



# 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



1 陳帆太平紳士

**Mr Chan Fan, Frank, JP**

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

2 薛永恒太平紳士

**Mr Sit Wing-hang, Alfred, JP**

機電工程署副署長/規管服務  
Deputy Director/Regulatory Services, EMSD

3 賴漢忠太平紳士

**Mr Lai Hon-chung, Harry, JP**

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

4 彭耀雄先生

**Mr Pang Yiu-hung, Eric**

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

5 梁建民博士、太平紳士  
**Dr Leung Kin-man, JP**

助理署長/鐵路  
Assistant Director/Railways

6 嚴國豪先生

**Mr Yim Kwok-ho**

部門會計師  
Departmental Accountant

7 羅肇嫻女士

**Ms Lo Siu-han, Cynthia**

機電工程署主任秘書  
Departmental Secretary, EMSD

\* 胡建明太平紳士出任機電工程署副署長/規管服務至2014年10月2日

Mr Woo Kin-ming, JP was Deputy Director/Regulatory Services, EMSD up to 2 October 2014

\* 張國輝太平紳士出任機電工程署助理署長/氣體及一般法例至2014年10月5日

Mr Cheung Kwok-fai, JP was Assistant Director/Gas and General Legislation, EMSD up to 5 October 2014

\* 周楚添先生出任機電工程署主任秘書至2014年7月13日

Mr Chow Chor-tim was Departmental Secretary, EMSD up to 13 July 2014



規管服務在2014/15年度在不少工作範疇都達至新的里程碑。我們的目標，是使全港市民安全安心。為此，我們一如以往，繼續與業界、社會大眾和其他持份者保持緊密聯繫，在鞏固核心工作的同時，也積極拓展新的服務領域。

Regulatory Services reached many new milestones. With the goal of ensuring “safety and peace of mind” for all in Hong Kong, we have continued to engage with the trades, the community and other stakeholders to enhance our core work and explore new frontiers in our services.

薛永恒太平紳士

Mr Sit Wing-hang, Alfred, JP

機電工程署副署長/規管服務

Deputy Director/Regulatory Services, EMSD

### 能源效益里程碑

《區域供冷服務條例》(第624章)於2015年3月在立法會順利通過，是我們能源效益工作的重要里程碑。這條例為區域供冷系統的用戶，訂定了詳細的收費機制。啟德區域供冷系統是全港首個同類的區域供冷系統，新條例的順利通過標誌了系統正式展開其實際經濟運作，長遠可達至收回成本的目標。條例亦為香港未來的區域供冷系統奠定收費準則。

另一里程碑是我們為「強制性能源效益標籤計劃」的其中三個產品類別，即冷氣機、雪櫃和洗衣機，收緊了能源效益評級標準，新評級標準已於2014年10月起開始，預計每年可為全港節省約三億度電。這是「強制性能源效益標籤計劃」自2009年全面實施以來，首次提升能源效益評級標準。

### ENERGY EFFICIENCY MILESTONES

The smooth enactment of the new District Cooling Services Ordinance (Cap 624) by the Legislative Council in March 2015 was a major milestone in our work for promoting energy efficiency. The Ordinance sets out a detailed tariff mechanism for users of the District Cooling System (DCS). The DCS at Kai Tak Development is the first system of its kind in Hong Kong, and the enactment of DCS Ordinance marks the beginning of its economic operation, with an aim of complete cost recovery in a long-term operation. The Ordinance also forms the base for the tariff systems of other new DCS in Hong Kong, and paves the way for their development.

Another milestone was the tightening of energy efficiency grading standards for air-conditioners, refrigerators and washing machines under the Mandatory Energy Efficiency Labelling Scheme (MEELS). The new grading standards commenced in October 2014 and are expected to save about 300 million kWh of electricity every year. The upgrade was the first since the MEELS was fully implemented in 2009.

至於在建築物能源效益方面的工作也有很大進展。自《建築物能源效益條例》(第610章)全面實施以來，於2014/15年度，已有超過700幢商業大廈按法律要求，完成能源審核。為了進一步收緊相關的能源效益要求，我們已於2014年9月開始為《建築物能源效益守則》及《能源審核守則》作出全面檢討，並預計於2015年底完成。

### 機電安全佳績

在機電安全規管工作方面，同樣重要的里程碑是2014年12月港鐵西港島綫啟用，這新鐵路延綫大大改善了西區市民的生活質素。由於位置原因，沿綫的香港大學站和西營盤站是全港首兩個地鐵站，使用站內升降機於火警及緊急事故時安全疏散乘客。故此升降機及其相關機電設施的可靠性，至為重要。我們的同事於緊逼的時限內，在新延綫啟用前的測試和驗收中加倍努力地工作，確保一切機電系統(包括升降機)均安全正常。

### 「創造公眾價值」已成部門文化

為使「歐陸嘉年華」和毗鄰的中環海濱摩天輪能及時在2014年12月順利開幕，我們規管服務的同事在極度緊逼的時間內，進行了非常徹底的審批工作，讓市民大眾趕及在節慶期間安全享用這些設施。我們事事以創造公眾價值為目標，這又是一例。

部門經過近年不斷鼓勵員工「創造公眾價值」，我們很高興見到同事在日常工作中都會多走一步，讓市民安心。舉個例，如一旦發生機電事故，我們的專業工程團隊都會馬上親自到現場了解情況，掌握第一手資料，好讓公眾全面了解情況。

Promoting building energy efficiency also had fruitful result. Following the full implementation of the Buildings Energy Efficiency Ordinance (Cap 610), the energy audits for over 700 commercial buildings were completed in 2014/15. To further tighten the energy efficiency requirements, a comprehensive review of its Building Energy Code (BEC) and Energy Audit Code was commenced in September 2014 for completion in end 2015.

### E&M SAFETY ACHIEVEMENTS

Equally significant in our E&M safety regulatory work was the opening of the MTR West Island Line in December 2014, which made a major contribution to the quality of life for all in Western District. Because of the station locations, its HKU and Sai Ying Pun Stations are the first in Hong Kong where lifts are used for fire and emergency evacuation of passengers. Therefore, the reliability of the lifts and their associated E&M facilities are particularly important in ensure passenger safety. This called for extra effort from our colleagues during pre-opening testing and commissioning against a tight deadline to make doubly sure that all E&M systems, including the lifts, were safe and sound.

### “CREATING PUBLIC VALUE” BECOMING OUR CULTURE

In order to facilitate the timely opening of the Great European Carnival and the nearby Hong Kong Observation Wheel in December 2014, our Regulatory Services colleagues conducted thorough vetting and approval work under great time pressure. The public was thus able to safely enjoy these facilities during the festive season – another example of how we aim to create public value in everything we do.

With our focus on “creating public value” in recent years, we are delighted to see that our colleagues have been going that extra mile in their daily work so that the public may enjoy peace of mind. For example, whenever E&M incident occurs, our professional staff will immediately conduct thorough on-site investigations in order to obtain first hand information of the situation, so that the public can be well informed of what has happened.

我們在有需要的時候，也會與公眾分享市場資訊，以提升行業的安全水平，比如年內我們就在部門網頁上，公布了私人樓宇升降機的平均保養合約價格，供公眾參考。有了這些數據作參考，升降機擁有人和負責人在選擇優質承辦商時，就更有把握。這些工作雖非傳統規管者的工作範圍，但我們仍樂意為之，就是因為這些額外的心思既能使設施更安全，也令市民更安心。

## 讓市民安心

「讓市民安心」就是我們想創造的最終價值。我們會持續鼓勵同事，以此作為準則，去調配資源在最重要的環節上，以達到安全和讓公眾覺得安全安心。近年很多例子顯示，這原則已完全滲入規管服務人員的工作態度，我們就2014年台灣高雄氣體爆炸事故的反應就是一例。爆炸一發生，公眾已開始關注香港會否發生類似意外，我們馬上採取行動致力化解市民的疑慮。而2015年香港境外發生一連串升降機事故，我們也以同樣主動的手法去化解市民的疑慮。香港社會對安全問題的觸覺日益敏銳，因此我們必須加把勁，讓市民對本港的機電設施和規管制度有信心。

不過，即使做到零事故，也不保證未來不再發生事故，因為我們可能會忽略某些風險。因此，我們近年正為我們規管的每個行業找出「先導指標」，因為我們相信某些狀況，比如工人年齡數據、維修保養價格水平、或是機電裝置的增幅等，都可以預警發生事故的風險水平正在改變，有助我們採取針對性的預防措施。

與此同時，我們在預防危機和事故方面的工作也沒有鬆懈，包括定期更新部門的「危機預防、應變及管理計劃」、進行危機處理演習、及與持份者保持溝通，務求盡早把握各種問題的脈搏動向。

Where necessary, we are committed to sharing market information with the public so as to help step up E&M safety. For example, we publish on our website the average lift maintenance contract prices of private buildings for the public's reference. With this information, lift owners and other Responsible Persons should be better equipped to choose contractors of higher quality. While such extra work is beyond the scope of a traditional regulator, we are happy to take it on as it not only ensures safety but also brings peace of mind to the public.

## PEACE OF MIND

"Peace of mind for the public" is the ultimate value we want to create. We shall continue to help our colleagues apply this principle as a yardstick to deploy our resources in the areas most critical to achieving safety and bringing peace of mind to the public. Many examples illustrate how deeply our Regulatory Services staff have internalised this principle in their work. Our response to the gas explosion in Kaohsiung, Taiwan in 2014 is a case in point. As soon as it occurred, we acted proactively to allay the public's concerns about the possibility of a similar incident in Hong Kong. We took the same proactive approach to allay the public's concerns over a number of lift incidents outside Hong Kong in 2015. As our community is increasingly alert to safety issues, we must work harder to reassure them that the city's E&M facilities and the regulatory system are up to the job.

However, it is true that a zero-incident record is no guarantee of an incident-free future, since it is always possible that we have overlooked certain risks. For this reason, we have been identifying "precursors" in each of the trades we regulate. We believe that certain conditions, such as worker age profiles, maintenance pricing levels or rates of increase in the number of E&M installations, could signal possible changes in risk level of incident occurrence and help us come up with targeted preventive measures.

At the same time, we have not lost sight of other crisis and incident prevention measures. These include regular updating of our departmental Crisis Prevention, Response and Management Plan, the holding of crisis management drills and ongoing communication with stakeholders to keep a finger on the pulse of various issues.

## 2015/16 年度展望

政府積極推行《香港都市節能藍圖2015~2025+》，因此能源效益工作將是2015/16年度的重點。除了致力推動相關能源效益法例的實施和節能基建的發展，我們也會推行一連串支援活動，如為各政策局和部門就如何減少能源強度提供意見，及落實各種青年推廣活動，例如提倡能源效益和可再生能源的比賽等。

談到青年比賽，我們的同事為比賽之一的「慳電熄一熄青年獎」設計了極創新的獎勵方法，就是不直接獎勵得獎隊伍，而是把獎金轉發給一個由每隊得獎隊伍選擇的非政府機構，用以資助年青人所需的社會服務。節能行善的配對工作，雖非我們的規管範圍，但既然這能惠澤社會所需，我們也樂於略盡綿力。

與此同時，我們也正籌備擴展「強性能源效益標籤計劃」，推出計劃的第三期，將會涵蓋新的產品類別。至於《建築物能源效益條例》，重點是繼續嚴謹及有效地執法，並每三年定期檢討《建築物能源效益守則》，收緊各種能源效益設計標準。我們也正研究在本港其他新發展區實施區域供冷系統的可能性，尤其有大規模商業區的新發展地域，它們對空調的需求將十分龐大。

機電設施老化會影響公眾安全，因此來年另一重點工作，是鼓勵業界實行有效的資產管理。香港鐵路有限公司在這方面也有所發展，它將斥資60億港元購買全新的93列八卡列車，取代目前於四條現有鐵路綫行走的第一代列車；另又斥資33億港元，更換共七條現有鐵路綫的信號系統，新系統將採用最新的「通訊為本列車控制技術」。新資產預計會提升鐵路安全和可靠度。

鑑於本港鐵路網快速擴展和我們日增的工作量，我們會於2015/16年度為鐵路科增添11個新職位，包括兩個總工程師職位。新添的人手，會有助加強本港的鐵路規管機制。

## DEVELOPMENTS IN 2015/16

Looking at 2015/16, energy efficiency will be a key area as the Government implements its Energy Saving Plan for Hong Kong's Built Environment 2015~2025+. Apart from implementing the energy efficiency legislation and promoting the energy efficiency facility in Hong Kong, we also assist in bringing forward a number of supporting initiatives, such as advising government bureaux and departments on how to reduce their energy intensity and engaging with youth through programmes such as competitions to promote energy efficiency and renewable energy.

In this regard, I am delighted that our colleagues have created an innovative prize for one of the youth competitions. Instead of rewarding winners directly, the Youth Energy Saving Awards will give a substantial cash donation to each winning team's nominated NGO to fund social services for young people. Linking energy efficiency and charitable work is beyond our regulatory portfolio, but is something that society needs and can benefit from.

At the same time, we are also working to expand the MEELS to include new product types in Phase 3 of the scheme. As to the Buildings Energy Efficiency Ordinance, the focus will continue to be on enforcement and on upgrading all design standards under the BEC every three years. We are also exploring the possibility of implementing DCSs at new districts in Hong Kong, especially those with sizeable commercial developments with large demand for air-conditioning.

Another priority will be to urge the trades to conduct effective asset management, as aging electrical and mechanical facilities will have impact to public safety. The MTR Corporation Limited is making progress in this respect. It is investing HK\$6 billion in 93 new eight-car trains to replace first-generation trains running on four existing railway lines, and a further HK\$3.3 billion to replace the signalling systems for seven existing lines with new ones using the latest communications-based train control technology. The new assets are expected to boost railway safety and reliability.

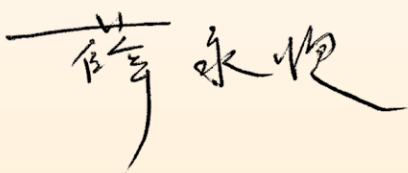
In view of the fast-expanding railway network and our increasing workload, we will create 11 new posts, including two Chief Engineer posts, in our Railways Branch from 2015/16. The added capacity will strengthen our railway regulatory regime.

我們也會有新舉措，去提高車輛維修業的專業地位和質素。車輛維修技術諮詢委員會為表示對最終成立強制性車輛維修工場及維修技工註冊計劃的支持，年內已提出建議，要於2015年推出「車輛維修工場自願註冊計劃」。

### 鳴謝員工與持份者

回顧2014/15年度規管服務工作成果的時候，最大的感受，是全體同事在工作中顯現的以人為本精神和承擔感。我們的團隊近年可說是奮發銳進，變得更靈活主動，更樂於與持份者、傳媒和社會人士接觸溝通。這是很大的成就，我衷心為同事感到高興，也多謝他們的出色表現。

我也必須感謝業界，還有專業學會、學術界、商會、工會和培訓機構等持份者對我們的支持，並向積極支援部門工作的各個諮詢及技術委員會成員致謝。傳媒和市民大眾也提供了不少寶貴意見，鞭策我們不斷改善。有大家的鼎力支持，我們有信心，規管服務必會精益求精，做得更好。



**薛永恒**

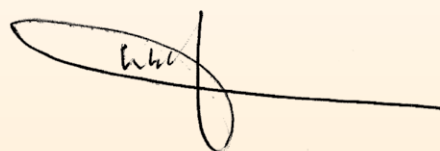
機電工程署副署長/規管服務

There will also be further efforts to enhance the professional status and quality of the vehicle maintenance trade. To demonstrate the trade's support for a mandatory registration scheme for vehicle maintenance workshops and vehicle mechanics, the Vehicle Maintenance Technical Advisory Committee has proposed during the year to launch a Voluntary Registration Scheme for Vehicle Maintenance Workshops in 2015.

### GRATITUDE TO STAFF AND OTHER STAKEHOLDERS

As we review the accomplishments in 2014/15, I am most impressed by the commitment of our Regulatory Services staff and the people-oriented spirit they demonstrate in their work. The team has been transforming itself in recent years to become more dynamic and proactive in reaching out to stakeholders, the media and the community. I congratulate our staff on this major achievement and thank them for their good work.

I would like to also express our gratitude to the trades and other stakeholders such as learned societies, academics, trade associations, workers' unions and training institutions for their support, as well as those who serve on various advisory and technical committees supporting our work. The media and the general public have also provided us with valuable feedback on how to improve our performance. With your continued support, we are confident that Regulatory Services will go from strength to strength.



**Alfred W H Sit**

Deputy Director/Regulatory Services, EMSD





機電工程署事事以人為本，我們關顧的社羣也很廣泛，包括受規管的行業、部門的出色團隊以及全港市民。

作為本港規管和推動機電安全與能源效益的機構，我們致力執行有關的法規，並提高社會對良好習慣及正確作業方法的認知。我們的宗旨是為全港提升生活質素，並時刻銘記，部門一切努力的最終目標，都是讓市民享有安全永續的生活環境，人人安心。

People are our top priority. For us at the Electrical and Mechanical Services Department, our community encompasses those in the regulated trades and our highly competent staff team, and extends beyond them to everyone who lives in Hong Kong.

As Hong Kong's regulator and promoter of E&M safety and energy efficiency, we strive to enforce the relevant laws and raise awareness of good habits and practices. Our aim is to improve the quality of life for all in Hong Kong. We never forget that the ultimate reason for everything we do is to give people the peace of mind that they live in a safe and sustainable environment.

推己及人 安全節能

**HELPING THE COMMUNITY  
STRENGTHEN SAFETY AND  
ENERGY EFFICIENCY**

為了更生動地向讀者介紹我們2014/15年度的工作，我們情商了一個家庭當導賞員，帶大家看看部門年內規管工作的重點。這是爸爸**馬克**，是位辦公室經理；媽媽**愛蓮**，全職家庭主婦；兒子**馬田**今年讀中三，女兒**愛瑪**讀小五；爺爺**馬泰**已經退休，周末就來探他們。當然，馬田和愛瑪早已登記參加了機電工程署為維繫全港青少年而設的「機電青少年大使」計劃。

Let us meet the family who will be your guide to some of the highlights of our Regulatory Services work during the 2014/15 year. **Mark** the father is an office manager, and **Elaine** the mother a homemaker. **Martin** the son is in Form 3 and younger daughter **Emma** in Primary 5. Retired grandpa **Matthew** visits them on weekends. Needless to say, both Martin and Emma have enrolled as E&M Young Ambassadors, a youth engagement scheme run by EMSD.



馬克是個機器迷，愛讀任何有關電力系統和電器的資訊。  
Mark loves all sorts of gadgets and enjoys reading about electrical systems and electric products.



馬田喜歡火車和鐵路，每天都乘幾次列車。  
Martin loves trains and railways. He takes the train several times a day.



愛瑪一有機會就要乘升降機和扶手梯，而像所有小孩，她也喜歡刺激的機動遊戲。  
Emma looks forward to taking lifts and escalators whenever she can. Like most children, she also loves the excitement of amusement rides.



愛蓮操持家務，對如何安全使用氣體很有心得。她也是社區中心的積極義工。  
Elaine makes safe use of gas in her housework. She is also an active volunteer helper in a community centre.



爺爺馬泰十分關注環保，從不浪費任何天然資源，包括能源。  
Grandpa Matthew has a passion for environmental protection and never wastes any natural resources, including energy.

既然他們每人都有一種與機電工程署規管服務有關的興趣，我們就看看他們眼中我們的工作吧！

As each family member has strong interests that are relevant to what we do at EMSD Regulatory Services, let us look at our work through their eyes!





保障公眾安全  
**PROTECTING  
PUBLIC SAFETY**

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## 電力安全 ELECTRICAL SAFETY

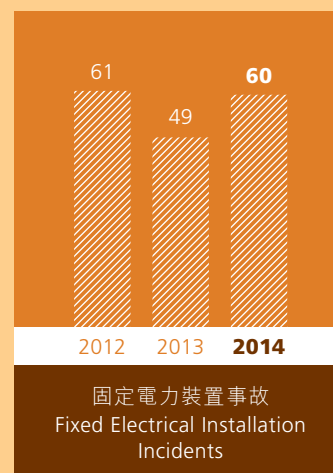
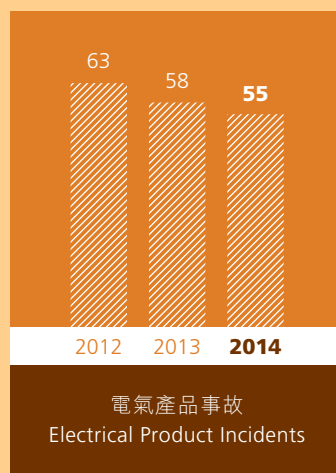
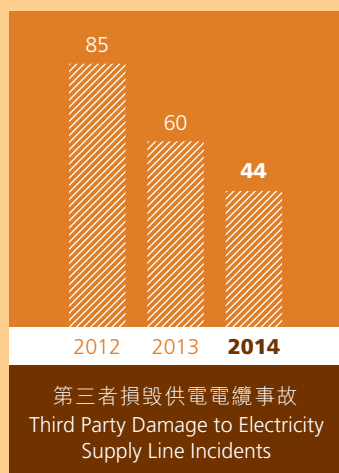
馬克喜歡一切與電力有關的東西，也很關注電業界的發展。

Mark has a passion for anything electrical and closely follows developments in the electrical trade.

大家好，我叫馬克，讓我們齊來看看本港電力安全的近期發展。  
*Hi, I am Mark and I am going to show you some recent highlights of Hong Kong's electrical safety environment.*



## 電力事故數目 Electrical Incidents Figures



### 事故數字下降

我很高興見到，香港2014年兩類主要電力事故持續錄得低數字：第三者損毀供電電纜事故，由2013年的60宗降至2014年的44宗，而電氣產品事故也由2013年的58宗降至2014年的55宗。

這不單對市民是好消息，也證明即使本港基建正快速增加，電業界也有效加強了安全工作的文化。機電工程署一直都透過多種教育和溝通活動，鼓勵業界採取安全作業方法，多年來的努力也見成效。

### 註冊電業工程人員完成首個進修周期

一般市民未必知道，為確保電氣從業員的專業水平，業界人士現必須定期接受有系統的培訓。機電工程署為全港註冊電業工程人員推出的「註冊電業工程人員持續進修計劃」，已於2014年底完成首個三年的培訓周期，即是說全港約74 000名註冊電業工程人員，已完成了計劃要求的兩個培訓單元，並成功續期註冊。在未來的新一輪進修周期，部門會推出更多的進修方法，並提供範圍更廣的課程供學員選讀，讓進修計劃更全面和靈活，繼續為註冊電業工程人員和市民的安全把關。

### FALLING INCIDENT RATES

I am pleased to say that we again recorded low numbers in two types of major electrical incidents in 2014: third-party damage incidents to electricity supply lines dropped from 60 in 2013 to 44 in 2014, and electrical product incidents dropped from 58 in 2013 to 55 in 2014.

This is good news for the public and shows that our electrical trade has continued to improve its safety culture despite the rapid growth of infrastructure works in Hong Kong. EMSD has encouraged the trade to adopt good safety practices via multiple education and communication initiatives, and its efforts are paying off.

### REWs COMPLETE FIRST PROFESSIONAL DEVELOPMENT CYCLE

The general public may not be aware that Hong Kong's electrical trade now undergoes regular systematic training as a way to help safeguard the quality of the profession. EMSD's Continuing Professional Development (CPD) Scheme for all Registered Electrical Workers (REWs) completed its first three-year cycle at the end of 2014. By then about 74 000 REWs had fulfilled the two-module training requirements and successfully renewed their REW registration. In the coming CPD cycle, additional means of fulfilling the CPD training requirements will be introduced, and a wider range of courses will be offered. This will make the programme more flexible and comprehensive so that it continues to promote safety for REWs and the public.



## 保障公眾安全 Protecting Public Safety



我們應用科技提高巡查工作的效率，比如熱能紅外線影像器，就能實時探測電力裝置上可能發生故障的部位。  
Thermal imagers are examples of how we apply technology to make inspection work more efficient. The device can identify potential faults on electrical installations in real time during inspections.



### 運用科技精明工作

機電工程署人員外勤工作時，會運用科技促進電力安全，例如電氣督察在外巡查時，會採用接駁到平板電腦的熱能紅外線影像器，以實時探測電力裝置上過熱的部位，找出可能發生故障的位置。現時電氣產品的巡查工作，也已用上平板電腦，好處是可以馬上從機電工程署的資料庫，獲取有關的產品證書資料，即時核實。這些都是部門在工作上精明運用科技的例子，對公眾大有裨益。

### 新工作守則及監察網上活動

機電工程署在2014/15年度與電業界成立了工作小組，檢討及更新了《電力線路（規例）工作守則》，目的是進一步提高安全要求。現時很多新落成的摩天大樓都設有本身的高壓電力裝置，因此更新守則就更形重要。新守則將於2015年出版。

網上購物是我的嗜好，但跟其他消費者一樣，我也擔心網店會賣不合規格的電氣產品。機電工程署的同事已不斷監察主要的電子商貿平台，一旦發現不符合安全規格的電氣產品，就會通知網商收回產品廣告。我們都知道，要規管網上世界並不容易，但部門在這方面的工作，對保護像我這樣的本地消費者，會有一定作用。

### WORKING SMART WITH TECHNOLOGY

EMSD also uses technology to step up electrical safety in the field. EMSD inspectors have begun using infrared thermal imagers connected to tablet computers to identify hotspots, or potential faults, on electrical installations in real time. Tablet computers are now also used during inspections of electrical products, providing a way to instantly check product certificates against EMSD's main database. Again, this is working smart and good news for the public.

### NEW CoP AND CYBERSPACE MONITORING

During 2014/15, EMSD set up a working group with the electrical trade to review and update the Code of Practice (CoP) for the Electricity (Wiring) Regulations. The aim is to step up safety requirements, especially as more new high-rise buildings are now equipped with their own high-voltage electrical installations. The new CoP will be published in 2015.

Online shopping is one of my favourite pastimes, but like all consumers I am wary about getting sub-standard electrical products from Internet merchants. EMSD officers monitor major e-trading platforms and issue reminders that urge merchants to withdraw the advertisements of non-compliant electrical products. Cyberspace is difficult to police, but this ongoing effort by EMSD will go some way towards protecting consumers like me in Hong Kong.



## 註冊電業工程人員歡迎第二輪進修計劃

### REWs EMBRACE CPD AS SECOND CYCLE BEGINS

機電工程署於2012年1月推出「註冊電業工程人員持續進修計劃」，要求所有註冊電業工程人員在註冊續期前，完成兩個培訓單元。由於註冊續期是每三年一次，因此全港約74 000名註冊電業工程人員，現都已完成第一輪持續進修，接受過「法例及安全規定」及「技術知識」兩方面的培訓。

港九電器工程電業器材職工會副理事長陳熾憲先生認為，進修計劃不單有助註冊電業工程人員在工作時更安全，對用家也加強了安全保障。

「培訓課程讓我們了解法例的最新要求，這固然重要，而學員之間互相分享經驗，也十分寶貴。有時別人做過的工作，自己未必經歷過，所以每個學員都有貢獻。」他說。「進修計劃的最大優點是有很多不同的培訓機構，遍佈全港各區，學員可自由選擇上課時間和地點，非常靈活。」業界人士如因事未能參加培訓，機電工程署在網上也提供了持續進修課程，幫助他們滿足註冊續期需要。

第二輪持續進修周期開始在即，陳先生認為過去三年的經驗相當正面，同業現已普遍接受持續進修是行業的一部分。「計劃推行得不算急進，是逐步來，這點很重要。我們很高興見到大部分同業都覺得進修計劃有用。」

EMSD launched the Continuing Professional Development (CPD) Scheme in January 2012, requesting Registered Electrical Workers (REWs) to complete two training modules before registration renewal. Since registration is on a three-year cycle, about 74 000 REWs in Hong Kong have now completed the first round of CPD, receiving training on "legislative and safety requirements" and "technical knowledge".

Mr Chan Chi-hin, Vice President of the Hong Kong & Kowloon Electrical Engineering and Appliances Trade Workers Union, believes that CPD has been useful in improving the safety of REWs and those who use their services.

"It is certainly important that we receive updates on any changes to legislative requirements, but the experience-sharing in the technical knowledge module is also very valuable. Every REW has something to contribute that others may not have come across before," said Mr Chan. "The best part is that a variety of training institutes offer the CPD courses at different venues all over Hong Kong, so there is great flexibility for REWs to choose when and where to take the courses." To cater for REWs who cannot attend training in person for whatever reason, EMSD also provides online CPD courses to assist them in registration renewal.

With the second CPD cycle about to commence, Mr Chan notes that the positive experience of the past three years has helped REWs accept CPD as part of the trade. "It was important that CPD was introduced in a modest manner, without being too aggressive. I am happy to say that most REWs now find CPD useful," he said.

機電工程署  
EMSD

香港特別行政區政府  
機電工程署

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主頁 > 保障公眾安全 > 電力 > 註冊電業工程人員持續進修

## 登記名冊： 註冊電業工程人員

註冊電業工程人員 (REW) 持續進修 (CPD) 計劃

由機電工程署主辦講座

2015年 10月 11月 12月

2015年12月註冊電業工程人員持續進修講座

課程編號	EM125 (新)
日期	1/12/2015 (星期二)
時間	晚上 7:30 - 9:30 (晚上 7:00 開始登記)

現正接受報名  
下載報名表格

## 氣體安全 GAS SAFETY

愛蓮既是家庭主婦，也是社區中心的義工，她從日常生活累積了不少氣體安全知識，且聽她描述去年本港氣體安全的發展。

As a homemaker and a volunteer worker at a community centre, Elaine has practical knowledge of gas safety. Here is her account of the past year's gas safety developments.



大家好，我是愛蓮，馬克的太太，有兩個孩子。氣體安全是我日常生活中重要的一環，一方面是因為家務所需，同時因為我在社區中心當義工，工作之一是教導長者如何確保家居氣體安全。我們不單向長者講解家用氣體安全貼士，也提醒他們應為家中氣體裝置至少每18個月，安排註冊氣體承辦商檢查一次。我們也時常向長者提及，機電工程署一直致力維持社區的氣體安全，比如去年就做了以下的工作。

*Hello, I am Elaine, Mark's wife and a mother of two. Gas safety is an important part of my daily routine, not only in my household but also in my volunteer work. I help at a community centre and one of my duties is to teach our senior citizens about gas safety at home. We provide safe-usage tips and remind them to get their gas installations checked at least once every 18 months by a registered gas contractor. We also assure them that EMSD is constantly working to boost gas safety in the community. Here are just some of EMSD's efforts for us from the past year.*

## 氣體事故數字下降

我們很高興見到氣體事故在2014年持續下降至217宗，較2013年的218宗及2012年的226宗有輕微減少。這對市民來說肯定是好消息，顯示機電工程署各種預防氣體事故的工作，例如業界安全講座及社區教育活動等，都見成效。

## GAS INCIDENT NUMBERS DOWN

It is good to know that gas incidents continued to decrease in 2014 when 217 were recorded, down slightly from 218 in 2013 and 226 in 2012. This is reassuring for consumers like me and shows that EMSD's efforts to prevent gas incidents, such as safety talks for the trade and community education programmes, have paid off.



煤氣公司利用「立管檢查飛行器」，無需搭建棚架亦可有效檢查設於高層樓宇之上給供氣分喉。  
Towngas is now using Quadcopter for inspection of service risers attached to high-rise buildings without the need of erecting scaffolds.



機電工程署員工正巡查屋苑內的中央石油氣裝置。  
EMSD staff inspecting an LPG central supply installation in a housing estate.

### 供氣分喉與煤氣安全

很多人都不知道，上給供氣分喉鏽蝕是氣體事故的主要成因之一，因此我們應多留意家中上給供氣分喉的狀況，以防事故發生。煤氣公司為提高上給供氣分喉檢查工作之效率，已全面採用新的「立管檢查飛行器」，定期監察高層住宅樓宇上給供氣分喉。這儀器於2014年開始逐步使用，證明可無須搭棚或入屋而有效檢視上給供氣分喉的狀態，同時亦能探測有否氣體洩漏。

煤氣公司馬頭角廠房完成優化工程後，已增加使用天然氣作煤氣生產，機電工程署也提供了技術支援和進行了必需的審核，確保廠房安全使用天然氣。上述優化工程也減少了廠房需儲備的石油量，變得更安全。

### 就用地規劃充當氣體風險顧問

去年署方在幕後做了很多工作，在宏觀層面確保本港氣體安全，例如繼續作為政府的氣體風險顧問，就氣體裝置附近的用地規劃及發展提供意見。由於政府近年積極賣地以增加房屋供應，機電工程署在這方面的工作也有增無已。

### 保障石油氣車輛安全

機電工程署在規管石油氣車輛的氣體安全也扮演重要角色。就石油氣儲存而言，若儲存器的總標稱容量超過130升，即列作「應具報氣體裝置」，其建造和使用必須獲得機電署批准。全港現時獲機電工程署批准的「應具報氣體裝置」之中，有29個設於車輛維修工場內，有五個則設於石油氣燃料缸工場內。而任何有關石油氣車輛燃料系統或相關配件的維修保養或更換工作，以及更換石油氣燃料缸的工作，都必須由機電工程署批准的第六類勝任人士、或在其監督下進行。

### RISER AND TOWN GAS SAFETY

People may not know that riser corrosion is a major cause of gas incidents, but we can all help keep an eye on riser conditions at home. To step up the effectiveness of riser inspection, Towngas is now fully utilising its new Riser Inspection Quadcopter to regularly inspect risers at high-rise buildings. This device, which has been gradually applied since 2014, monitors riser condition and detects gas leakage without scaffolding or the need to enter flats.

Towngas has increased the use of natural gas for town gas production after completing the upgrading works at its Ma Tau Kok Plant. EMSD has provided technical support and necessary vetting to ensure the safe use of natural gas at the Plant. As a result of the above upgrading works, naphtha storage at the Plant has been reduced, making it safer.

### GAS RISK ADVISER FOR LAND USE PLANNING

A great deal of work also took place behind the scenes last year to ensure gas safety in the community on a larger scale. For example, EMSD has continued as the gas risk adviser to the Government in land use planning and development in the vicinity of gas installations. It has been busy in this role as the Government continued its pro-active land sales programme to boost housing supply.

### KEEPING LPG VEHICLES SAFE

EMSD also plays a key role in regulating gas safety of the LPG vehicle trade. In respect of LPG storage, any containers with the aggregated nominal water capacity of more than 130 litres is classified as "notifiable gas installation (NGI)". The construction and use of NGIs require the approval of EMSD. Among the NGIs approved by EMSD, 29 are inside vehicle maintenance workshops and five inside LPG fuel tank workshops. Work involving the maintenance, repair or replacement of LPG vehicle fuel systems or associated components, as well as the replacement of LPG fuel tanks, are required to be carried out by a Competent Person (Class 6) or a person under the supervision of a Competent Person (Class 6) approved by EMSD.

工作人員正於加氣站抽取車用石油氣樣本，供機電工程署進行每月的車用石油氣品質檢定測試。該檢測制度高度透明，深得業界和公眾信賴。 Auto-LPG samples being taken from a filling station for EMSD's monthly auto-LPG quality monitoring and testing. The system is highly transparent and well trusted by the trade and the public.



大家或會記得，2015年初，石油氣的士引擎死火問題曾引起業界關注。機電工程署每月均進行車用石油氣樣本化驗，以監察車用石油氣質素，當時的化驗結果未見異樣。為了解情況，署方除了定期的檢測，額外抽取了石油氣樣本進行化驗和增加巡查市面的車輛維修工場，並直接和石油氣的士業界聯絡。一如機電工程署近年行之有效的石油氣品質監察制度，當時整個調查過程都高度透明，贏得業界信賴，有助消除公眾的疑慮。該事件很可能由於車輛疏於保養和引擎在寒冷天氣下調較不當所致。其實我們一家人有時也會乘的士，所以也樂見石油氣的士引擎死火事件已迅速解決。

You may recall there were concerns among the taxi trade in early 2015 about engine stalling. Monthly auto-LPG quality monitoring and testing by EMSD did not produce any unusual results. Additional LPG sample tests and extra garage visits were made on top of routine checks, as well as direct liaison with the trade to look into the situation. This investigation, like the well-established LPG quality monitoring system itself, was highly transparent and well trusted by the trade, which helped allay concerns. The problem was likely to have been caused by lack of regular vehicle maintenance and improper engine adjustment under cold weather conditions. As our family takes taxi rides from time to time, I'm pleased to note that incidents of engine stalling soon subsided.

### 覆檢石油氣燃料缸

的士業和全港石油氣車輛都關注的事，是按《氣體安全（氣體供應）規例》規定，石油氣燃料缸必須每五年最少檢測一次。由於2015及2016年將是燃料缸的覆檢高峰期，為確保全港21 000多部石油氣車輛能順利進行覆檢，機電工程署會鼓勵業界開設更多新的石油氣燃料缸工場，及採用石油氣液體交換系統以排走燃料缸內的石油氣，這樣對周圍環境會做成較少污染。

### LPG CYLINDER REVALIDATION

Another issue of interest to the taxi trade and the entire LPG fleet in Hong Kong is the revalidation of fuel tanks of LPG vehicles in accordance with the Gas Safety (Gas Supply) Regulations, which require LPG cylinders to be tested and examined at least once every five years. To ensure the smooth processing of the 21 000 LPG vehicles in Hong Kong during the cyclical peak in 2015 and 2016, EMSD would encourage the trade to establish new LPG fuel tank workshops. It will also encourage the use of LPG liquid transfer system to purge LPG fuel tanks, which is more environment-friendly for the community.

### 事故調查及其他工作

相信不少市民都記得，2015年4月黃大仙一個車輛維修工場發生爆炸，造成三死九傷。機電工程署現正對事故進行深入調查，同時也加強了對全港車輛維修工場的巡查，並採取了一切必需的短、中、長期措施，防止類似意外再發生。

### INCIDENT INVESTIGATION AND FURTHER WORK

Many of us also recall the unfortunate incident in April 2015 in which three were killed and nine were injured in an explosion at a vehicle repair workshop in Wong Tai Sin. EMSD is conducting a detailed investigation of the incident. At the same time, it has increased workshop inspections and taken all necessary short-, medium- and long-term mitigating measures to help prevent such a tragedy recurring.

上述氣體安全工作明年仍會繼續，其他活動，包括經常性的安全推廣工作，如向提供石油氣車輛燃料系統維修服務的工場加強宣傳等，也會加緊進行。我們作為普通市民，這些工作雖未必幫得上忙，但我們可以做的，就是在家居安全地使用氣體，小心監察家居的氣體爐具，這樣就人人都可以出一分力啦！

These and other gas safety efforts will continue well into the coming year. Ongoing efforts include further work to step up safety education at workshops providing service for LPG vehicle fuel systems. We in the community may not always be able to help with these schemes, but we can all use gas more safely at home and keep an eye on our gas appliance safety. We can all chip in!

近期引進香港的新型石油氣的士(左),及兼用石油氣和汽油的新型雙燃料的士(右),將加強本港的士車隊,給公眾更多選擇。  
The new LPG taxi model (left) and the new bi-fuel taxi model running on LPG and petrol (right), both recently introduced into Hong Kong. The new models will strengthen the local taxi fleet and give the public more choices.



## 新型石油氣的士及雙燃料的士獲批 NEW LPG AND BI-FUEL TAXIS APPROVED



香港在1997年引進石油氣的士,最近運輸署更批准新類型的石油氣的士及雙燃料的士在港推出,加強了石油氣的士的陣容。

新型的士由2015年初已在香港推出。跟一般四座位石油氣的士不同,它們的石油氣缸內都沒有燃料泵,完全撇除了因維修保養燃料泵,而到石油氣燃料缸工場排走燃料缸內的石油氣再進行維修的需要。

機電工程署在運輸署發出有關的車輛類型批准之前,向運輸署提供了氣體安全方面的意見,尤其是有關雙燃料的士和新型石油氣的士的燃料缸的意見。兼用石油氣和汽油的雙燃料的士,在本港雖是新事物,在歐洲卻很普遍。

新引入香港的雙燃料的士,車尾有個可伸縮的斜台,方便坐輪椅的乘客進出,而新型的石油氣的士型號,則可容納相當多行李。這批新類型車輛將加強本地的士車隊,給公眾更多選擇。

LPG taxis have been operating in Hong Kong since 1997. The LPG fleet was recently extended with Transport Department's type approval for a new LPG and new bi-fuel taxi category.

The new taxi models have been available in Hong Kong since early 2015. Unlike conventional four-seater LPG taxis, these models do not have fuel pump inside the LPG tank, eliminating the need for purging of LPG fuel tanks at LPG fuel tank workshops for maintenance and repair of the fuel pump.

EMSD provided gas safety advice to the Transport Department prior to the approval, specifically with regard to the LPG vehicle fuel tank of the new bi-fuel and LPG taxis. While the bi-fuel taxi running on LPG and petrol is only now being introduced in Hong Kong, it is common in Europe.

The new bi-fuel model features a retractable ramp at the back, allowing easy entry for passengers on wheelchairs, while the new LPG taxi model can accommodate a considerable quantity of luggage. The new vehicle type is expected to strengthen the local taxi fleet and give the public more choices.

## 車輛維修業註冊進展 PROGRESS IN REGISTRATION FOR VEHICLE MAINTENANCE TRADE

為了提升車輛維修業水平,機電工程署早於2007年已推出了「車輛維修技工自願註冊計劃」,至2015年4月為止,約有6 400名車輛維修技工已經註冊,佔全港車輛維修技工約七成。部門也於2013年推出「車輛維修工場約章」,而不久將來更會推出一個「車輛維修工場自願註冊計劃」。

此外,為進一步提高業界水平,機電工程署將進行深入的可行性研究,以近年推行上述兩個自願計劃的經驗為基礎,探討是否可為本港車輛維修技工及維修工場,分別推行強制性的註冊制度。

To enhance standards of the vehicle maintenance trade, EMSD launched the Voluntary Registration Scheme for Vehicle Mechanics in 2007. About 6 400 mechanics had registered as of April 2015, which is about 70% of vehicle mechanics in Hong Kong. The Department also launched the Vehicle Maintenance Workshops Charter Scheme in 2013, and will soon roll out a Voluntary Registration Scheme for Vehicle Maintenance Workshops.

To further enhance the trade's standards, EMSD will start conducting an in-depth study on the feasibility of putting in place a mandatory registration system for the vehicle maintenance trade, covering both mechanics and workshops, having regard to the experiences gained from the two voluntary registration schemes in the past few years.

## 機械安全

### MECHANICAL SAFETY

愛瑪雖只是小學五年級，但對升降機、自動梯和機動遊戲機的最新發展，卻瞭如指掌。她豐富的知識，一方面是由於參加了機電工程署的機電青少年大使計劃，另一方面是由於她對一切關於垂直運輸和刺激的機動遊戲機資料，都極有興趣，不會放過。

Though Emma is only in Primary 5, she is totally up to date on all that is new in lifts and escalators and amusement rides. Most of her knowledge comes from being an EMSD E&M Young Ambassador, and from avid reading of anything related to vertical transport and thrilling carnival rides.



大家好，我是愛瑪。機動遊戲機是我的至愛，對升降機和自動梯也十分有興趣，它們每天都安全有效地運送幾百萬人，真是神奇！我想跟大家分享一些我知道的相關資訊。

*Hi, I am Emma. I love amusement rides and find it amazing that lifts and escalators can move millions of people so safely and efficiently every day. May I share with you a few things I know?*



中環海濱摩天輪（左）及「荔園 Super Summer 2015」（右）均能如期開幕供公眾享用，全因機電工程署就場內機動遊戲機作出適時的審批工作。  
Both the Hong Kong Observation Wheel (left) and the Lai Yuen Super Summer 2015 (right) were able to open according to schedule for enjoyment by the public, thanks to EMSD's timely vetting and approval of the rides.

## 審批嘉年華機動遊戲機和纜車系統

去年冬天最開心的，是去了2014年12月至2015年2月在中環舉行的「歐陸嘉年華」。全因機電工程署就場內各種機動遊戲機的適時審批工作，我們一家人和朋友才可以享受這盛事，當然，我們也順道去了旁邊的中環海濱摩天輪。同是於2014年12月開幕的摩天輪，也由機電工程署審批，讓我們可從高空欣賞維港的不凡美景。

我們家有時也會去乘坐昂坪360纜車。由於機電工程署的努力，這纜車系統已加強了「狀態為本監察」和「風險為本監測」的工作，使系統更可靠。昂坪360系統的可靠度，再由2013年的99.82%升至2014年的99.83%，即是纜車平均運作每八小時，才只有不足一分鐘的停頓。這有助操作人員增加預防性保養的次數，進一步減少因機件故障做成的系統停用時間。

說到機動遊戲機，怎能不提「荔園 Super Summer 2015」？重現荔園遊樂場對爸爸媽媽固然是懷舊之旅，哥哥和我也覺得很好玩。場內有六款機動遊戲機，多是模仿當年荔園的機動遊戲機。機電工程署在極短的時限內，完成了那批機動遊戲機的審批工作，讓市民趕得及在夏天享受這活動。

現在轉去談談我的另一嗜好，就是升降機和自動梯。正如有些同學是巴士迷，我就是升降機和自動梯迷！我知道機電工程署去年做了很多工作，以加強升降機和自動梯安全，下面是一些例子。

## VETTING CARNIVAL RIDES AND CABLE CAR SYSTEM

One of the best experiences for me last winter was the Great European Carnival, which was on in Central from December 2014 to February 2015. Thanks to EMSD's timely vetting and approval of the rides, my family and friends were able to enjoy great fun there with me. It goes without saying that we also took a ride on the nearby Hong Kong Observation Wheel. Also vetted and approved by EMSD, it opened in December 2014 to give us breathtaking harbour views.

Our family also enjoys a ride on Ngong Ping 360 (NP360) from time to time. The cable car is now even more reliable thanks to EMSD's work in stepping up condition-based monitoring and risk-based surveillance. Reliability improved from 99.82% in 2013 to 99.83% in 2014, meaning there was less than one-minute's stoppage for every eight hours of cable car operation. This allowed the operator to schedule more frequent preventive maintenance, thus reducing downtime due to equipment failure.

While on the subject of rides, how can I not mention the Lai Yuen Super Summer 2015? It was a nostalgic trip for my parents, and great fun for my brother and me. The funfair had six amusement rides, mostly replicas of the original Lai Yuen. The rides were vetted and approved by EMSD, against a tight timeframe, which allowed the event to open to the public in time for the summer.

Now to my other hobby: just as some of my classmates love spotting buses, I am fascinated by lifts and escalators. I know that as the regulator of lifts and escalators, EMSD has done a lot in the past year to enhance lift and escalator safety. Here are some examples.



### 升降機合約價格更透明

我們都知道，過低的升降機保養價格，可能會引致服務質素欠佳，因為承辦商或會先大幅壓價以取得合約，然後因貨就價，不做足服務。因此，相關的負責人，例如升降機擁有人和物業管理公司等，都有需要知道市場合約的價格，以資比較。就此，機電工程署已於2014年11月首次公開了升降機的保養價格數據。

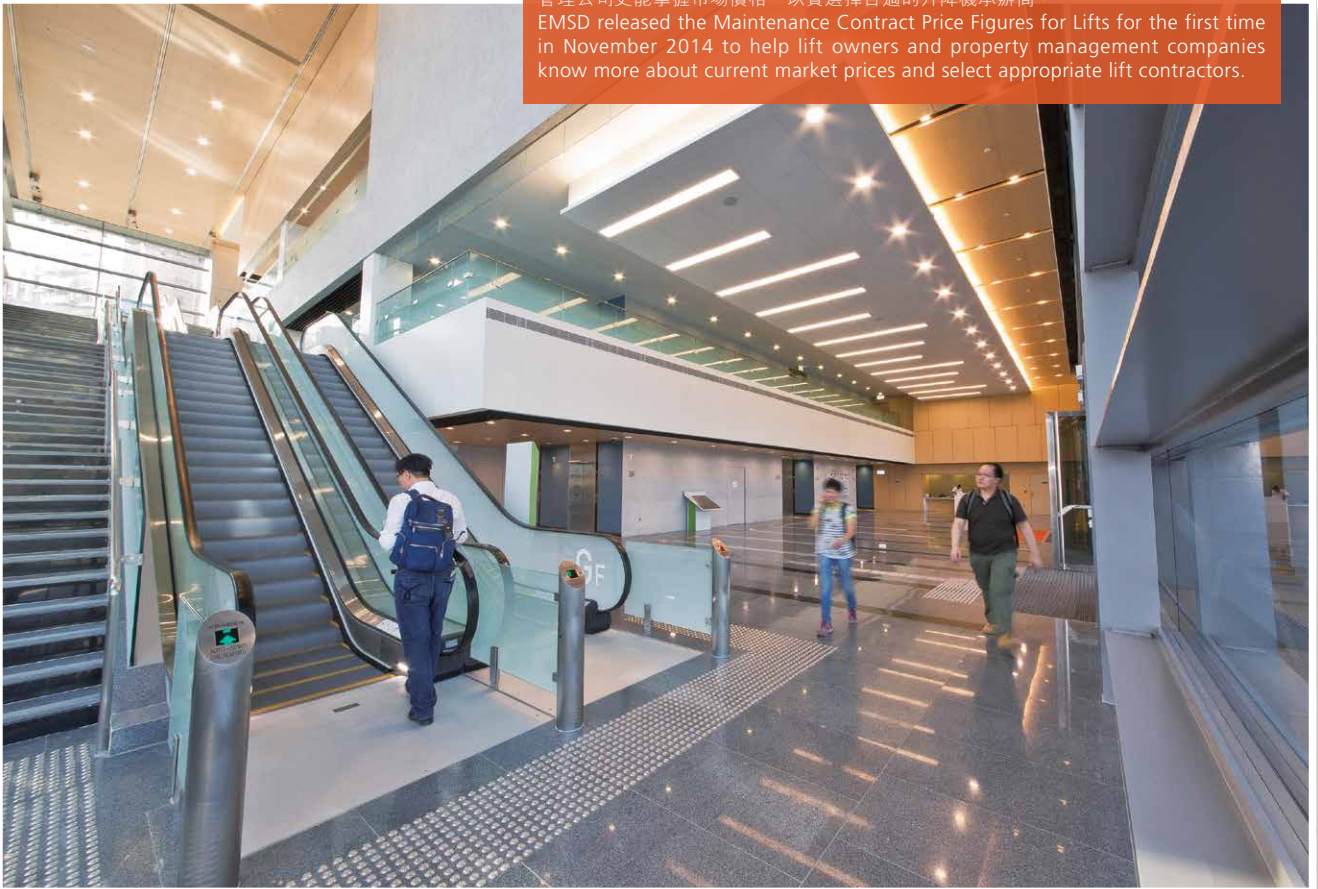
署方提供了本港私人住宅和商業樓宇升降機的平均每月保養合約價格數據，並根據升降機的「額定速度」與「運行樓層」兩個準則細列價格，數據每隔半年在部門網頁更新一次。新措施的目的，是提高市場的透明度，讓負責人在選擇升降機承辦商時作為參考，並根據承辦商提供的服務內容，考慮其報價是否合理。

### LIFT CONTRACT PRICES MORE TRANSPARENT

We all know that unreasonably low contract prices may contribute to poor lift maintenance because contractors that set such prices to secure business may then cut corners to save cost. Responsible Persons (RPs) such as lift owners and property management companies therefore need a good understanding of current market prices. To help, EMSD released the Maintenance Contract Price Figures for Lifts for the first time in November 2014.

The figures provide average monthly maintenance prices for private residential and commercial buildings, itemised according to the lift's rated speed and the number of floors served. Prices are taken from an ongoing survey by an independent consultant. The figures are updated every six months and published on the EMSD website for the public's reference. The new measure aims to make the market more transparent, and is a reference for RPs considering whether the price quoted by their contractor is reasonable and appropriate for the services specified.

機電工程署於2014年11月首次公開了升降機的保養價格數據，讓升降機擁有人和物業管理公司更能掌握市場價格，以資選擇合適的升降機承辦商。  
EMSD released the Maintenance Contract Price Figures for Lifts for the first time in November 2014 to help lift owners and property management companies know more about current market prices and select appropriate lift contractors.



## 新「升降機及自動梯保養工作事宜移交核對表」

另一新猷是2015年5月推出的「升降機及自動梯保養工作事宜移交核對表」，方便負責人在轉換承辦商時，確保新舊承辦商之間能有效地交接保養工作及有關的記錄。核對表也有助負責人及新舊承辦商三方，充分了解在交接過程中各自的法律責任，讓各方都更符合法例要求。

至於加強版的「註冊升降機及自動梯承辦商表現評級制」，增添了綠色「安全之星」及藍色「質素之星」，已於2014年1月正式推出，實施以來也廣受升降機及自動梯負責人與公眾歡迎，而新制度對選擇合適的承辦商以提供良好的維修保養服務，實大有幫助。除了加入星星評級外，新制度更加入個別承辦商的資料註明。任何註冊承辦商如涉及意外、或有關安全的官司、或曾收過機電工程署的警告信，在部門網頁上都會註明詳細資料，並保留一年，供負責人及公眾參考，使制度更透明。

## 意外、投訴與查詢

2014年因機件故障而發生的升降機意外只有四宗，而因機件故障而發生的自動梯意外更是零。不過，全年升降機意外數字，卻由2013年的330宗增至2014年的446宗，而全年自動梯意外數字，也由2013年的1 416宗增至2014年的1 639宗。多數意外的主要原因，是乘客不小心使用的行為；至於自動梯意外，另一主要原因是「外來因素」，即有外物楔於梯級與自動梯梳齒板之間，觸發安全掣而急停自動梯運作，引致乘客受傷。

所以，我們作為機電工程署的機電青少年大使，更應該時常提醒親友，切記注意安全使用升降機和自動梯。

署方去年也重新編排了監察升降機和自動梯安全工作的內部分工，採用分區制，每區都由固定的專人跟進，優點是負責同事對區內情況會較熟悉，能加強風險管理，採用更聚焦的方法加強安全。推行分區制後，有關升降機和自動梯的公眾投訴和查詢明顯減少，由2013/14財政年度的1 700宗降至2014/15財政年度的1 406宗，對各方都有利。

## NEW CHECKLIST FOR LIFT AND ESCALATOR MAINTENANCE HANDOVER

Another new measure was the introduction of the Checklist for Handover/Takeover of Lift and Escalator Maintenance in May 2015. This gives RPs a handy tool to manage the transfer of lift and escalator maintenance duties and documents from one contractor to another. The checklist also helps RPs and contractors better understand their respective legal obligations and duties during the handover, which should lead to better compliance with the law.

The completely revamped Contractors' Performance Rating (CPR) system, with the new green Safety Star and blue Quality Stars, was officially launched in January 2014. It has proved popular with RPs and the public, as it helps them choose appropriate contractors for maintenance and repair services. In addition to the star ratings, the new CPR also includes detailed notes on individual contractors that have been involved in incidents or court cases over safety or that have been served with warning letters by EMSD. The notes are kept on EMSD's website for a year for reference by RPs and the public, making the system more transparent.

## INCIDENTS, COMPLAINTS AND ENQUIRIES

In 2014, only four lift incidents and zero escalator incident were caused by equipment fault. However, the total number of lift incidents increased from 330 in 2013 to 446 in 2014 and escalator incidents rose from 1 416 in 2013 to 1 639 in 2014. A key reason was unsafe passenger behaviour. In the case of escalators, "external factors" were also to blame, such as when a foreign object becomes wedged between the step and combplate, triggering sudden stoppage and resulting in injuries.

This is all the more reason why we E&M Safety Ambassadors must remind our family and friends to use lifts and escalators safely.

EMSD has also reorganised to adopt a regional approach to overseeing lift and escalator safety, thus gaining more in-depth understanding of each region and takes risk-based, focused measures. As a result, the number of public complaints and enquiries about lifts and escalators has come down significantly: reducing from 1 700 in FY2013/14 to 1 406 in FY2014/15, to the benefit of all concerned.



經機電工程署的努力，昂坪360纜車系統加強了「狀態為本」和「風險為本監測」的工作，變得更可靠。  
Ngong Ping 360 is now even more reliable as a result of EMSD stepping up condition-based monitoring and risk-based surveillance of the cable car system.



機電工程署正與昂坪360商討，改善吊車車廂門鎖的感應器設計，以減少出錯。  
EMSD has been working with Ngong Ping 360 to enhance the design of cabin door locking sensor to minimise false tripping.

### 業界調查與新措施

署方還有其他新猷，比如2014年就進行了一項業界調查，探討升降機及自動梯行業的人力資源需求和工作環境問題，又於2014年12月成立了一個新的升降機及自動梯保養事宜工作小組，成員包括商會、工會和培訓機構代表，專責跟進該調查發現的有關升降機和自動梯保養的問題。

機電工程署明年更會推出一個促進優化現有升降機的獎項計劃，又會為升降機及自動梯負責人推出一份通訊，此外，署方正與昂坪360商討，改善吊車車廂門鎖的感應器設計，以減少出錯。這些新措施不單會使升降機、自動梯和纜車系統更安全，機動遊戲機也會更刺激好玩，我很期待！

### TRADE SURVEY AND NEW INITIATIVES

But this was not all. EMSD also conducted a trade survey in 2014 to explore the manpower needs and working environment of the lift and escalator trade. In December 2014 it formed a new Working Group on Matters related to Maintenance of Lifts and Escalators to follow up on issues identified in the survey. The new Working Group comprises representatives from trade associations, unions and training institutions.

For next year, EMSD is also planning to roll out an award scheme to promote lift modernisation, and to launch a newsletter for RPs. It is also working with NP360 to enhance the design of cabin door locking sensors to minimise false tripping. I am excited about all these developments, as they shall make our lifts and escalators ever safer and the rides more fun!



伍偉良先生與「2015年申訴專員嘉許獎 — 公職人員獎」獎座。獎項表揚他處理公眾查詢和投訴的專業表現。  
Mr Ng Wai-leung with the trophy of the 2015 Ombudsman's Awards for Officers of Public Organisations, in recognition of his professional handling of public enquiries and complaints.



## 申訴專員獎嘉許同事主動為民解難

### OMBUDSMAN'S AWARD FOR PRO-ACTIVE PROBLEM-SOLVER

一般法例部高級機械督察伍偉良先生，最近榮獲「2015年申訴專員嘉許獎 — 公職人員獎」，表揚他在處理公眾查詢和投訴方面，表現專業、有耐心且態度積極。伍督察的工作，是幫助社區人士解決有關升降機和自動梯的問題，也是承辦商和業主之間的溝通橋樑。

他加入機電工程署工作近30年，多年來在巡查升降機和自動梯、意外調查及有關《升降機及自動梯條例》方面的執法工作，都累積了豐富經驗。

伍督察成功處理過很多住宅樓宇升降機因長期失修而反覆停用的個案，這些情況對業主和住客，特別是長者，都帶來極大不便；而單幢舊樓的管業公司或業主管理委員會，往往缺乏相關的技術知識，因此更容易發生這種情況。一旦收到投訴，伍督察和同事便會親自往現場了解情況，跟居民和升降機承辦商見面商討，嘗試找出問題成因。

他說：「在大部分個案中，住客其實只是想知道工程進度，和幾時可以恢復升降機服務，但承辦商有時就沒有回應，不跟業主溝通。我們就發揮橋樑的角色，為雙方清楚解釋問題所在，加速解決，以盡快恢復升降機服務。」他排難解紛的工作，有時也包括敦促承辦商加快修理故障，補交未齊的文件，或改善保養程序等。

「我們最大的滿足感，就是見到居民，尤其是老人家，高高興興地重新享用到正常的升降機服務，這就是我們工作的價值。所以我常提醒同事，要設身處地為市民著想，嘗試真正去了解他們的需要和感受。」他說。

Mr Ng Wai-leung, senior mechanical inspector of the General Legislation Division, was recently honoured in the 2015 Ombudsman's Awards for Officers of Public Organisations. He was recognised for his professionalism, patience and pro-active attitude in handling public enquiries and complaints. Mr Ng assists the community by helping to resolve lift and escalator problems. He acts as a bridge for communication between lift contractors and property owners.

Since joining EMSD almost 30 years ago, Mr Ng has gained extensive experience in lift and escalator inspection and incident investigation, as well as enforcement of the Lifts and Escalators Ordinance.

Mr Ng has successfully handled many cases where frequent lift breakdowns have caused great inconvenience to owners and occupants, particularly the elderly. Such complaints typically occur in aging residential buildings, often stand-alone ones where the management company or owner's management committee has limited technical knowledge. Upon receiving a complaint, Mr Ng and his team visit the site and talk to residents and the lift contractor to identify the root cause of the problem.

"In most cases, what all the residents want to know is how works are progressing and when lift service will resume. But lift contractors are sometimes not responsive and fail to communicate with flat owners. Our role is to act as a bridge. We clarify the issues for both parties and expedite the problem-solving process so that lift service can resume quickly," said Mr Ng. This might include urging the contractor to expedite fault rectification, submit missing paperwork, or improve maintenance procedures.

"We get a lot of satisfaction from seeing happy residents, especially the elderly, get back their normal lift service. This is the value of our work and the reason why I always remind colleagues to put themselves into the shoes of the public and try to truly understand their needs and feelings."

## 鐵路安全 RAILWAY SAFETY

馬田是個鐵路迷和火車迷，不單認得出香港所有的列車型號，還熟知一切有關本港鐵路網的新聞。跟妹妹愛瑪一樣，他也參加了機電青少年大使計劃。

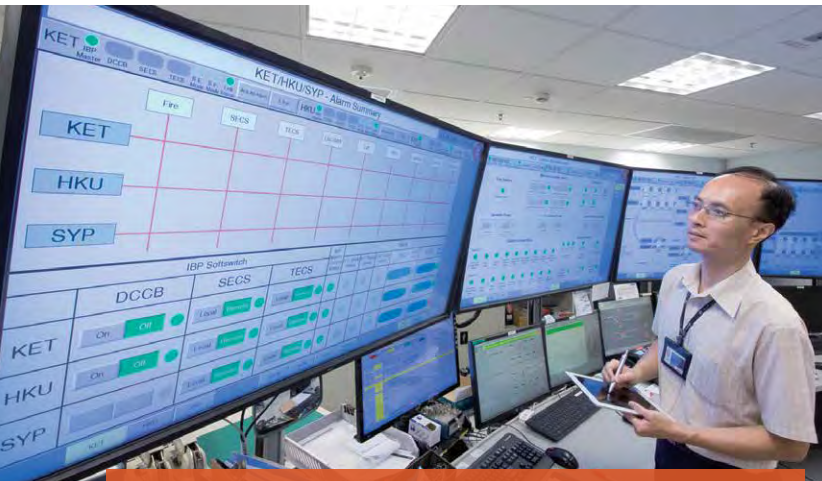
Martin loves railways and trains. He can identify all the train models you can see in Hong Kong, and he closely follows all news about the city's railway network. Like his sister Emma, Martin is an E&M Young Ambassador.

你好，我是馬田。香港的鐵路網近年發展得很快，要追上各種新資訊，真夠我忙的！現在讓我帶大家重溫2014/15年度的鐵路大事。

Hi, I am Martin. I've been really busy staying on top of developments in Hong Kong's fast expanding railway network. Let me take you on a tour of the highlights in 2014/15.



機電工程署人員正巡查港鐵架空電纜系統。港鐵公司在本署監察下，已全面檢視所有架空電纜系統及實施相關改善措施。  
EMSD staff inspecting the MTR overhead line systems. Under the monitoring of EMSD, MTRCL has conducted a thorough review and implemented improvement measures for all overhead line systems.



機電工程署與港鐵公司及相關的政府部門緊密合作，在西港島綫啟用前進行了大量安全檢查及現場測試。  
EMSD worked closely with MTRCL and other relevant government departments to carry out numerous safety inspections and on-site tests prior to the opening of the West Island Line.



## 西港島綫 2014 年 12 月 啟用

2014 年 12 月西港島綫的啟用，是本港鐵路發展的里程碑，為港島西區居民和所有往返西區的市民帶來方便，也為該區揭開新的一頁。機電工程署與香港鐵路有限公司（港鐵公司）及相關的政府部門緊密合作，為西港島綫啟用前進行了大量安全檢查及現場測試，並監察各種緊急事故演習，確保新綫對乘客安全。

經過各方合作和努力，西港島綫的香港大學站和堅尼地城站都能於 2014 年 12 月如期啟用，而西營盤站也已於 2015 年 3 月啟用。機電工程署於多年前便開始投入工作，負責確保由最初的設計階段直至最後的測試和驗收階段，新綫都符合適當的安全做法。新綫啟用當天我當然有去，有機會乘坐由新站開出的第一班列車，見證香港鐵路發展的歷史性一刻，真令人興奮！

## 檢討架空電纜系統的管理

大家或會記得，2014 年初東鐵綫發生了一連串事故，影響列車服務。機電工程署的調查發現，事故成因是由於架空電纜絕緣體損壞，涉及一批品質有問題的絕緣體。

作為鐵路安全規管機構，機電工程署要求港鐵公司立即更換該批絕緣體，作為即時措施。港鐵公司也聘請了獨立專家，徹底檢討架空電纜系統的管理，而機電工程署也密切監察整個檢討過程及審視檢討結果。除了聽取專家的意見外，機電工程署也提出了一系列長遠的改善建議。港鐵公司已採納有關建議，從而提升鐵路系統表現。（詳情另見 40 頁特寫故事。）

## WEST ISLAND LINE OPENED IN DECEMBER 2014

A major milestone last year was the opening of the West Island Line in December 2014, an exciting new page for the local community and everyone who commutes to the Western District. EMSD worked closely with the MTR Corporation Limited (MTRCL) and other relevant government departments to carry out numerous safety inspections and on-site tests and to monitor emergency drills and exercises to make sure that the new line would be safe for passengers.

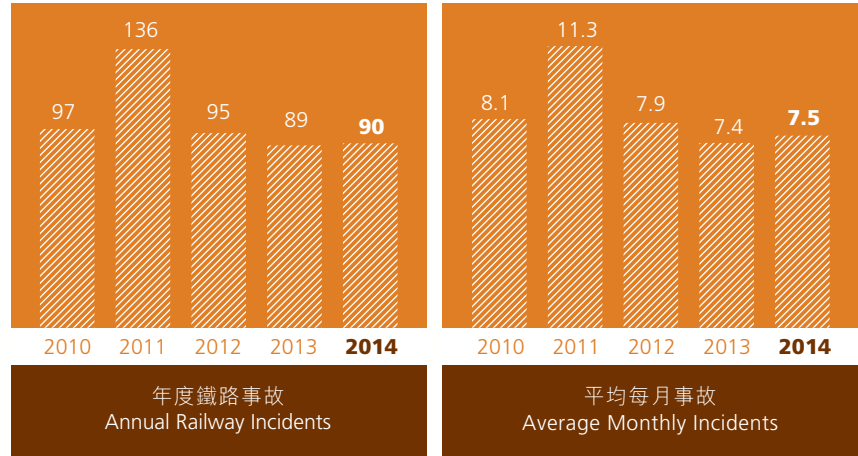
Thanks to the concerted effort of all concerned, HKU Station and Kennedy Town Station were opened in late December 2014 as scheduled, with Sai Ying Pun Station opening in March 2015. EMSD's work on this extension line goes back many years, as it was responsible for ensuring that appropriate safety practices were in place from the earliest design stage through to final testing and commissioning stage. The opening days were fun: I really enjoyed being part of Hong Kong's rail history on the first train from a new station!

## REVIEW OF OVERHEAD LINE SYSTEM MANAGEMENT

You may remember a series of incidents that caused delays on the East Rail Line in early 2014. EMSD's investigations found that the incidents were caused by overhead line (OHL) insulator failure related to the quality of one batch of defective OHL insulators.

EMSD as the safety regulator required MTRCL to immediately replace that batch of insulators as an immediate measure. MTRCL also engaged an independent expert to conduct a thorough review of the management of the OHL systems, while EMSD closely monitored the review process and assessed the review results. On top of the expert's advice, EMSD offered a series of long-term improvement recommendations which MTRCL has already adopted to enhance railway system performance. (See story on p.40 for more details.)

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



### 更換列車及信號系統

對乘客和所有火車迷來說，港鐵公司決定購買93列八卡列車，以替代所有在觀塘綫、荃灣綫、港島綫及將軍澳綫行走的第一代列車，都是令人高興的好消息，港鐵公司並已於2015年7月批出更換列車的合約，造價約為60億港元，新列車將於2018至2023年間運抵本港。機電工程署會確保新列車符合所有相關的鐵路安全標準，並通過所有必要的廠房測試，以及通過在鐵路現場的安全及表現測試。

港鐵公司已開始更換現有七條鐵路綫的信號系統，即荃灣綫、港島綫、觀塘綫、將軍澳綫、東涌綫、機場快綫和迪士尼綫。現時使用的固定區段信號系統，將被先進的「通訊為本列車控制系統」取代，即是採用以無線通訊為基礎的流動區段列車控制技術。荃灣綫信號系統的更換工作現已經展開，並將於2018年率先完成。至於整個更換項目預計於2026年完成。

港鐵公司已於2015年3月批出更換信號系統的合約，造價約為33億港元，涵蓋上述七條鐵路綫的信號系統，包括在路軌、車站、車廠及車務控制中心、以及在載客列車與機車內的相關信號設備。機電工程署會仔細審視有關系統的設計、安裝、以及整體更換計劃，並會參與相關的測試，在確保新系統的安全表現後，才會批准新系統投入服務。

更換列車和信號系統這兩個項目，都是港鐵公司資產優化計劃的重要里程碑。我很期望見到新的列車和信號系統投入運作。

### REPLACEMENT OF TRAINS AND SIGNALLING SYSTEMS

In exciting news for passengers and all of us who love trains, the MTRCL has confirmed the purchase of 93 new eight-car trains to replace all of the first-generation trains operating on the Kwun Tong Line, Tsuen Wan Line, Island Line and Tseung Kwan O Line. MTRCL awarded the train replacement contract in July 2015. The new trains will cost about HK\$6 billion and will be delivered to Hong Kong between 2018 and 2023. EMSD will see to it that they comply with all relevant railway safety standards and pass all required factory tests and on-site safety and performance tests.

MTRCL has commenced to replace the signalling systems on seven existing MTR railway lines: Tsuen Wan Line, Island Line, Kwun Tong Line, Tseung Kwan O Line, Tung Chung Line, Airport Express and Disneyland Resort Line. The current fixed-block signalling systems will be replaced by cutting-edge communications-based train control systems, which use radio-based moving-block train control technology. Works for the Tsuen Wan Line will be due for completion in 2018. The whole project is anticipated to be completed in 2026.

MTRCL awarded the signalling system replacement contract in March 2015 at about HK\$3.3 billion. It covers the replacement of the signalling systems for the seven railway lines, including the relevant signalling equipment at tracks, stations, depots and operation control centres and on passenger trains and locomotives. Again, EMSD will carefully review the system design, installation and the migration plan. EMSD will also take part in relevant testing to ensure the safety performance of the new systems before approving them for service.

Both the train and signalling system replacement projects are milestones in MTRCL's asset enhancement programme, and I look forward to seeing the new trains and signalling system at work.



機電工程署的職責之一，是為全港新鐵路綫所有關於安全的系統進行審核、檢查和測試，確保鐵路安全。  
The vetting, inspection and testing of all safety-related systems at Hong Kong's new railway lines are one of EMSD's duties to ensure railway safety.

## 測試和驗收新鐵路綫

眾所周知，目前有四條新鐵路綫在興建中，分別為南港島綫（東段）、沙中綫、觀塘延綫和廣深港高速鐵路（香港段），全部都計劃在未來幾年啟用。

為了確保這批鐵路新綫和延綫能安全運作，並符合國際標準，機電工程署一直都與港鐵公司及相關的政府部門合作，審核、檢查和測試所有關於安全的系統，並監察緊急事故演習及審視各種緊急事故應變計劃。這些已成為機電工程署近年的恆常工作，而離各條新綫和延綫驗收的日子越近，他們的工作就越見繁重。

## 增添人手提高鐵路安全

香港的鐵路網正快速擴展，機電工程署在規管鐵路安全方面的工作量也越來越大。有見及此，政府由2015/16年度起，會為機電工程署鐵路科增添11個新職位，包括兩個總工程師職位。新添的人手，將有助署方加強對現有鐵路綫和新鐵路項目的安全監察工作，也將整體地加強本港的鐵路安全規管機制。鐵路科的新增人手，更可讓署方持續提升對有關港鐵公司鐵路運作和新鐵路項目的監察。

## 安全工作的「點綫面」

上述的新職位落實之後，機電工程署將於「點、綫、面」三個層次加強其日常規管工作。「點」的層次，是指署方會加強安全巡查的次數和深入程度；「綫」的層次是指主動檢視港鐵公司的維修保養工作流程，以提高維修保養質素；「面」的層次則是指署方會從宏觀的策略角度，去檢討及調校目前用於港鐵公司的安全規管機制，包括對其安全管理系統與資產管理系統，進行全面詳細的審核。

由此可見，香港的鐵路工作，的確進行得如火如荼！希望明年可以為大家報導更多新發展消息。

## TESTING AND COMMISSIONING OF NEW RAILWAY LINES

We all know that four new railway lines are under construction: the South Island Line (East), the Shatin-to-Central Link, the Kwun Tong Line Extension and the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link. All are scheduled to open in the next few years.

To prepare for the safe operation of these new lines/extension and to ensure their compliance with international standards, EMSD has been working with MTRCL and other relevant government departments to vet, inspect and test all safety-related systems, to monitor emergency drills and to scrutinise various emergency contingency plans. The work is ongoing and will get more intense with the approach of the scheduled commissioning dates.

## NEW CAPACITY TO BOOST RAILWAY SAFETY

Hong Kong's fast-expanding railway network comes with an increasing workload for EMSD. The Government will therefore create 11 new posts, including two Chief Engineer posts, in EMSD's Railways Branch from 2015/16. This added capacity will help enhance safety oversight of existing railway lines and new railway projects, and support the overall strengthening of the railway regulatory regime in Hong Kong. It will also ensure that EMSD can continue to enhance its monitoring of MTRCL railway operations and new projects.

## THE "POINT", "LINE" AND "PLANE" OF RAILWAY SAFETY WORK

Once the new posts are created, EMSD will enhance its daily regulatory work at three levels, which it calls "point", "line" and "plane". At the "point" level, EMSD will increase the frequency and depth of safety inspections. At the "line" level, it will proactively look into the maintenance workflow of MTRCL in order to enhance maintenance quality. At the "plane" level, it will review and adjust the current safety regulatory regime applied to MTRCL from a macro and strategic perspective. This will involve a comprehensive and detailed vetting of its safety management system and asset management system.

So a lot is happening in Hong Kong's railways! I look forward to updating you on more new developments next year.





### 改善架空電纜系統背後的故事

## THE STORY BEHIND OVERHEAD LINE SYSTEM IMPROVEMENT

2014年的農曆新年，對鐵路科高級工程師樊志榮先生可說十分難忘，因為他和他的團隊要日以繼夜，冒著濕冷的天氣，在室外調查在2月份發生的兩宗東鐵綫事故，當時每宗事故都影響了列車服務達三至四小時。事故發生後，樊先生和他的團隊一方面要迅速回應及處理來自傳媒、立法會和市民的查詢和關注，更要馬上動身，查找事故的根本成因。他們很快發現，同一批次的架空電纜絕緣體存在瑕疵，是導致兩宗事故的成因，而出現瑕疵則與絕緣體的品質控制有關。

他回想說：「這兩宗事故突顯了一個事實，就是即使是架空電纜絕緣體這類低成本又不起眼的小部件，如果不好好管理，也可做成重大事故。那次事故再提醒大家，所有部件的品質控制和保養工作，都須以審慎和有條不紊的方式處理，包括最細微的部件也不例外。」

當時，機電工程署立即要求港鐵公司緊急更換肇事批次的所有絕緣體，繼而再更換購自同一製造商的同型號其他批次的絕緣體，以防萬一。署方又要求港鐵公司抽樣測試其他現存的絕緣體，並在安裝新絕緣體前先進行篩選測試。樊先生的團隊在整個過程中積極參與，包括審視有關測試的標準和方法，並參與有關測試的進行過程。

為預防再發生類似事故，港鐵公司也聘用了獨立專家，就架空電纜系統的管理進行全面檢討。與此同時，機電工程署也聘請了另一獨立專家，監察港鐵公司的檢討工作程序。樊先生的團隊與署方的獨立專家也緊密合作，審視港鐵公司的檢討方法、結果和建議。所有這些措施，目的都是加強有關的品質控制和保養程序，確保所有港鐵綫路的架空電纜絕緣體均有優良品質，從而使港鐵架空電纜系統更為安全可靠。



2014年初，港鐵東鐵綫發生兩宗涉及架空電纜絕緣體的事故，樊志榮先生與其團隊調查事故成因。且聽他分享個中經驗。  
Mr Eric Fan and his team investigated into two incidents involving overhead line insulators at the MTR East Rail Line in early 2014. He shares his experience as follows.

Chinese New Year 2014 was unforgettable for Mr Eric Fan, Senior Engineer at the Railways Branch. He and his team spent many days and nights outdoors in wet and cold weather investigating two incidents that happened in February of that year on the East Rail Line. Each led to service disruptions of three to four hours. While promptly dealing with queries and addressing the concerns of the media, Legislative Council and general public, the team quickly mobilised itself to look for the root cause of the incidents. It promptly discovered that defects in the same batch of overhead line insulators had caused the incidents, and were related to quality control of the insulators.

Recalling the experience, Mr Fan said, "These incidents highlight the fact that even low-cost, mundane components like overhead line insulators can cause big problems if not properly cared for. It shows once again the importance of a prudent, systematic approach towards quality control and maintenance of all parts and components, even minor ones."

EMSD immediately asked MTRCL to urgently replace all insulators that came from the concerned batch, and then to also replace all other batches of the same type of insulators supplied by the manufacturer of the defective batch as a prudent measure. EMSD then requested MTRCL to sample test other existing insulators and carry out screening tests on all new insulators prior to installation, with Mr Fan's team heavily involved in assessing the testing standards and methodology and in participating in various tests.

As a preventive measure, MTRCL further engaged an independent expert to conduct a comprehensive review of the management of overhead line systems. Mr Fan's team also worked closely with another expert engaged by EMSD to monitor MTRCL's review process and assess its review methodology, findings and recommendations. All of these initiatives aimed to enhance quality control and maintenance procedures to ensure that the quality of overhead line insulators and hence the safety and reliability of overhead line systems on all MTR railway lines can be improved in the long run.



## 西港島綫背後的故事

### THE STORY BEHIND WEST ISLAND LINE

如果說西港島綫在2014年12月底啟用之後，香港大學的莘莘學子和西區居民的生活質素馬上得到改善，也不算誇張，因為西港島綫確為該區帶來更暢順的公共交通。鐵路科的工程師施培康先生，就跟我們分享了西港島綫背後的故事。

西港島綫是港鐵港島綫的一條三公里延綫，在西營盤、香港大學和堅尼地城有三個地底車站，其中西營盤站和香港大學站面對非常有挑戰性的地質問題。到了2014年6月，西營盤站的土木工程滯後，很明顯這個車站會無法如期在2014年內驗收啟用。港鐵公司於是制訂了一個後備計劃，假如西營盤站真不能如期啟用，列車則會由港島綫的上環站直接駛往香港大學站，再往堅尼地城總站，直至西營盤站啟用為止。

施先生和他的團隊就是在這種時間緊逼的情況下，為西港島綫進行各種必要工作，以確認西港島綫是「安全正常」。在2014年8月至10月這高峰期，他的團隊常要日以繼夜地工作，更要在午夜及以後的非行車時段工作，才能完成大量檢查和處理數以千頁計的報告與圖則。經過團隊的努力，機電工程署能夠與其他相關政府部門順利協調合作，並趕及於2014年12月初，向港鐵公司確認西港島綫狀況為「安全正常」並可以啟用，讓港鐵公司有足夠時做好宣傳和各種服務的準備。團隊的努力讓西港島綫（雖沒有西營盤站）於2014年12月底投入服務，而西營盤站也於2015年3月，一如後備計劃預期般啟用。至此，西港島綫也全面投入服務。

施先生記得，當西港島綫啟用的時候，團隊有很大滿足感，同時如釋重負。他說：「上一次香港有新鐵路延綫啟用已是2009年，所以西港島綫為我們的安全審批工作帶來一個新的模板，對未來審批其他新鐵路綫時極有參考價值。今次的經驗也突顯了在安排各種檢查的時間表和優先次序的時候，我們須採用靈活應變和風險為本的方法，才可以在緊逼的時限內完成工作。」

他補充：「對我們的團隊來說，只要見到西區的街坊笑逐顏開，有安全的新鐵路綫為他們服務，就是最大回報。」



2014年12月港鐵西港島綫啟用，是香港一個里程碑。該鐵路延綫能如期啟用，施培康先生及其團隊扮演了重要角色。以下是他講述西港島綫背後的故事。  
The opening of the MTR West Island Line in December 2014 was a milestone for Hong Kong. Mr P H Sze and his team played a key role in facilitating the opening of the new extension as scheduled. He shares the story behind the scenes.

It is not an exaggeration to say that the quality of life of many University of Hong Kong (HKU) students and residents of Western District instantly improved when the MTR West Island Line (WIL) opened in late December 2014 to provide much smoother access to public transport. Mr P H Sze, Engineer at the Railways Branch, has a story to tell about the WIL opening.

WIL is a 3-km extension of the MTR Island Line with three underground stations at Sai Ying Pun (SYP), HKU and Kennedy Town. The SYP and HKU Stations presented very challenging geological constraints. It was clear by June 2014 that delays in civil works at SYP Station would prevent this station from being commissioned in 2014 as planned. MTRCL drew up a backup plan under which trains would run from Sheung Wan Station of the Island Line straight to HKU Station and then terminate at Kennedy Town Station, until SYP Station opened.

It was against this background that Mr Sze and his team conducted the work necessary to confirm WIL as "safe and sound". The team often had to work day and night during the peak from August to October 2014, during non-traffic hours at midnight and beyond, to complete the numerous inspections, processing thousands of pages of reports and drawings along the way. As a result, EMSD coordinated with other relevant government departments and confirmed the "safe and sound" condition of WIL to MTRCL in early December 2014 for the opening of WIL, allowing sufficient time for the company to prepare for publicity and various services. The hard work paid off as WIL began service in late December 2014, albeit without SYP Station. Full operation with SYP Station commenced in March 2015 as scheduled in the backup plan.

Mr Sze recalled that the team felt a great sense of satisfaction – and relief too – when the WIL finally opened. "The last time railway extensions were opened in 2009, so the WIL has become a more contemporary template for our safety approval processes that we will be able to draw on for other new railway projects. It particularly underscored the need for us to work smart, adopt a risk-based approach, and be very flexible about scheduling and prioritising the inspections in order to beat tight deadlines," he said.

"For the team, the best reward is seeing a happy community in Western District, well served by a safe new railway line," Mr Sze added.





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EFFICIENCY  
AND CONSERVATION**

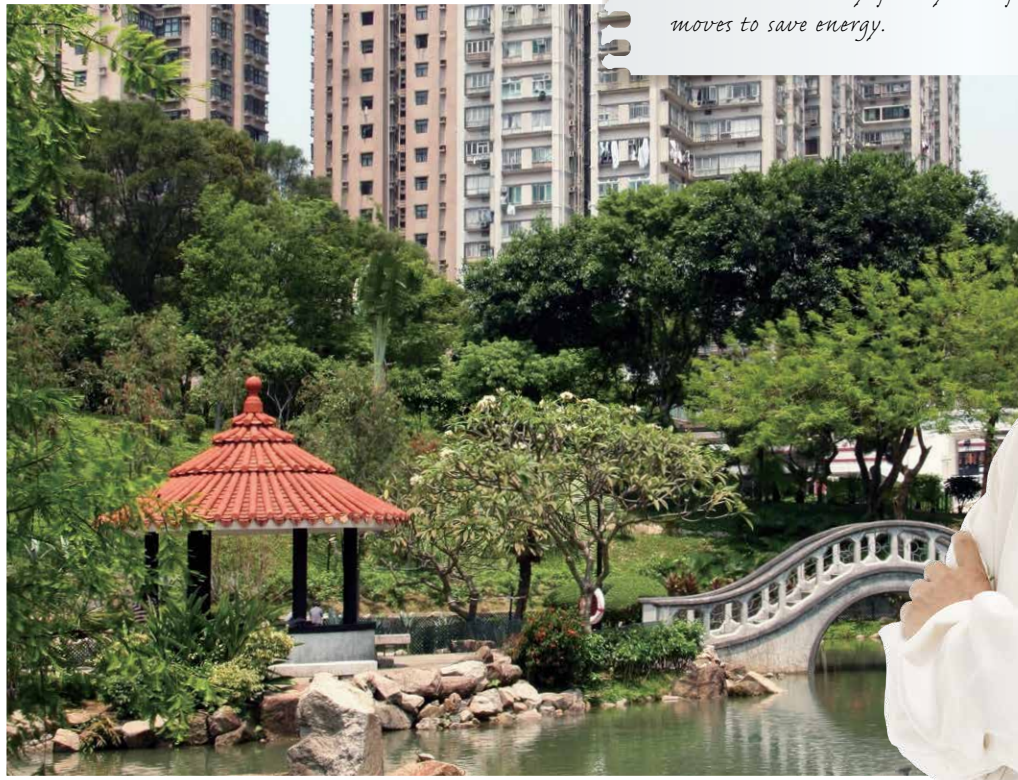


爺爺馬泰雖已退休，但精力充沛，心境年輕。他深信天然資源十分寶貴，不應浪費。每逢周末他都去探馬克一家，又時常向愛瑪和馬田談到香港在推動能源效益及節能方面做了甚麼工作。

Grandpa Matthew is retired, but energetic and young at heart. He believes all natural resources are precious and nothing should be wasted. He visits Mark's family on weekends and uses every opportunity to tell Emma and Martin what Hong Kong is doing to promote energy efficiency and conservation.

大家好，我是馬泰，馬克的爸爸，馬田和愛瑪的爺爺。很久以前我爸爸已經說過，所有天然資源都是寶。現在人人都懂得這樣說，只是字眼變成「環保」和「可持續發展」。我很高興家裡有這優良傳統，也很留意香港在節能方面的動向，還經常跟親友分享有關資訊。

Hello, this is Matthew, Mark's father and grandpa to Martin and Emma. My own father taught me many years ago that all natural resources are precious; today it seems everyone is talking about it, but of course we now call it environmental protection and sustainability. I am proud to say this is our family tradition and I see to it that my family and friends are up to date on the city's moves to save energy.



### 優化強制性能源效益標籤計劃 能效標準

負責規管本港能源效益的機電工程署能源效益事務處，其「強制性能源效益標籤計劃」於2014年收緊了能源標籤的評級標準，是年內一大里程碑。新的《產品能源標籤實務守則2014》已於2014年10月刊憲，新的評級標準也同時開始生效。

### MEELS ENERGY LABEL STANDARDS UPGRADED

EMSD's Energy Efficiency Office, the regulatory body for energy efficiency in EMSD, reached a milestone in 2014 with the tightening of energy efficiency grading standards for energy labels under the Mandatory Energy Efficiency Labelling Scheme (MEELS) it operates. The regraded standards commenced when the new Code of Practice on Energy Labelling of Products 2014 was gazetted in October 2014.



ENERGY LABEL 能源標籤	
more efficient 效益較高	Grade 1 級
1	
2	
3	
4	
5	
less efficient 效益較低	
Annual Energy Consumption (kWh)(Cooling) 每年耗電量(千小時)(製冷) <small>Based on 1200 hours operation 以每年使用200小時計算</small>	986
Cooling Capacity (kW) 製冷量(千瓦)	2.54
Refrigerant 製冷劑	R410A
Room Air Conditioner Brand 品牌:	ABC 某某牌
Model Reference Number / Year Information Provider	型號: U1-C080123 / 2014 XYZ 某某某
機電工程署 EMSD	

新評級制的能源標籤，由2015年11月25日起開始使用。新能源標籤的樣式不變，只在「參考編號」一欄增加了「U1」字頭。The new regraded energy label, used from 25 November 2015 onwards. The label looks the same as before, except for the addition of "U1" in the "Reference Number" box.

「強制性能源效益標籤計劃」於2008年隨《能源效益(產品標籤)條例》而推出，並於2009年全面實施。該計劃現時涵蓋五類產品，即冷氣機、雪櫃、慳電膽、洗衣機和抽濕機。為了讓該計劃能與時並進，配合科技發展和市民不斷提升的期望，一個由機電工程署、業界商會和消費者委員會代表組成的工作小組，在充分諮詢業界之後，作出優化「強制性能源效益標籤計劃」能效評級標準的建議。

新的評級標準提升了三類產品的能源效益要求，包括冷氣機、雪櫃和洗衣機，它們合共佔全港家居用電量約50%。收緊後的能源效益標準，預計可為香港每年節省約三億度電，和每年減少約21萬公噸二氧化碳排放量。

### 無縫過渡至新能源標籤

提升能源效益評級標準的影響，是能源效益水平不足的產品型號，在新評級制度下將會降級，而只有根據新評級制度能源效益表現最佳的，才會得到最好的一級評級。新評級標準的能源標籤於2015年11月25日起開始使用。對消費者來說，由於新能源效益標籤的樣式不變，只是在標籤上「參考編號」一欄增加了「U1」字頭，因此可說是無縫過渡。今次優化評級標準的另一意義，是引進提升產品能源效益標準的周期觀念，鼓勵業界不斷優化產品的能源效益。

### 「強制性能源效益標籤計劃」第三階段涵蓋新產品

「強制性能源效益標籤計劃」也會不斷擴大涵蓋範圍。該計劃的第三階段建議入的新產品，包括電視機、熱泵空調機、七公斤至十公斤洗衣量的洗衣機、儲水式電熱水爐和電煮食器。諮詢文件已經發出，讓業界、相關持份者及公眾於2015年6月30日或之前就有關建議提交意見。

First introduced in 2008 via the Energy Efficiency (Labelling of Products) Ordinance and implemented in 2009, the MEELS now covers five product types: air-conditioners, refrigerators, compact fluorescent lamps, washing machines and dehumidifiers. In response to technological advancements and rising community expectations, a task force comprising representatives from EMSD, trade associations and the Consumer Council recommended the MEELS upgrade after full consultation with the trade.

The new Code of Practice has raised the MEELS grading standards of three product types, namely air-conditioners, refrigerators and washing machines, which together account for some 50% of domestic electricity consumption in Hong Kong. The tightened standards are expected to save about 300 million kWh of electricity every year and an annual reduction of around 210 000 tonnes of carbon dioxide emissions.

### SEAMLESS TRANSITION TO NEW ENERGY LABELS

The impact of regrading is that product models not sufficiently energy efficient under the new standards will get a lower grade, and only those in the new top tier will qualify as Grade 1, which is the most energy efficient. The upgraded energy labels are used from 25 November 2015 onwards. The good news for consumers is that there will be a seamless transition as the energy label will look the same, except for the addition of "U1" in the "Reference Number" box. The regrading has also introduced a cycle to encourage the trade to continuously enhance the energy performance of products.

### NEW PRODUCTS FOR MEELS PHASE 3

The MEELS will continue to expand in scope. New product types have been proposed for consideration to be included in Phase 3 of the scheme, namely televisions, heat pump air-conditioners, washing machines with washing capacity between 7 kg and 10 kg, electric storage water heaters and electric cooking appliances. Members of the trade, relevant stakeholders and the public were invited to share their views on these proposals on or before 30 June 2015 via a public consultation.

## 香港都市 節能藍圖 2015~2025+



環境局  
發展局  
運輸及房屋局 合辦  
2015年5月



環境局與機電工程署聯手推出「全民節能」運動，右圖為啟動典禮盛況。運動的目的，是支援環境局於2015年5月推出的《香港都市節能藍圖2015~2025+》(左圖)落實工作。  
The Environment Bureau and EMSD jointly launched the "Energy for All" Campaign at a ceremony (right). The Campaign supports the implementation of the "Energy Saving Plan for Hong Kong's Built Environment 2015~2025+" launched by the Environment Bureau in May 2015 (left).

### 為《香港都市節能藍圖2015~2025+》提意見

機電工程署去年另一重要工作，是協助環境局草擬香港首份都市節能藍圖《香港都市節能藍圖2015~2025+》。這藍圖為香港定下新目標，要於2015年將能源強度減少四成。藍圖已於2015年5月推出，涵蓋完整的政策及主要行動計劃，涉及與節能相關的經濟、規管、教育及社會等各個範疇的分析和建議。機電工程署在執行能源效益法例、推動自願性節能計劃及宣傳最佳節能做法方面，都有重要角色，因此署方在藍圖草擬過程中，也為環境局提供了不少意見。

### 「全民節能」運動

節能藍圖推出之後，環境局與機電工程署馬上聯手推出一個名為「全民節能」運動的大型長期宣傳活動，以配合和支援節能藍圖。這宣傳活動更推出了「全民節能」網站www.energysaving.gov.hk，公眾從這一站式平台取得所有關於香港節能和活動的資訊，網站也齊備通往本地所有主要能源效益機構的連結。此外，機電工程署也十分重視維繫年青人，因此「全民節能」運動也為年青人推出了兩個比賽，一是「新能源新世代太陽能車比賽」，鼓勵年青人把可再生能源有創意地應用於設計和製造太陽能車。另一比賽是「慳電熄一熄青年獎」，鼓勵年青人組隊設計及實施節約能源措施。這慳電比賽的獎項也十分創新：勝出的隊伍要將獎金捐給一個由他們選擇的非政府機構，以幫助有需要的社會人士改善生活質素。環保活動也能惠及弱勢社羣，彰顯香港的關懷文化。

### CONTRIBUTING TO ENERGY SAVING PLAN 2015~2025+

Another milestone for EMSD last year was helping the Environment Bureau (ENB) prepare the Energy Saving Plan for Hong Kong's Built Environment 2015~2025+. The first-ever energy-saving blueprint for Hong Kong, the Plan sets a new target of reducing Hong Kong's energy intensity by 40% by 2025. It was launched in May 2015, complete with a strategy and action plans that touch upon the economic, regulatory, educational and social aspects of energy saving. As EMSD plays a key role in enforcing energy efficiency legislation and promoting voluntary schemes and energy-saving best practices, it gave the Bureau significant input during drafting of the Plan.

### “ENERGY SAVING FOR ALL” CAMPAIGN

Immediately following the launch of the Energy Saving Plan, the ENB and EMSD jointly introduced an ongoing public education programme to support it. The "Energy Saving for All" campaign features a dedicated website www.energysaving.gov.hk that aims to serve as a one-stop platform for the general public to acquire everything they wish to know about energy saving in Hong Kong, with hyperlinks to all major energy efficiency organisations and activities in the city. As youth engagement is an EMSD priority, the campaign offers two youth competitions: the New Energy New Generation Solar Car Competition to promote the innovative application of renewable energy via the design and construction of solar racing cars, and the Youth Energy Saving Award to encourage young people to form teams to devise and implement creative energy-saving measures. The latter also breaks new ground in that the winning teams will receive cash awards that they will allocate to NGOs of their choice to help improve living conditions for the needy. In this way, an environmental cause will help meet the needs of the underprivileged to underscore Hong Kong's caring culture.



「2014年室內溫度節能約章」啟動典禮盛況。  
Launching ceremony of the 2014 Energy Saving Charter for Indoor Temperature.

隨著上述都市節能藍圖的活動陸續展開，機電工程署將繼續為政府各部門和政策局提供專業支援，幫助各部/局的政府建築物，由2015/16至2019/20年度共節省5%電力的目標（以相若的運作條件及以2013/14年度為基線計算）。

As the Energy Saving Plan unfolds in 2015/16, EMSD will continue to provide professional support to government departments and bureaux to achieve the target of achieving 5% saving in electricity consumption in government buildings from 2015/16 to 2019/20 (under comparable operating conditions using 2013/14 as baseline).

### 室內溫度節能約章

「室內溫度節能約章」於2012年首次推出，當時已有百多個商場承諾在6月至9月的夏季月份，將室內溫度維持在攝氏24至26度。各界對約章一直都非常支持，包括發展商、物業管理公司、商舖、辦公室大樓、住宅樓宇、屋苑與非政府機構。2015年的約章，更有3 000多個來自不同界別的單位參加，比2014年多43%。

### ENERGY SAVING CHARTER ON INDOOR TEMPERATURE

The first Energy Saving Charter on Indoor Temperature was launched in 2012 when more than 100 shopping malls pledged to maintain an average indoor temperature of between 24 and 26 degrees Celsius in the summer months from June to September. The Charter has continued to be well supported by developers, property management companies, shops, offices, residential buildings, housing estates and non-government organisations. The 2015 Charter had a total of more than 3 000 participants from different sectors, 43% higher than that of 2014.

### 更多較快速電動車充電器

電動車有助本港減少排氣尾管的廢氣排放，改善路邊空氣質素。機電工程署一直協助政府推廣電動車的使用，例如積極在政府停車場安裝充電器，並發出技術指引，協助電動車使用者、發展商和物業管理公司在旗下物業安裝充電器。為了落實行政長官於2014年《施政報告》中有關增加電動車充電設施的承諾，政府已於16個政府停車場，安裝了100個新的中速充電器。公眾人士由2014年8月起已可開始使用。

### FASTER EV CHARGING FACILITIES MORE WIDELY AVAILABLE

Electric vehicles (EVs) have the potential to help Hong Kong reduce tailpipe emissions and improve roadside air quality. EMSD is doing its part to promote the wider use of EVs by installing charging facilities in government car parks and by issuing technical guidelines to aid EV users, encourage developers and property management companies to install charging facilities. In response to the Chief Executive's pledge in his 2014 Policy Address, 100 new medium chargers were made available for public use from 1 August 2014. The new medium chargers were installed at 16 government car parks.

機電工程署員工正檢測新安裝的電動車中速充電器。由2014年8月1日起，全港已安裝了100個新的中速充電器，供公眾人士使用。  
EMSD staff checking a new medium-speed electric vehicle charger, one of the 100 such new chargers made available for public use since 1 August 2014.







啟德發展區區域供冷系統目前有三個客戶，分別為啟德郵輪碼頭（左）、工業貿易大樓（右）和晴朗商場。  
The Kai Tak Development District Cooling System at Kai Tak currently has three users, namely the Kai Tak Cruise Terminal (left), the Trade and Industry Tower (right) and Ching Long Shopping Centre.

### 更新《電動車輛充電設施技術指引》

電動車中速充電器比標準充電器可縮短充電時間達六成，因此現時大部分新電動車型號都已採用。有鑑於此，機電工程署也於2015年4月發出了《電動車輛充電設施技術指引》更新版，更新的内容是關於自該指引於2011年首次出版以來，高能量充電技術的新發展，以及電動車各種標準的轉變。

2014/15年度是忙碌又豐收的一年，至於2015/16年度，重點是繼續推行已展開的工作，例如推出「強制性能源效益標籤計劃」第三階段，落實兩個關於慳電和可再生能源的青年比賽，同時也會再拓展「室內溫度節能約章」，邀請學校參與2016年的約章。

### 《區域供冷服務條例》通過並生效

機電工程署除了在產品及社會層面推動節能外，也參與本港大型的能源效益基建工程。2014/15年度這方面的里程碑，是立法會經過相關的條例草案委員會仔細審核草案後，於2015年3月底通過了《區域供冷服務條例》(第624章)。

《區域供冷服務條例》訂明向使用啟德區域供冷系統用戶的詳細收費機制，而供冷系統也已開始局部運作。啟德區域供冷系統目前有三個客戶，即啟德郵輪碼頭、晴朗商場和工業貿易大樓。然而隨著越來越多發展於啟德發展區落成，用戶數目必會不斷增加。機電工程署是該供冷系統的項目經理，興建、運作、維修及向用戶收費是其職責，因此已增加小量人手，應付相關的工作。

### UPDATED GUIDELINES FOR EV CHARGING FACILITIES

Medium chargers can reduce charging time by up to 60% compared with standard chargers and have become the norm for most new EV models. Accordingly, EMSD also published an updated edition of the Technical Guidelines on Charging Facilities for Electric Vehicles in April 2015. The update captures new developments in higher-power charging technologies as well as changes to EV standards that have come in since 2011, when the guidelines were first published.

The 2014/15 year was a busy and fruitful one, and 2015/16 will see the continuation of several initiatives begun then, including work on Phase 3 of MEELS, the implementation of the two youth competitions on energy saving and renewable energy, as well as the further expansion of the Charter on Indoor Temperature, which will invite schools to join from 2016.

### DISTRICT COOLING SERVICES ORDINANCE ENACTED AND EFFECTIVE

As well as promoting energy saving at the product and community-engagement levels, EMSD is also involved in Hong Kong's major energy-efficiency infrastructure. The milestone in this arena in 2014/15 was the enactment by the Legislative Council of the new District Cooling Services Ordinance (Cap 624) in late March 2015 after thorough scrutiny by the Bills Committee.

The Ordinance sets out the detailed tariff charging mechanism for users of the District Cooling System (DCS) at Kai Tak Development, which is already partially operational. There are currently three users of DCS services, namely the Cruise Terminal, Trade and Industry Tower and Ching Long Shopping Centre, with the number increasing as more tenants move into Kai Tak Development. As DCS project manager, EMSD will be responsible for tariff collection and has slightly expanded its team to handle the work.

啟德區域供冷系統預計將於2022年全面投入運作，屆時總製冷量在運作高峰時段可達284兆瓦，是全球最大之一。該系統的另一特色，是服務範圍面積很大，用戶大樓的種類也極多。香港有這樣出色的區域性節能水冷空調基建設施，真讓市民自豪，希望其他新區日後也會發展類似的區域供冷系統！

### 區域供冷系統北廠獲 LEED 金級認證

另一有關啟德區域供冷系統的好消息，是系統的北廠已於2014年7月取得LEED金級認證。LEED是英文「能源和環保設計」的簡寫，是全球首屈一指的環保建築物認證計劃，由美國綠色建築議會運作，宗旨是表揚全球各地最優秀的建築策略和最佳作業方法。啟德區域供冷系統北廠是香港首幢獲此殊榮的建築物，在數個評分項目都取得高分，包括選址、室內環保品質、創新、設計過程和區域優次安排。南廠的LEED認證工作仍在進行中，而北廠房則也已取得ISO 50001認證。

### 《建築物能源效益條例》執法有效 檢控成功

機電工程署近年致力幫助本港建築物節能，包括執行《建築物能源效益條例》。根據該條例的首宗檢控個案已於2014年審訊，有關建築物的業主立案法團被裁定違反該條例有關規定而罪名成立。至今為止，另有四宗類似個案亦已成功檢控。這些案例向業界發出強烈訊息，署方會繼續嚴謹及有效地執法。總括來說，由於署方在該條例生效之初已對條例的規定作廣泛宣傳，因此業界依法進行能源審核的比率也很高。

### 每三年一度檢討《建築物能源效益守則》

《建築物能源效益守則》第一版於2012年推出，並會每三年定期檢討守則，收緊各種能源效益設計標準，同時，機電工程署也會不斷監察主要的能源效益參項，確保設計標準符合國際水平。2014年初，相關的照明功率密度已經提高，照明設計標準也因而收緊（例如辦公室最高許可為每平方米13瓦，走廊通道最高許可為每平方米八瓦）。目前署方正參照最新的技術發展、國際標準和公眾期望等因素，為2012年版的《建築物能源效益守則》作出全面檢討，並預計於2015年底完成。

去年香港在能源效益和節能方面有很大進展，我很高興，希望明年有更多好消息向大家報導！

When the DCS is fully operational, which is scheduled for around 2022, it will have a total cooling capacity of 284 megawatts at operational peak, making it one of the largest in the world. It is also unique in the sheer size of the area served and the large variety of user buildings. I am really proud that Hong Kong has such an outstanding system using energy-efficient water-cooled air-conditioning on a regional scale, and I hope that more DCSs will be built in other new districts!

### DCS CERTIFIED TO LEED GOLD STANDARD

A related piece of good news is that the DCS North Plant achieved Gold LEED certification in July 2014. LEED, which stands for Leadership in Energy and Environmental Design, is the premier global green building certification programme. It is operated by the US Green Building Council to recognise best-in-class building strategies and practices around the world. The DCS North Plant has become the first plant building in Hong Kong to obtain this recognition, scoring high marks for sustainability in several assessment categories including site selection, indoor environmental quality, innovation, design process and regional priorities. The DCS South Plant is also being LEED certified, while ISO 50001 certification has been obtained for the North Plant.

### SUCCESSFUL PROSECUTIONS SIGNAL EFFECTIVE BEEO ENFORCEMENT

EMSD has been doing a great deal to help buildings in Hong Kong save more energy, including via enforcement of the Buildings Energy Efficiency Ordinance (BEEO). The first prosecution took place in 2014 and the Owners' Corporation of the relevant building was convicted of contravening the relevant requirements of the BEEO. Four similar prosecutions have been successfully concluded to date, sending a strong message to the trade that BEEO will be strictly and effectively enforced. On the whole, compliance with energy audit requirements is high due to extensive prior publicity of the BEEO provisions.

### THREE-YEAR UPGRADING CYCLE OF BEC STANDARDS

The BEC will be reviewed at three-year intervals, after the initial edition was issued in 2012, to further tighten the energy efficiency standards. Meanwhile, EMSD will monitor the key energy efficient parameters continuously to make sure they are comparable with relevant international standards. In early 2014, the Lighting Power Density was upgraded to tighten the relevant lighting standards (e.g. 13W/m<sup>2</sup> for office and 8 W/m<sup>2</sup> for corridor). Currently, a comprehensive review of the BEC 2012 is under way for completion in 2015. In each review, reference will be made to the latest worldwide technological developments, updated international standards and public aspirations.

I am glad that so much progress was made in Hong Kong last year on the energy efficiency and conservation front, and trust that there will be more good news to report next year!



**示範建築物：  
聖言中學與工業貿易大樓**

**SHOWCASE BUILDINGS:  
SING YIN SECONDARY  
SCHOOL AND TRADE &  
INDUSTRY TOWER**

2008/09年度的《施政綱領》，選定聖言中學和工業貿易大樓為展示最新能源效益設計與科技的示範建築物，機電工程署則在採用新的節能科技設計方面參與了工作。

聖言中學已獲美國綠色建築議會頒發「2013年全球最綠學校獎」，傳媒也曾廣泛報導該校的節能佳績，並已成為其他學校的節能榜樣。聖言中學採用了一系列十分有效的系統和措施，包括全港首個在學校使用的淡水水冷式中央空調系統，比氣冷空調系統可節省達兩成用電量。該校也採用了LED照明系統、各種可再生能源裝置、和一個可靈活控制如照明和空調等各種屋宇工程系統的建築物能源管理系統，以節省能源。

聖言中學的設計目標是每年節省27.3%耗電量，這目標很快已達到。學校除了應用節能科技外，還實行其他配套工作，比如綠色班長制和各種鼓勵環保行為的推廣活動。該校目前的耗電量，比香港其他中學的平均耗電量低近三成。

工業貿易大樓由2014年起已逐步開始運作。大樓的目標，是要取得美國綠色建築議會的最高鉑金級認證。大樓的主要節能設施，包括升降機電力再生系統，可於升降機下行時回收電力，比一般升降機的能源效益高兩至三成；此外還有一個風冷系統，運用外面的空氣為大型伺服器房降溫；也有一個可從空調冷凝水回收熱能的系統，預先冷卻抽入的暖鮮風。所有這些系統都能減少耗電量。

工業貿易大樓的另一特色，是接駁了啟德區域供冷系統，大樓既享有高效益的中央水冷空調服務，又能騰出更多空間，建造綠化天台。由於大樓尚新，入伙後的能源效益評估仍在進行中，要到2016年年中才完成，但預期大樓的能源效益表現應相當高。



聖言中學展示了最新的能源效益設計與科技應用，例如LED照明系統、各種可再生能源裝置、及全港首個在學校使用的淡水水冷式中央空調系統。  
Sing Yin Secondary School features state-of-the-art energy efficiency designs and technologies, such as LED lighting, various renewable energy installations as well as a fresh-water-cooled centralised air-conditioning system, the first in a school setting.



The 2008/09 Policy Agenda identified these two buildings as projects to demonstrate state-of-the-art energy efficiency designs and technologies. EMSD is involved in the design stage in the adoption of new energy efficiency and conservation technologies for demonstration purposes.

Sing Yin Secondary School was recognised by the US Green Building Council as the "Greenest School on Earth 2013", and its energy-saving achievements have been widely reported in the media. It is seen as a model for other schools to follow, incorporating a number of proven energy conservation features. These include a fresh-water-cooled centralised air-conditioning system, the first in a school setting, which reduces electricity consumption by up to 20% compared to air-cooled systems. It also uses an LED lighting system; various renewable energy installations; and a building energy management system that facilitates flexible control of various building engineering systems such as lighting and air-conditioning to save energy.

The design target was to reduce the school's annual electricity consumption by 27.3%, which was readily achieved. With its energy-saving technologies supported by a system of Green Prefects and energy-saving behaviour programmes, the school's current electricity consumption is nearly 30% lower than the average electricity consumption of other secondary schools in Hong Kong.

The Trade and Industry Tower, incrementally operational since 2014, aims to achieve the highest platinum rating in the US Green Building Council's global Leadership in Energy and Environmental Design (LEED) programme. Its key energy conservation features include a lift power-regeneration system that reclaims energy as the lift travels downwards, making it 20% to 30% more energy efficient than conventional lifts. It also has a free cooling system that uses outside air to lower the temperature in large server rooms and a heat recovery system that reclaims energy from air-conditioning condensate water to pre-cool warm fresh air intake. All of these systems reduce electricity consumption.

Another key feature is that the Tower is connected to the District Cooling System for highly efficient, centralised water-cooled air-conditioning with more space for a green roof. As the Tower is relatively new, post-occupancy evaluation will be in progress until mid-2016, but its energy performance is expected to be highly positive.



立法會議員於2015年2月視察了啟德發展區區域供冷系統的北廠控制室、製冷機組與相關設施，以進一步了解系統運作。  
Members of the Legislative Council visited the Kai Tak Development District Cooling System North Plant, its chillers and related facilities in February 2015, to know more about the operation of the system.

## 立法會議員視察區域供冷系統北廠 LEGCO MEMBERS VISIT DCS NORTH PLANT



立法會議員於2015年2月24日視察了啟德區域供冷系統，了解其實際運作。出席議員包括《區域供冷服務條例草案》委員會主席盧偉國博士、及非委員會委員范國威議員及葉建源議員，並有30多位記者到場採訪。

Members of the Legislative Council (LegCo) visited the District Cooling System (DCS) at Kai Tak Development on 24 February 2015 to observe it in operation. LegCo members who participated in the visit included the Chairman of the Bills Committee on the District Cooling Services Bill Dr Lo Wai-kok, as well as non-Committee members Mr Gary Fan and Mr Ip Kin-yuen. More than 30 journalists also attended.

機電工程署高層管理首先簡介了區域供冷系統的概念和優點，再帶議員參觀北廠控制室和製冷機組。議員然後前往鄰近的晴朗商場，了解供冷設施和為一個典型用戶提供供冷服務的情況。今次視察活動，有助議員具體了解區域供冷系統的運作方法、怎樣節能、和系統如何讓個別建築物無須安裝製冷機組。

The visit began with a briefing by EMSD senior management on the concept and benefits of DCS, followed by a walkthrough of the North Plant control room and its chillers. Visitors were then taken to the DCS substation at the nearby Ching Long Shopping Centre to observe the cooling facilities and services provided to a typical user. The tour gave visitors a better understanding of how DCS operates, how it saves energy and eliminates the need for individual buildings to install their own chillers.

立法會其後已於2015年3月25日通過條例草案，成為《區域供冷服務條例》(第624章)，並於2015年3月27日刊憲，即時生效。

LegCo subsequently passed the Bill on 25 March 2015 as the District Cooling Services Ordinance (Cap 624). It was gazetted on 27 March 2015 and took immediate effect.



左圖為機電工程署高層管理與立法會議員於視察途中合照。右圖為機電工程署人員為議員簡介區域供冷系統的好處及操作概況。  
EMSD senior management and Legislative Council members during the visit (left). EMSD staff briefed visitors on the benefits and operation of the District Cooling System (right).







提高公眾安全及節能  
意識

**RAISING PUBLIC  
AWARENESS OF  
SAFETY AND ENERGY  
CONSERVATION**



馬克一家在周末常參加各種社區活動，讓馬田和愛瑪拓闊視野，而跟爺爺馬泰一起出席具教育意義的嘉年華和類似活動，也是三代樂聚天倫的好機會。

Weekends are always fun for Mark and his family as they often attend community events that will help Martin and Emma broaden their horizons. Going to educational fairs and other events together with Matthew is also a good opportunity for the children to connect with grandpa.

跟香港很多家庭一樣，我們周末都會找些活動，讓孩子在輕鬆有趣的氣氛下學點新事物。作為一個矢志為全港市民提升生活質素的政府部門，機電工程署也時常為市民舉辦這類活動，讓我們全家在享受輕鬆活動之餘，也增進機電安全和能源效益的知識。

機電工程署多年來，一直都以雙管齊下的方式與持份者溝通，即上述的社區大眾活動，以及為業界而設的活動。以下是部門2014/15年度在這兩方面的重點工作。

*Like many families in Hong Kong, we are always on the lookout for something fun and educational for the children to do on weekends. EMSD, as a government department that seeks to help improve the quality of life for all in Hong Kong, offers such activities to the community from time to time. This gives us the chance to enjoy ourselves while we learn more about E&M safety and energy efficiency.*

*Along with trades-specific programmes, these community events make up EMSD's longstanding two-pronged approach to communicating with stakeholders. The following are highlights of the Department's efforts to promote E&M safety and energy efficiency in 2014/15.*





機電工程署緊密維繫被規管的各個行業，與業界代表經常進行會議及各種討論交流。圖為署方人員與升降機及自動梯業界人士進行工作小組會議。EMSD engages with the regulated trades via frequent meetings and discussions with trade representatives. Photo shows EMSD officers in a working group meeting with representatives from the lift and escalator trade.



機電工程署於「亞太區鐵路會議2015」設立展覽攤位，展示署方在香港鐵路安全規管方面的工作。EMSD staged an exhibition booth at the Asia Pacific Rail 2015 to showcase its railway safety regulatory work in Hong Kong.

## 維繫業界

### 與業界溝通 推動機電安全

直接與業界溝通，對保障從業員以至市民大眾的安全都很重要。機電工程署全年都舉辦各種講座、座談會和工地簡報會，為電氣、氣體、升降機和扶手梯行業的承辦商和工人講解安全作業方法。

署方也與不同的業界商會、工會和培訓機構合作，舉辦各種安全培訓課程和推廣安全活動，部分是直接合作，部分則與包含上述機構代表的各種工作小組和諮詢委員會合辦，活動包括安全獎項、業界比賽和持續專業進修計劃等。此外，署方也發放大量宣傳機電安全的單張、小冊子、海報、短片和網站內容等，滿足業界需要。

機電工程署定期舉辦業界會議和研討會，增進業界領袖和從業員對海外新科技和本港規管發展的知識，並加強署方和業界的交流互動，討論雙方關注的問題。比如每年由機電工程署與港九電器工程電業器材職工會及香港電器工程商會合辦的「電力技術研討會」，就是個好例子。

署方也積極參與重要的區域或國際性業界會議，例如部門今年就參加了2015年3月31日至4月1日在香港舉行的「亞太區鐵路會議2015」，並首次在該會議設立展覽攤位，向來自亞太區各地的千多位鐵路專業人士，包括規管人員、營運商、顧問及研究人員等，展示香港在鐵路安全規管方面的工作。機電工程署助理署長/鐵路也在大會上以「香港鐵路 — 邁進新時代」為題演講，並主持圓桌座談會，與亞太區各地的鐵路業持份者交流意見。

## ENGAGING WITH THE TRADES

### E&M Safety Trade Communication

Direct communication with the trades is very important to ensuring the safety of trade practitioners and the general public. In this regard, numerous talks, seminars and on-site briefings are held year-round to promote good work safety practices to contractors and workers in the electrical, gas and lift and escalator trades.

EMSD also organises safety training and events in cooperation with various trade associations, workers' unions and training institutes, either directly or through their representatives in numerous working groups and advisory committees. Such events include safety awards, trade competitions and continuous professional development programmes. Furthermore, EMSD produces and distributes a wide range of trades-specific E&M safety education materials, such as leaflets, brochures, posters, videos and website content.

EMSD-led trade conferences and symposiums are organised regularly to help trade leaders and practitioners keep abreast of new overseas technologies and of regulatory developments in Hong Kong. They also serve as forums for the trades and EMSD to exchange views and discuss issues of concern. An example is the Annual Technical Seminar for the electrical trade, which is jointly organised by EMSD, the Hong Kong & Kowloon Electrical Engineering & Appliances Trade Workers Union and the Hong Kong Electrical Contractors' Association.

EMSD also pro-actively participates in major regional and international trade conferences. This year, EMSD staged an exhibition booth for the first time at Asia Pacific Rail 2015. Held in Hong Kong from 31 March to 1 April, the 2015 conference attracted more than 1 000 rail professionals, representing regulatory authorities, operators, consultants and research institutes, etc from throughout the Asia Pacific rail industry. In addition to showcasing Hong Kong's railway safety regulatory work at its busy booth, EMSD also took the opportunity to directly address conference delegates. EMSD's Assistant Director/Railways presented a paper entitled "Railway in Hong Kong – Stepping into a New Era" and chaired a round-table session with various railway industry stakeholders from different countries in the region.



### 與能源效益業界溝通

機電工程署也同樣注重與能源效益行業保持溝通，並經常為家用電器製造商、出入口商及零售商舉行大量講座和研討會。在2014/15年度，由於署方須就「強制性能源效益標籤計劃」的《產品能源標籤實務守則》訂定2014年新版，因此更就此而廣泛諮詢業界。此外，署方的能源效益大使也經常走訪全港各電器零售商，確保店鋪的前線員工對新評級制能源標籤有一定認識。新評級制能源標籤將由2015年11月25日起開始使用。

至於建築物能源效益方面，機電工程署近年為業界舉辦了大量講座和研討會，講解《建築物能源效益條例》的主要條款，通過這類面對面的直接交流，讓發展商、建造業人士、業主立案法團和物業管理公司熟習該條例的要求，及其根據條例規定的法律責任。署方也定出版各種通訊、單張和小冊子，讓各持份者掌握有關建築物能源效益的最新發展。署方會定期為《建築物能源效益守則》作出檢討。其中照明功率密度標準已於2014年初作出提升。此外，本署自去年9月起全面檢討《建築物能源效益守則》2012版本的技術規定，以進一步提升能源效益標準。預計年底完成有關檢討程序。

### 維繫市民

機電工程署每年都本著「讓市民安全安心」的宗旨，推行大量公眾教育工作，內容包括豐富多元的廣告及宣傳計劃、大型活動、學校和社區外展探訪、及各界參觀位於署方總部大樓的教育徑等，此外還有其他為特定目標而設的活動。所有活動都是為了與市民大眾分享機電安全資訊，並鼓勵大家在家居和工作間實踐能源效益。

### 「機電青少年大使」計劃

機電工程署2014/15年度的重點工作之一，是加強與青少年的聯繫工作，尤其是加大力度推廣「機電青少年大使」計劃。該計劃的宗旨，是培養青少年成為機電工程署的大使，在日常生活中推廣機電安全、能源效益以及機電業發展。署方在2014/15年度進行了大使招募活動，已登記的大使總人數升至3 800名。

### Communicating with the Energy Efficiency Trades

Continuing its strong commitment to trade communications, EMSD also holds numerous talks and seminars for manufacturers, importers/exporters and retailers of domestic appliances. Such work was particularly important in 2014/15 as the trade was extensively consulted about the new Code of Practice on Energy Labelling of Products 2014 under the Mandatory Energy Efficiency Labelling Scheme. The regraded, tightened energy standards commenced when the new Code was gazetted in October 2014. EMSD's energy efficiency ambassadors also visit appliance retailers throughout Hong Kong to ensure that their frontline staff are familiar with the new, upgraded energy labels that will be used on or after 25 November 2015.

On the buildings energy efficiency front, EMSD has held numerous talks and seminars in recent years to explain and publicise key provisions of the Buildings Energy Efficiency Ordinance. Such face-to-face communications ensure that developers, buildings professionals, owners' corporations and property management companies are familiar with the statutory requirements and their respective duties under the Ordinance. Newsletters, leaflets and brochures are also produced regularly to keep these stakeholders updated on the latest developments. EMSD will review regularly the Building Energy Codes. In early 2014, the Lighting Power Density requirements were upgraded. In addition, EMSD has started to review the Building Energy Code 2012 Edition since September last year with a view to further upgrading energy efficiency standards, and will complete the review at the end of this year.

### ENGAGING WITH THE PUBLIC

Every year, EMSD runs an extensive public education programme that is aligned with its objective to ensure "safety and peace of mind" for all in Hong Kong. It comprises a rich variety of advertising and publicity campaigns, special events and school and community visits to the Education Path at its headquarters, not to mention other tailored initiatives. They all aim to share E&M safety tips with the public and to promote energy efficiency in our homes and workplaces.

### E&M Young Ambassador Scheme

One of EMSD's priorities in 2014/15 was to step up its youth engagement programmes, in particular its E&M Young Ambassador (EMYA) Scheme. The Scheme aims to empower youngsters to become EMSD ambassadors and help promote E&M safety, energy efficiency and E&M engineering development in their daily lives. A membership recruitment drive in 2014/15 saw the number of registered ambassadors rise to about 3 800.



左圖為「機電安全香港通」2014才藝比賽各優勝隊伍，於2014年12月舉行的機電安全嘉年華領獎後合照，右圖為嘉年華演唱節目，是最受歡迎的項目之一。Winners of the E&M Safety Campaign 2014 Talent Competition with their trophies at the E&M Safety Carnival held in December 2014 (left), and singing performance at the Carnival, one of the most popular items at the event. (right).

已登記的機電青少年大使會定期從網上收到訊息，包括2015年1月推出的每月通訊，內有豐富的機電安全和能源效益資訊。署方也會邀請大使參加各種活動，例如機電安全嘉年華、機電工程署開放日及「機電青少年大使」計劃的周年活動。2015年的周年活動，是在7月免費乘坐中環海濱摩天輪，大使的反應十分熱烈！

### 學校外展項目

機電工程署的學校外展活動，多年來已走訪接觸了數以百計的幼兒園、幼稚園、中小學及專上院校，部門多位專責學校外展工作的大使，全年無間地與全港不同年齡的學生直接對話，提升學生的能源效益和節能意識，並增進他們對安全使用電氣和氣體用具、升降機、扶手梯和機動遊戲機的知識。2014/15年度，署方的學校外展大使共探訪了535家學校和相關機構，包括357家幼稚園、57家小學、84家中學、兩家專上學院或培訓機構、35家長者和社區中心，共探訪了約120 400名市民。

機電工程署總部大樓的優勢之一，就是有一個出色的教育徑，能為全港學校和社區中心以至外地訪客及專業團體，提供內容豐富、生動活潑的團體導賞服務，在輕鬆的氣氛下以互動形式，去增強參觀者對能源效益、節能和機電安全的知識。社會人士對教育徑導賞服務，全年都需求甚殷。2014/15年度，署方就接待了259個學校、社區及青年中心、本地專業團體及海外代表團瀏覽教育徑，提供導賞。參觀人士來自各年齡層和各行各業，總數約達10 900位。

### 「全民節能」運動及相關活動

年內另一重點活動是由環境局與機電工程署合辦的「全民節能」運動，目的是支援《香港都市節能藍圖2015~2025+》；這是香港首份都市節能藍圖。署方特別為此推出了兩個嶄新的比賽，即「新能源新世代太陽能車比賽」和「慳電熄一熄青年獎」（詳情見「推廣能源效益及節能」一章第44頁）。

Registered ambassadors receive regular online updates, including a monthly newsletter, launched in January 2015, which contains useful E&M safety tips and energy efficiency information. E&M Young Ambassadors are also invited to events such as the E&M Safety Carnival, EMSD Open Days and the annual EMYA activity. The 2015 annual activity was a free ride on the Hong Kong Observation Wheel in July, which won excellent response from ambassadors!

### School Outreach Programme

Over the years, EMSD's school outreach programme has touched hundreds of nurseries, kindergartens, primary and secondary schools and tertiary institutes. Its dedicated team of ambassadors come into direct contact with students of all ages all year round to raise students' awareness of energy efficiency and conservation and to improve their knowledge of the safe use of electrical and gas appliances, lifts and escalators and amusement rides. During 2014/15, ambassadors from various EMSD divisions visited a total of 535 institutions, covering 357 kindergartens, 57 primary schools, 84 secondary schools, two tertiary or training institutes, 35 elderly and community centres, reaching about 120 400 individuals in all.

Thanks to an excellent Education Path at its headquarters building, EMSD is well positioned to offer informative and interesting guided tours to groups from schools and community centres and to overseas visitors and professional bodies, as required throughout the year. Visitors learn about energy efficiency and conservation as well as E&M safety in a relaxed and interactive environment. In 2014/15, EMSD conducted a total of 259 Education Path guided tours for schools, community and youth centres, local professional bodies and overseas delegations, reaching about 10 900 individuals of different ages and from all walks of life.

### “Energy Saving for All” Campaign and Related Initiatives

Another major communications initiative was the “Energy Saving for All” Campaign jointly introduced by the Environment Bureau (ENB) and EMSD. It aims to support the ENB's Energy Saving Plan for Hong Kong's Built Environment 2015~2025+, which is the first-ever energy saving blueprint for Hong Kong. In support of the campaign, EMSD also launched two youth competitions, namely the New Energy New Generation Solar Car Competition and the Youth Energy Saving Award. (For details, see p.44 in the “Promoting Energy Efficiency and Conservation” chapter.)

### 機電工程署開放日及傳媒聚會

機電工程署每隔一段時間，就會在總部大樓舉辦開放日，讓公眾了解部門的服務，並增加對機電安全和能源效益的認識。我們全家就去了2014年11月1日和2日舉辦的機電工程署開放日，覺得很開心。我們特別喜歡參觀教育徑和毗鄰的啟德區域供冷系統，還有就是當天展出的各類電動車。兩天的開放日，共有5 000多名市民參與。

署方也在開放日的前一天，即2014年10月31日舉行傳媒周年聚會。席間，部門高層管理人員就能源標籤新評級標準，向傳媒朋友作了簡介，並帶他們預覽開放日的攤位和節目。當天的聚會共有30多位記者和編輯出席。

### 鐵路安全影片

繼2013/14年度出版《安全鐵路開心旅程Go Go Go!》手冊之後，機電工程署與港鐵公司再攜手合作，在2014/15年製作了新的影片，以上述手冊的創意念和動畫家庭為藍本，講述一家人乘坐輕鐵及重鐵路線，往紅磡聽演唱會途中的經歷，藉此帶出安全使用鐵路的多個重要訊息。影片有中文和英文版，將於港鐵列車內播放，大家也可於機電工程署網頁上收看。

### 更佳數碼工具

無論任何年齡群組，近年都已漸轉往網上媒介取得資訊和娛樂，機電工程署也與時並進。部門年內推出了一個新網站www.energysaving.gov.hk，市民從這一站式綜合平台已可取得所有關於香港節能和活動的資訊，網站也齊備通往本地所有主要能源效益機構的連結。另一例子是www.gsp.emsd.gov.hk氣體安全網站，有齊市民大眾及業界所需的氣體安全資訊。機電工程署致力整合及改善數碼溝通工具，務求為市民帶來更順暢的網上閱覽經驗，這些都是部分例子。

### EMSD Open Day and Media Gathering

EMSD organises Open Days at its headquarters from time to time so that the public may learn more about the Department's services as well as E&M safety and energy efficiency. Our family went to the most recent Open Day, held on 1 and 2 November, 2014 and enjoyed the event. We particularly liked visiting the Education Path and the nearby Kai Tak District Cooling System and seeing different types of electric vehicles on display. More than 5 000 visitors attended the Open Day.

EMSD held its annual media gathering on 31 October 2014, just prior to the Open Day. Senior management briefed journalists on the new regraded standards for energy labels and took them on a preview of the Open Day booths and programmes. More than 30 journalists and editors attended the gathering.

### Railway Safety Video

Further to the Railway Safety – Happy Journey Go Go Go! handbook published in 2013/14, a new video on railway safety was jointly produced by EMSD and MTRCL in 2014/15. Using the same creative platform as the handbook and featuring the same characters, the video follows a cartoon family taking the MTR Light Rail and heavy railway lines to a pop concert in Hung Hom, highlighting key safety messages for railway users along the way. The video, in both Chinese and English, will be broadcast on MTR trains and available on EMSD's homepage.

### Better Digital Tools

As people of all ages are increasingly migrating to online media for information and entertainment, EMSD has also moved with the times. Its new comprehensive website www.energysaving.gov.hk aims to serve as a one-stop platform for the general public to acquire everything they wish to know about energy saving in Hong Kong, with hyperlinks to all major energy efficiency organisations and activities in the city. A dedicated portal www.gsp.emsd.gov.hk also features all key gas safety information for the public and the trade. These are just some examples of how the Department continues to consolidate and improve its digital communication tools for a better user experience.



機電工程署高層管理邀請多位中小學生，一起主持部門2014年開放日開幕禮，突顯部門十分重視青少年參與機電安全和能源效益推廣活動。EMSD senior management at the opening ceremony of its Open Day 2014, with secondary and primary students on stage. Inviting students to jointly open the event highlights the importance EMSD attaches to engaging youth in promoting E&M safety and energy efficiency.

機電工程署與港鐵公司攜手製作新影片，宣傳鐵路安全。圖為影片一幕。  
A shot from the new video on railway safety jointly produced by EMSD and MTRCL.



「機電安全香港通」2014各項比賽的優勝者，於機電安全嘉年華大合照。維期六個月的運動，吸引了各年齡群組及各行各業的市民積極參與。  
Winners of various competitions of the E&M Safety Campaign 2014 at the E&M Safety Carnival. The six-month Campaign attracted enthusiastic participation by people of different age groups and all walks of life.



## 「機電安全香港通」與市民互動 老少咸宜

### E&M SAFETY CAMPAIGN ENGAGES PEOPLE OF ALL AGES

「機電安全香港通」是機電工程署的旗艦活動，由署方與香港工程師學會及來自不同界別的機構協辦，包括電力、氣體、公共交通、房屋、遊樂及行業商會等。「機電安全香港通」始於2001年，發展至今，已是本港最大型推廣機電安全和節能環保的公眾教育活動之一，隔年舉行一次。

機電工程署氣體標準事務處的工程師丁邦佑女士，是2014年為期6個月的「機電安全香港通」活動的工作小組成員之一。工作小組除了舉行多年來深受歡迎的海報設計比賽和網上問答比賽外，更為較年輕的市民首次推出3項新比賽：校際問答比賽、填色比賽和才藝比賽。填色比賽是為幼稚園而設，極受歡迎，推出數周已收到兩萬多份幼稚園學生的作品。大家可於 [www.emsd.gov.hk/emsd/emssafetycampaign2014](http://www.emsd.gov.hk/emsd/emssafetycampaign2014) 瀏覽各比賽得獎作品和短片，而才藝比賽優勝隊伍的《電器安全歌》，也可於 [www.youtube.com/user/emsdgovhk](http://www.youtube.com/user/emsdgovhk) 頻道欣賞。

活動的壓軸節目，是大眾期待的機電安全嘉年華，已於2014年12月6日及7日一連兩天假九龍花墟公園舉行，並由環境局常任秘書長王倩儀女士出任主禮嘉賓。兩天的嘉年華會，吸引了約10 130位市民進場，參與各種攤位遊戲、欣賞歌星表演、話劇演出和投入充滿趣味玩意的兒童角。才藝比賽和校際問比賽的總決賽也於嘉年華舉行，現場觀眾十分享受台上的熱烈氣氛。

丁女士回想整個活動的籌備過程，有很深體會。這是她第一次參與大型宣傳活動的籌組工作，跟她日常的工程工作很不同，但共通點是兩者都涉及項目管理。她說：「時間緊逼是最大挑戰，而最開心的一刻是見到嘉年華順利開幕。另外，在現場見到各階層的市民，與親友開心共度一天，又學到關於機電安全和能源效益的知識，而這些都是我們工作的直接成果，都是令人開心的時刻。」丁女士的日常工作，是與同事聯手執行氣體法例，往往需要較長時間才能見到工作成果，而今次參加「機電安全香港通」工作，讓她感受到籌備工作帶來的即時直接成效，她很享受這經驗。

她笑著說：「活動期間，我上班乘坐的巴士，有時會播出我們攝製的宣傳短片，我就會非常緊張和在在，還會偷看其他乘客，看他們有甚麼反應！」

The E&M Safety Campaign is a signature programme jointly organised by EMSD, the Hong Kong Institution of Engineers and other leading E&M organisations from the utilities, gas, public transport, public housing and recreation sectors. Launched in 2001, the biennial event has become one of Hong Kong's largest public education programmes promoting E&M safety and energy efficiency.

Ms Fanny Ting, engineer at the Gas Standards Office, was a member of the working group for the 2014 Campaign. On top of established activities like the Poster Design Competition and Online Quiz, the six-month campaign introduced three new elements to target youngsters of different ages: an Interschool E&M Safety Quiz, a Colouring Competition and a Talent Competition. The Colouring Competition for kindergartens in particular proved extremely popular, with more than 20 000 submissions received from kindergarten students in just a few weeks. Visit <http://www.emsd.gov.hk/emsd/emssafetycampaign2014> to browse winning pictures and performances. The winning team's "Electrical Safety Song" is also on <http://www.youtube.com/user/emsdgovhk>.

The E&M Safety Carnival, the much-anticipated two-day finale event, was held on 6-7 December, 2014 at Fa Hui Park in Kowloon, officiated by Ms Anissa Wong, Permanent Secretary for the Environment. A total of about 10 130 visitors attended to enjoy educational booth games, Canto-pop and drama performances and a children's fun corner. The audience also enjoyed live performances by the winning teams of the Talent Competition as well as the exciting final round of the Interschool E&M Safety Quiz.

Thinking back on what she learnt from the experience, Ms Ting said it was the first time she had organised such a large-scale publicity event. This was a departure from her day-to-day engineering work, though both involve project management. "Beating very tight deadlines was challenging," she said. "The happiest moment was when the Carnival opened smoothly. It was so gratifying to see people from all walks of life having fun with family and friends while learning something about E&M safety and energy efficiency – all as a direct result of our work." As part of a team that performs law enforcement duties, which often take some time to complete, Ms Ting enjoyed seeing the immediate, positive impact of her work via this project.

"During the campaign period, I would sometimes see our video commercials being aired on the bus I take to work. I felt so involved that I would even check out the other passengers to see their response!" she added with a laugh.