



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 薛永恒太平紳士
Mr Sit Wing-hang, Alfred, JP

機電工程署署長
Director of Electrical and Mechanical Services

2 賴漢忠太平紳士
Mr Lai Hon-chung, Harry, JP

副署長 / 規管服務
Deputy Director/Regulatory Services

4 彭耀雄太平紳士
Mr Pang Yiu-hung, JP

助理署長 / 氣體及一般法例
Assistant Director/Gas and General Legislation

6 羅肇嫻女士
Ms Lo Siu-han, Cynthia

主任秘書
Departmental Secretary

7 何家儀女士
Ms Ho Ka-ye, Camilla

部門會計師
Departmental Accountant

3 潘國英先生
Mr Poon Kwok-ying, Raymond

助理署長 / 電力及能源效益
Assistant Director/Electricity and Energy Efficiency

5 陳秋發先生
Mr Chan Chau-fat

助理署長 / 鐵路
Assistant Director/Railways



- * 陳帆太平紳士出任機電工程署署長至2017年6月30日
Mr Chan Fan, Frank, JP was Director of Electrical and Mechanical Services up to 30 June 2017
- * 薛永恒太平紳士出任副署長 / 規管服務至2017年6月30日
Mr Sit Wing-hang, Alfred, JP was Deputy Director/Regulatory Services up to 30 June 2017
- * 賴漢忠太平紳士出任助理署長 / 電力及能源效益至2017年11月14日
Mr Lai Hon-chung, Harry, JP was Assistant Director/Electricity and Energy Efficiency up to 14 November 2017
- * 梁建民博士、太平紳士出任助理署長 / 鐵路至2017年5月26日
Dr Leung Kin-man, JP was Assistant Director/Railways up to 26 May 2017



賴漢忠太平紳士
Mr Lai Hon-chung, Harry, JP

機電工程署副署長 /
規管服務

Deputy Director/
Regulatory Services, EMSD

在2016/17年度，規管服務於監管機電安全及促成若干範疇的工作方面取得多項成就。我們能夠達到這些里程碑，全賴一眾同事的努力和拼搏精神，以及業界與社會大眾的鼎力支持。

The year 2016/17 saw a few milestone achievements in our role as E&M safety regulator and facilitator in certain areas of work. These would not have been possible without the hard work and can-do spirit of our colleagues and strong support from the trades and the community.

主要獎項與認同

去年的重要成就之一，是帶領屋宇署、路政署、香港消防處、香港警務處及運輸署共同贏得2017年公務員優質服務獎勵計劃的「部門合作獎」金獎。參賽項目「為新鐵路綫把關」詳細闡述我們六個政府部門如何緊密合作，以公眾安全為先，促成及確保新的西港島綫、觀塘綫延綫及南港島綫能在非常緊迫的時限內順利開通。這獎項充分肯定了我們同事和聯合團隊的出色專業表現和合作精神。我們謹祝賀為此付出的每一位工作人員。

國際能源效益獎項

我們的第二項成就，是獲美國能源工程師協會(AEE)頒發兩項崇高榮譽。機電署憑歷年來在開發、組織、管理和實踐其綜合能源管理方案的傑出表現，榮獲「AEE亞太地區機構能源管理獎」，以及憑創新的能源管理項目，榮獲「AEE亞太地區年度能源項目獎」。

這兩個獎項，是國際機構對我們多年來在香港推動節能減排工作的重要嘉許。事實上，在同事和其他持份者的努力下，香港過去十年的能源強度已下降超過26%，勝過大部分亞太經濟合作組織成員經濟體。

MAJOR AWARDS AND RECOGNITION

A key achievement last year was leading to win the Partnership Award Gold Prize under the Civil Service Outstanding Service Award Scheme 2017 together with the Buildings Department, Highways Department, Hong Kong Fire Services Department, Hong Kong Police Force and Transport Department. Titled "Safeguard Our New Railway Lines", the joint entry outlined how the six departments, against very tight deadlines and with public safety as the priority, collaborated closely to facilitate and ensure the smooth opening of the new West Island Line, Kwun Tong Line Extension and South Island Line. This award is a major recognition of the professional excellence and collaborative efforts of our colleagues and the joint team. Our congratulations to everyone who contributed to this achievement.

INTERNATIONAL AWARDS FOR ENERGY EFFICIENCY

A second achievement was EMSD winning two prestigious awards in the Association of Energy Engineers (AEE) Awards, namely the AEE Regional Institutional Energy Management Award for Asia-Pacific Rim Region for the Department's outstanding performance in developing, organising, managing and implementing its comprehensive energy management programme over the years, and the AEE Regional Energy Project of the Year Award for Asia-Pacific Rim Region for an innovative energy management project.

The AEE awards are a major international recognition of our commitment to implementing energy saving and emission reduction projects in Hong Kong over the years. Indeed, thanks to the good work of our colleagues and other stakeholders, Hong Kong's energy intensity has decreased by more than 26% in the past decade, outperforming most other Asia-Pacific Economic Cooperation (APEC) economies.



服務回顧 Operations Review

規管與促成並重

至於我們如何擔當促成者的角色，在此可進一步闡釋。我們推動業界和公眾恪守各種機電安全和節能的法規，並非新事。多年來，我們一直積極協助和勸諭老舊建築物的業主，為其固定電力裝置進行所需定期檢測和領取證明書，以符合法例要求。此外，又為升降機及自動梯承辦商制訂表現評級和認可計劃，並推出自願性的車輛維修技工及車輛維修工場註冊計劃，以鼓勵業界提高服務質素。儘管這些措施並非法例要求，但已證明行之有效，並深受市民歡迎。

隨着科技的急促發展，我們最近亦致力於推動科技創新，為業界樹立良好榜樣。在啟德發展區開創和實施的區域供冷系統，正好向社會展示在區域層面為空調系統供應中央製造的冷凍水所帶來的許多好處。機電署也因此成為落實和操作區域供冷系統的先驅，長遠而言，更可把累積的豐富經驗和最佳作業方法與私營機構和社會分享。

有些時候，要促進業界精益求精，需要的只是創新意念或做法，而非可能較為昂貴的嶄新技術。舉例來說，我們提供「升降機或自動梯保養工作移交事宜核對表」，便有助新舊承辦商順利交接。此外，我們亦定期就私人住宅和商業樓宇的升降機保養價格進行調查，並每六個月公布結果一次。業界的服務收費越公開透明，升降機負責人在選擇承辦商時就能掌握更多資訊，俾便作出較明智的決定。同樣地，這些舉措也不是法律要求，卻有助減少事故發生和提高升降機安全。我們希望能在其他工作範疇也注入這類創新意念。

TO REGULATE AND FACILITATE

Our role as facilitator is worth some elaboration. Facilitating the trades and the public to comply with various E&M safety and energy efficiency laws and regulations is nothing new. For many years, we have proactively offered assistance and advice to owners of ageing buildings to facilitate them to carry out the requisite Periodic Inspection, Testing and Certification for their fixed electrical installations, as required by law. We have also developed performance rating and recognition schemes for lift and escalator contractors, as well as voluntary registration schemes for vehicle mechanics and maintenance workshops, with a view to motivating them to raise service quality. These measures, though not statutorily required, have proved effective and have been warmly welcomed by the trades.

With rapid advancements in technology, our latest focus is to drive innovation with technology so as to set a good example for the trades. Our implementation of the District Cooling System (DCS) at Kai Tak Development is a case in point. Through this pioneering project, the Government has led by example to demonstrate to the community the benefits of supplying centralised chilled water for air-conditioning systems at regional scale. The project also puts EMSD at the forefront of DCS implementation and operation, from which a rich body of experience and best practice will arise over time for sharing with the private sector and community at large.

At times, facilitating the trades to do better requires only new ideas or processes, rather than new and potentially expensive technology. An example is our providing a “Checklist for Handover and Takeover of Lift/Escalator Maintenance” that facilitates a smoother handover for both the outgoing and incoming contractors. We also conduct a regular survey of lift maintenance prices in private residential and commercial buildings and announce the findings every six months. This helps make the trade's service charges more transparent to the public and enables Responsible Persons for lifts to make more informed choices when selecting a contractor for provision of services. Again, this is not required by law but can contribute to incident reduction and lift safety. We aim to come up with similarly innovative ideas in other areas of our work too.

重新校驗先驅

我們在2016/17年度的另一里程碑，是出版《重新校驗技術指引》(《指引》)。重新校驗是一個具成本效益、以知識為本的系統化檢測過程，有助定期檢查和糾正建築物內系統本身和操作過程出現的問題，使現有建築物回復到最佳操作狀態。重新校驗會深入監測和研究工程設備，了解在實際操作時涉及的各種因素和層面之間的互動關係，並輔以收集得來的數據進行分析，從而找出節能和其他改良操作效益的機會，並付諸實行。

為了研究怎樣在香港推動重新校驗，我們於2016年推出一項先導計劃，涵蓋政府樓宇和私人樓宇。我們挑選了六幢現有政府樓宇進行重新校驗。私人樓宇方面，我們一方面與業界內已率先於其樓宇進行重新校驗的先驅合作，同時也與香港綠色建築議會合作，透過議會協助私營企業在其樓宇進行重新校驗。

先導計劃找出了多個節能機會，包括簡單直接的系統調校，以至涉及系統的改善建議等，都能在較短的回本期帶來可觀的節能成效。先導計劃也為我們團隊帶來寶貴的實務經驗，並有助我們改進《指引》內容。

從先導計劃的研究成果，加上我們與各持份者及政府部門進行諮詢工作，讓我們豐富了《指引》內容作出版，並已於2017年6月在「全民節能」網站上載《指引》，隨之亦舉辦了多場簡報會及經驗分享會，吸引了1 500多人參與。

重新校驗可為樓宇業主、租戶和社區帶來營運、財務和環保方面的好處。為了應對氣候變化，我們很樂意擔當促成者/推動者的角色，協助社區採用這嶄新方法。我們的最終目標一貫是更有效地善用能源。為了環保，我們樂於多走一步。

PIONEER OF RETRO-COMMISSIONING

Another milestone was our work to publish the Technical Guidelines on Retro-commissioning during 2016/17. Retro-commissioning (RCx) is a cost-effective and systematic knowledge-based process to regularly check and rectify issues in systems and operational practice so as to restore an existing building to its optimal operational status. It involves in-depth monitoring and study of the dynamic interaction of different factors and dimensions during actual operation of the equipment, assisted by data analytics, so that energy saving and other operational enhancement opportunities can be identified and implemented.

To study how RCx may be applied in Hong Kong, we commenced a pilot study covering both public and private buildings in 2016. For public buildings, six existing government buildings were selected to undergo RCx. For private buildings, we collaborated with industry pioneers who have adopted some RCx measures in their buildings and the Hong Kong Green Building Council who assisted the private sector to conduct RCx in their buildings.

The pilot study identified various energy savings opportunities, ranging from straightforward system tunings to recommendations involving system improvements, which could generate considerable energy saving with short payback period. The pilot study also gave our team valuable hands-on RCx experience and helped to enhance the Technical Guidelines.

Results of the pilot study together with findings from consultation with stakeholders and relevant government departments have enabled us to enrich and publish the Technical Guidelines on Retro-commissioning on our Energy Saving for All website in June 2017, followed by many seminars and experience-sharing workshops attended by over 1 500 people.

Retro-commissioning brings operational, financial and environmental benefits to building owners, tenants and the community. To play a part in combating climate change, we are more than happy to be the facilitator/promoter to help the community adopt this new initiative. Our ultimate goal has always been to utilise energy in a more effective way. We are delighted to go this extra mile for the environment.



服務回顧 Operations Review

連接國內高鐵網

在整個2016/17年度，以至撰文之際，我們的同事都埋首工作，為定於2018年第三季通車的廣深港高鐵香港段作出準備，全力測試和檢查包括列車在內的各種機電系統。一如既往，每條新鐵路綫開通前的檢測時間總是非常緊迫。幸得近幾年開通多條新鐵路綫獲得的豐富經驗，加上與其他政府部門一貫的良好合作，我們團隊對應付這項挑戰滿有信心。

廣深港高鐵將首次把香港連接至國內的高鐵網，並通往其他「一帶一路」國家，我們很高興能參與這重要項目。

2017/18 年度重點工作

廣深港高鐵香港段的檢測和校驗，是2017/18年度的重點工作。另外，我們也正繼續落實啟德發展區區域供冷系統的工作，以配合不同新用戶接駁到該供冷系統的需求。同時，團隊也將忙於為東涌新市鎮擴展部分及其他新發展區，籌劃興建新的區域供冷系統。

我們將於2017/18年度主辦幾個重要的本地和國際會議。在撰文時已於2017年6月在香港舉辦國家質量監督檢驗檢疫總局與機電工程署的周年大會，標誌着雙方的緊密合作已踏入第14個年頭。為配合周年大會，我們雙方亦同時合作舉辦公眾展覽，讓市民更深入認識我們兩個機構就提高香港和內地機電安全和能源效益方面的合作。

我們也將於2017年10月在香港舉辦國際鐵路安全議會第27屆年度會議。這是一個重要的國際鐵路會議，匯集內地及世界各地的鐵路政策官員、運輸部長、規管機構代表、營運商、製造商和其他持份者，一起討論有關鐵路安全和發展的議題。

在2016年11月舉行的第二十屆北京·香港經濟合作研討洽談會(京港會)上，機電署與北京市政府就兩個城市在電力安全的合作進行了討論。我們期待在2017年11月於香港舉行的第二十一屆京港會上，就這方面進行更多交流。機電署與亞太經合組織也會繼續維持長期合作的伙伴關係，而在2018年5月，機電署將以東道主身分在香港舉行亞太經合組織能源工作小組第55次會議。

CONNECTING TO THE MAINLAND'S HIGH-SPEED RAILWAY

All through the year 2016/17 and at the time of writing, our colleagues have been busy working on the testing and inspection of various E&M systems, including rolling stock, in preparation for the opening of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) Hong Kong Section, scheduled for the third quarter of 2018. As always, the timeframe is tight, but with experience gained from opening other new lines in recent years, as well as good collaboration with other government departments, the team will rise to the challenge.

The XRL will not only connect Hong Kong to the Mainland's high-speed railway network for the first time, but also provide a link to other Belt and Road countries. We are delighted to play a role in this milestone project.

2017/18 PRIORITIES

Work on XRL testing and commissioning is an obvious priority in 2017/18. Besides, work for DCS at Kai Tak Development is being carried on to cope with the rising demand of various new consumers' connections to the DCS, while the plan for new DCS at Tung Chung New Town Extension and other new development areas will also keep the team busy.

2017/18 will also see us hosting several major meetings and international conferences. We had held the annual general meeting between the Mainland's General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) and EMSD in Hong Kong in June 2017, marking the 14th anniversary of the AQSIQ-EMSD cooperation. Together with the annual general meeting, a public exhibition was also jointly organised to raise community awareness of the two organisations' cooperation on E&M safety and energy efficiency in Hong Kong and the Mainland.

We shall be hosting the 27th annual conference of the International Railway Safety Council in Hong Kong in October 2017. This is a major international railway event in which railway policy makers, transport ministers, regulators, operators, manufacturers and other stakeholders from the Mainland and across the world will join together to deliberate on railway safety and development issues.

Meanwhile, discussions were held with Beijing municipal authorities on city-to-city cooperation on electrical safety during the 20th Beijing-Hong Kong Economic Cooperation Symposium in November 2016. We look forward to having more exchange on this front at the 21st Symposium in Hong Kong in November 2017. Our long-term working relationship with APEC will continue, with EMSD playing host to the APEC Energy Working Group 55th Meeting in Hong Kong in May 2018.

我們在不斷加強規管工作之餘，也同時增強作為促成者的角色，協助業界恪守法紀。在改善機電署總部大樓方面，我們也取得了良好進展，並陸續進行優化工程，使其成為可供參觀者及鄰近社區共享的可持續發展綠色建築。總部大樓內的「教育徑」經全面翻新後，將於明年初向公眾開放，讓數以千計關注機電安全、能源效益和機電署服務的學生和訪客，感受全新的體驗。

向持份者和合作伙伴致謝

謹此感謝各位同事過去一年為規管服務付出的努力和取得的成果。我們的服務與時並進，實有賴各持份者，包括業界的工作小組和組織、學術界、專業團體、非政府機構、培訓機構、參與我們各諮詢與技術委員會的組織，以及業內個別人士的積極支持，在此致以衷心謝意。我們也感謝相關決策局的支持及各部門的合作。此外，海外專家、內地對口單位及各個國際組織致力給予支持和配合，並且不吝賜教，分享專業知識，我們感激萬分。期待來年繼續獲得各方支持，再創佳績。

Apart from our ongoing efforts to enhance our regulatory work and step up our facilitator role to help the trades comply with the law, we are also making good progress on the transformation of our headquarters into a green and sustainable building for visitors and the neighbouring community to enjoy. Our revamped Education Path in the headquarters building will open to the public early next year, bringing a fresh new experience to thousands of students and visitors keen to learn about E&M safety, energy efficiency and our services.

APPRECIATION FOR STAKEHOLDERS AND PARTNERS

We must thank all the staff engaged in Regulatory Services for their excellent and award-winning work in the past year. As we grow and evolve, we continue to rely on the vital support of all stakeholders including various trade task forces and associations, academics, professional bodies, NGOs, training institutes, organisations on our advisory and technical committees, and individual members of the trades. We must express our gratitude to them all. We owe a vote of thanks to the concerned policy bureaux for their support and departments for their cooperation. Our appreciation also goes to our overseas experts, Mainland counterparts and various international organisations for their support, collaboration and generous sharing of knowledge and expertise. We look forward to your continued support in the coming year, and together we will strive for even better results.

賴漢忠
機電工程署副署長/規管服務

Lai Hon-chung, Harry
Deputy Director/Regulatory Services, EMSD



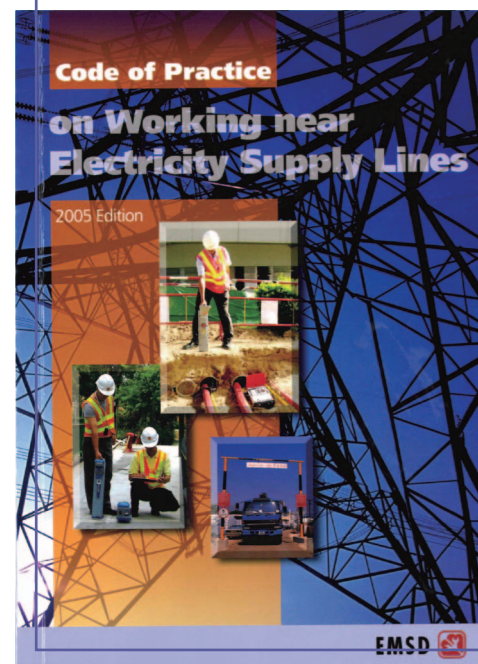
年度亮點 Highlights of the Year

《有關在供電電纜附近工作的實務守則》完成諮詢

《有關在供電電纜附近工作的實務守則》新版本的諮詢工作，已於2017年3月完成，並預計於2018年年初出版。新版本旨在進一步降低因挖掘工程影響地底電纜、或因起重機或吊重機操作影響架空電纜，而做成意外事故或停電的風險。

CONSULTATION COMPLETED FOR CODE OF PRACTICE ON WORKING NEAR ELECTRICITY SUPPLY LINES NEW EDITION

The consultation on a new edition of the Code of Practice on Working Near Electricity Supply Lines was completed in March 2017. It is expected to be published in early 2018. The new edition aims to further reduce the risk of incidents and power stoppages arising from excavations near underground electricity cables, and cranes or hoists operating near overhead electricity cables.



《有關在供電電纜附近工作的實務守則》新版本，預計於2018年年初出版。

A new edition of the Code of Practice on Working Near Electricity Supply Lines is expected to be published in early 2018.



加強公共屋邨煤氣裝置定期安全檢查

為鼓勵更多公共屋邨住戶參與氣體定期安全檢查，我們與房屋署及香港中華煤氣有限公司合作推出的氣體定期安全檢查先導計劃，已擴展至總共八個公共屋邨，成功為更多住戶進行檢查或保養煤氣裝置。

REGULAR SAFETY INSPECTIONS FOR TOWN GAS INSTALLATIONS STEPPED UP AT PUBLIC HOUSING ESTATES

Our joint pilot scheme with Housing Department and The Hong Kong and China Gas Company Limited to encourage more households to take part in Regular Safety Inspections was expanded to cover a total of eight public housing estates, successfully accessing more households to inspect or maintain their town gas installations.



▲ 能於個別住戶內進行定期安全檢查，對保障住宅樓宇氣體安全十分重要。

Accessing individual households for Regular Safety Inspections is crucial to ensuring gas safety in residential buildings.

▶▶ 北角模範邨是我們推廣定期安全檢查先導計劃的八個公共屋邨之一。

Model Housing Estate in North Point is one of the eight public housing estates in our pilot scheme to promote Regular Safety Inspections.

推出石油氣車輛燃料缸保安封條系統工作守則

全新的《石油氣車輛燃料缸保安封條系統工作守則》已於2017年1月3日生效，工作守則要求所有設有內置燃料泵的石油氣車輛的燃料缸，均須貼上藍色或紅色保安封條。以防止非法更換燃料缸內外配件，及確保相關的維修工序是由勝任人士在石油氣燃料缸工場內進行。

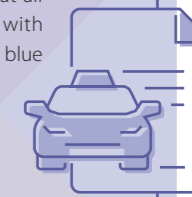
CODE OF PRACTICE ON SECURITY LABEL SYSTEM FOR LPG VEHICLE FUEL TANKS LAUNCHED

A new "Code of Practice on Security Label System for LPG Vehicle Fuel Tanks" took effect on 3 January 2017 which requires all LPG vehicle fuel tanks equipped with internal fuel pumps be affixed with blue or red security labels, so as to deter unlawful replacement of internal or external components of a fuel tank, and ensure that the related repair work is carried out by a competent person at an LPG fuel tank workshop.



全新的《石油氣車輛燃料缸保安封條系統工作守則》海報，提醒石油氣車主及司機，所有裝有內置燃料泵的車用石油氣燃料缸，由2017年1月3日起均須貼上藍色和紅色保安封條。

Poster on the new "Code of Practice on Security Label System for LPG Vehicle Fuel Tanks" alerting LPG vehicle owners and drivers that all LPG vehicle fuel tanks equipped with internal fuel pumps be affixed with blue and red labels from 3 January 2017 onwards.



年度亮點 Highlights of the Year

昂坪 360 換新纜索

昂坪 360 纜車於 2017 年年初停止服務，以便進行纜索更換工程。纜車系統投入服務近十年，更換纜索是正常且必須的程序。更換纜索工程歷時約五個月，纜車系統經我們檢查後已於 2017 年 6 月初重新通車。新纜索全於歐洲生產及檢測，新導軌纜已加強了表面金屬絲的強韌性，使纜索更加耐用。

NEW ROPES AT NGONG PING 360

Ngong Ping 360 suspended service to replace ropes in early 2017. Ropes replacement for the system is normal and necessary after some 10 years in operation. The works took about five months and, after our inspection, the system was reopened in early June 2017. The new ropes were all manufactured and tested in Europe, and the new track ropes have improved features like thicker outer wires to enhance their durability.



▶ 新纜索全於歐洲生產及檢測，新導軌纜更加強了表面金屬絲的強韌性，更加耐用。

The new ropes were all manufactured and tested in Europe. The new track ropes have thicker outer wires and are more durable.

▼ 昂坪 360 纜車投入服務近十年後，於 2017 年上半年進行纜索更換工程。

After some 10 years in operation, Ngong Ping 360 replaced its ropes during the first half year of 2017.



兩條新鐵路綫啟用

經過我們的檢查後，觀塘綫延綫和南港島綫（東段）已分別於 2016 年 10 月和 12 月啟用。兩條新綫投入服務後，鐵路網已覆蓋全港十八區，是本港鐵路網持續發展的另一里程碑。南港島綫（東段）更採用最新科技全自動列車控制系統，具備高效可靠及靈活調動的優勢。

TWO NEW RAILWAY LINES OPENED

After our inspection, the Kwun Tong Line Extension and the South Island Line (East) (SIL(E)) were opened in October and December 2016 respectively. The railway network now serves all 18 districts in Hong Kong, marking another milestone in the city's continuous railway development. The SIL(E) has adopted the latest technology of fully automated operation, with a high degree of flexibility and operation excellence.

為政府大樓完成能源審計並節能

我們於 2016 年 5 月和 2017 年 3 月，分別為 150 棟和 194 棟政府大樓完成能源審計工作，並建議多個能源管理機會項目，更協助各部門爭取得額外五億元的政府撥款，以落實這批能源管理機會項目，配合政府計劃於 2019/20 年節省 5% 耗電量的目標。

ENERGY AUDITS FOR GOVERNMENT BUILDINGS TO SAVE ENERGY

We completed energy audits for 150 and 194 government buildings in May 2016 and March 2017 respectively, with various Energy Management Opportunities (EMO) recommended. We also helped make a successful bid for \$500 million additional funding to implement these EMOs, so as to meet Government's 5% electricity saving target by 2019/20.

更新淡水冷卻塔計劃出版物

為配合相關法規和國際標準的最新要求，有關淡水冷卻塔計劃的現有刊物已完成檢討及更新，並分別易名為 2016 版本的《淡水冷卻塔計劃》及《淡水冷卻塔實務守則》第一至第三部。而 2016 版本的《預防退伍軍人病工作守則》亦已完成檢討。

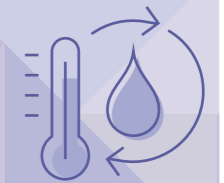
FRESH WATER COOLING TOWER SCHEME DOCUMENTS UPDATED

Existing publications of the Fresh Water Cooling Towers Scheme have been reviewed and updated to meet the latest requirements of relevant regulations and international standards. The documents have been renamed as Fresh Water Cooling Towers Scheme (2016 Edition) and the Code of Practice for Fresh Water Cooling Towers: Parts 1-3 (2016 Edition). In addition, the Code of Practice for Prevention of Legionnaires' Disease (2016 Edition) has also been reviewed.



有關《預防退伍軍人病工作守則》及淡水冷卻塔計劃的各種刊物已完成更新，以配合相關法規和國際標準的最新要求。

Code of Practice for Prevention of Legionnaires' Disease and publications of the Fresh Water Cooling Towers Scheme have been updated to meet the latest requirements of relevant regulations and international standards.





重要數字 Key Figures

電業工程人員 ELECTRICAL WORKERS

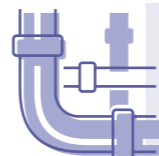


註冊電業工程人員
REGISTERED
ELECTRICAL WORKERS

2015
76 000 名
NOS.

2016
76 739 名
NOS.

燃氣供應 GAS SUPPLY

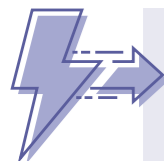


氣體喉管網路總長
TOTAL LENGTH OF
GAS PIPE NETWORK

2015
3 583 公里
KM

2016
3 614 公里
KM

電力供應 ELECTRICITY SUPPLY



本地售電量
LOCAL ELECTRICITY
SALES

2015
43 912 百萬度
GWh

2016
44 029 百萬度
GWh

車輛維修技工 VEHICLE MECHANICS



註冊車輛維修技工
REGISTERED VEHICLE
MECHANICS

2015
6 617 名
NOS.

2016
8 384 名
NOS.

升降機及自動梯 LIFTS AND ESCALATORS



升降機
LIFTS

2015
63 561 部
NOS.

2016
64 930 部
NOS.

鐵路 RAILWAY



鐵路路線長度
RAILWAY TOTAL
ROUTE LENGTH

2015
221 公里
KM

2016
231 公里
KM



自動梯
ESCALATORS

2015
8 925 部
NOS.

2016
9 156 部
NOS.



鐵路年度載客量
RAILWAY ANNUAL
PATRONAGE

2015
1 884 百萬
MILLION

2016
1 893 百萬
MILLION

保障公眾安全 Protecting Public Safety

電力安全 ELECTRICAL SAFETY

安全水平保持穩定

2016年，電力事故宗數保持穩定，顯示電力安全水平得以維持。同時，隨着《電力(線路)規例工作守則》為期兩年的寬限期將於2017年11月30日結束，我們舉辦了多次簡報會，向業界加強闡釋推廣新守則的內容。

以對象為本傳達安全訊息

我們秉承協作的精神，並以對象為本，與各持份者緊密合作，讓我們的目標受眾更易取得安全資訊。例如，在面向75萬租戶的房屋署通訊中，刊載有關電氣安全的文章，並在長者安居服務協會的網站和社交媒體平台，上載短片和資訊等。並且為確保舊樓業主參加如「樓宇更新大行動」等現有建築物改善計劃時，不忘檢測固定電力安全裝置，我們更與屋宇署合作，宣傳相關經費的申請可包含電氣安全選項。

Steady Level of Safety

The number of electrical incident numbers in 2016 remained steady, indicating a sustained level of electrical safety. Meanwhile, we have stepped up the promotion of the new Code of Practice for the Electricity (Wiring) Regulations to the trade via numerous briefings, as the Code will be fully implemented on 30 November 2017 when its two-year grace period comes to an end.

Target Oriented Approach

In the spirit of collaboration, we have used a more target oriented approach via working with various stakeholders to reach the intended audiences of our safety messages. These included, for example, placing electrical safety articles in the Housing Department's newsletters to reach its 750 000 tenant families, and putting short videos and messages on the website and social media of the Senior Citizen Home Safety Association for the elderly. Moreover to ensure that owners of aging buildings do not forget about safety on electrical installations as they take part in existing buildings improvement initiatives like "Operation Building Bright", we have worked with the Buildings Department to promote that the relevant funding applications could contain items of electrical safety.



▲ 我們在羅湖和落馬洲邊境口岸均備放宣傳單張，提醒前往內地的市民選購安全的電氣產品。

We have made leaflets available at Lo Wu and Lok Ma Chau border points to advise the public members going to Mainland that they should buy safe electrical products.

▶ 我們有關的宣傳單張，提醒市民選購安全電氣產品時須要留意的事項。Our related leaflet advises the public on items to which they should pay attention for buying safe electrical products.



▲ 電力法例部與能源效益事務處的同事，使用一個「共用平台暨地理資訊系統」以便進行聯合零售店舖巡查。系統能自動建議巡查路線，大大提高工作效率。Using a Common Shop Inspection Platform cum Geographic Information System, colleagues from our Electricity Legislation Division and Energy Efficiency Office carry out joint retailer inspections. The System automatically plans the inspection routing, greatly boosting efficiency.

▶▶ 聯合零售店舖巡查涵蓋能源標籤和電氣產品安全，是部門同事跨組合作的好例子。The joint inspection covers both energy labels and electrical product safety, and is a good example of cross-team cooperation.



修讀工程或技術專業的學生，也應盡早接受有關電力安全教育。我們與職業訓練局作出安排，讓工程科目學生盡早接觸到電力安全訊息，尤其是《電力(線路)規例工作守則》更新版的資訊。另外，就針對前往內地的旅客，我們在羅湖和落馬洲邊境口岸均備放宣傳單張，提醒旅客應購買安全的電氣產品。

Students in engineering or technical courses should get exposure to electrical safety education. We have made arrangements with the Vocational Training Council so that safety messages, especially those related to the new Code of Practice for the Electricity (Wiring) Regulations, can reach engineering students as early as possible. For cross-border travellers going to the Mainland, we have made leaflets available at Lo Wu and Lok Ma Chau border points to advise them to buy safe electrical products.

提醒迷你倉業界注意安全

2016年6月，牛頭角一個迷你倉發生嚴重火災。我們隨即主動巡查香港的迷你倉，向發現有不合電力安全規格的營運商發出改善通知書。我們更馬上向所有迷你倉營運商發出建議信，並附上為迷你倉具體情況而建議的安全指引，提醒業界必須確保電氣安全。

Alerting Mini Storage Operators

Subsequent to a serious fire at a mini-storage space in Ngau Tau Kok in June 2016, we have taken the initiative to inspect mini-stores in Hong Kong and issued improvement notices to those with non-compliance items identified. We also promptly issued an advisory letter with tailor-made safety guidelines to all mini-store operators to alert them to ensure electrical safety.

加強巡查

另一方面，鑒於年內工地發生了致命電力事故，我們與勞工處攜手加強巡查工地，提醒工人採取適當的電力安全措施。如去年所述，我們也加強巡查全港大型戶外招牌，尤其注意電力裝置和防護措施是否安全。

Inspections Stepped Up

On a separate front, in view of fatal electrical incidents on work sites during the year, we have worked with the Labour Department to step up inspection of work sites so as to remind workers to take proper electrical safety precautions. As mentioned last year, we have stepped up inspection of large outdoor sign boards, in particular the related electrical installations and protective measures.

在零售店執行電器安全與能源效益巡查方面，我們年內開始推行並使用一個「共用平台暨地理資訊系統」。該系統能自動顯示巡查範圍附近所有相關電器零售店，並按其位置自動排列出一條建議的巡查路線，大大提高工作效率。

For inspection works at retail shops in respect of electrical product and energy efficiency we implemented and began using the Common Shop Inspection Platform cum Geographic Information System this year. This system can automatically display all relevant shop locations in the vicinity of the inspection area and generate a suggested route for inspection works, greatly boosting the efficiency of work.

保障公眾安全 Protecting Public Safety

協助屋苑住戶

科技應用雖好，但也必須配合積極協助大眾解決問題的良好態度。我們處理觀塘曉光閣停電事件就是個好例子。曉光閣於2016年6月發生停電停水事故，影響500多戶居民和一家屋苑內的安老院。我們即時派出三個小組提供支援：一組負責調查事故，另一組支援恢復供電工程，第三組則聯絡中電安排臨時供電。我們的行動，贏得住戶和區議員的讚揚。

明年計劃

展望2017/18年，《供電電纜工作守則》新版本的諮詢工作已於2017年1月展開，將於2018年初完稿及準備出版。現有版本為2005年出版。

社區方面，我們正考慮一項新計劃，以提高私人護養院舍，包括安老院舍的電力安全，減少電力系統的潛在危險。目前，大部分電力負載量不超過100安培的場所，均無須為其固定電力裝置進行定期測試(WR2)。我們計劃與相關行業經營者及政府部門合作，協助這類場所也實施定期測試，進一步加強私人護養院舍的電力安全。

此外，為確保市民家居的電力工程能安全進行，我們計劃與香港房屋委員會及香港房屋協會探討合作可能性，提醒住戶在裝修家居時，必須僱用註冊電業承辦商和註冊電業工程人員進行電力工程，並保留僱用承辦商的紀錄，以確保工程質素。

我們也會繼續探討與非政府機構的其他合作機會，如運用其社交媒體分享電力安全短片，讓目標受眾更有效接收訊息。

Assisting Building Occupants

The use of technology, however, must go hand in hand with a proactive attitude to help the public. A good example is the case of Hiu Kwong Court in Kwun Tong which had a major power and water stoppage in June 2016. The incident affected over 500 households as well as a residential care home for elderly persons in the building. We immediately coordinated three teams to provide support: one to investigate the incident, the other to support power recovery works, and the third to liaise with CLP to provide temporary power supply. Our work won the praise of tenants and a District Councillor.

Initiatives Next Year

Looking to 2017/18, consultation on a new edition of the Code of Practice on New Electricity Supply Lines has begun in January 2017, which will be finalised and ready for publication in early 2018. The current edition was issued in 2005.

At the community level, a new initiative is being considered to enhance the electrical safety of private care homes such as residential care homes for elderly persons to reduce potential electrical safety hazards. Currently some of these venues are not required to carry out the Periodic Testing (WR2) requirements, as the approved loading of their electrical installations do not exceed 100 A. Our plan is to explore with the related trade operators and government departments to further enhance electrical safety at these private care homes by implementing the periodic testing requirements.

In addition, to ensure that electrical work is properly carried out, we plan to explore collaboration possibilities with the Hong Kong Housing Authority and Hong Kong Housing Society. Our aim is to remind their tenants to employ only Registered Electrical Contractors and Registered Electrical Workers for renovation involving electrical work, and to keep proper records of contractors employed, so that the quality of work is better assured.

We shall also continue to explore new opportunities to work with NGOs to share electrical safety videos via various social media so as to reach our target audiences more effectively.



檢查樓宇的固定電力裝置，是我們督察人員的職責之一。

Inspection of fixed electrical installations in buildings is one of the duties of our inspectorate teams.



化投訴為嘉許 Turning Complaints into Compliments

高級工程師甄文傑，以專業手法有效地處理公眾投訴和查詢，贏得2016年申訴專員嘉許獎。文傑的職責，是監督有關全港三百萬電力客戶的電力裝置法例的執行工作。作為監管者，他的團隊近年每年需處理多達24 000宗查詢和440宗舉報個案，而部分複雜的個案，更因種種原因，隨時會變為投訴。

文傑的手法是以主動誠懇的態度，與投訴人直接溝通。「與其迴避問題，不如細心聆聽和理解投訴人真正的難處，建立互信，找出問題癥結，然後嘗試幫忙解決。」他說。

以兩宗個案為例。某位註冊電業工程人員曾不斷投訴其他同業的工作「不合規格」，又投訴機電工程署要求業界在為固定電力裝置進行定期檢測時，必須暫停電力供應的做法。文傑和他的同事就此直接聯絡投訴人，安排會面，詳細討論有關問題並深入了解他的觀點，同時也解釋了機電署有關做法的背後理念，在過程中建立互信。

另一個案則涉及某村屋業主投訴無法取得正式電力供應和獨立電錶，對電纜安全也有意見。雖然某些問題是文傑團隊的工作範圍以外，但他們仍積極協助投訴人與電力公司及承辦商協調，以解決問題。兩宗個案後來都順利解決，可說是化投訴為嘉許。

他強調：「前線同事和大家的團隊合作精神其實功勞最大，否則不能成事。」

Andrew Yan, senior engineer, has won The Ombudsman's Award 2016 for his effective, professional handling of public complaints and enquiries. His role is to oversee enforcement work relating to electricity consumer installations of Hong Kong's three million electricity consumers. As regulator, his team handles as many as 24 000 enquiries and 440 reported cases from the public annually in recent years. Some complicated cases could turn into complaints due to various reasons.

Andrew's approach is to engage in proactive, sincere communication with the complainant directly. "Rather than avoiding the issue, it is more productive to listen to and understand the complainant's real concerns, establish trust, identify the root cause of the problem and help resolve it," he said.

Two cases illustrate his approach. One Registered Electrical Worker repeatedly complained about the "sub-standard" work by other members of the trade and EMSD's requirement for power suspension during PITC work. Andrew and his team contacted the complainant for a meeting, talked through the issues in great detail to understand his perspective, and explained EMSD's rationale, building trust in the process.

In another case a village house owner complained about not getting permanent electricity supply with individual energy meter and had issues with electrical cable safety. Andrew and his team helped liaise with the electricity supplier and contractor of the developer to rectify the problems, though some areas of such work was outside his team's duties. Both cases were amicably resolved, turning complaints into compliments.

"Credit must go to our frontline staff as well as team work that have made it all possible," he stressed.

保障公眾安全 Protecting Public Safety

▲▲ 氣體安全 GAS SAFETY

事故宗數維持穩定

2016年，氣體事故總計275宗，處於穩定水平。其中供氣喉事故低見127宗。此外，第三者損毀地下煤氣喉管事故有13宗。

煤氣和瓶裝石油氣安全

繼去年與房屋署及香港中華煤氣有限公司(煤氣公司)合作，於三個公共屋邨推行氣體裝置定期安全檢查先導計劃後，我們在2016/17年，更將計劃擴展至總共八個公共屋邨。我們針對的是「長期沒有進行安全檢查」的公共屋邨煤氣用戶，即在過去五年或以上，因煤氣公司人員未能進入單位替煤氣裝置進行保養或檢查的目標用戶。先導計劃成功地讓煤氣公司人員完成了84%目標用戶的安全檢查工作。

同時，「瓶裝石油氣分銷商安全表現評級計劃」的2016年稽核結果也已公布。參與計劃的分銷商中，34家獲評為最高的金級，21家獲評銀級，125家獲評銅級。此計劃獲得所有分銷商的支持和參與，因而可作為用戶一個概括的參考。

Incident Numbers Steady

Total gas incident numbers in 2016 remained steady at 275. Of these, riser incidents hit a low of 127. Besides, third-party damage to underground gas pipes incidents were at 13.

Town Gas and LPG Cylinder Safety

Further to a joint pilot scheme last year with the Housing Department and The Hong Kong and China Gas Company Limited (HKCG) to encourage more households in three public housing estates to take part in Regular Safety Inspections (RSI), we have expanded the scope in 2016/17 to cover eight public housing estates in total. Our focus was the "Long-Time-No-Service" (LTNS) town gas accounts, i.e., those that have not had any maintenance or inspection service performed on their town gas installations for the past five years or more due to difficulty in accessing those households. The pilot has successfully facilitated the staff of HKCG to conduct RSI in 84% of the LTNS households.

Meanwhile, the LPG Cylinder Distributor Safety Performance Recognition Scheme launched has announced its 2016 audit results. Among the participating distributors, 34 attained gold rating, the highest level of safety performance, while 21 and 125 received silver and bronze ratings respectively. The scheme gained support and participation from all distributors. The scheme is therefore a general reference for consumers.

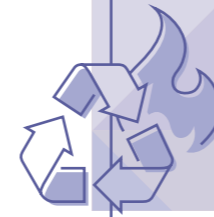
機電署督察巡視一個位於灣仔的瓶裝石油氣分銷商，該分銷商參與了我們的「瓶裝石油氣分銷商安全表現評級計劃」，並獲評為最高的金級。

Our inspector inspecting an LPG cylinder retailer in Wan Chai that has obtained the highest gold rating in our LPG Cylinder Distributor Safety Performance Recognition Scheme.



煤氣公司使用新界東北堆填區的沼氣，以電熱聯供發電系統發電，為大埔雅麗氏何妙齡那打素醫院提供蒸汽和熱水。機電署人員正巡查該電熱聯供發電系統。

Using landfill gas from the North East New Territories Landfill, Towngas uses a Combined Heat and Power Generation System for electricity generation, providing steam and hot water for the Alice Ho Miu Ling Nethersole Hospital in Tai Po. Our staff inspecting the concerned Combined Heat and Power Generation System.



年內也發生氣體產品回收事件。事緣我們接獲有關荃灣一屋苑的一款嵌入式煤氣爐具，出現數宗異常燃燒和過熱的報告。經調查後，我們認為爐具有潛在安全隱患，即於2016年8月1日呼籲公眾停止使用該型號爐具，並撤回該產品型號的許可證，指示進口商停止銷售，及安排回收產品。該爐具雖沒有即時危險，也沒有事故報告，但我們仍採取必要的預防措施，確保公眾安全。

促進使用沼氣

年內，我們支持政府鼓勵使用沼氣的政策，項目之一是使用新界東北堆填區的沼氣，在打鼓嶺生產合成天然氣，供應給煤氣公司的電熱聯供發電系統作發電之用，並為雅麗氏何妙齡那打素醫院提供蒸汽和熱水。另一項目是煤氣公司在新界東南堆填區裝置設備，將剩餘的沼氣轉化為合成天然氣，輸送至煤氣公司位於井欄樹的調壓站，將合成天然氣混合煤氣之後，注入煤氣供氣網絡。

The year also saw a product recall. After investigating into several reports of abnormal burning and overheating of a built-in type town gas cooking appliance installed at an estate in Tsuen Wan, we urged the public on 1 August 2016 to stop using that model in view of potential safety hazards. We withdrew approval of the model, instructed the importer to stop selling it and arranged a product recall. Though there was no immediate danger or related incident reported, the precautionary measures were taken to ensure public safety.

Facilitating the Use of Landfill Gas

During the year we supported the Government's policy to encourage utilisation of landfill gas. One project uses landfill gas from the North East New Territories Landfill at Ta Kwu Ling to produce synthetic natural gas (SNG) and supplies it to a Combined Heat and Power Generation System installed by Towngas for electricity generation, making steam and hot water for the Alice Ho Miu Ling Nethersole Hospital. The other project was at the South East New Territories Landfill where Towngas has constructed facilities to convert surplus landfill gas into SNG which is then transmitted via pipeline to a regulating station in Tseng Lan Shue and integrated into the town gas network.



保障公眾安全 Protecting Public Safety

兩個項目均有助減排及轉廢為有用能源，改善空氣質素。我們的角色，是巡查和審批所有相關氣體設施和管道，並已於2017年3月完成工作。

政府氣體風險顧問

我們是政府就所有土地用途和規劃建議的氣體風險顧問，以確定鄰近煤氣/石油氣裝置的地點是否符合規劃建議，及發展計劃是否可行、且不會遇到無法克服的困難。我們也擔任房屋署等多個部門的技術顧問，協助公共屋苑中央石油氣供應商的招標工作。由於屋苑的中央石油氣設施不斷老化，我們正協助房屋署根據最新的相關工作守則，檢討設施的狀況、設計及細節，以提高安全和可靠度。

Both projects can reduce carbon emission, turn waste into useful energy and improve air quality. Our role was to inspect, examine and approve all relevant gas installations and pipelines, which was completed in March 2017.

Gas Risk Advisor to Government

We are the gas risk advisor to the Government in all land use and planning proposals, to ascertain if sites adjacent to town gas/LPG installations are feasible for the proposed development without insurmountable problems. We also act as technical advisor to departments such as Housing Department to help them prepare tenders of bulk LPG supply to its public housing estates. As those LPG facilities are aging, we are helping Housing Department to review their condition, design and facility details against the latest Code of Practice to enhance safety and reliability.



▲ 煤氣公司員工正檢測供氣喉管。
Towngas staff is examining a gas pipe.

◀ 我們非常重視氣體爐具的安全，如發現任何氣體爐具有安全隱患，必會果斷地安排產品回收，以確保公眾安全。
We take safety of gas appliances very seriously, and will not hesitate to arrange for product recalls should any gas appliance pose potential safety hazards, to ensure public safety.



▶▶ 車輛維修工場如有由機電署發出的藍色或紅色的識別標誌，即表示該車輛維修工場有適當的維修設備及人員，可提供石油氣燃料系統維修服務。

Any vehicle maintenance workshop with a red or blue identification signage indicates that it has the proper equipment and personnel to carry out LPG vehicle fuel system maintenance works.

▼ 我們員工根據《石油氣車輛燃料缸保安封條系統工作守則》，於運輸署三個驗車中心，為石油氣的士貼上藍色保安封條。

Our staff affixing blue security labels on an LPG taxi at one of Transport Department's three vehicle examination centres, in accordance with the "Code of Practice on Security Label System for LPG Vehicle Fuel Tanks".



石油氣車輛安全

石油氣車輛安全仍是我們的首要考慮。《石油氣車輛燃料缸保安封條系統工作守則》已於2017年1月3日生效，工作守則要求所有設有內置燃料泵的石油氣車輛的燃料缸，均須貼上藍色或紅色保安封條。氣體標準事務處會為現有的石油氣車輛的燃料缸貼上藍色保安封條，而新進口的石油氣車輛，則由車輛進口商負責貼上藍色保安封條，以防止燃料缸在下次覆檢或更換氣缸配件之前，被非法更換氣缸配件。覆檢或更換氣缸配件後，註冊氣體供應公司須於石油氣燃料缸工場內，為燃料缸貼上紅色保安封條。篡改封條或非法更換任何燃料缸內外配件，均會受到調查和檢控。

為了讓石油氣車輛司機和車主更容易識別可提供石油氣燃料系統維修服務的車輛維修工場，我們由2015年8月開始向有適當維修設備及人員的石油氣車輛維修工場發出藍色或紅色的識別標誌，以進一步加強石油氣車輛的維修安全。

LPG Vehicle Safety

LPG vehicle safety continues to be a priority. The "Code of Practice on Security Label System for LPG Vehicle Fuel Tanks" took effect on 3 January 2017 which requires that all LPG vehicle fuel tanks equipped with internal fuel pump to be affixed with blue or red security labels. Blue labels are affixed by our Gas Standards Office on existing LPG vehicles, or by LPG vehicle importers on newly imported LPG vehicles, to prevent unlawful replacement of fuel tank components prior to the next revalidation or replacement. Red labels are affixed by registered gas supply companies at LPG fuel tank workshops after revalidation or replacement of fuel tank components. Tampering with the labels or unlawful replacement of any internal or external component of fuel tanks is subject to investigation and prosecution.

In order to assist LPG vehicles drivers and owners to easily identify the vehicle maintenance workshops providing services to fuel system of LPG vehicles, we have started issuing blue or red identification signages to LPG vehicle maintenance workshops with proper equipment and personnel to carry out LPG vehicle fuel system maintenance works since August 2015. The measure aims to further step up LPG vehicle maintenance safety.



保障公眾安全 Protecting Public Safety

車輛維修技工和車輛維修工場自願註冊計劃

業界和公眾對「車輛維修技工自願註冊計劃」和「車輛維修工場自願註冊計劃」給予大力支持和響應。我們也積極宣傳和進行外展推廣工作，並於2016年5月在一大型商場舉辦了吸引數以百計從業員和市民參與的推廣日，年內兩項計劃的參與率均達高峰。截至2017年3月底，共有9 170名車輛維修技工和1 790家車輛維修工場參加了自願註冊計劃，參與率相當於全港逾九成車輛維修技工及逾六成車輛維修工場。

監察易燃雪種

年內，機電工程署帶頭成立了跨部門工作小組，對環保卻易燃的雪種之發展作出監察及商討處理這類雪種的行動。工作小組的目的，是加強及理順在監察易燃雪種的發展和使用情況上的合作，並協調部門之間的分工。

我們也成立了政府與業界的聯絡小組，負責協調政府部門、空調和製冷商會、專業組織、培訓機構、物業管理公司協會、保險公會和其他持份者。聯絡小組為政府和業界提供了一個平台，供雙方交換意見及協調有關安全處理易燃雪種的宣傳工作。

來年展望

2017/18年也會是忙碌的一年。我們會將氣體定期安全檢查，拓展至另一批共133個公共屋邨，立要針對使用煤氣或管道石油氣的「長期沒接受安全檢查服務」用戶。我們更打算將計劃推廣至香港房屋協會的屋邨，同時提醒業界必須檢查及優化日漸老化的石油氣設施。我們團隊會繼續提高「車輛維修工場自願註冊計劃」的參與率，全力實施石油氣車輛燃料缸保安封條計劃，並密切監測石油氣車輛安全。

Voluntary Registrations of Vehicle Mechanics and Vehicle Maintenance Workshops

The trade and the public have shown strong support and receptiveness to the Voluntary Registration Scheme for Vehicle Mechanics (VRSVM) and the Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW). With our extensive promotional and outreach programmes as well as a Promotion Day held in a mega shopping mall in May 2016 that attracted hundreds of trade practitioners and members of the public, both VRSVM and VRSVMW attained high participation rates in 2016/17. As at end March 2017, a total of 9 170 VMs and 1 790 VMWs have registered under the VRSVM and VRSVMW respectively. The numbers are equivalent to participation rates of over 90% of all VMs and 60% of all VMWs in Hong Kong.

Monitoring of Flammable Refrigerants

During the year, EMSD has taken a leading role in setting up an Inter-departmental Coordination Group on monitoring the development of and coordinating actions in handling eco-friendly flammable refrigerants. The Coordination Group aims to reinforce and streamline the collaboration in monitoring the development and use of flammable refrigerants, as well as coordinate on the demarcation of works among concerned departments.

We have also set up a Government and Trade Liaison Group to coordinate government departments, air-conditioning and refrigeration associations, professional bodies, training institute, property management association, insurance association and other stakeholders. This provides a platform for the government and trade to exchange views and collaborate in promoting safety in handling flammable refrigerants.

The Coming Year

2017/18 will be another busy year as we expand the RSI promotion programme to LTNS accounts in another batch of 133 public housing estates using town gas or piped LPG. We also plan to extend the programme to housing estates under the Hong Kong Housing Society, while reminding the trade to review and upgrade aged LPG assets. Our team will continue to boost the VRSVMW registration rate, implement the LPG fuel tank security labels scheme with full force, and closely monitor LPG vehicle safety.



確保氣體爐具安全 Ensure Safety of Gas Appliances

香港甚少發生氣體煮食爐回收事件，但如發現有問題爐具，我們必會果斷執法以保障公眾安全。事緣我們接獲數宗有關一款主要安裝於荃灣某屋苑的嵌入式煤氣煮食爐的投訴，指爐具出現不正常燃燒和過熱情況。經調查後，我們2016年8月回收該款爐具。雖然產品並無即時危險，但我們仍撤銷該款爐具型號的批准，並指示進口商全面停售和安排回收。

陳志偉是負責執行這次產品回收行動的。他說：「作為規管機構，我們必須公平，全面聆聽所有相關人士，包括發展商、進口商和住客的疑慮，在安全的大前題下取得平衡。」可以理解的是，住客必會有很多投訴和建議，而我們的團隊也努力聆聽眾多住客的意見，更造訪個別單位了解現場情況，務求更深入了解住客擔心的問題。

香港環境獨特，比如高樓大廈的某些單位位置比較當風，會增加使用該款爐具的安全風險。志偉指出，今次事件對進口商帶來啟示，即使產品已取得型號批准，也必須密切監察產品的質素。他也感謝團隊成員能以關懷和專業的態度，與個別租客廿四小時保持緊密溝通，讓租客對政府產生信任，對解決今次事件很有幫助。

Product recalls of gas cooking appliances are rare in Hong Kong but we will not hesitate to do so where necessary to ensure public safety. In August 2016, we recalled a built-in type town gas cooking appliance mainly installed at an estate in Tsuen Wan, after investigating into several reports of abnormal burning and overheating of the appliance concerned. Though there was no immediate danger, we withdrew approval of the model in view of the potential safety hazards, instructed the importer to stop selling it and arranged a product recall.

Chan Chi-wai, our engineer who led the team that implemented the recall, said, "As regulator, we must be fair and listen to the concerns of all parties, i.e., developer, importer and tenants in order to strike a balance, with safety as top priority". Understandably, the tenants had many grievances and suggestions, and the team spared no efforts in listening to their views and visiting individual units to better understand their concerns.

Several complications unique to Hong Kong, such as windy location of some flats in high rise buildings has added to the safety risk of using the model. Chi-wai said the lesson learnt for importers is that they must monitor product quality at all times, even after obtaining type approval. He also thanked his team members for their caring and professional attitude in communicating with individual tenants round the clock, thus building their trust in government which helped resolve the issues.



保障公眾安全 Protecting Public Safety



貼藍封條的小隊
The Team with Blue Labels

高級督察黎國峰率領三隊共六位督察，在運輸署轄下的三個驗車中心，為所有裝有內置燃料泵的車用石油氣燃料缸貼上藍色保安封條。根據2017年1月3日生效的新《石油氣車輛燃料缸保安封條系統工作守則》，所有設有內置燃料泵的車用石油氣燃料缸，均須貼上規定的保安封條。《守則》旨在防止非法更換任何內部或外部燃料缸的配件（包括更換石油氣缸內的燃料泵及相關配件），以確保其工序是由合資格人士於石油氣車輛燃料缸覆檢工場內進行。

國峰認為效率是關鍵。「由於我們借用運輸署的驗車中心為現有的石油氣車輛燃料缸貼上安全封條，因此我們必須有效率地完成以免妨礙中心的正常運作。」他說。全部程序都要在三分鐘內完成，包括貼上藍色安全封條、拍照、紀錄封條的序列號碼、車牌號碼和車底盤號碼。由於組員都在室外環境工作，四周都是車輛廢氣，而夏天時，同事雖穿了必需的個人保護裝備，熱度還是極高。

國峰說司機初時由於不明白安全封條的作用，有點抗拒。後來消息在同業中傳開去，加上司機看到貼封條的小組成員能詳盡介紹有關細節，又極有耐性地細心貼上封條，很多司機都開始明白，這措施長遠對他們本身和公眾的安全都有利。

Lai Kwok-fung, senior inspector, leads three teams of six inspectors in total to affix blue security labels on LPG vehicle fuel tanks equipped with internal fuel pumps at three Transport Department vehicle examination centres. The labels are mandatory for all LPG vehicle fuel tanks equipped with internal fuel pumps under the new "Code of Practice on Security Label System for LPG Vehicle Fuel Tanks" that took effect on 3 January 2017. The Code aims to deter unlawful replacement of internal or external components of an LPG fuel tank (including replacement of fuel pump inside the fuel tank and associated components), and ensure such work was carried out by a competent person at an LPG fuel tank workshop.

Efficiency is the key according to Kwok-fung. "As we are making use of Transport Department vehicle examination centres to affix labels on existing LPG vehicle fuel tanks, we must work fast to avoid causing any disruption to the centres' normal operation," he said. All steps must be completed within three minutes, including affixing the blue labels, taking photos and recording the relevant serial numbers, vehicle registration marks and chassis numbers. Team members must also work outdoors in a tough environment, exposed to exhaust fumes and intense heat in summer despite wearing the necessary personal protective gear.

Kwok-fung said initially the drivers were somewhat reluctant as they did not understand why the labels were necessary. However, as word got around and they saw the teams working hard to explain the details and affix the labels with great patience and care, many drivers have begun to understand that in the long run, the initiative will enhance their own safety and the safety of members of the public.



▶ 監察新導軌纜索和牽引纜索的運作，確保安全暢順。

Inspection of the new track ropes and haul ropes to ensure their safe and smooth operation.

◀ 昂坪360纜車系統經過十年運作，已於2017年上半年更換了全部導軌纜索和由機場島轉向站至昂坪站的牽引纜索。

After 10 years in operation, Ngong Ping 360 has completed replacement of all track ropes and haul ropes between the airport island and angled station and Ngong Ping Terminal during the first half year of 2017.

▼ 新導軌纜正從東涌灣的躉船拖出。

New track ropes pulling from the barge at Tung Chung Bay.



機械安全 MECHANICAL SAFETY

年內重點

2016/17年主要工作有三方面：架空纜車、機動遊戲機、升降機及自動梯。事故宗數保持穩定，年度同期數字相對波動不大。升降機意外宗數由2015年的439宗稍微減少至2016年的427宗，同期自動梯事故宗數則由1590宗增加至1624宗。由於乘客行為導致的意外仍佔大多數，我們必須繼續加強公眾安全教育。

Focus in the Year

Our work in 2016/17 focused on three areas: aerial ropeway, amusement rides, lifts and escalators. Incident numbers have stayed steady, with small year-on-year fluctuations. Lift incidents, for example, have slightly decreased from 439 in 2015 to 427 in 2016 while escalator incidents have increased from 1590 to 1624 in the same period. As passenger behaviour still accounts for the majority of the incidents, we must keep up the momentum of safety education for the public.

更換昂坪360纜索

年內的重點項目是昂坪360纜車的纜索更換工程，有關工作於2016年初啟動，2017年初動工，工程歷時約五個月，纜車系統已於2017年6月重新通車。

Ngong Ping 360 Ropes Replacement

A major initiative in the year was the large-scale rope replacement works of Ngong Ping 360 (NP360) that kicked off in early 2016, with commencement of site works in early 2017. The works took about five months to complete and the system was re-opened in June 2017.

昂坪360纜車自2006年起啟用，是亞洲最長的雙纜索纜車系統，單向總長5.7公里。經過十年運作，為確保纜車安全可靠，更換導軌纜索和牽引纜索是正常和必要的程序。新纜索均在歐洲進行測試，在整個過程中，昂坪360纜車營運商都與原索道製造商和資深顧問緊密合作。身為安全監管機構，我們也多走一步，特地諮詢海外知名學者，尋求獨立意見和監察。

Established in 2006, NP360 is the longest bi-cable ropeway in Asia, with a total length of 5.7 km in one way. After a decade in operation, replacement of both the track rope and haul rope is a normal and necessary process to ensure safety and reliability. The new ropes were tested in Europe, and the NP360 operator has been working closely with the original ropeway manufacturer and experienced consultants throughout the process. As the safety regulator, we also took the extra step to seek input from a renowned overseas academic for independent advice and vigilance.



保障公眾安全 Protecting Public Safety



◀ 香港迪士尼樂園的全新機動遊戲機「鐵甲奇俠飛行之旅」，其設計也經我們嚴格審核，才可開放給市民使用。

Control room of the "Iron Man Experience" at Hong Kong Disneyland. This new amusement ride went through our rigorous design vetting prior to opening.

▼ 2016年於中環舉行的歐陸嘉年華，其流動機動遊戲機，全部都經機電署嚴格的设计審核和操作審批，以保安全。圖示其中一款機動遊戲機「旋轉火車」。

Amusement Rides of the European Carnival 2016 held in Central. The mobile rides were all subject to EMSD's rigorous design and operations vetting to ensure safety. Picture showing one of the rides, the "Train Ride".



審批機動遊戲機

審批嘉年華的流動機動遊戲機，近年已成為我們每年一度的工作。年內，我們再為兩個嘉年華審批機動遊戲機，分別是荔園 Super Summer 2016 和冬季歐陸嘉年華。一如往年，我們都面對緊逼的時間表，必須盡快處理審批過程，以便能合時於節日期間為市民及遊客帶來歡樂，並維持最高的安全審批標準。

2017年1月，香港迪士尼樂園啟用全新機動遊戲機「鐵甲奇俠飛行之旅」，其設計也經過我們嚴格審核。這台新遊戲機不但為香港增添另一旅遊景點，更有助香港維持吸引遊客的勢頭。與此同時，我們繼續配合兩個主題樂園的擴展工作，包括將於2018年開幕的海洋公園大樹灣發展項目，及香港迪士尼樂園2018年至2023年的第一期擴建計劃。

Amusement Rides Safety Vetting

Vetting of mobile amusement rides for carnivals has become an annual exercise in recent years. During the year our team again has vetted amusement rides for two carnival events: the Lai Yuen Super Summer 2016 and the Great European Carnival in winter. Just as in past years, under tight timeframes of the events, our prompt handling of the application process has facilitated both events to be held in a timely manner in the holiday seasons for the enjoyment of tourists and local citizens, while at the same time maintaining our high safety standards via thorough inspection of the rides.

The new amusement ride "Iron Man Experience" that opened in January 2017 in Hong Kong Disneyland also went through our vigorous design vetting. The opening of the new ride has given Hong Kong a new tourist attraction and maintained the momentum of adding new tourist highlights for Hong Kong. Meantime we have continued to coordinate with the two theme parks on their expansion projects, such as the Tai Shue Wan Water Park Development in Ocean Park to be opened in 2018, and Phase 1 expansion of Hong Kong Disneyland from 2018 to 2023.

推動優化升降機及自動梯

全港現時約有五成升降機和四成自動梯已使用20多年，安裝時雖已達到當時的技術水平，但隨着近年科技迅速發展，這批升降機及自動梯的安全、可靠和舒適度仍有改進空間。

為促進現有升降機的優化工作，我們已推出多項措施，例如為負責人提供優化升降機工程服務合約的規格範本，設立優化升降機網上專頁，並向個別升降機負責人發信就優化升降機提出具體建議。

同樣，我們也於2016年9月推出優化自動梯推廣計劃，並同年12月出版優化自動梯指引，並佐以多項宣傳活動。

升降機及自動梯業界調查

我們聘請了獨立顧問公司於2016年進行升降機及自動梯業界調查，了解及探討從業員的人手問題、工作環境、工作滿意度及薪酬水平等。調查結果已於2017年3月提交升降機及自動梯安全諮詢委員會。我們將繼續與業界合作，共同促進行業的可持續發展。

Lift and Escalator Modernisation Drive

About 50% of existing lifts and 40% of existing escalators in Hong Kong are over 20 years old. Though their level of technology was appropriate at the time of installation, with rapid technology advancement in recent years, there is room for improvement to make these ageing lifts and escalators safer, more reliable and comfortable.

To boost lift modernisation in Hong Kong, we have introduced many measures such as making available a sample contract with specifications to help Responsible Persons (RPs) procure lift modernisation services, setting up a dedicated webpage on lift modernisation, and issuing reminder letters to individual RPs with specific recommendations on lift modernisation works.

Similarly, we have launched an initiative to promote escalator modernisation in September 2016, including issuing a set of escalator modernisation guidelines in December 2016 with supporting publicity activities.

Trade Survey of Lift and Escalator Industry

We engaged an independent consultant to conduct a Lift and Escalator Trade Survey in 2016 to gauge and explore issues of manpower, working environment, job satisfaction and salary level of practitioners. The results were presented to the Lift and Escalator Safety Advisory Committee in March 2017. We shall work with the trade to facilitate the sustainable development of the industry.

機電工程署
EMSD

機電工程署
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《優化自動梯指引》已於2016年12月出版，旨在幫助自動梯負責人優化現有的自動梯。

The Guidelines for Modernising Existing Escalators were published in December 2016 to help Responsible Persons upgrade their existing escalators.



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▲ 我們也檢查自動梯年檢准用證上的資料，確保內容準確及已更新。

We also make sure that the information recorded on the escalator annual inspection Use Permit is accurate and up-to-date.

◀ 我們定期巡查自動梯的重點之一，是確保自動梯維修保養承辦商的工作質素達到一定水平。

The quality of work of escalator maintenance contractors is a priority in our regular escalator inspections.



自動梯事故

2017年3月下旬，旺角朗豪坊不幸發生自動梯事故，導致18名乘客受傷。事故引起社會關注自動梯維修保養的問題。我們十分重視這宗事故，並隨即進行深入調查，首先要求涉事的註冊自動梯承辦商，在事發一個月內檢查全港相同品牌的所有1 700部自動梯，並要求所有註冊自動梯承辦商在一星期內，為全港所有64部垂直提升高度達15米或以上的自動梯進行安全檢查，結果顯示該批自動梯全部運作正常。

後來的事務調查顯示，朗豪坊涉事自動梯的主驅動鏈和主驅動鏈保護裝置發生雙重失效，導致附加制動器無法啟動，使煞停自動梯的功能失效。我們已向全港註冊自動梯承辦商和註冊自動梯工程師發出通告，提醒他們檢查所有主驅動鏈保護裝置及主驅動鏈。我們並已展開法律程序，檢控須為事故負責的人士。

2017/18年重點工作

來年的重點工作，是修訂《升降機工程及自動梯工程實務守則》，檢討及更新架空纜車的相關實務守則，以於年內刊憲，及進一步推行「優質升降機服務認可計劃」。我們將繼續審批海洋公園發展項目的新添機動遊戲機，並緊密監察昂坪360纜車更換新纜後的運作情況。

Escalator Incident

The unfortunate escalator incident at Langham Place, Mong Kok, in late March 2017, injuring 18 passengers, drew public attention to escalator maintenance. We took the incident very seriously and have begun in-depth investigations. The registered escalator contractor concerned in the incident was required to immediately check all 1 700 escalators of the same brand operating in Hong Kong within a month. We also required registered escalator contractors to make safety inspections of all escalators with a vertical height of all 64 high rise escalators of 15 metres or above within one week, which found those escalators operating normally.

Subsequent investigations revealed that a double failure of the main drive-chain and a broken-drive-chain device in the escalator concerned led to the inactivation of the auxiliary brake for stopping the escalator. A circular has been issued to all registered escalator contractors and registered escalator engineers to remind them to properly check all broken-chain-drive devices and the main drive chains. Legal proceedings are under way to prosecute the parties responsible for the incident.

2017/18 Priorities

Our priorities in 2017/18 are to update the Code of Practice for Lift Works and Escalator Works, review and update the Code of Practice on Aerial Ropeway for gazetting in the year, and further develop the Quality Lift Service Recognition Scheme. Our work on Ocean Park to vet new rides in its development projects will continue, as will our work to closely monitor the performance of NP360 with its refreshed ropeway system.



昂坪360纜索更換工程 NP360 Ropes Replacement Works

昂坪360纜車於2017年成功更換新纜索，是系統自2006年啟用以來首次更換導軌纜，是件重要的事。負責監察這工程的高級工程師區子威表示，機電工程署在換纜過程中既是規管者，也發揮促成者的角色。

「我們根據風險管理及治未病方法，觀察纜索實際的磨損情況，提醒昂坪360的營運商應提前開始更換纜索。」他說。他與團隊和旅遊事務署跟十多個政府部門緊密合作，確保換纜工程引致纜車暫停服務對遊客和其他使用者帶來的不便，會減到最低。

子威和他的同事在過程中還多走一步，例如親往外地的纜索生產商監察纜索質素，又要求昂坪360纜車就纜索接駁器進行實驗室「損毀」測試，並邀請一位知名學者兼纜車專家，作為換纜工程的獨立顧問。

團隊成員在五個月的施工期間，輪流往現場監察工程，無論通宵、星期日或公眾假期都無間斷且隨時都與營運商、承辦商和其他持份者保持緊密聯絡。換纜工程最終如期完成，昂坪360纜車也於2017年6月初重新啟用。他說：「多謝大家的努力，為更換這亞洲最長的雙纜索纜車系統的纜索方面樹立了良好的楷模，可供未來參考。新導軌纜已加強了表面金屬絲的強韌性，使纜索更加耐用。」

The successful rope replacement of Ngong Ping 360 (NP360) in 2017 was significant as it was the first track rope replacement of NP360 since it commenced operation in 2006. William Au, senior engineer in General Legislation Division who oversaw the project, said that EMSD acted as the safety regulator as well as facilitator of the replacement exercise.

"Using a risk-based approach and in view of the wear-and-tear situation of the rope, we alerted the NP360 operator that replacement should start slightly earlier than planned," he said. Working closely with the Tourism Commission and over 10 related government departments, the team helped ensure that the service stoppage caused minimum impact on tourists and other users.

William and his team also went the extra mile, such as making an overseas visit to the rope manufacturer regarding rope quality, requesting the NP360 operator to conduct laboratory "destructive" tests on the rope connector, and engaged a renowned academic cum ropeway expert as independent consultant for the replacement exercise.

Team members took turns to monitor on-site the replacement works throughout the five-month process, no matter overnight, Sundays or public holidays. The team maintained close communication with the operator, contractors and other stakeholders at all times. The project was completed as scheduled and NP360 was re-opened for public use in early June 2017. "Thanks to everyone's hard work, Hong Kong now has a good template in rope replacement for future reference," he said. "The new track ropes have improved feature like thicker outer wires to enhance durability."

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鐵路安全 RAILWAY SAFETY

新鐵路綫最新發展

觀塘綫延綫已於2016年10月啟用，南港島綫(東段)也於2016年12月投入服務，這都是香港鐵路網持續發展的里程。

觀塘綫延綫長約2.6公里，是現有觀塘綫從油麻地擴展至黃埔的路綫，設何文田和黃埔兩個新站。南港島綫(東段)長約七公里，接駁金鐘和海怡半島，途經海洋公園、黃竹坑和利東三站。該綫採用嶄新的中型鐵路三卡車廂全自動操作列車，配合列車前後端視覺屏幕，為首個在香港使用的無人駕駛地鐵列車系統。無人駕駛列車採用了最新科技，高度可靠，未來有很大的應用潛力。

正如近年其他投入服務的新鐵路綫一樣，我們在觀塘綫延綫與南港島綫(東段)啟用之前，都與多個有關政府部門和香港鐵路有限公司(港鐵)緊密合作，配合工程的不同階段，就兩條新綫所有關於安全的系統，進行現場測試及法定巡查，確保兩條新綫全綫「安全可靠」之後，方可開通給公眾使用。所有測試和巡查工作，均按最嚴格的安全標準和在極緊湊的時限內完成，充分表現相關政府部門的工作熱忱，和出色的團隊精神。

下一條啟用的新鐵路綫，是廣深港高速鐵路(高鐵)香港段，預期於2018年投入服務。各項測試和巡查工作進展順利，有望能如期投入服務。

New Railway Lines Update

The opening of the Kwun Tong Line Extension (KTE) in October 2016 and the South Island Line (East) (SIL(E)) in December 2016 marked another milestone in the city's continuous railway development.

At about 2.6 km long, the KTE is an extension of the existing Kwun Tong line from Yau Ma Tei to Whampoa, with two stations at Ho Man Tin and Whampoa. The SIL(E), about 7 km long, runs between Admiralty and South Horizons with three intermediate stations at Ocean Park, Wong Chuk Hang and Lei Tung. It is a new medium-capacity railway operating with 3-carriage fully automatic trains, making it the first metro line in Hong Kong to use driverless trains with vision screens at both ends. Supported by the latest technology, driverless trains are highly reliable and have good potential to be further deployed in future.

As with other new railway lines opened in recent years, we worked closely with other relevant government departments and MTR Corporation Limited (MTRCL) to conduct on-site testing and statutory inspections of all safety related systems in KTE and SIL(E) with their phased work completions along the way, until we confirmed both lines in their entirety as "safe and sound" for operation for public use. The testing and inspections were conducted against very tight deadlines and stringent safety standards. All the government departments involved in this joint effort showed great passion and wonderful team spirit throughout the process.

The next new line to open in 2018 will be the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) Hong Kong Section. Testing and inspection work is progressing well towards the target opening.



將行走廣深港高速鐵路(高鐵)香港段的列車。
New trains for the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) Hong Kong Section.



我們與屋宇署、路政署、消防處、警務處及運輸署於2017年公務員優質服務獎勵計劃獲得「部門合作獎」金獎。

We won the gold prize of the Partnership Award in the Civil Service Outstanding Service Award Scheme 2017 with Building Department, Highways Department, Fire Service Department, Hong Kong Police Force and Transport Department.



跨部門通力合作

我們能順利完成工作，實有賴屋宇署、路政署、消防處、警務處及運輸署等部門支持和合作。我們更與上述五個部門攜手，以「為新鐵路綫把關」為題，參加了「2017年公務員優質服務獎勵計劃」，並獲得「部門合作獎」金獎。

機電工程署負責這項計劃的牽頭角色，在跨部門聯手合作下，確保新鐵路綫順利通車。跨部門團隊曾共同克服不少挑戰，例如須審批大量工程文件和圖則，並要在緊逼的時限內完成許多法定巡查，在資源方面有極大的壓力。但團隊的六個部門能相互支持，緊密合作，例如在進行法定巡查的高峰期，消防處人手極有壓力，機電署於是外借工程人員給消防處。機電署同事也經常不定時工作，甚至通宵達旦，以確保檢測新綫的工作，不會干擾現有鐵路的正常運作。

Joint Departmental Effort

Our work would not have been possible without the support and cooperation from other departments including the Buildings Department, Highways Department, Fire Services Department (FSD), Hong Kong Police Force and Transport Department. Indeed, we have made a joint entry with these five departments in the Civil Service Outstanding Service Award Scheme 2017, titled "Safeguard our New Railway Lines" that won the gold prize of the Partnership Award under the Scheme.

EMSD took the lead in this joint departmental initiative to ensure the smooth opening of the new railway lines. Some of the challenges for the team included, for example, great pressure on our resources to handle a large amount of engineering documents and drawings for vetting and approval, and a tight schedule of numerous statutory inspections. All six departments in the joint team collaborated closely and supported each other, such as EMSD "loaning" its technical staff to FSD at the peak of the statutory inspections when FSD's manpower was under great strain. EMSD colleagues also worked many irregular hours overnight to carry out statutory inspections, to ensure that the normal operation of the interfaced existing railways was not disrupted.



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八卡列車改裝工程

興建中的沙中線項目，挑戰之一是，西鐵綫和馬鞍山綫在2019年會連接起來，成為未來的「東西走廊」，連接新界東部和西部，屆時「東西走廊」的所有列車必須改為八卡列車。這過程相當複雜，即是要把西鐵綫列車，由七卡列車改為八卡列車，而馬鞍山綫列車也會以八卡列車代替四卡列車。由2016年1月起，我們已開始在西鐵綫採用七卡/八卡列車混合模式，及後在馬鞍山綫也採用四卡/八卡列車混合模式，並逐步增加八卡列車數量，以過渡至全面八卡列車運作。我們必須確保和驗證，轉換至八卡列車後的運作，能完全符合鐵路安全的要求，讓乘客可安全使用。

Conversion to 8-car Trains

The challenge of the Shatin to Central Link (SCL) project is multiplied by the complex arrangement under which the West Rail Line (WRL) and the Ma On Shan Line (MOL) will be transformed into the future East West Corridor (EWC) connecting the east and west parts of the New Territories by rail in 2019, all with 8-car trains. This will entail converting 7-car trains running on the WRL to 8-car trains and replacing 4-car trains running on the MOL with 8-car trains. A mixed mode of 7-car/8-car trains and 4-car/8-car trains has been running on WRL and MOL respectively during this transition period commencing from January 2016, with gradual increase of 8-car trains. All requirements from a railway safety perspective must be satisfied and verified in order to ensure the converted 8-car trains are safe for passenger service.

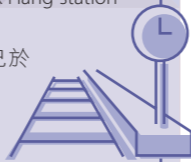


◀ 我們的工程師於港鐵黃竹坑站啟用前，進行各種驗收測試工作。

Our engineer making statutory inspections at the MTR Wong Chuk Hang station prior to its opening.

▼ 港鐵黃竹坑站，是南港島綫（東段）的新站之一。新綫已於2016年12月啟用。

The MTR Wong Chuk Hang station on the South Island Line (East). The new line was opened in December 2016.



提升鐵路安全

至於提升現有鐵路安全方面，我們的首要工作，是加強審核港鐵的工程資產管理和安全管理系統工作，同時敦促港鐵及早更新老化的工程資產。近年來，港鐵在更換現有鐵路綫的訊號系統和更換列車方面頗有進展。接着要更新的主要資產，就是對鐵路服務的安全和可靠性十分重要的供電系統。

Enhancing Railway Safety

As to enhancing safety of existing railways, our priority is to enhance our audit work of MTRCL's asset management and safety management systems, and at the same time urge it to replace and rejuvenate its aging assets. Replacement of old signalling systems and rolling stock on existing lines has made considerable progress in recent years. The next major asset to be upgraded and replaced will be the power supply system, vital to the safety and reliability of railway service.



我們的工程師為現有鐵路綫進行定期巡查。

Our engineer making inspections on an existing railway line.



2016年，因設備故障及員工行為引起的鐵路事故有91宗，數字保持穩定。我們會繼續着重深入調查所有事故的根本原因，並建議港鐵採取即時補救和改進措施。

The number of railway incidents due to equipment failure and staff behaviour in 2016 has remained steady at 91. We continued to put great emphasis on thorough and detailed investigation into incidents to identify the root causes, followed by urging MTRCL to take prompt remedial and improvement measures.

2017年2月，荃灣綫一列滿載乘客的列車，在即將到達尖沙咀站月台時，車上一名男子突點着燃燒彈，造成19名乘客受傷。這雖屬個別事件，但我們已敦促港鐵須就火警意外事故進行演習，並加強向乘客宣傳教育，在發生火警意外時須注意的事項。

An incident occurred in February 2017 when a man set off a firebomb in a crowded train on Tsuen Wan Line when it was about to reach the Tsim Sha Tsui Station platform, injuring 19 passengers. Though the incident was an isolated case, we have urged MTRCL to conduct relevant drills and step up publicity to educate passengers on the dos and don'ts in the event of fire-related emergencies.

來年亮點

廣深港高鐵香港段啟用的籌備工作，是2017/18年的重點之一。我們也會繼續敦促港鐵加快更新優化資產，尤其要更換訊號系統、列車及供電系統，以提升現有鐵路綫的安全。預計2019年啟用的沙中綫「東西走廊」，也快進入測試及校驗階段，再次涉及機電署與其他政府部門的通力合作。我們期待這些挑戰。

Highlights Next Year

Preparatory work for the opening of XRL Hong Kong Section will be a focus in 2017/18. We shall also keep reminding MTRCL to carry out and expedite asset upgrading, in particular the replacement of the signaling system, rolling stock and power supply system to enhance the safety of existing rail lines. The SCL East West Corridor, expected to open in 2019, will soon enter the testing and commissioning phase, once again involving the joint effort of EMSD and other government departments. We look forward to the challenges ahead.



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新綫的挑戰：轉戰沙中綫 The New Lines Challenge: Moving on to SCL

觀塘綫延綫和南港島綫(東段)已分別於2016年10月和2016年12月順利啟用。兩條新綫開通前的籌備工作，工程師李潔珍都有大量參與。

潔珍對南港島綫(東段)印象特別深刻。該綫是以全自動操作系統運作，列車裝有自動駕駛功能和多種先進設備，例如自動探測障礙器、自動泊站功能和靈活的走綫調動等，測試亦合乎國際標準。此外，由政府多個部門組成的「軌道安全及保安委員會」更要求所有全自動駕駛列車，須有一名客戶服務員駐守列車，讓乘客更感方便和安心。

潔珍記得在南港島綫(東段)開通前，在極緊迫的時間內，為各種機電系統進行了大量檢查及驗收，和審批了無數圖則和文件。「我們有很多個深宵都在軌道或車站工作中渡過，每晚工作都要捉緊大概兩小時的工作空間，由大約凌晨一時半開始至三時半。」她說。「早上四時前需要完成測試新系統的工作，讓鐵路系統回復運作，以免影響現有鐵路線的正常服務。」

觀塘綫延綫和南港島綫(東段)開通前，必須進行大量關於訊號系統、列車、機電系統、車站和軌道的檢測工作，和新綫開通前的各種跨部門協調工作，潔珍也積極參與。現在兩條新綫已投入服務，她也已轉戰另一富挑戰性的新綫開通工作——沙中綫。

Our engineer, Cherry Lee, was heavily involved with pre-opening work of the recent new Kwun Tong Line Extension (KTE) and South Island Line (East) (SIL(E)), both opened smoothly in 2016.

The SIL(E), a metro line in Hong Kong which uses fully automated operations, is particularly memorable for Cherry. She noted that its trains were implanted with operating intelligence and advanced features like obstacle detection device, auto station docking and flexible service loops running, all tested according to international standards. The presence of a customer service officer on each driverless train, as required by the Trackside Safety and Security Committee formed by various government departments, provides additional service and confidence for passengers.

Cherry recalled the pressure of having to conduct numerous statutory inspections of E&M systems as well as vetting countless drawings and documents for approval, all against high standards and limited time prior to SIL(E) opening. "I recall working many late nights in stations or on tracks when we had only two hours from around 1:30 to 3:30am to complete the tasks," she said. "By 4am we must cease our project activities for system resumption to avoid disrupting the normal service of the existing lines in operation."

Cherry was heavily involved in inter-departmental consolidating work leading to railway commissioning and pre-opening inspections of signalling systems for KTE and SIL(E), as well as work on other aspects like trains, E&M systems, stations and trackwork. Now that the new lines are running, she has moved on to another exciting challenge — the Shatin to Central Link.



新綫的挑戰：新綫變身現有綫 The New Lines Challenge: From New to Existing Lines

工程師雷衍仁和他的團隊，職責是監察三條現有鐵路線的運作，即西港島綫、觀塘綫延綫和南港島綫(東段)。在這之前，他也大量參與了這三條新綫開通前的驗收和測試工作。該三條鐵路線分別於2014年12月、2016年10月和12月開通啟用，之前也全通過極嚴謹的安全檢查和測試，還有多次緊急事故應變演練和模擬。這些工作，他都有參與。

以觀塘綫延綫為例，衍仁主要負責機電系統和新站的安全測試，並與其他政府部門和港鐵公司，共同監察在新綫站內和鐵路隧道內進行的模擬火警事故或乘客疏散演練。「觀塘綫延綫的測試工作，在綫路開通前一年已開始進行，測試和演練工作在最後的3個月更進入高峰期」他說。「我們是與時間競賽，一方面要日以繼夜進行系統測試、各種演練和事故模擬，同時也得審批大量文件。」

雖然團隊的人數不多，但都能互相支援，順利渡過了2016年觀塘綫延綫和南港島綫(東段)開通籌備工作同時達到「高峰」的幾個月。回味新綫開通前的工作，衍仁說觀塘綫延綫啟用的首日，團隊人人都鬆一口氣，也十分開心，就像「迎接新生嬰兒」般興奮。

Our engineer, Marco Lui, and his team currently oversee the operation of three existing lines: West Island Line (WIL), Kwun Tong Line Extension (KTE) and South Island Line (East)(SIL(E)). Prior to this he was heavily involved with the pre-opening inspection and testing work of these new lines. Opened in December 2014, October and December 2016 respectively, all three lines went through rigorous safety inspections and testing as well as numerous emergency drills and simulations prior to opening — in which Marco played a part.

Take the KTE opening as example. Marco was mainly responsible for testing of E&M systems and receiving the new stations, as well as overseeing jointly with other government departments and MTRCL the various emergency drills, including those simulating fire incidents or passenger evacuations in stations and rail tunnels. "The peak of KTE testing work took place in the final two months prior to opening," he said, "thus we all had to race against time — conducting system inspections and drills and simulations day and night, on top of vetting and approving numerous documents."

Though the team was small, members supported each other during several "peak" months in 2016 when preparatory work for the opening of KTE and SIL(E) took place concurrently. Looking back at the pre-opening work, Marco recalled fondly that on the first day of KTE opening, everyone in the team was relieved and happy, like "receiving a new born baby".



推廣能源效益及節能 Promoting Energy Efficiency and Conservation

節能約章 2016

為了推廣能源效益，我們於年內向大眾推出兩項新猷。首先是繼2012年「節能約章」推出以來，連續第四年推行的「節能約章2016」。2012年推出約章的原意，是鼓勵參與機構承諾在夏季月份保持室內溫度在攝氏24至26度之間，當時有100家機構參加，至2016年，參與「節能約章」的機構已大幅增至3 300家，來自多個界別，包括商場、商舖、辦公室、屋苑、住宅、非政府機構、中小學和專上院校等。

「節能約章」的涵蓋範圍，也由原先的控制室內溫度，拓闊至其他要求，包括關掉不使用電器的電源，及採購一級能源標籤的電器，以節省電力和減少碳排放。

慳神大比拼

另一新猷是2016年推出的全新「慳神大比拼」計劃，旨在表揚運用節能科技而做出優秀節能表現的團體。比賽吸引了279家機構參加，分別來自商場、辦公室、住宅、屋苑、中小學和專上院校五大類別。頒獎典禮已於2016年5月舉行，得獎者更就如何令現有建築物更有效地節能，親與業界及市民分享經驗和最佳實務做法。

全民節能

「全民節能」運動自2015年推出後持續進行至今，2017年更推出新亮點——「4Ts約章」，強調「制定時間表」、「訂立目標」、「開放透明」和「共同參與」。至於2015/16年舉辦的「慳電熄一熄青年獎」比賽優勝者，則於2016年8月遠赴丹麥和瑞典參加學習交流團，參觀當地的低碳綠色城市，回港後更已於2016年11月與公眾分享其學習心得。

Energy Saving Charter 2016

The year saw two major initiatives in promoting energy efficiency to the public. One was the Energy Saving Charter 2016, the fourth one since its launch in 2012. What began as a pledge to maintain an indoor temperature between 24 to 26 degrees Celsius in the summer months, with about 100 signatories in 2012, has grown and evolved into an extensive campaign with 3 300 signatories in 2016. The signatories have come from a wide spectrum including shopping malls, shops, offices, housing estates, residential buildings, NGOs, schools and post-secondary educational institutions.

The scope of the Charter has also been extended from indoor temperature to also cover switching off electrical appliances when not in use, and to procure electrical appliances with Grade 1 Energy Label to help reduce electricity consumption and carbon emissions.

Energy Championship Scheme

The other initiative was the new Energy Championship Scheme launched in 2016, aiming to commend organisations with excellent energy saving performance via adopting energy efficient technologies. The contest attracted 279 organisations under the five categories of shopping malls, office premises, housing estates and residential buildings, schools and tertiary institutions. The prize presentation ceremony was held in May 2016, and winners shared their experiences and best practices with the trade and community on how to make existing buildings more energy efficient.

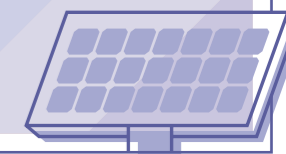
Energy Saving for All Campaign

Meanwhile, the Energy Saving for All Campaign that began in 2015 has continued, with new elements added in 2017 such as the launch of the "4Ts Charter" with an emphasis on "timeline", "target", "transparent" and "together" for participating organisations. Winners of the Youth Energy Saving Award held in 2015/16 also went on a study trip to Denmark and Sweden in August 2016 to learn about low-carbon green cities and, upon return, shared their experiences in a session with the public in November 2016.



我們的工程師正檢測設於機電署總部大樓廣場，一塊有追蹤陽光功能的太陽能發電板。我們近年為廣場增添了不少綠色設施和節能科技，變身為方便公眾人士享用的空間。

Our engineer checking a sun-tracking photovoltaic panel at the piazza of EMSD Headquarters Building. The piazza has been transformed into a showcase of green features and technologies for enjoyment by the public.



「強制性能源效益標籤計劃」邁進一步

業界和其他持份者，均對建議中的「強制性能源效益標籤計劃」第三階段大力支持，而有關的條例修訂亦已提交立法會審議。這是2016/17年的一大成績，將能擴大「強制性能源效益標籤計劃」的涵蓋範圍。建議中的條例修訂法案將於2017年5月審議。

第三階段計劃一旦實施，「強制性能源效益標籤計劃」的涵蓋範圍將擴大至包括電視機、儲水式電熱水器和電磁爐，現行的冷氣機及洗衣機涵蓋範圍也會擴大。新階段計劃預計可每年節省約150兆瓦時電力，和減少105 000噸二氧化碳排放，連同該計劃現時涵蓋的電器，整個計劃屆時涵蓋的所有電器耗電量，將相等於全港住宅每年總耗電量約七成。

我們另一方面的工作是協助政府節約能源，為社區樹立好榜樣。年內，我們為各政策局及政府部門的環保經理，舉辦有關節能內務管理實務工作的簡報會，並分別於2016年5月和2017年3月，為150棟和194棟政府大樓完成能源審計工作，和建議多個能源管理機會項目。為促進各政府部門落實這批能源管理機會項目，我們更就此爭取得額外五億元政府撥款，以配合政府計劃於2019/20年節省5%耗電量的目標。

One Step Forward for Mandatory Energy Efficiency Labelling Scheme

With full support from the trades and key stakeholders for the proposed Phase 3 of the Mandatory Energy Efficiency Labelling Scheme (MEELS), a major achievement in 2016/17 was the introduction of legislative amendments to the Legislative Council that will enable the extension of MEELS product coverage. The proposed amendments will be vetted in May 2017.

Once implemented, Phase 3 will extend the product coverage to televisions, storage-type electric water heaters and induction cookers, and expand the existing scope of room air-conditioners and washing machines. The new phase is expected to bring about energy saving of 150 GWh and reduction of 105 000 tonnes of carbon dioxide emissions a year. Together with existing products under MEELS, all the product types covered will account for about 70% of total annual electricity consumption in Hong Kong's residential sector.

Helping government save energy, thus setting a good example for the community, is another aspect of our work. During the year we held a briefing for green managers of all bureaux and departments on energy saving house-keeping practices. We also completed energy audits for 150 and 194 government buildings in May 2016 and March 2017 respectively, with various Energy Management Opportunities (EMOs) recommended. To facilitate the EMOs implementation, we helped make a successful bid for \$500 million additional funding earmarked for those energy saving projects, so as to meet the Government's 5% electricity saving target by 2019-20.

推廣能源效益及節能 Promoting Energy Efficiency and Conservation

創科論壇 2016

機電工程署每兩年一度舉辦的「創科論壇」已於2016年11月舉行，主題為「想像．創新．香港」，邀得特區政府高官、本地和海外學界與商界領袖、業界代表出席。論壇為期兩天，吸引了400多位參加者，集中以樓宇、運輸、能源和可持續發展等角度，探索最新的城市發展概念，願景是把香港打造為未來的智慧型都市。

區域供冷系統最新發展

年內，在能源效益基建的成績方面，我們完成了啟德發展區區域供冷系統中，橫跨啟德明渠的海底及冷凍水管敷設工程，將前啟德南面停機坪區與供冷系統南廠連接起來，並將由2017年下半年開始，為香港兒童醫院提供冷凍水，讓醫院的空調系統能於2018年該院啟用時準備就緒。此外，區域供冷系統也將由2017年年中起，向機電工程署總部大樓供應冷凍水，而未來港鐵沙中綫啟德站和宋皇臺站，也會使用其冷凍水供應服務。

EMSD Summit 2016

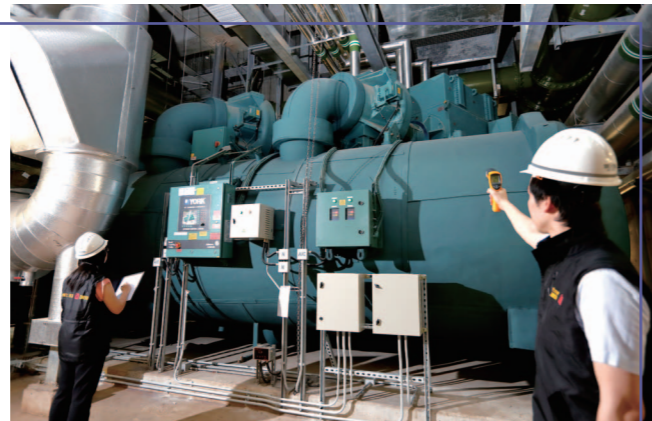
The EMSD Summit 2016, the latest of our biennial signature conference, with the theme "Imaginate Hong Kong" was held in November 2016. Attended by senior SAR government officials, leading academics, business leaders and representatives of the trades both local and overseas, the 2-day event explored the latest urban development ideas from the perspectives of building, transportation, energy and sustainability with the vision of transforming Hong Kong into a smart city of the future. The event attracted over 400 participants.

District Cooling System Update

An achievement in our work on energy efficiency infrastructure during 2016/17 was the completion of the sub-sea chilled water pipe laying across the Kai Tak Approach Channel of the District Cooling system (DCS) at Kai Tak Development. This sub-sea tunnel will connect the former Kai Tak south apron area to the DSC South Plant that will start supplying chilled water to the Hong Kong Children's Hospital in the second half of 2017. This will enable the hospital to get its air-conditioning system ready for its opening in 2018. The DCS will also start supplying chilled water to the EMSD Headquarters Building in mid-2017 and the future Kai Tak Station and Sung Wong Toi Station of the MTR Shatin to Central Link will also use the chilled water supplied from the DCS.

▶▶ 機電工程署員工正檢查啟德發展區區域供冷系統的製冷機組，該供冷系統為啟德發展區內的用家提供冷凍水，以供空調之用。
EMSD staffs are checking the chiller of the District Cooling System (DCS) at Kai Tak Development (KTD). The DCS supplies chilled water to consumers in KTD for air-conditioning purposes.

▼ 啟德發展區區域供冷系統採用了海水作為散熱之用，圖為供冷系統的海水泵。
The District Cooling System at Kai Tak Development uses seawater for heat rejection purpose, as shown in the photo is the seawater pump.



隨着香港各新發展區的主要基建工程和新市鎮擴展工作正陸續進行，我們在區域供冷系統方面的經驗也將大派用場於有關的發展區，例如東涌新市鎮擴展和洪水橋新發展區等。我們期待香港能更廣泛採用區域供冷系統，以節能減排，也樂意扮演推動的角色。

《建築物能源效益條例》及相關守則

《建築物能源效益條例》自2012年實施至今已四年多，繼2015年新版的《建築物能源守則》及《能源審核守則》刊憲頒布後，有關的寬限期亦已屆滿，所有訂明新建築物及現有訂明建築物的主要改裝工程，必須遵守有關新版守則。同時，上述兩份《守則》會每三年檢討一次，就2018年版本的內容，我們已開始進行諮詢業界及持份者。檢討工作會切合最新的技術發展和相關國際標準新動向，並符合公眾期望。

As major infrastructure works in various new development areas (NDAs) and new town extensions throughout Hong Kong are in the pipeline, our DCS experience will be applicable to these large-scale new developments, such as Tung Chung New Town Extension and Hung Shui Kiu NDA. We look forward to playing a role in more extensive application of DCS in Hong Kong to save energy and reduce carbon emissions.

Buildings Energy Efficiency Ordinance and its Codes

The Buildings Energy Efficiency Ordinance (BEEO) has been implemented for over four years since 2012. Further to the gazetting of the upgraded Building Energy Code (BEC) and Energy Audit Code (EAC) 2015 Edition, the relevant grace periods in existing prescribed buildings must follow these Codes. Meanwhile, as part of the once-every-three-years review cycle of the Codes, a new round of consultation with the trades and stakeholders has already started regarding the 2018 Edition of both Codes. The review will be in tandem with the latest technology advancements, upgrades in comparable international standards and public aspirations.

元朗公共圖書館已於2017年6月遷往新的元朗文化康樂大樓，新設施全面符合《建築物能源效益條例》。我們的同事為遷址後的圖書館檢測能效表現。

The Yuen Long Public Library was relocated to the new Yuen Long Leisure and Cultural Building in June 2017. The facility fully complies with the Buildings Energy Efficiency Ordinance. Our colleagues are checking the energy efficiency performance of the newly relocated Yuen Long Public Library.





推廣能源效益及節能 Promoting Energy Efficiency and Conservation



2017



機電署出版了《重新校驗技術指引》以協助物業管理公司、樓宇運作人員和持份者以各種「重新校驗」方法提高現有建築物的能源效益。我們的同事正檢測系統以確保校驗方法。

With the publication of our Technical Guidelines on Retro-commissioning, we can facilitate property management companies, building operators and stakeholders to improve energy efficiency in existing buildings via retro-commissioning practices. Our colleagues checking system at pilot site to confirm relevant methodology.



重新校驗技術指引

機電工程署制訂的《重新校驗技術指引》，旨在幫助物業管理公司、樓宇運作人員和其他持份者提高現有建築物的能源效益。「重新校驗」是一個具成本效益的系統性測試過程，用作定時檢查現有建築物的能源效益表現，及找出運作上的優化方案，以達到節能目的。測試過程可以單項進行，亦可配合翻新工程進行。

經兩輪諮詢後，《重新校驗技術指引》已於2017年6月30日推出。

Retro-commissioning Guidelines

The Technical Guidelines on Retro-commissioning developed by EMSD aim to help property management companies, building operators and stakeholders to improve energy efficiency in existing buildings. Retro-commissioning (RCx) is a cost effective, systematic process to periodically check the energy efficiency performance of existing buildings and identify operational improvements to save energy. The process can be performed alone or in conjunction with a retrofit project.

After two rounds of consultations, the Guidelines were launched on 30 June 2017.

淡水冷卻塔計劃

為配合相關法規和國際標準的最新要求，我們已於2016年12月完成檢討有關淡水冷卻塔計劃的現有出版物，並分別易名為《淡水冷卻塔計劃(2016版本)》及《淡水冷卻塔實務守則：第一部分至第三部分(2016年版)》。另一份經修訂的出版物是《預防退伍軍人病工作守則(2016年版)》，並已全部上載至機電工程署網站。我們也於2016年12月舉辦技術論壇，推廣淡水冷卻塔計劃和建築物能源效益。

2017/18 年動向

機電工程署將主辦2017/18年在香港舉行的第55次亞太經合組織工作小組會議，準備工作已經展開。我們也會與環境局合作，向立法會尋求通過「強制性能源效益標籤計劃」第三階段，並開始研究該計劃在未來階段，是否可進一步涵蓋LED燈和氣體用具。而《建築物能源效益條例》各項守則的檢討和更新工作也會持續進行。

Fresh Water Cooling Towers Scheme

To cope with the latest requirements of relevant regulations and international standards, a review of existing publications of the Fresh Water Cooling Towers (FWCT) Scheme was completed in December 2016. The documents have been updated and renamed as Fresh Water Cooling Towers Scheme (2016 Edition), and the Code of Practice for Fresh Water Cooling Towers: Parts 1-3 (2016 Edition). Another updated document is the Code of Practice for Prevention of Legionnaires' Disease (2016 Edition), all of which are available on the EMSD website. A technical forum was also conducted in December 2016 to promote the FWCT Scheme and building energy efficiency.

2017/18 Initiatives

EMSD will be hosting the APEC Working Group 55th Meeting in Hong Kong in 2017/18 and preparations are under way. We shall work with the Environment Bureau to seek Legislative Council approval for Phase 3 of MEELS. At the same time, studies on future phases of MEELS to also cover LED lights and gas appliances will begin. Work to update the various Codes under BEEO will continue too.



機電署同事正為完成安裝的淡水冷卻塔進行檢查。

Our staff is carrying out inspection for the just installed fresh water cooling towers.





推廣能源效益及節能 Promoting Energy Efficiency and Conservation



我們舉辦淡水冷卻塔和建築物能源效益的規管及實務的研討會，藉以向業界推廣「淡水冷卻塔計劃」和分享建築物能源效益的最新發展。

We hold a forum on control and practice of fresh water cooling towers and buildings energy efficiency to promulgate the Fresh Water Cooling Towers Scheme and share the latest development of building energy efficiency to the trade.



為了更準確預測香港未來的能源消耗量，我們團隊會大幅修訂已沿用七年的「香港長期能源選項規劃模型」。有關修訂會充份反映近年數據定義、數據趨勢、推動耗能的成因與耗能活動之間的相聯關係、以及政府政策的轉變，以更準確預測本港未來的能源消耗量。

To more accurately predict future energy consumption in Hong Kong, we shall revamp the Hong Kong Long-range Energy Alternatives Planning (LEAP) Model, already running for seven years. The revamp will capture the latest changes in data definitions, data trends, correlations between drivers and activity indicators as well as government policies for more accurate projections.



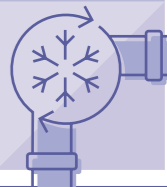
我們團隊已在日常工作中使用移動通訊技術，例如使用「共用平台暨地理資訊系統」，方便我們在與電力法例部同事聯手巡查零售店鋪、以查核能源標籤和電器安全情況時，可利用該系統，更有效地安排巡查路線。我們並會探討應用更多技術應用方案，使日常運作更有效率。

Our team has also been using mobile technologies in daily work, such as the Common Shop Inspection Platform cum Geographic Information System to help us plan more efficiently the routes of retailer inspections of mandatory energy efficiency labels and electrical product safety, jointly with colleagues from the Electricity Legislation Division. We shall explore further technology applications to make our operations more efficient.



我們從運作啟德發展區區域供冷系統中獲得不少經驗和知識，這些在日後我們營運其他新發展區的區域供冷系統時就能派上用場。圖為供冷系統的北廠鳥瞰。

Through operating the District Cooling System at Kai Tak Development, we have gained lots of experience and knowledge which should be useful for our operation of the future DCS in new development areas. Photo shows the aerial view of the North Plant of the System.





推廣能源效益及節能 Promoting Energy Efficiency and Conservation



推廣4Ts約章
Marketing the 4Ts Charter

怎樣才能最有效推廣4Ts約章？負責這項目工程師李秀芬，就要面對這問題。

機電工程署於2012年推出節能約章並一直大力推廣，而政府最近也推出了新的4Ts約章，以「4Ts」作框架，即「訂立目標」、「制定時間表」、「開放透明」和「共同參與」。約章是香港對《巴黎協定》作出的回應，同時也鼓勵政府所有的4Ts合作伙伴，包括物業管理公司、醫院、學校和非政府機構等，訂定具體的節能目標和時間表，也鼓勵他們分享現有和計劃中的節能措施。目前已有二千多家公司和機構簽署參加約章，反應勢頭持續積極。

「推廣工作的關鍵，是去了解可能參與機構的真正需要，和他們對實際操作的疑慮。」秀芬說。舉個例，部分機構擔心他們提交的資料會作甚麼用途，她就會解釋資料只會用作統計用途，而機電工程署也不會干預參與機構的節能計劃。

至於4Ts約章有甚麼作用？確立目標本身就極有意義，秀芬說：「4Ts約章的好處，就是讓機構為自己訂立節能目標，製訂時間表，到最後便能知道節能計劃是否奏效。」另外兩個T，即「開放透明」和「共同參與」，則旨在鼓勵參與機構多跟公眾分享知識，和動員更多其他機構去參加約章。

What is the best way to “market” the 4Ts Charter? That is the question for Sue Lee, our engineer tasked with promoting the cause.

On top of the Energy Saving Charter which EMSD has been promoting since its launch in 2012, the Government has come up with a new 4Ts Charter, on the basis of the 4Ts framework, namely “target”, “timeline”, “transparency” and “together”. It is a response to the Paris Agreement of which Hong Kong is a signatory, and aims to encourage all 4Ts partners such as property management companies, hospitals, schools and NGOs to set energy saving targets and timelines, and share their current and planned energy saving measures. Over 1 000 companies and organisations have signed up and response continues to be positive.

“The key is to understand potential participants’ needs and their practical concerns,” Sue said. For example, some are worried about the use of the information submitted. She assured them that it would be for statistical compilation only, and EMSD would not interfere with their energy saving plans.

Why is the 4Ts Charter useful? Sue said that having a target makes all the difference. “The beauty of the 4Ts Charter is that you set your own target and plan your timeline, so that you can measure in the end whether the energy saving plan has been successful.” The other two Ts — “transparency” and “together” -- serve to encourage knowledge sharing with the public and mobilise more organisations to join the effort.



幫「三無」大廈符合
《建築物能源效益條例》
Helping “Three-nil” Buildings
Comply with BEEO

根據2012年全面實施的《建築物能源效益條例》規定，現有商業/綜合建築物須進行的首次能源審核，進度雖然大致良好，但於「三無」大廈卻遇上重重困難。「三無」大廈是指那些無業主立案法團、無業主委員會、也無物業管理公司的大廈，大多位於上環和油麻地等舊區。

督察高錦昌本着協助市民符合法例和促進建築物能源效益的精神，特別多走幾步，盡量聯絡這些「三無」大廈的業主。雖然業主名字和地址可以查冊找到，但郵寄給他們的信件通常都沒有回音。「要找到這些業主，唯一方法是親自上門，在附近問人，希望找到業主本人。」他說。尋找業主的過程很花時間，也要堅持和耐心。

一找到業主，接着就要向他們解釋《建築物能源效益條例》和能源審核的相關要求。

「有些業主有很多怨氣發洩，也不明白為甚麼大廈要做能源審核。」他說。他的團隊會詳細地解釋，讓業主漸漸明白和接受新法例要求。錦昌很高興的說，至目前為止，「三無」大廈業主都願意接受法例的要求。「這是對我們能源事務處工作的認同，也是一種動力。」他說。

The first round of energy audits of existing commercial/composite buildings, as required under the Buildings Energy Efficiency Ordinance (BEEO), is in good progress ever since the BEEO commenced implementation in 2012. However, “three-nil” buildings posed a challenge. They are buildings without owners’ corporations, residents’ organisations or property management companies, typically in older districts like Sheung Wan or Yau Ma Tei.

In the spirit of facilitating compliance with the law and promoting buildings energy efficiency, our inspector Ko Kam-cheung, took extra steps to reach out to property owners in those buildings. The owners’ names and address can be ascertained via document search, but letters mailed often go unanswered. “The only way to reach the property owners is to go to the building, ask around, and hopefully find them in person,” he said. The process is time consuming and requires perseverance.

Once the owners are found, what follows is to explain to them how to comply with the BEEO and energy audit requirements.

“Some owners have lots of frustrations to vent and do not understand why their buildings need to conduct energy audits,” he said. The team makes detailed explanations, so that the owners gradually understand and accept the requirements. Kam-cheung was also delighted to point out that so far, owners of “three-nil” building are willing to accept the idea of complying with the new law. “It is a sort of motivation and appreciation of our work in the Energy Efficiency Office,” he said.

提高公眾安全及節能意識 Raising Public Awareness of Safety and Energy Conservation

與持份者聯繫溝通是我們十分重要的工作，用以提高公眾的安全及節能意識、和向業界提倡良好的實務做法。我們相信公眾教育比檢控，更能有效提高市民和業界的安全與能源效益水平。以下是我們年內，為業界和公眾度身設計的主要聯繫溝通活動。

Stakeholder engagement is a very important part of our work in building public awareness of safety and energy efficiency, and promoting best practices. We believe that public education is more effective than prosecution in achieving a high level of safety and energy efficiency, both for the trades and the public. Below are some of our key engagement initiatives tailored for the trades and the public during the year.

▲▲ 聯繫業界 ENGAGEMENT WITH THE TRADES

我們與各個受規管的業界及相關行業，有非常多元化和深入的互動溝通。除了既定的溝通渠道，如定期會議、簡報會/研討會，和向商會、工會、專業團體及培訓機構發出通告和通訊刊物等文字資料之外，規管服務的各個部別，多年來都透過各種工作小組和諮詢委員會，去鼓勵業界表達意見和提出建議，務求掌握和了解業界的實際疑慮和感受。

Our communication with the regulated trades and related industries are diverse, deep and dynamic. Apart from established channels like regular meetings, briefings/seminars and written communications such as circulars and newsletters for trade associations, workers' unions, professional bodies and training institutes, our Divisions over the years have also engaged the trades via a network of working groups and advisory committees to solicit their views and suggestions, and to gauge the trades' practical concerns and sentiments.

我們也相信，別人的認同可激勵更佳表現。因此我們近年積極投放資源，組織各式獎項、比賽和多個自願性質的註冊/約章計劃，以激勵業界參與和改善實務操作做法。

We also believe that recognition motivates performance. Hence in recent years we have invested more resources in organising awards, contests and various voluntary registration/charter schemes to motivate the trades to participate and improve their practices.



要確保升降機及自動梯安全，改變使用者習慣及行為是十分重要，所以宣傳及公眾教育仍是我們的工作重點。

Advocating the change in passenger behaviour is pivotal to lift and escalator safety. Therefore, we continue to attach great importance to publicity and public education.



獎勵計劃

年內，我們持續調校改善各種為業界而設的嘉許和獎勵計劃，像2015年推出的「優質升降機服務認可計劃」及2016年推出的「瓶裝石油氣分銷商安全表現評級計劃」。二者都以根據一套安全及服務表現準則而進行的獨立審核結果，去評定參加計劃的負責人、承辦商或氣體分銷商應得到金級、銀級或銅級評級和證書，目的是對其表現作出嘉許，並激勵大家做得更好。所有結果和評級資料都已上載機電工程署網頁，讓市民在挑選服務供應商時，可作出更明智選擇。

Award Schemes

We continued to refine and improve various recognition schemes for the trades, such as the Quality Lift Service Recognition Scheme and the LPG Cylinder Distributor Safety Performance Recognition Scheme, launched in 2015 and 2016 respectively. Both schemes use independent audit results per a set of safety and performance criteria as the basis for awarding gold, silver and bronze ratings and corresponding certificates to participating responsible persons, contractors or gas distributors, so as to recognise their performance and motivate further improvements. All the results and ratings are available on the EMSD website to help the public make informed choices of service providers.

與此同時，一些既有的比賽，如「傑出註冊電業工程人員選舉」這類每兩年一次具代表性的活動，則繼續舉行。

Meantime, established contests such as the Outstanding Registered Electrical Worker Awards Scheme have continued as our biennial signature events.

註冊與約章計劃

我們在2016/17年度推出了幾個新的註冊和約章活動。早於2015年7月首推的「車輛維修工場自願註冊計劃」，則於2016年5月，假一大型商場舉行推廣日，吸引了數百位業界人士和市民參加。截至2017年3月底，該註冊計劃已吸引了全港約六成的車輛維修工場註冊，數字仍在不斷上升。

Registration and Charter Schemes

2016/17 saw the extensive promotion or launch of several registration and charter schemes. The Voluntary Registration Scheme for Vehicle Maintenance Workshops (VRSVMW), launched in July 2015 with the aim to enhance the service quality of vehicle maintenance workshops, held a Promotion Day in May 2016 at a mega shopping mall which attracted hundreds of trade practitioners and members of the public. As of end March 2017, the VRSVMW has attracted some 60% of all vehicle maintenance workshops in Hong Kong to register. The number continues to go up.

提高公眾安全及節能意識 Raising Public Awareness of Safety and Energy Conservation

約章方面，早於2012年推出的「節能約章」，至2016年已是第四屆。今屆約章吸引了3 300多個場所簽署，承諾履行各種節能措施，例如由六月至九月期間，把室內溫度控制於攝氏24至26度之間，及採購節能電器產品等。

2016/17年度的新猷是「4Ts約章」，是政府與業主及管業經理的伙伴計劃，旨在鼓勵這類持份者運用4Ts框架，即據「訂立目標」、「制定時間表」、「開放透明」和「共同參與」四個原則，由每個參與機構去訂定本身的具體節能目標和制定時間表，公開分享節能表現記錄，並與政府和其他持份者合作，去落實其節能目標。新約章很受歡迎，已有千多個機構簽署參加。

As to charters, a key one is our annual Energy Saving Charter launched in 2012 which saw its fourth edition in 2016, attracting over 3 300 premises to sign up and pledge to various energy saving practices such as maintaining indoor temperature of 24–26 degree Celsius from June to September, and procuring energy efficient appliances.

A new initiative in 2016/17 was the 4Ts Charter, a partnership with building owners and managers to motivate them to save energy in the built environment under the 4Ts framework, namely “target”, “timeline”, “transparency” and “together”. Each participating organisation is expected to come up with a plan with a specific energy saving target and timeline, make available its performance records, and work together with government and other stakeholders to achieve its target. The new Charter is well received and over 1 000 organisations have signed up.



「恆神大比拼」2016的優勝隊伍與環境局局長黃錦星先生於頒獎典禮合照。Winning teams of the “Energy Saving Champion Scheme” 2016 posed with Mr. Wong Kam-sing, Secretary for the Environment, at the prize presentation ceremony.

諮詢業界

諮詢業界十分重要，旨在確保受規管者的意見，獲得充份聆聽和考慮，而這類正式和非正式的交流意見與資訊，也有助我們感受業界的實際處境，對業界的疑慮和關注問題也保持敏感度。除了各式各樣有業界商會及代表參與的定期會議、論壇、工作小組、專責小組和諮詢委員會之外，去年我們更增添了幾個新渠道。

Consulting the Trades

Trade consultation is critical as it ensures that regulatees' views are heard and taken into full account. These formal and informal exchanges of views and information also keep us stay sensitive to the trades' concerns. In addition to a variety of regular meetings, forums, working groups, task forces and advisory committees involving various trade associations and representatives, last year also saw several new initiatives.

至於近年建築物能源效益推廣工作能取得成效，業界諮詢是絕對不能或缺的要素之一。當中每三年一次檢討及優化《建築物能源效益守則》的工作，和「強制性能源效益標籤計劃」的未來拓展階段，均涉及持續的諮詢業界過程。至於2017年6月已推出的《重新校驗技術指引》，也包含了大量機電業界的專業意見，有助各持份者在其建築物內落實重新校驗。我們會繼續與業界合作，持續優化該《指引》。

我們也會進行業界意見調查，找出業界關注的事項，和了解業內人士切身的福祉問題，務求找出改善方法。2016年進行的升降機及自動梯業界調查就是一例。

會議及國際交流

機電工程署近年為多個在港舉行的機電安全及能源效益會議作東道主，讓香港躋身區域和國際業界交流會議中心之列。例如2016年11月舉行的「創科論壇」，主題是「想像∞創新∞香港」。會議趁現時部分城市正轉型為未來智慧城市之際，從樓宇、運輸、能源和可持續發展等角度，探索最新的城市發展概念，吸引了400多位來自本地及海外的政府官員、商界、學者及非政府機構人士參加。這論壇也是機電工程署每兩年一度的部門旗艦活動。

年內，我們也積極籌備將於2017年10月與港鐵公司合辦的第27屆「國際鐵路安全議會」會議。會議匯聚了全球和內地的鐵路規管機構、營運商和專家，堪稱鐵路安全及發展方面最重要的國際交流活動。香港快將於2018年接駁內地高鐵網絡，此時在港主辦鐵路盛事，正合時宜。

2017年也是機電工程署與國家質量監督檢驗檢疫總局合作的14周年，我們除了於2017年6月主辦「國家質量監督檢驗檢疫總局—機電工程署周年大會」外，更特別舉辦了公眾展覽及聯繫年青人的活動。

A key factor for the success in promoting buildings energy efficiency, trade consultation is also an ongoing process on matters such as the once-every-three-years cyclical upgrading of the Building Energy Codes, as well as future phases of the Mandatory Energy Efficiency Labelling Scheme. Our Technical Guidelines on Retro-commissioning (RCx), launched in June 2017, have also incorporated considerable input from the E&M trades to facilitate stakeholders to implement RCx in their own buildings. We shall continue to collaborate with them to refine the Guidelines in future.

Trade survey is another tool to help us identify issues of concern for the trades and the general well-being of trade practitioners for improvement initiatives, such as the Lift and Escalator Trade Survey conducted in 2016.

Conferences and International Exchange

EMSD has played host to various E&M safety and energy efficiency conferences in recent years, putting Hong Kong on the map as a hub of regional and international exchange for the trades. An example was the EMSD Summit 2016 held in November, the latest of our biennial signature conference with the theme “Imaginate Hong Kong”. It explored the latest urban development ideas from the perspectives of building, transportation, energy and sustainability as existing cities transform into smart cities of the future. Over 400 local and overseas participants from government, business, academia and NGOs attended the event.

Much work was done during the year to prepare for the 27th International Railway Safety Council (IRSC) Conference that we are co-hosting with MTR Corporation Ltd in October 2017. Bringing together railway regulators, operators and experts from around the world and the Mainland, IRSC is the most important international event for railway safety and development. It is also timely given Hong Kong's imminent connection to the Mainland's high-speed railway network in 2018.

2017 was EMSD's 14th year of cooperation with the Mainland's General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ). Special events were held in Hong Kong to mark the occasion, such as an exhibition and youth engagement activities, in addition to the AQSIQ-EMSD annual general meeting which EMSD hosted in June 2017.



提高公眾安全及節能意識 Raising Public Awareness of Safety and Energy Conservation

一年一度的機電署電力規例研討會我們的旗艦活動之一，專為電氣行業各持份者舉辦，深受業界歡迎。2016年的電力規例研討會假荃灣大會堂舉行，吸引了數百名電業界人士參加。

The EMSD Annual Technical Seminar for the electrical trade is one of our signature events that is highly popular with various stakeholders in the electrical trade. The 2016 Annual Technical Seminar was held at Tsuen Wan Town Hall and well attended by hundreds of electrical trade practitioners.



▲ 聯繫公眾 ENGAGEMENT WITH THE PUBLIC

我們跟市民大眾的聯繫工作，重點是以多渠道多類型活動，適時有效地與不同的目標對象溝通，並強調部門運作高度透明，和盡量分享資訊。對傳媒查詢，我們以專業方式適時回應，而公眾投訴和查詢也盡快處理。在適當情況下，個別同事更會多走一步，協助投訴人找出問題的成因，幫忙解決問題，化投訴為嘉許。

為了宣傳機電安全和能源效益訊息，我們也運用不同的社交媒體，再配合傳統的離線工具，推出多元化的宣傳運動和盛事活動，以接觸特定的目標受眾。我們正與多個非政府機構和其他組織，商討如何合作宣傳，期望能把部門的資源發揮更大效用，也可學習其他機構在宣傳推廣方面的長處。

Our public engagement programme focuses on timely and effective communication with various target audiences via a multitude of channels and activities, with a high degree of transparency in our operations and information dissemination. We address media enquiries in a professional and timely manner, while complaints and enquiries from the public are handled promptly. Where appropriate, individual officers often go the extra mile to help complainants look into the root cause of the issues and help resolve the problems, turning complaints into compliments.

To promote specific safety and energy efficiency messages, we have deployed a mix of social media and traditional offline tools in diverse publicity campaigns and events in order to reach out to the intended audiences. We are also stepping up collaboration with NGOs and other organisations in publicity and communication matters, both to optimise our resources for bigger impact and to learn from others.

傳媒關係

傳媒是市民知悉我們工作表現的主要訊息來源，因此我們對新聞界採訪，都力求主動配合和保持高透明度。除了應對傳媒日常查詢，我們也不時安排專訪或特寫故事，提醒市民我們各種活動背後的安全與節能訊息。我們每年也舉辦傳媒聚會，讓記者和部門高層管理人員見見面，更新聯繫。

獎項與比賽

比賽與獎項既可激勵參加者，予以嘉許認同，也可動員市民大眾反思安全和節能等問題，改變大眾的行為。2015年「全民節能」運動，就有兩項為市民而設的比賽，即「慳電熄一熄青年獎」和「新能源·新世代」太陽能車比賽，已於2016/17年度圓滿結束，頒獎禮亦已於2016年6月舉行。

2016年8月，機電工程署署長更親自率領「慳電熄一熄青年獎」得獎者組成學習團，遠赴丹麥和瑞典，參觀歐洲城市的低碳環保措施。學習團回港後，團員更於2016年11月舉行公眾分享會，是整個活動的壓軸項目。

機電青少年大使與樂齡科技博覽

「機電青少年大使」是機電工程署聯繫青少年的活動計劃，已登記成員有6 000多名，近年都積極參加我們的多種活動，例如由香港社會服務聯會（社聯）於2017年6月主辦、多個政府部門包括機電署和多個其他機構支持的全港首個「樂齡科技博覽暨高峰會」，其中由我們聯同社聯一起主辦的「樂齡科技顯愛心」青少年比賽，就有很多機電青少年大使參與。比賽目的是鼓勵參加者提出創新的產品意念，讓長者生活更方便、更健康愉快。

Media Relations

For the public, the media are the key source of information about our work and so we strive to be pro-active and highly transparent when it comes to working with journalists. Apart from handling day-to-day media enquiries, we also arrange media interviews and special features from time to time to remind the public of the safety and energy conservation messages which underpin our initiatives. We also hold an annual media gathering to refresh contacts between journalists and our senior management.

Awards and Contests

Competitions and awards provide motivation and recognition, which can mobilise the public to reflect on safety and energy efficiency issues and transform their behaviour. Two contests for the public under the "Energy Saving for All 2015" campaign, namely the Youth Energy Saving Award and New Energy New Generation Solar Car Competition were successfully concluded in 2016/17, with prize presentations held in June 2016.

The Director of Electrical and Mechanical Services also led winners of the Youth Energy Saving Award on a study trip to Denmark and Sweden in August 2016 to learn more about low-carbon green practices in European cities. A public sharing session by the trip participants was held in November 2016 as the finale.

EMYA and Gerontech Expo

The E&M Young Ambassador programme (EMYA), our youth engagement scheme with over 6 000 registered members, has played an active role in many EMSD community engagement activities in recent years. The latest example was the Gerontech Youth Challenge, part of Hong Kong's first-ever Gerontech Expo cum Summit held in June 2017 organised by the Hong Kong Council of Social Service (HKCSS) and supported by the Government including EMSD and many other organisations that co-organised by HKCSS and us. Many EMYA members participated in the Gerontech Youth Challenge, a competition of creative product ideas that aims to enhance the health, convenience and well-being of the elderly.



提高公眾安全及節能意識 Raising Public Awareness of Safety and Energy Conservation

樂齡科技和照顧銀髮一族，或非我們的規管工作範疇，但與市民的安全和生活質素則息息相關，因此我們很高興有機會盡一分力。這也是我們首次與社聯合作，期望日後能跟更多非政府機構有其他合作。

Gerontechnology and caring for the elderly may be beyond the scope of our regulatory duties, but are highly relevant to safety and people's quality of life. In that regard we were delighted to have the opportunity to contribute to the cause. It was also our first collaboration with HKCSS, and we look forward to more collaboration with NGOs in future.

年內，「機電青少年大使」計劃也為成員安排了一系列參觀活動，包括參觀國泰城、中電青山發電廠和「電力世界」展覽廳、港鐵九龍灣車廠、香港天文台和機電工程署總部大樓。

During the year EMYA also organised many visits for members. The Young E&M Ambassadors enjoyed great fun and acquired knowledge about E&M safety and energy efficiency matters during visits to Cathay City, the Castle Peak Power Station "ElectriCity", MTR Kowloon Bay Depot, the Hong Kong Observatory and EMSD Headquarters Building.



機電署的機電青少年大使參觀港鐵九龍灣車廠，親身體驗鐵路運作方面的機電安全工作。

Our E&M Young Ambassadors on a visit to MTR Kowloon Bay Depot to learn first hand about E&M safety in a railway operation setting.

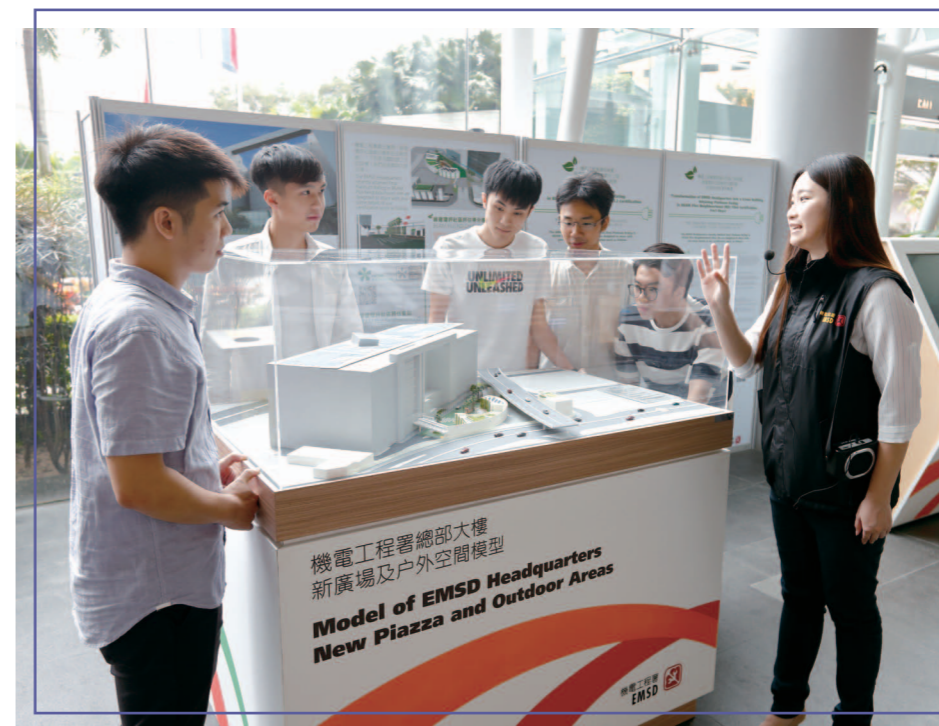


協作、外展、優化總部

我們一直都探討如何與其他機構協作，把機電安全和能源效益的宣傳工作做得更好。例如我們已把電力安全短片，放到幾個非政府機構的社交媒體平台，務求更有效接觸某些目標對象。我們也跟香港房屋協會合作，提醒住戶在裝修家居時，必須僱用註冊電業承辦商和註冊電業工程人員，以策安全。

Collaboration, Outreach, Headquarters Improvements

Indeed, we have always explored collaboration opportunities with other organisations in publicising E&M safety and energy efficiency. A case in point was sharing our electricity safety videos on social media of other NGOs so as to reach the target audiences more effectively. We also work with the Hong Kong Housing Society to remind their tenants to only employ Registered Electrical Contractors and Registered Electrical Workers during electrical renovation works to ensure safety.



機電署總部大樓正進行多項改建工程，變為更綠化環保的公共空間，供公眾人士享用。圖為學生參觀總部大樓模型，導賞員則簡介各種綠化和能源效益設施。

The EMSD Headquarters Building is being transformed into a sustainable space for enjoyment by the public. Photo shows students viewing a model of the headquarters building while one of our tour guides explained the various greening and energy efficiency facilities.



正如「機電青少年大使計劃」，我們的學校外展計劃也行之多年，深受全港學校和學生歡迎。2016/17年度，我們來自各部別的全職學校宣傳大使隊伍，走訪了331所機構，主持機電安全和能源效益講座，共涵蓋207所幼稚園、36所小學、29所中學、1個專業團體、5所特殊學校、51所老人和社區中心與2個其他機構，並於多家學校舉辦了96次展覽和互動問答遊戲。

Just like the EMYA scheme, our school outreach programme is well established and popular with schools and students all over Hong Kong. In 2016/17, our team of full-time school ambassadors from various Divisions visited a total of 331 institutions to deliver talks for the promotion of E&M safety and energy efficiency, covering 207 kindergartens, 36 primary schools, 29 secondary schools, 1 professional institute, 5 special schools, 51 elderly and community centres and 2 other organisations. The team also held 96 roadshows and exhibitions with fun quizzes at various schools.

至於總部大樓教育徑的導賞活動仍深受歡迎。雖然教育徑年內進行翻新工程，只能局部開放，但2016/17年度，我們仍舉辦了334次導賞活動，接待了來自學校、社區和青少年中心、本地專業組織和海外的訪客。教育徑翻新工程將於2018年年初完成，屆時教育徑將以全新面貌開放，讓訪客有煥然一新的體驗。

The in-bound guided tours to the Education Path at our headquarters building were as popular as ever, though it was under renovation and hence only partially opened during the year. A total of 334 guided tours for schools, community and youth centres, professional bodies and overseas visitors were held in 2016/17. When renovation works are fully completed in early 2018, the revamped Education Path will re-open to give a brand new experience to visitors.

與此同時，我們總部大樓外的廣場持續進行綠化和改善工程，進展良好，目的是提供一個可持續發展的優質公共空間，與社區人士共享。

Meantime, continuous greening and improvement works in our piazza were in good progress, which will provide a sustainable, high-quality public space for all in the neighbourhood to enjoy.