高出三成。近年的員工滿意度調查結果，比起1997年時亦提升了20%。這些不同表現數據，反映基金不斷提高生產力及客戶服務的成果，亦顯示出員工上下一心，為業務持續發展而努力。

機電工程營運基金靈活創新，多年來透過持續改善管理策略，不斷提高生產力和服務質素，使公共資源得以有效運用。機電工程署能夠成為第一個政府部門獲得品質、環保和職安綜合管理系統的企業認證，也是首個政府部門贏得香港管理專業協會的「優質管理金獎」，可說實至名歸。另外，機電工程署在工程技術發展方面，先後取得有關機電設施保養技術的專利，以及建造業議會建築信息模擬(簡稱BIM)的創新建造獎，現時正為BIM應用於機電設施保養的相關技術申請專利。



在環保與持續發展方面，機電工程營運基金一直在轄下辦公地方進行設施和系統優化。機電署總部大樓成為首幢政府建築物獲得「綠建環評」鉑金評級，為實踐綠色作業起示範作用。與此同時，基金的專業人員積極協助客戶節能減排，多年來為各政府部門，合共節省多達16%的耗電量。基金今年再為客戶部門建議引入更多高能源效益的機電設備，配合政府新一輪減少5%耗電量的政策。

機電工程營運基金雖然以商業模式運作，但仍以公眾利益為先。現時政府推行「0-1-1」的財政節約方案，並不包括營運基金，但機電工程營運基金主動於2016/17年度下調收費，將提高生產力的成果回饋客戶，讓客戶保留更多資金加強核心服務。除此之外，基金更計劃在未來五年動用超過六億元，培育1 000多名機電人才，配合香港的長遠發展。

基金現時聘用超過200名殘疾人士，佔基金全體員工達4%，體現「傷健共融」。我身旁的咖啡店，是基金去年特別騰出空間，讓社會企業經營的，為殘疾人士提供工作機會，協助他們融入社會。由此可見，基金除了專注於業務之外，亦以關懷共濟的精神，致力履行企業社會責任。

機電工程營運基金經過20年的努力，蛻變成為客戶的可靠伙伴，不斷改善效率及提升服務質素，達到政府當初建立營運基金的目的。我期望基金繼續以靈活創新、持續發展和關懷共濟的信念，為社會的進步共融作出貢獻。

在此祝願機電工程營運基金今後發展更上層樓，各位同事工作愉快。

今天適逢中秋佳節，祝各位闔家安康，人月兩圓。

林鄭月娥
政務司司長

機電工程署署長 於2016年9月15日機電工程營運基金20周年感恩典禮致辭

SPEECH BY THE DIRECTOR OF ELECTRICAL AND MECHANICAL SERVICES AT EMSTF 20TH ANNIVERSARY THANKSGIVING CEREMONY ON 15 SEPTEMBER 2016

感謝大家在百忙中抽空出席機電工程營運基金20周年感恩典禮。感謝大家對我們的愛護、支持。感謝張局長，韓秘書長對我們的信任、指導。特別感謝林鄭司長多年來對我們的關懷、勉勵。

憑藉前人的帶領，同事們的拼勁，機電工程營運基金能夠走到今天，我們感恩。回顧當年很多同事都反對推行營運基金，甚至質疑背後動機。在疑惑不安的陰霾下，我們踏上逆境求存的旅程。我們的業務組合沒有專營權，亦不受保護。市場上提供同類服務的公司多的是，物競天擇，適者生存。從此，我們從個人心態、思維，以至企業文化都變得不一樣。我們視工作為業務，工作增加變成業務增長；我們視客戶為伙伴，以專業、謙卑的態度去提供服務。

經歷多年的洗滌沉澱，我們建立以人為本、以公眾價值為前提的信念。以往，我們也曾以回報率作為營運表現的指標。但我們明白到：如果我們從客戶的錢包多取分毫，客戶就會少了經費，市民大眾就會少了服務。現時，我們採納「微利營運」的方針，讓客戶保留更多資源投放其核心服務，利惠市民。營運基金以微利營運猶如航空母艦在淺水區作業，基金所有人員都必須時刻保持警覺，積極控制成本，持續提升生產力。微利營運雖然有擱淺風險，但我們願意接受挑戰，為社會創造公眾價值。

作為公營部門，追逐盈利從來都不是我們的目的。廿年來，營運基金整體生產力提升超過30%。我們將成果回饋客戶，緩減服務收費上調對客戶帶來的財務壓力。每當客戶出現周轉困難，我們都會靈活應對。當年為奧運馬術比賽提供技術支援，我們在分毫未收的情況下，調動資源全力以赴。當救護車隊因老化影響救援服務，我們不計成本為車隊更新配件，與客戶患難與共。當財政預算案遭遇拉布，我們不但暫緩收費，更退還已收款項，與客戶共渡時艱。

營運基金的存在價值是透過服務，提升市民生活質素。機電服務與市民生活息息相關，涵蓋全港公共設施。因應不同的服務，我們的業務單位有各自的服務信念，讓同事清楚明白服務背後所蘊含的意義和使命，付諸實踐。在醫院產房的同事致力確保醫療設備精準可靠，讓充滿期盼的父母安然迎接小生命的來臨；在展覽場館的同事會盡一切努力讓市民在舒適環境下欣賞展品，同時嚴格監控溫度、濕度和燈光，確保珍貴的展品不受損害；支援紀律部隊的同事，首要任務是確保所需裝備時刻待命、不容有失。為了不負使命，我們日夜守護機電設備，用行動回應客戶和公眾期望。

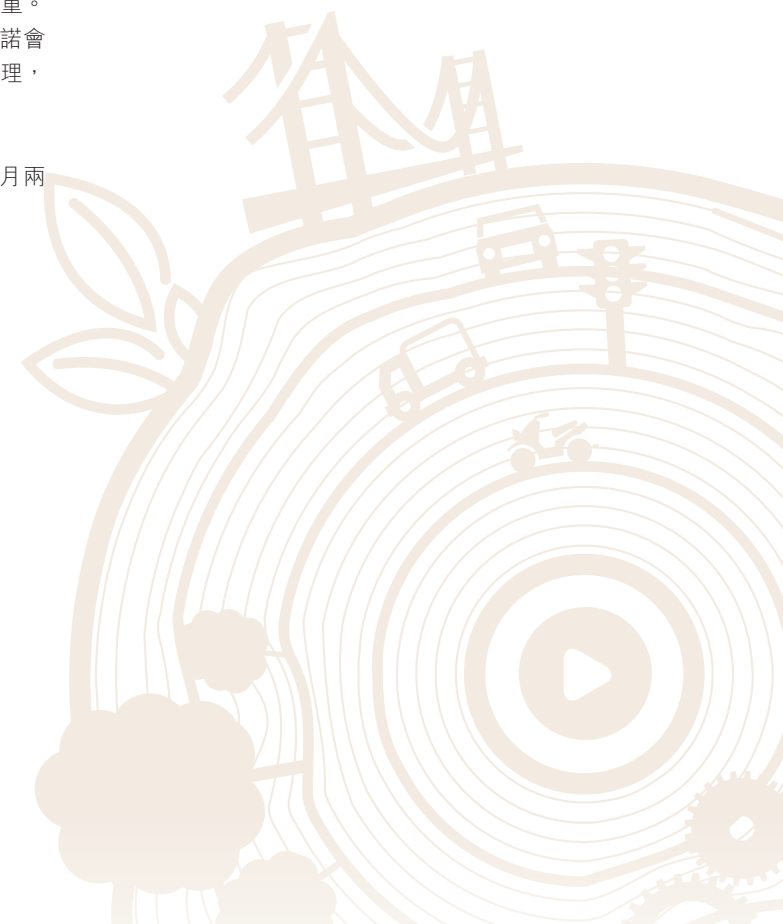


香港自七十年代騰飛，大量基礎建設相繼落成。時至今日，不少機電設備已經年過40。妥善維護及適時更新，對香港的可持續發展尤其重要。展望將來，香港正邁向低碳、智慧型都市進發，為營運基金帶來機遇和挑戰。我們的發揮空間會變得寬廣，但同時肩上的擔子亦變得沉重。但無論如何，我們定必毋忘初衷，緊抱信念。我們承諾會繼續以專業、勇於承擔的態度，持續優化機電資產管理，推動社會發展，延續香江傳奇。

今日適逢中秋佳節，我衷心祝願各位家庭幸福，人月兩圓！

多謝各位。

陳帆
機電工程署署長
機電工程營運基金總經理



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1996

機電工程營運基金隨着《營運基金條例》於1996年6月通過而成立，以自負盈虧的方式為政府決策局、部門及自主機構提供機電工程服務。

The Electrical and Mechanical Services Trading Fund (EMSTF) was established following the enactment of "Trading Funds Ordinance" in June 1996, to provide E&M services to government bureaux, departments and autonomous bodies on a self-financing basis.

首度20載：里程碑

OUR FIRST 20 YEARS: MILESTONES

1997

由獨立市場調查公司進行首次調查，了解客戶及員工的需要。調查後來成為定期「客戶意見調查」及「員工滿意度調查」，促進提升我們的服務質素。

Commissioned independent market research firms to conduct first survey on clients' and staff's needs. The survey was later developed into regular "Customer Opinion Survey" and "Staff Satisfaction Survey" to facilitate our further service improvement.

.....



1998

成為首個獲得香港服務業生產力獎的政府部門。

The first government department to win the Hong Kong Award for Services (Productivity).



1999

成為首個獲得ISO 9001品質管理系統企業認證的政府部門。

The first government department to obtain the Corporate Certification for ISO 9001 Quality Management System.

.....



2000

成為首個獲得ISO 14001環境管理系統企業認證的政府部門。

The first government department to obtain the Corporate Certification for ISO 14001 Environmental Management System.

2001

建立「抱負、使命與信念」，以配合長遠策略目標，更適切地反映企業文化，以及為日後的營運和發展提供指引。

Developed Vision, Mission and Values to align with its longer-term strategic goal, better reflect the corporate culture and guide future operation and development.

在職安健管理方面有顯著進步，獲得OHSAS 18001職業健康及安全管理系統認證。

Obtained the OHSAS 18001 Occupational Health and Safety Management System Certification for its significant improvement in occupational health and safety management.

首度20載：里程碑

OUR FIRST 20 YEARS: MILESTONES

2002

全面開放市場，完成自1999年起逐步與客戶脫鉤。

Opened up market fully after phased untying of customers from 1999.



2003

與客戶緊密協作，對抗「沙士」。

Worked closely with clients to combat SARS.



2004

成為首個採用嶄新企業管理電腦系統的政府部門，進一步加強財務管理、日常營運和客戶服務。

The first government department to adopt a new Corporate Computer System to further enhance its financial management, daily operation and customer service.



2005

遷進九龍灣總部，大樓配以嶄新設施結合先進環保技術，提高內部溝通和運作效率。

Relocated to the New Kowloon Bay Headquarters Building equipped with environmental protection technology, enhancing internal communications and operational efficiency.



2006

成為首個政府部門奪得香港管理專業協會優質管理獎金獎，優質服務獲得表揚。

The first government department to win the Hong Kong Management Association Total Quality Management Gold Award in recognition of its high-quality services.

2007

營運基金如期完成深港西部通道多種機電裝備測試工作，以慶祝香港回歸祖國十周年。

Commissioned the E&M installations of the Hong Kong-Shenzhen Western Corridor timely to celebrate the 10th anniversary of Hong Kong's return to Chinese sovereignty.



2008

為2008北京奧運馬術賽事提供「零瑕疵」項目管理和全面的通訊科技服務。

Supported the Equestrian Events of the 2008 Beijing Olympics with "zero-defect" project management and comprehensive information and communication technology (ICT) services.

2009

逾230位營運基金員工為香港東亞運動會提供專業支援。

Provided engineering support to Hong Kong East Asian Games with more than 230 EMSTF Staff.



2010

新小欖灣數據中心的資訊保安管理系統達到世界標準，取得ISO 27001認證。

Obtained the ISO 27001 certificate for the world-class information security management system of the new Siu Ho Wan Data Centre.

修訂「抱負、使命與信念」宣言，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。

Revised the Vision, Mission and Values statements with a view to improving the quality of life for the community through continuous enhancement of our E&M engineering services.

2011

為水警總區研發的中央指揮系統，贏得「2011香港資訊及通訊科技獎」的全年大獎、最佳公共服務應用大獎及最佳公共服務應用（電子轉化）金獎。

Won the Award of the Year, Best Public Service Application Grand Award and Best Public Service Application (Transformation) Gold Award at the Hong Kong ICT Awards 2011 for the Central Command System developed for the Marine Police.

2012

透過成立香港機電業推廣工作小組向年青一代推廣機電行業。

Set up the Hong Kong E&M Trade Promotion Working Group to promote electrical and mechanical engineering career to the young generation.

2013

與香港機場管理局共同設計的跑道燈固定電流調節器測試平台榮獲專利。

Obtained a patent on the constant current regulator testing platform jointly developed with Airport Authority Hong Kong.



2014

成功為不同的機電設備取得ISO 55001資產管理標準認證，加強資產管理的能力。

Obtained the ISO 55001 certificates for various E&M systems to further enhance our asset management competence.



2015

取得ISO 50001能源管理系統認證，顯示能源管理工作獲得認可。

Obtained the ISO 50001 Energy Management System Certification for its efforts in energy management.



2016

機電署總部大樓獲得香港綠色建築議會所頒的「綠建環評既有建築」的最終鉑金級認證，以及「綠建環評社區」先導評估的鉑金級認證。

The EMSTF Headquarters Building was awarded BEAM Plus Existing Buildings Final Platinum Rating and a Platinum rating for the BEAM Plus Neighbourhood pilot-assessment from the Hong Kong Green Building Council Limited.

前機電工程署署長

FORMER DIRECTORS OF ELECTRICAL AND MECHANICAL SERVICES



傅立新先生
Mr Hugh Phillipson

機電工程署署長
(1993至1998年)
Director of Electrical
and Mechanical Services
(1993–1998)

1993

1996年，傅立新先生以時任署長的身分監督機電工程營運基金的成立及當中的過渡工作。他印象最深刻的是機構文化的轉變。當時署方做了大量工作，例如進行培訓和重組架構等，讓員工為轉變作好準備。同事因而變得更加以客為本，並加強與客戶的溝通。

他猶記得員工協會最初對改革感到非常憂慮，各級員工包括專業人員也很抗拒，並有很多激烈的討論。後來政府承諾不會有員工因營運基金的成立而遭遣散，才令員工安心，最終改變態度，令其後各種改革措施得以順利推行，發展至今天的營運基金模式。

傅立新先生表示：「我一直十分欣賞營運基金為香港不同範疇提供多元化和重要的服務支援。許多同事都盡心竭力，令改革得以落實。即使以世界等級來看，營運基金確實是獨一無二的。」

As the department head who oversaw the setting up of EMSTF in 1996 and the transition process, Mr Hugh Phillipson was most impressed by the shift in corporate culture. Much work was done to prepare staff for the change, like training and organisational restructuring. Colleagues became more customer-oriented and there was more communication.

He recalled that staff associations were initially very concerned about the change and there was resistance by staff at all levels, including professionals. Discussion on this issue heated up, but what triggered their eventual change of mind was the Government's undertaking that there would be no redundancy as a result of becoming a trading fund. This gave staff the peace of mind that was essential for the implementation of subsequent change initiatives and developments in the organisation which shaped EMSTF as we know it today.

"I have always been impressed by the great variety and importance of all the work EMSTF does to support Hong Kong in so many ways. Many colleagues gave their best to make the change possible," he said. "It is indeed a unique department, even in world ranking."



黎仕海先生
Mr Lai Sze-hoi, Roger

機電工程署署長
(2001至2006年)
Director of Electrical
and Mechanical Services
(2001–2006)

2001

黎仕海先生回想在他任內，機電工程營運基金在成本效益和服務質素方面都取得很大進步，而且預留了更多可投放於培訓和機構發展的資源，讓整個營運基金能更好地服務市民。他亦大力推行「品質之旅」，經過三年的努力，營運基金於2006年成為首個贏得香港管理專業協會優質管理獎金獎的政府部門。

營運基金的工作對他個人而言也產生了很大影響。他表示：「我本來對技術工作較有興趣，但營運基金驅使我閱讀更多關於管理的書籍和思考許多管理上的問題，而且很多時須與持不同意見的同事溝通，讓我明白要先了解對方的要求和憂慮，以誠待人，才能展開更好的交流。」

「沙士」期間，黎先生曾向全體同事發出通告，引用「養兵千日，用在一朝」這句成語帶出危難當前，同僚必須繼續盡心服務市民的信息。他表示當年同事日以繼夜為醫院提供服務，盡力為醫院加裝抽氣扇，最終協助醫院順利渡過難關。

Reflecting on his years as Director of Electrical and Mechanical Services, Mr Lai Sze-hoi said EMSTF had made great strides in cost effectiveness and service quality with more resources set aside for investment in training and organisational development, hence enabling EMSTF as a whole to serve the public better. He also promoted EMSTF's "quality journey" with great enthusiasm. After three years of hard work, EMSTF became the first government department to win the Gold Award of the Hong Kong Management Association Quality Award in 2006.

Working at EMSTF had made a significant personal impact on him as well. "I was initially more interested in technical matters, but my duties at EMSTF prompted me to read more widely on the subject of management and think through many management issues. It also gave me plenty of opportunities to talk to colleagues with differing views. The experience made me realise that one must first understand others' wishes and concerns and treat people with sincerity to forge better communication," he said.

"Training an army for a thousand days to use it for one morning," Mr Lai quoted the Chinese idiom in a memo issued to all staff during the SARS epidemic, saying that extensive preparations would eventually pay off. His message was to urge all colleagues to continue serving the public wholeheartedly in the face of a daunting crisis. He recalled that in those days, many colleagues worked hard round the clock to provide services and retrofit ventilation fans for hospitals, which ultimately helped them through the crisis.



何光偉先生
Mr Ho Kwong-wai

機電工程署署長
(2006至2009年)
Director of Electrical
and Mechanical Services
(2006–2009)

2006

何光偉先生認為他任內最大的成就，是2008年為北京奧運在港舉辦的馬術項目提供全面的資訊科技服務。為應付這項極具挑戰性的工作，機電工程營運基金成立了內部專責團隊負責長達兩年的籌備工作。賽事最終順利完成，客戶對我們的服務十分滿意，讚揚我們的服務達到「零瑕疵」的水平。

何先生表示：「營運基金的強項是員工富有團隊精神，彼此視作一家人，每次遇到難關也能迎刃而解，即使在『沙士』肆虐期間面對高危情況，仍本着服務市民的精神去完成工作。」他當年也見證了機電署引入營運基金概念初期的「震盪」日子，這段經歷使他深受啟迪：「遇到突變時，必須保持開放態度和靈活思維，才可以應付轉變。」

他憶述退休時，營運基金已運作了十多年，無論服務質素和財政狀況都已達到目標和預期成效，證明當初轉型的決定確是明智之舉。

Mr Ho Kwong-wai noted that EMSTF's biggest achievement during his years as Director of Electrical and Mechanical Services was providing comprehensive information technology services to the 2008 Beijing Olympic Equestrian Events held in Hong Kong. To take on this highly challenging task, EMSTF set up a dedicated internal team which worked on the job for two years. The event was successfully completed, and the client was highly satisfied with our services, praising our services as "zero defect".

"The strength of EMSTF is that its people have a great sense of team spirit, working like a family. Together we can resolve any difficulty. Even during the SARS outbreak when the risk was high, we were able to complete our tasks with the spirit of serving the public," he said. Mr Ho also witnessed the days of "turmoil" when the trading fund concept was first introduced, a very inspiring experience for him too. "When there is a sudden change, one must be open-minded and flexible in order to cope with the change," he said.

He recalled that he retired at a time when EMSTF had been operating for more than ten years. At that point EMSTF had already achieved its objectives and intended results in service quality and financial performance, proving that the original decision for the transformation was wise.



陳鴻祥先生
Mr Chan Hung-cheung, Stephen

機電工程署署長
(2009至2011年)
Director of Electrical
and Mechanical Services
(2009–2011)

2009

在陳鴻祥先生任內，機電工程營運基金的發展相對穩定，故此有空間讓他優化和精簡架構，為長遠發展作好準備。舉例來說，他減少非公務員合約僱員的數目但增加公務員職位，令非公務員合約僱員有更多機會投考公務員職位。他亦倡議善用市場機制，透過將二線工作外判，讓員工能集中處理更高增值的服務。

他表示，營運基金的工作極具挑戰，能磨練自己，令他活得精彩，不枉此生，同時亦令他明白「迎難而上」的意義：面對的困難越多，學到的東西就越多，信心亦更加增強。他亦學會「困難總有解決的辦法」這個道理，所以每當遇到挑戰時，他絕不退縮，只會積極面對。

他指出：「營運基金總能順利應對每項轉變和挑戰，原因在於同事願意接受轉變，並且明白只有轉變才會帶來進步，因此他們都敢於迎接每項重大轉變和克服每項挑戰。」

The development of EMSTF was relatively stable during the years when Mr Chan Hung-cheung was Director of Electrical and Mechanical Services, giving him room to fine-tune and streamline the organisation to prepare for longer-term development. For instance, the number of non-civil service contract (NCSC) staff was reduced while the number of civil service (CS) posts was increased, thus creating more opportunities for NCSC staff to apply for CS posts. He also advocated the better use of market mechanism via contracting out work of secondary importance, so that EMSTF staff could focus on higher value-added services.

He recalled that working at EMSTF was very challenging and could train him up and made him feel living a "fulfilled life". EMSTF made him realise what it means to strive hard in the face of difficulties: the more difficulties there are, the more one can learn and raise one's confidence. He also learnt that for any problem, there is always a solution. The insight gave him the courage to tackle challenges upfront with enthusiasm and never run away from them.

"EMSTF has been able to emerge successfully from every change and challenge. The reason is that our colleagues are willing to accept changes. They understand that only changes can bring progress. Therefore, they have the confidence to embrace every major change and beat every challenge," he said.

機電工程營運基金的員工

EMSTF STAFF

方武先生 Mr Fong Mo



2015年退休的方武先生，於1971年參加前工務司署的學徒訓練計劃，並於1976年被派往機電署前身的「機電處」工作，退休前為管理值班工程師。

他最難忘的經歷是2003年爆發的「沙士」疫症。當時他是機電署進入淘大花園收集塵埃樣本供政府化驗所化驗的三人小組成員之一。當天，他和其他政府部門的同事穿着全套防護衣物在現場工作十多小時。他表示：「在那段日子，連物料供應商也不敢進入醫院，只將貨物放在路口。那時我們與醫護人員的合作非常緊密，互相依賴信任。」回望過去，他仍然十分感謝當年與他並肩作戰，一起對抗「沙士」疫症的同事。

Retired in 2015, Mr Fong Mo joined the Apprentice Training Scheme of the then Public Works Department in 1971 and was posted to the then E&M Office, forerunner of EMSD, in 1976. He was the Shift Charge Engineer before retirement.

His most unforgettable experience is the SARS epidemic in 2003. Mr Fong was one of the three members of an EMSD team that went inside Amoy Gardens to collect dust samples for testing by the Government Laboratory. Clad in full protective gear, he and other government colleagues worked for some ten hours there. "In those days, however, even goods suppliers dared not go inside the hospitals. They would only leave the goods at the road entrance. At that time, we had very close collaboration with the medical staff. We really only had each other to trust and depend on," he recalled. Looking back, Mr Fong is still very grateful to those colleagues who worked side by side with him to fight SARS.

李民正先生 Mr Li Man-ching



李民正先生於1970年參加學徒訓練計劃，並在機電署服務至2013年退休。他退休前為管理值班工程師。

1996年營運基金成立時雖然風高浪急，但憑藉大家上下一心，最後都能安然渡過巨變，他為此而很感恩。他表示：「在營運基金進入開放市場初期，為開拓業務，我開始為醫院管理局（醫管局）提供一站式服務。『沙士』期間，更因應醫管局的要求，臨時提供建築維修保養、加建、改建及改善工程等服務，直至2012年才將服務交回醫管局。能為客戶帶來『全盤服務方案』，我也感到自豪。」

Mr Li Man-ching joined the Apprentice Training Scheme in 1970 and retired from EMSD in 2013. He was the Shift Charge Engineer before retirement.

Mr Li is grateful that though it was an eventful and turbulent time back in 1996 when EMSTF was first established, everyone in EMSTF was united as a team and eventually rode out the storm of change. "During the early stage of EMSTF's full entrance into the open market, I started to provide one-stop services to the Hospital Authority (HA) as a way to explore business opportunities. Temporary building maintenance services as well as addition, alteration and improvement works were also provided at HA's request during SARS until these services were handed over to HA in 2012. I feel proud for being able to deliver 'full-service solutions' to clients," he said.

李家聲先生 Mr Lee Kar-sing, Christopher



李家聲先生於1970年參加首屆技工學徒訓練計劃，2002年調往綜合工程部，至2015年退休。他退休前為管理值班工程師。

李先生表示，2014年政府總部（政總）被佔領期間，營運基金同事所展現的使命感令他印象深刻。當年12月1日上午，政總被示威者圍堵，政府和承辦商人員均無法入內上班，行政署長於是宣布政總暫停開放，有關員工當日上午無須返回工作地點。然而，營運基金同事仍然盡力工作，幾經波折終能進入政總操作系統，繼續為身處政總執行緊急職務的政府同事及在該處工作的警務人員，提供所需的空調、機電和屋宇裝備服務。他憶述：「我們更有同事自願在辦公時間前到坐滿示威者的廣場巡視，確保政總的電力設施不會超出供電負荷。」

Mr Lee Kar-sing joined the first Craft Apprentice Training Scheme in 1970. He was posted to the General Engineering Services Division in 2002 and retired in 2015. He was the Shift Charge Engineer before retirement.

Mr Lee said that he was impressed by the commitment shown by EMSTF colleagues when the Central Government Offices (CGO) were occupied in 2014. On the morning of 1 December, due to the blockage of CGO by protesters, both government and contractor staff could not go into CGO for work. The Director of Administration announced that CGO was to be closed temporarily and that the concerned staff were not required to report for duty that morning. However, for the benefit of those government colleagues performing emergency duties and police officers working in CGO, EMSTF colleagues still made great efforts and finally managed to enter CGO to continue operating the air-conditioning, E&M and building services systems there. He recalled, "Some of our colleagues even volunteered to walk around the square filled with sit-in protestors before office hours, with a view to ensuring that CGO's electric power loading was not exceeded."

梁淦章先生 Mr Leung Kam-cheung



梁淦章先生於1983年加入機電署工程策劃部，2016年年初退休。他退休前為高級工程師。

2008年，梁先生在香港協辦的奧運馬術項目中，負責資訊及通訊科技系統和設施的總體策劃、統籌及操作。他表示：「可能營運基金在2005年為世貿香港部長級會議擔任資訊科技及通訊系統和設施項目管理十分成功，所以再次獲委託參與奧運馬術項目的工作。」事實上，在2006至2008年期間，他長駐香港奧運馬術公司，除了定期向北京奧組委作出匯報外，還經常與奧組委磋商技術細節及工程進度。

Mr Leung Kam-cheung joined the Project Division of EMSD in 1983 and retired in early 2016. He was the Senior Engineer before retirement.

Mr Leung was responsible for the overall planning, co-ordination and operation of information and communication technology systems and facilities for the 2008 Olympic Equestrian Events held in Hong Kong. He said, "EMSTF was successful in providing project management of information technology and communication systems and facilities for the World Trade Organisation Hong Kong Ministerial Conference in 2005. This probably led to EMSTF being entrusted again with the task of participating in the Olympic Equestrian Events." In fact, he was stationed full-time at the Equestrian Company of Hong Kong from 2006 to 2008, reporting regularly to the Beijing Olympic Organising Committee and having frequent discussions on technical details as well as project progress with the Committee.

機電工程營運基金的員工 EMSTF STAFF

梁德民先生 Mr Leung Tak-man



梁德民先生於1980年參加學徒訓練計劃，至1993年調往啟德機場，1998年轉到赤鱗角新香港國際機場服務至今，現為機電署區域經理/機場工程。

梁先生表示：「在營運基金成立初期，雖然高層管理人員有向員工講解營運基金的概念，但大家並不太清楚其運作模式及這種模式會帶來的轉變詳情。直至實行後，大家才開始發現轉變很大，我們需要有客戶意識，而營運基金亦涉及商業運作元素。後來，營運基金與機場管理局的合作模式有所改變。部分同事為自己變成了判頭而感到不開心，但我們以『客戶伙伴』的概念去改變他們的看法。現在營運基金已運作了20年，同事已經完全適應這種運作模式。」

Mr Leung Tak-man joined the Apprentice Training Scheme in 1980. He was posted to the Kai Tak Airport in 1993, and in 1998 to the new Hong Kong International Airport at Chek Lap Kok where he still works today. He is the Regional Manager/Airport Sector of EMSD.

Mr Leung recalled, "During the early days of EMSTF, though senior management had explained at length the concept of trading fund to staff, nobody was really clear about its operational mode or the detailed changes it would bring. Not until implementation began did we start to realise how enormous the changes were: there had to be customer awareness, and elements of commercial operation were also involved. Later on, the mode of co-operation between EMSTF and the Airport Authority also changed. Some of our teammates were unhappy as they felt that they had become a sub-contractor. However, we tried to change their mindset with the concept of 'partnership with clients'. Now that EMSTF has been operating for 20 years, our colleagues are totally adapted to this kind of operational mode."

馮劍青先生 Mr Fung Kim-ching



馮劍青先生自1971年參加學徒訓練計劃至今，在部門已經服務了45個年頭，現為機電署高級機械督察/車輛。

他坦言，以營運基金模式運作對車輛工程分部的衝擊很大，故此同事在營運基金成立初期，對車輛工程分部能否與市場上的代理商競爭感到非常擔憂，因為車輛工程分部不可像市場上的車輛代理商般，以售賣零件的收入彌補提供車輛維修服務帶來的虧蝕。不過，經過高層管理人員多番努力解釋，同事最終明白「唯一的出路是自我完善、配合改變，與部門共同發展，凡事多走一步。」他表示：「經過上上下下同事的辛勤努力，近年車輛工程分部終於做到收支平衡並錄得微利。」

Mr Fung Kim-ching joined the Apprentice Training Scheme in 1971 and this is his 45th year at the Department. He is the Senior Mechanical Inspector/Vehicle of EMSD.

He frankly said that the Vehicle Engineering Sub-division (VESD) was dealt a heavy blow in the early stage of its transition to a trading fund operation as colleagues were deeply worried about whether VESD could compete against other vehicle dealers in the market. That was because VESD could not, like the vehicle dealers in the market, use the revenue from selling parts and components to compensate for the loss incurred from providing vehicle maintenance services. However, after painstaking effort by the senior management to explain the situation, colleagues eventually realised that "the only way out is to improve ourselves, adapt to changes, grow together with the Department, and always go the extra mile in everything we do." "Today, VESD has finally broken even and managed to make a small profit. This is the outcome of the hard work by all our colleagues at every level," he said.

機電工程營運基金的客戶 EMSTF CLIENTS

李浩天先生 Mr Lee Hoo-tin

路政署高級工程師/上坡設施
Senior Engineer/PHL,
Highways Department



機電工程營運基金為路政署道路工程項目的機電設施提供工程策劃、工程監督、維修保養等服務。李浩天先生印象最深的，是2014年營運基金工程策劃部為路政署的升降機系統工程項目提供的服務。當時，工程策劃部提出優化建議，把原先在每部升降機安裝空調系統的設計，改為安裝同樣舒適但更省電環保的機械通風系統。新設計效果理想，一直沿用至今。

他以「非常滿意和專業」來評價營運基金的服務。他表示：「他們熟悉政府運作和採購程序，而且勇於承擔及事事精益求精，這兩方面的表現均非常突出。我們的工程牽涉很多公眾諮詢工作，他們都竭力盡心提供協助，令我們得以順利完成各項工程。大家是緊密的工作伙伴。」

EMSTF provides project planning, site supervision, maintenance services, etc. for the E&M facilities in the road projects of the Highways Department (HyD). Mr Lee Hoo-tin was most impressed by the services provided by EMSTF's Project Division (PD) for HyD's lift installation projects during 2014. PD's advice was to improve the original design, where each lift would be installed with an air-conditioning system, by replacing it with a mechanical ventilation system that would provide similar comfortable environment for users but more energy-saving and environment-friendly. The new design worked well and is still in use today.

He described EMSTF's services as "highly satisfactory and professional". "They are familiar with the government operation and procurement procedures. They are committed and willing to go the extra mile, and perform really well in both aspects. Our works involve a lot of public consultation, and they make strenuous efforts to assist us so that we can finish our tasks smoothly. We are close working partners," he said.

馬信昌先生 Mr Ma Shun-cheong

消防處救護總區車隊管理組
救護監督
Superintendent, Fleet Management
Unit, Ambulance Command,
Fire Services Department



營運基金為消防處提供救護車採購及維修保養服務。馬信昌先生憶述約十年前，救護車機件故障事件引起社會高度關注。營運基金大力支援消防處，加強救護車的採購及維修保養服務，使救護車車隊的表現經常維持在最佳狀態，為市民提供緊急救護服務。近年營運基金更為消防處引進了救護車的國際標準，以改善本地救護車的設計。這些新設計的救護車快將投入服務。

馬先生表示：「我對營運基金非常滿意。」他補充：「營運基金團隊具有專業知識，經驗豐富，提供穩健可靠的優質服務。我們之間有緊密而優良的伙伴關係。」

EMSTF provides ambulance procurement and maintenance services to the Fire Services Department (FSD). Mr Ma Shun-cheong recalled that about ten years ago, mechanical breakdowns in ambulances caused much concern in the community. EMSTF provided great support to FSD to enhance ambulance procurement and maintenance services so that ambulance fleet performance could always be maintained at an optimal level, in order to provide emergency ambulance services to the public. In recent years, EMSTF has also introduced international standards for ambulances to FSD so as to enhance the design of local ambulances. Ambulances with new designs will soon be operational.

"I am highly satisfied with EMSTF," he said. "With professional expertise and rich experience, the EMSTF team provides reliable and quality services. We have a close and excellent partnership," he added.

機電工程營運基金的客戶 EMSTF CLIENTS

陳偉杰先生
Mr Chan Wai-kit, Thomas

旅遊事務署高級經理(旅遊) 41
Senior Manager (Tourism) 41,
Tourism Commission



陳偉杰先生表示，營運基金自2010年開始為啟德郵輪碼頭(郵輪碼頭)提供服務，包括海邊前沿區工程設施、五條乘客登船橋、岸上食水供應與污水收集系統，以及郵輪碼頭大樓內的電子器材和設施的設計工作。自2013年起，營運基金開始為乘客登船橋、各個機電、空調和屋宇裝備系統，以及電子和工程設施，提供操作及維修保養服務。

陳先生認為營運基金同事樂於合作、專業及具有優良的團隊精神。他最難忘的是郵輪碼頭啟用初期，營運基金同事主動協助登船橋運作，特別是當「海洋水手號」在2013年6月首次泊岸時，有賴營運基金同事協助登船橋運作，遊客離船登岸的過程非常暢順。他補充：「我們非常滿意營運基金的服務，他們不但迅速回應客戶的要求，而且每每都能提出具成本效益的方案。營運基金是郵輪碼頭的一個重要『組件』，沒有他們，郵輪碼頭難以運作。」

Mr Chan Wai-kit said that EMSTF had started providing services for the Kai Tak Cruise Terminal (Terminal) since 2010, including the design of seaside apron facilities, the five seaport passenger boarding bridges (SPBBs), onshore fresh water supply and sewerage system as well as electronic equipment and facilities in the terminal building. Starting from 2013, EMSTF began to provide operation and maintenance services for the SPBBs, the various E&M, air-conditioning and building services systems as well as electronic and engineering facilities.

Mr Chan said that EMSTF colleagues were highly co-operative, professional and had excellent team spirit. He was most impressed by EMSTF colleagues' proactive assistance in the operation of the SPBBs during the initial operation stage of the Terminal. In particular, it was thanks to the assistance of EMSTF colleagues in operating the bridges that during the inaugural berthing of "Mariner of the Seas" in June 2013, all passengers disembarked very smoothly. "We are very satisfied with EMSTF's services. They respond promptly to our requests and always come up with cost-effective solutions. EMSTF is a vital 'component' of the Terminal. The Terminal can hardly operate without them," he added.

梁錦沛先生
Mr Leung Kam-pui

建築署總物業事務經理/2
Chief Property Services
Manager/2, Architectural
Services Department



梁錦沛先生表示：「我們很滿意機電工程營運基金的服務。」他指出：「最值得欣賞的是他們提供的一站式服務，既專業又可靠。」他形容彼此的伙伴關係好比「刀與叉」——大家需要互相配合才可順利完成工作。

營運基金為建築署的建業中心及其他場地提供機電系統操作及維修保養服務，也為該署物業事務處負責的工程提供全面的機電工程顧問服務。梁先生猶記得在營運基金運作初期，建築署與營運基金的服務協議內容曾出現一些灰色地帶，後來經雙方磋商後達成共識，為日後長遠合作奠下良好基礎。

"We are very satisfied with EMSTF's services," said Mr Leung Kam-pui. "What we appreciate the most is its one-stop, professional and reliable services," he said. He described their partnership as that between "fork and knife" – one needs to complement the other to complete the work successfully.

EMSTF provides O&M services for the E&M systems of the Architectural Services Department (ArchSD) in its APB Centre and other venues. It also provides comprehensive E&M consultancy services for the works undertaken by the Property Services Branch of ArchSD. Mr Leung recalled that during the initial operation stage of EMSTF, there were some grey areas in its service agreement with ArchSD. After discussions made by both parties, a consensus was reached which laid a good foundation for their subsequent long-term co-operation.

溫慧玲女士
Ms Wan Wai-ling, Randa

康樂及文化事務署高級經理
(大會堂)
Senior Manager (City Hall),
Leisure and Cultural Services
Department



營運基金為康樂及文化事務署(康文署)轄下各市政文娛設施及圖書館提供電氣、空調、屋宇裝備和電子系統的維修保養服務，也為該署表演場地的燈光及舞台設施提供操作和維修保養服務。多年來，溫慧玲女士先後在伊利沙伯體育館、香港中央圖書館、香港文化中心及香港大會堂與營運基金合作。

要數一件她與營運基金一起經歷而又最深刻的事，應是發生於去年6月的事故。當時政府總部附近一條連接大會堂製冷系統的地下海水喉管破損，令大會堂部分設施的冷氣供應中斷，幸得營運基金同事採取一系列應變措施和提供緊急支援，並於短短兩天內為大會堂找來臨時大型製冷系統應急，使大會堂的服務不受事故影響。溫女士表示：「我對營運基金非常滿意。他們可靠、物有所值、經驗豐富和專業，而且非常了解我們的場地和運作，並能維護我們場地的利益，讓我們能為市民提供更優質的服務。」

EMSTF provides maintenance services for the electrical, air-conditioning, building services and electronic systems at various municipal and cultural facilities as well as libraries under the Leisure and Cultural Services Department (LCSD). It also provides O&M services for lighting and stage facilities in LCSD's performance venues. Over the years, Ms Wan Wai-ling has worked with EMSTF at the Queen Elizabeth Stadium, the Hong Kong Central Library, the Hong Kong Cultural Centre and the City Hall.

The most memorable experience she shared with EMSTF took place in June last year, when an underground sea water pipe near the Central Government Offices for a chiller plant at the City Hall was damaged, causing suspension of air-conditioning supply at some facilities of the venue. Fortunately, thanks to the EMSTF staff who provided a series of contingency measures and emergency support and managed to deploy a large makeshift chiller system for the City Hall within merely two days, services at the City Hall were not affected by the incident. "I am very satisfied with EMSTF. They are reliable, good value for money, experienced and professional. They know our venues and operation very well and always work in the best interest of our venues, so that we can enhance the quality of our services to the public," she said.

劉楚釗醫生
Dr Lau Chor-chiu

醫院管理局港島東醫院聯網總監
Cluster Chief Executive,
Hong Kong East Cluster,
Hospital Authority



營運基金為東區尤德夫人那打素醫院(東區醫院)提供機電、冷氣、電子、屋宇裝備及醫療設備的維修保養及大型工程項目管理服務，雙方多年來合作無間。最教劉楚釗醫生難忘的是「沙士」期間，營運基金與東區醫院同事共同研發出一套供高危護理區使用的獨特負壓通風系統，以減低醫護人員互相傳染的風險。另一「驚險」情節，是當時營運基金緊急為東區醫院建造了醫院管理局第一個備有負壓通風系統的手術室，讓外科部門能為一名懷疑感染「沙士」的病人進行緊急手術。

劉醫生表示：「我們很慶幸能與營運基金這樣具承擔、使命感和理念相似的團隊合作。」他補充：「他們反應很快，總能提供完美的維修保養及工程方案。他們亦是醫院團隊的一員，與我們出生入死，互相信任，我們的合作關係絕不止於一紙服務合約那麼簡單。」

EMSTF provides maintenance services for the E&M, air-conditioning, electronic, building services systems and medical equipment as well as project management services for major engineering projects at the Pamela Youde Nethersole Eastern Hospital (PYNEH). Both parties have worked together closely over the years. For Dr Lau Chor-chiu, the most unforgettable experience was during the SARS period when EMSTF and PYNEH colleagues jointly developed a unique negative pressure ventilation system to be used in high-risk clinical areas to reduce the risk of cross-infection among medical staff. Another "nerve-racking" experience was that EMSTF urgently constructed the first operating theatre with negative pressure ventilation system for PYNEH under the Hospital Authority, which enabled the hospital's surgical department to conduct an emergency surgery on a suspected SARS patient.

"We are grateful to have EMSTF as our highly committed partner, with their sense of mission and values similar to ours," he said. "They respond fast, and always provide perfect maintenance and engineering solutions. They are a member of our hospital team, and together we have gone through life-and-death situations. We trust each other. Our partnership goes way beyond a mere service contract," he added.

感謝 Thank You



機電工程營運基金在2016年
客戶意見調查中取得佳績，滿意指數再創新高。
謹此衷心感謝客戶的支持及同事的努力。

EMSTF scores a record high satisfaction rating
in the Customer Opinion Survey 2016.
We would like to express our heartfelt
thanks for our clients' support and
our colleagues' efforts.

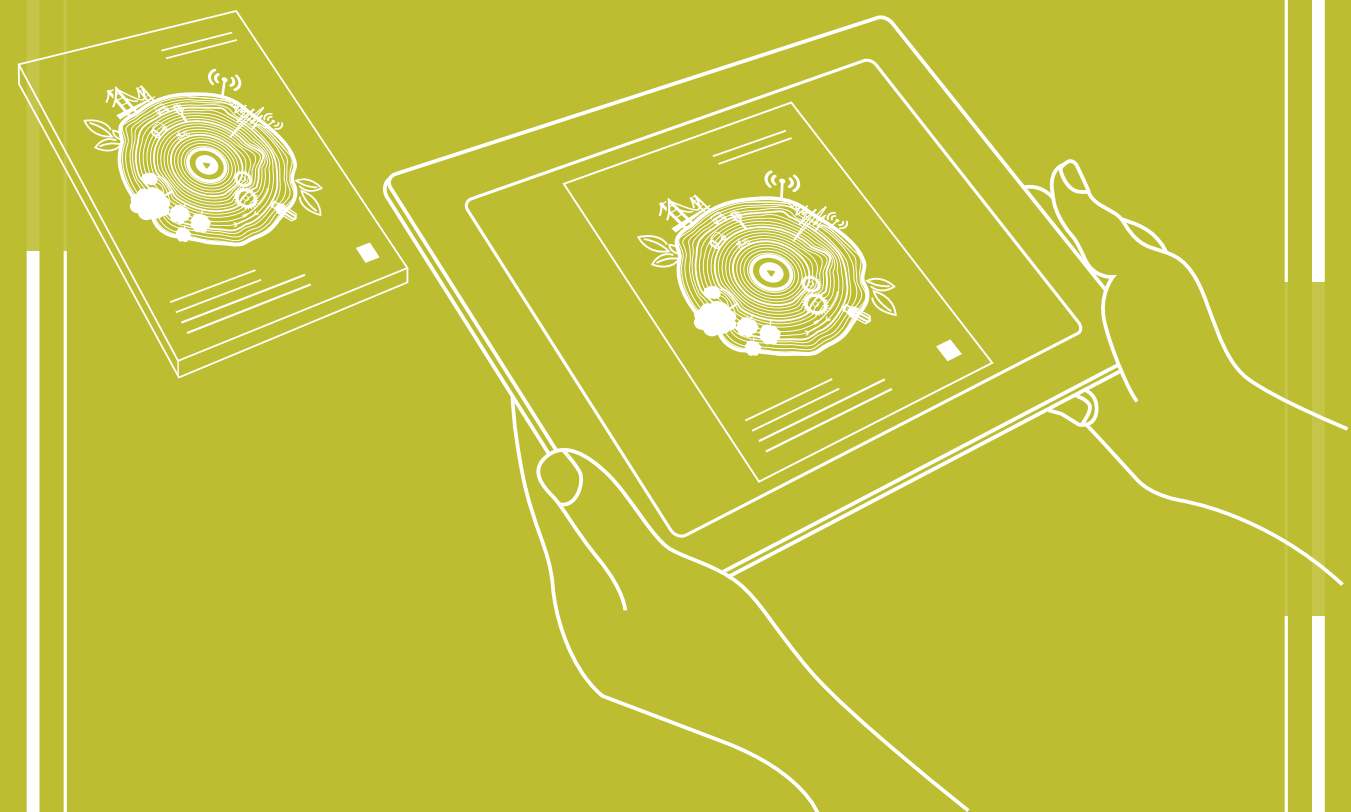
請瀏覽網址：www.emsd.gov.hk/EMSTF20
或掃描以下QR代碼，
觀看與機電工程營運基金20周年
相關的資訊。

Please visit the website:
www.emsd.gov.hk/EMSTF20
or scan the QR code below to
view information related to
the EMSTF 20th Anniversary.



機電工程營運基金 20周年紀念短片 EMSTF 20th Anniversary Video

精華版
Abridged version



你可透過手機程式WedCam掃描封面的擴增實境代碼，觀看短片。

You can view our video
by scanning the AR code on the cover through
the mobile app, "WedCam".

活動代碼: EMSD
Event Code: EMSD



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