

安全節能在香港

A Safe and Energy Efficient Hong Kong

機電工程署規管服務 2010 年業務概覽

Electrical and Mechanical Services Department
Regulatory Services - Achievements Overview 2010



機電工程署
EMSD



抱負、使命和信念

Vision, Mission and Values

Vision

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

Mission

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

Values

- Expertise
- Integrity
- Reliability
- Commitment

抱負

我們的抱負，是要成為促使香港在機電安全及善用能源方面，都達到世界首要都會水平的政府機構。

使命

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

信念

- 專業才能
- 誠信
- 可靠
- 承擔





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服務無間斷

Service Round the Clock

規管服務的工作觸及香港生活多方面，我們也努力確保人人享有機電安全和能源效益。有你的支持，我們可以攜手把香港變得更安全、更節能。

OUR REGULATORY SERVICES TOUCH MANY ASPECTS OF DAILY LIFE IN HONG KONG, AND WE STRIVE TO ENSURE E&M SAFETY AND ENERGY EFFICIENCY FOR EVERYONE. WITH YOUR SUPPORT, WE CAN WORK TOGETHER TO MAKE HONG KONG A SAFER AND GREENER PLACE.





重要活動

Achievements and Initiatives

INCIDENT NUMBERS CONTINUE TO FALL

Both electrical and gas incident numbers saw further reduction in 2010, again underscoring the effectiveness of our public education programmes and our risk-based inspection and preventive approach.

Electrical incidents continued to fall in 2010, with a record low of 73 incidents of third-party damage to electricity supply lines, 55 electrical product incidents, and 33 fixed electrical installation incidents.

Fewer gas incidents were also reported compared to the previous year, with most being minor. Total gas incidents reached a new low last year, dropping from 259 in 2009 to 224 in 2010, equivalent to 31.7 per million capita.

事故數字持續下降

電力和氣體事故數字於2010年均進一步下降，再次突顯我們的公眾教育工作、和以風險管理巡查及預防事故的模式奏效。

電力事故於2010年持續減少，第三者損毀供電電纜事故創新低至73宗，電氣產品事故減至55宗，而固定電力裝置事故則減至33宗。

氣體事故也比上一年減少，大部份均為輕微事故。整體氣體事故數字去年再創新低，由2009年的259宗，下降至2010年的224宗，等於每百萬人31.7宗。

NEW BILL ON LIFT AND ESCALATOR SAFETY

Following a three-month public consultation with regard to amending the Lifts and Escalators (Safety) Ordinance (Cap. 327), it was decided in early 2010 that an entirely new bill on lift and escalator safety would be drafted, with a new regulatory framework and streamlined procedures to better satisfy community needs and reflect current technologies. The bill is scheduled to be submitted to LegCo in mid-2011 for vetting.

The bill, if enacted, will open a new chapter in the regulation of lift and escalator safety. The fundamental change is to extend the responsibility, which is heavily vested in Registered Lift Contractors (RLC) under the current legislation, to all the key stakeholders. This means that the owner, RLC and even the worker will have shared responsibilities to fulfil, for the benefit of our community as a whole.

升降機及自動梯安全新法案

經過3個月的公眾諮詢，關於修訂《升降機及自動梯（安全）條例（第327章）》的建議，有關方面已於2010年初決定草擬一條全新的升降機及自動梯安全條例，並製訂新的規管架構及改善執法程序，以配合社會需要和現今的技術發展。草案預計於2011年年中呈交立法會審議。

條例草案如獲通過，本港的升降機及自動梯安全規管工作將展開新的一頁。最基本的改變，是加強負責升降機及自動梯工程人士的註冊制度及界定所有持份者的責任。這指明負責管理或控制升降機或自動梯的擁有人、物業管理、註冊承建商、註冊工程師及工，都要分擔「共同責任」，齊齊為社會整體安全作出貢獻。

RAILWAY SAFETY VETTING IN FULL SWING

Construction of the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) commenced in 2010, and is scheduled for completion in 2015. Our work to vet the safety design submissions for its 11-hectare 15-platform West Kowloon Terminus is well under way, covering an extensive range of safety features and facilities such as fire services, ventilation and communication systems. Intensive safety vetting of other XRL facilities will continue over the next few years.

鐵路安全審批工作全面展開

廣深港高速鐵路香港段已於2010年開始動工，預計於2015年完工。高鐵香港段的西九龍總站面積達11公頃，有15個月台，包含大量不同的安全裝備和設施，如消防、通風和通訊等各種系統，我們已展開有關設計的安全審批工作。預計未來數年，陸續會有大量的安全設施需要審批處理。

BUILDINGS ENERGY EFFICIENCY ORDINANCE ENACTED

Another milestone was the enactment of the Buildings Energy Efficiency Ordinance in late 2010. As Hong Kong's first building-related energy efficiency legislation, the Ordinance is expected to improve energy efficiency in buildings, and thus help alleviate the adverse effects of climate change, by regulating the hardware design of major energy-using systems and building installations. Various tasks are now underway to prepare for enforcement of the Ordinance when full implementation begins in September 2012.

《建築物能源效益條例》立法通過

2010年另一里程碑是《建築物能源效益條例》於年底在立法會通過。這是全港第一條涉及建築物的能源效益條例，規管建築物的主要耗能及屋宇裝備設施的硬件設計。預料條例推行後，會改善本港建築物的能源效益，並有助舒緩氣候變化帶來的不良影響。條例將於2012年9月全面推行，我們現正為全面推行條例進行籌備工作。

APPROVAL OF MEELS PHASE TWO

A key success in 2010 was the approval of phase two of the Mandatory Energy Efficiency Labelling Scheme (MEELS) by LegCo. Phase two extends the MEELS to cover washing machines and dehumidifiers. With an 18-month grace period, phase two will begin full implementation on 19 September, 2011. A revised Code of Practice covering all five products under both phases has been gazetted to help the trade better comply with mandatory requirements of the Energy Efficiency (Labelling of Products) Ordinance.

強制性能源效益標籤計劃第二階段順利通過

2010年的成就之一，是強制性能源效益標籤計劃第二階段獲立法會通過。第二階段把計劃拓寬，涵蓋洗衣機和抽濕機，並有18個月寬限期，將於2011年9月19日全面推行。此外，《產品能源標籤實務守則》亦已經更新及刊憲，內容包含第一和第二階段的所有5類產品，以助業界符合《能源效益（產品標籤）》條例的要求。



高層管理人員 Senior Management

1. 署長

陳鴻祥太平紳士
機電工程署署長

Director

CHAN Hung Cheung, Stephen, JP
Director of Electrical and Mechanical Services

2. 副署長

陳帆太平紳士
副署長 / 規管服務

Deputy Director

CHAN Fan, Frank, JP
Deputy Director / Regulatory Services

3. 助理署長

李國強
助理署長 /
電力及能源效益

Assistant Director

LI Kwok Keung
Assistant Director /
Electricity and Energy Efficiency



4. 助理署長

薛永恒

助理署長 /
氣體及一般法例

Assistant Director

SIT Wing Hang, Alfred

Assistant Director /
Gas and General Legislation

5. 助理署長

梁建民

助理署長 / 鐵路

Assistant Director

LEUNG Kin Man

Assistant Director / Railways

6. 秘書

周楚添

主任秘書

Secretary

CHOW Chor Tim

Departmental Secretary

7. 會計師

林志賢

部門會計師

Accountant

LAM Chi Yin

Departmental Accountant

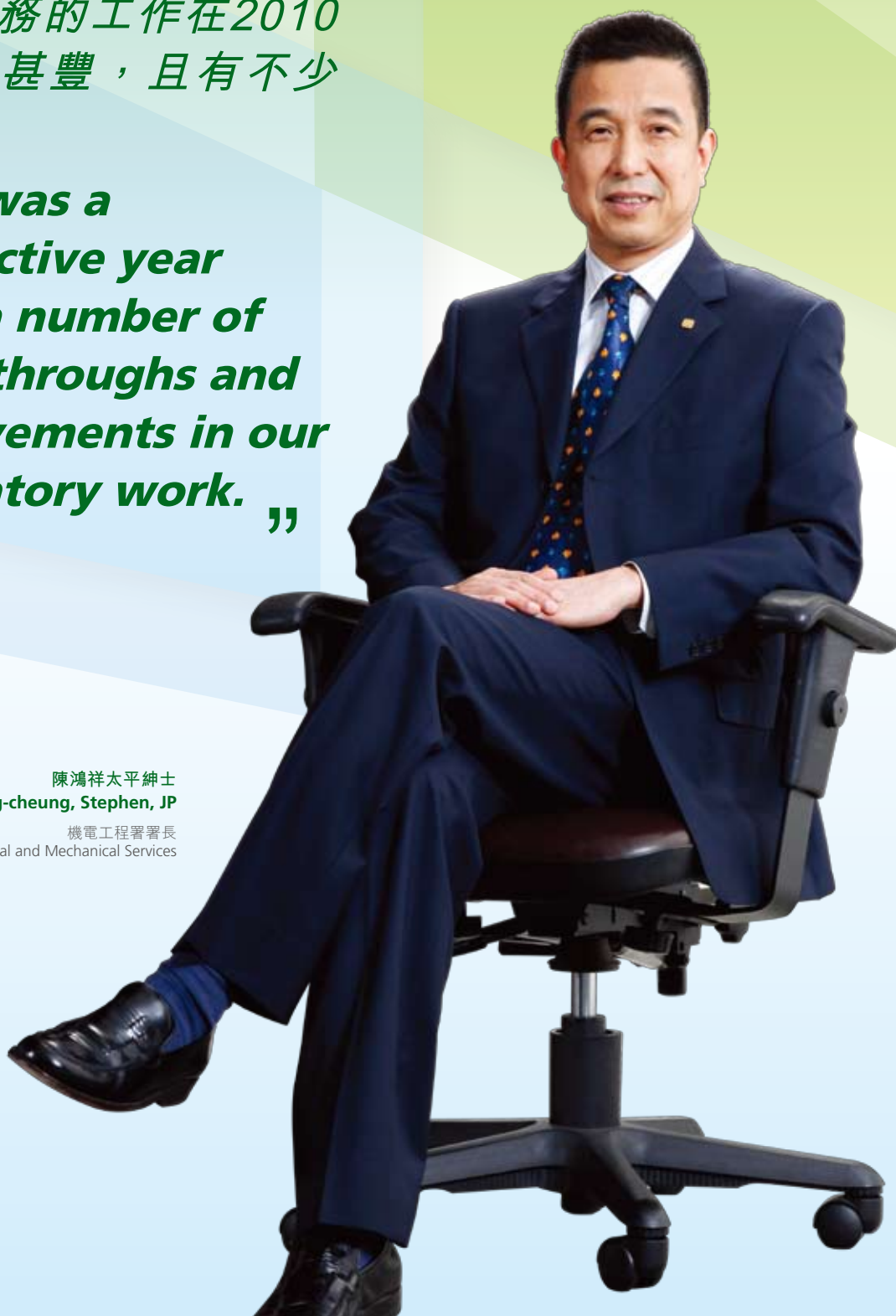
署長的話

Message from the Director

“規管服務的工作在2010年績效甚豐，且有不少突破。

2010 was a productive year with a number of breakthroughs and achievements in our regulatory work.”

陳鴻祥太平紳士
Mr Chan Hung-cheung, Stephen, JP
機電工程署署長
Director of Electrical and Mechanical Services



升降機及自動梯安全新條例草案

“新條例草案，反映了現時升降機及自動梯維修保養市場開放競爭的特色和需要。新的草案，不會再過份依賴註冊電梯承辦商的角色；而電梯擁有人、負責人、以至電梯維修保養工人，也要負上法定的責任去確保電梯安全。”

The New Bill on Lift and Escalator Safety

“The spirit of the new bill reflects the needs of the current open market in lift and escalator maintenance. Instead of overly relying on the lift contractor, the lift owner and even the worker will soon have a statutory role to play in ensuring safety.”

規管服務的工作在2010年績效甚豐，且有不少突破。

能源效益里程碑

去年我們能源效益工作的一大成績，是強制性能源效益標籤計劃第二階段已獲得立法會通過，把洗衣機和抽濕機也納入計劃，規定必須有能源標籤。計劃的第一階段已由2009年11月起全面實施，現加上第二階段，整個計劃共涵蓋5個產品類別，耗電量相等於全港家居總耗電量約65%。預計計劃全面推行後，將為全港住戶節省可觀的耗電量。

另一成就是《建築物能源效益條例》於2010年底完成立法，並將於2012年9月起全面推行。我們已開始籌備屆時的執法工作。

立法會去年也批准了興建啟德發展區區域供冷系統的撥款，工程合約並已及時批出，以配合整體項目進度。這大型項目無論性質和規模，都是本港前所未有的，能源效益事務處未來數年會全力進行管理和監察。

我們也欣然見到規管淡水冷卻塔方面，去年有一大突破，對進一步推廣水冷式空調系統的工作有很大幫助。新的安排，會大大改善對散佈全港約9千6百個淡水冷卻塔的監管工作，並使機電工程署能更有效地促使淡水冷卻塔擁有人去糾正冷卻塔的設計、操作與維修保養欠妥情況。淡水冷卻塔的新規管架構，不單減少了傳播退伍軍人病症的潛在公共衛生風險，還能同時推動能源效益，一舉兩得。

2010 was a productive year with a number of breakthroughs and achievements in our regulatory work.

ENERGY EFFICIENCY MILESTONES

A key success in our energy efficiency work was the approval of phase two of the Mandatory Energy Efficiency Labelling Scheme (MEELS) by LegCo, mandating the extension of MEELS to cover washing machines and dehumidifiers. Augmenting phase one of MEELS, which has been in full implementation since November 2009, the Scheme now covers five product types that account for about 65 per cent of total domestic electricity consumption in Hong Kong. The initiative is expected to generate energy savings for many households and for many years to come.

A further achievement was the enactment of the Buildings Energy Efficiency Ordinance in late 2010, which set in motion various tasks to prepare for enforcement of the Ordinance when full implementation begins in September 2012.

Another milestone last year was LegCo's approval of funding for the District Cooling System at the Kai Tak Development, making it possible to award the contract in time to meet the works programme. Over the next few years, our Energy Efficiency Office will play a pivotal role in overseeing this extensive project, which is unprecedented in Hong Kong in terms of its nature and scale.

We are also pleased to see a breakthrough in the regulatory control of fresh-water cooling towers, a key element in our drive to promote the more energy efficient Water-Cooled Air-Conditioning Systems. The new arrangement will lead to major improvements in controlling the approximately 9,600 fresh-water cooling towers in the territory, and support us in rectifying malpractices in tower design, operation and maintenance. The new regulatory regime serves to reduce potential public health hazards relating to Legionnaires' disease in tandem with the promotion of energy efficiency.

機電安全績效

去年機電安全的表現也相當不俗，電力事故數字持續下降，勢頭很好，氣體事故去年也比前年減少，且大多數是輕微事故。

至於升降機和自動梯安全，我們現正集中草擬全新的升降機及自動梯安全條例草案，草案會加強對升降機及自動梯的安全規管，提升註冊工程師及工程人員的資歷要求，並會將擁有人的責任擴至其他對升降機及自動梯有管理權或控制權的人。根據目前法例，註冊電梯承辦商的責任最重，而新草案則會界定所有持份者的責任，包括維修保養工程人員，都要承擔「共同責任」，為安全出一份力。

鐵路安全是我們較新的工作範疇，不過，一如其他機電安全工作，我們的規管重點，也是確保鐵路營運者的硬件、系統設計和操作手法安全。此外，香港的鐵路網未來數年會大幅擴張，包括興建首條高速鐵路，因此，我們面對的挑戰，是如何進一步加強部門的能力，以充份應付各種規管、審批和意外事故調查的大量工作。

提高透明度

我們欣然報告，規管服務在提高運作透明度方面，已取得相當進展，也符合我們較早時訂下、要求提高本身運作透明度的策略性目標。某些業界的安全表現，尤其容易引起公眾疑慮，因此提高透明度就更形重要。就此，我們已樹立了好些機制，比如車

E&M SAFETY PERFORMANCE

The past year was equally fruitful in E&M safety. The number of electrical incidents continued its downward trend and remains well under control. Fewer gas incidents were also reported compared to the previous year, with most being minor.

On lift and escalator safety, we have continued to focus on drafting a new lift and escalator safety bill which will take a very different regulatory approach. The fundamental change in the new bill is to extend the responsibility, which is heavily vested in Registered Lift Contractors (RLC) under the current legislation, to all the key stakeholders, so that the owner, RLC and even the worker will have shared responsibilities to fulfil.

Railway safety is a relatively new area of our work, but like other E&M safety areas, our focus is to ensure the safety of the railway operators' hardware, design and operating practices. Moreover, as Hong Kong will see a major expansion of its railway network in the next few years, including our first high-speed rail link, our challenge is to enhance our capacity to discharge effectively our regulatory, approval and investigative duties.

MORE TRANSPARENT TO THE PUBLIC

We are happy to report that we have also made progress in increasing the transparency of our operations, which is one of the strategic objectives we have set for ourselves. This is particularly important in areas where there is public concern for the safety performance of certain sectors of the trade. We have established mechanisms such as the monthly auto-LPG

規管淡水冷卻塔新發展

“最新的發展，是我們已透過《公眾衛生及市政條例》獲得授權，進行淡水冷卻塔的巡查、執法和檢控工作。條例同時也賦予我們法律根據，去建立一套規管架構，糾正本港淡水冷卻塔在設計、操作和維修保養方面種種不當的做法。”

What's New in the Control of Fresh-Water Cooling Towers

“What's new is that we now have powers, delegated to us via the Public Health and Municipal Services Ordinance, that provide the statutory basis for inspection, enforcement and prosecution work. This also means that we can now put in place a regulatory framework to rectify malpractices in design, operation and maintenance of fresh water cooling towers in Hong Kong.”

註冊能源效益評核人開始註冊

“《建築物能源效益條例》(第610章)下的註冊能源效益評核人規例，已於2011年3月21日生效，標誌著本港建築物能源效益的發展，已揭開新的一頁。我們已由立法進入推行和執法階段，並面對未來的挑戰。”

Registration of Registered Energy Assessors Commences

“The Regulation on Registered Energy Assessors under the Buildings Energy Efficiency Ordinance (Cap. 610) has commenced on 21 March 2011 and marks a new page in building energy efficiency development in Hong Kong. We have moved from the legislative stage to implementation, with new challenges ahead.”

用石油氣樣本每月品質檢驗測試、及為追蹤註冊電梯承建商表現而設的季度「註冊升降機承建商表現評級」制度等。有關的測試和評核結果均定期於機電工程署網頁公佈，並常輔以新聞稿說明，協助市民理解有關數據。

把握社會脈搏

經過近年的種種改善和整合，我們相信規管服務已變為更有成效、更有活力的團隊。至於未來的路，關鍵是必須好好把握社會脈搏，繼續做好宣傳和公眾教育工作，且在每方面都要進一步提高員工的能力，使規管服務的專業人員和管理層，為機構的未來發展做好準備。

規管服務的同事盡忠職守，表現出色，我謹向全體員工致謝。同樣，業界同寅的支持、廣大市民的意見和政策局的指引，對我們也十分重要，我謹對所有持份者致以謝忱。

規管工作既複雜又令人興奮，規管服務不但能改善市民生活質素，長遠來說更可促使社會進步。本人有幸參與其事，與大家共同努力，實在與有榮焉。

quality tests and the quarterly Contractor Performance Rating system that tracks the safety and performance of RLCs. Test results and information relating to specific named contractors and suppliers are regularly posted on the EMSD website, and supplemented by press releases from time to time to help the public understand the data.

FEELING THE PULSE OF THE COMMUNITY

We believe that after improvements and consolidation in recent years, Regulatory Services has emerged as a more effective and dynamic team. Going forward, the key is to keep our finger on the pulse of the community, to keep up our publicity and public education efforts, and to strengthen our staff capacity in all aspects of our work to ensure our professional and management officers are well prepared for the future.

I wish to thank all staff for their dedication and good work. Equally important has been support from the trades, valuable feedback from the public, and guidance from the policy bureaux. All these stakeholders deserve our sincere thanks.

Regulatory work is complex and exciting. It improves our quality of life and advances our society in the long run. It is a pleasure and a privilege to be engaged in this important work with you.



機電工程署署長
陳鴻祥



Stephen H C Chan
Director of Electrical and Mechanical Services

如何形容今天的團隊？

“我覺得「有朝氣」最能形容今天的規管服務團隊。”

One Team, One Word

“I think ‘vibrant’ is the word that best describes today’s Regulatory Services.”

業務回顧 **Operations Review**



“規管服務應為市民大眾、包括我們所有持份者，創造某種比我們日常監察和執法這些基本工作更高的價值。

Regulatory Services should deliver some kind of value to the public, including all our stakeholders, above and beyond our basic duty of gate-keeping and law enforcement.”

陳帆太平紳士
Mr Chan Fan, JP

副署長／規管服務
Deputy Director/ Regulatory Services

「無邊界」規管服務

“我們從沒見過不願意進行跨部別合作的同事，無論是籌備嘉年華、研討會、以至處理難題與危機，部別之間都合作無間。由此看來，我們的運作已做到「無邊界」規管服務。”

“Borderless” Regulatory Services

“We have not encountered any staff member who is reluctant to work across administrative borders and cooperate with other Divisions on joint tasks, be it a carnival or symposium, or an issue or crisis. In that sense, our operations are already ‘borderless’.”

署長已從策略層面回顧了規管服務去年的業務概況，我會從管理角度，集中談談規管服務未來數年的發展。

管理任務

2010年初，我們為自己定下幾個富挑戰性的管理任務。首先，我們要為規管服務各個工作範疇的規管架構，進行徹底的內部稽核和檢視，以找出不足之處和了解潛在風險。其次，我們要提高同事的危機意識和應變能力。第三，我們希望改變同事以往側重工作產量的心態，轉為比較重視工作成效。第四，我們希望探討「公眾價值」的觀念，激發新思維，讓我們更有效地評估自身的工作成效。經驗告訴我們，要做一個有效的規管者，這幾方面都是要優先處理的問題。

落實進度

我們去年在上述四方面都有相當進展。有關規管服務架構的內部稽核，進行得十分仔細，等於重新檢視一遍我們負責執法的種種條例和規定背後的基本理念和意義。稽核的結論，是我們整體工

The Director has reviewed the past year from a strategic perspective and highlighted Regulatory Services' key achievements. I shall focus on a number of management issues pertinent to our development in the next few years.

MANAGEMENT TASKS

Internally, we challenged ourselves on several fronts at the beginning of the year. First, we wanted to conduct a thorough stocktaking or internal audit of our regulatory frameworks in different areas to find out the potential risks and issues they entail. Second, we wanted to raise our level of crisis alertness and preparedness. Third, we wanted to shift our colleagues' mindset from a focus on output to outcome, and fourth, we wanted to explore the concept of “public value” to provide fresh ideas to help us evaluate our work. We have learnt from experience that these areas have to be prioritised if we want to become a more effective regulator.

PROGRESS MADE

We have made progress in each of these major tasks. The internal stocktaking was detailed and meticulous, leading us to literally re-examine some of the basic concepts and essential meaning of the legislation and regulations we enforce. The conclusion is that we are largely on track,

令人高興的挑戰

“能源效益事務處近年為政府推行多項新節能計劃，因此要處理很多高增長帶來的管理問題，不過，這些都是令人高興的挑戰。我們可以做得更好的，是再提高能源效益的標準，讓業界加把勁，進一步加強能效表現。”

Our Enviably Challenge

“Our Energy Efficiency Office is helping the Government to implement many new initiatives and therefore has the enviable challenge of managing a high-growth portfolio of activities. We could do more, however, by being more aggressive in raising energy efficiency standards so that the trade will be stretched to improve performance.”

作的方向是正確的，但仍有改善空間。我們日後會時常進行這種內部檢視工作，確保我們不會與執法工作的基本理念脫節。

規管服務所有部別，去年都參與了製訂規管服務的《危機預防、應變與處理計劃》，提供意見，並在編寫過程中發掘了好些以前未有充分注意的紕漏和問題。我們已馬上採取措施去堵塞漏洞和解決問題，並通過模擬演練和進修培訓，提高員工處理危機的能力。

與此同時，我們也主動採取措施去提高規管服務運作的透明度，讓傳媒和市民大眾對我們的工作、特別是那些容易引起公眾興趣或疑慮的事項，有更清晰的了解。我們發現，由於同事比以前更主動發放資訊和數據，傳媒和市民對各種規管服務問題的資料掌握和理解，也比較全面。

「公眾價值」與工作成效

要談工作成效，不得不先探討「公眾價值」這個宏觀概念。「公眾價值」是個不斷蛻變的觀念，意義會隨著社會演進而變化。我們相信，規管服務應為市民大眾、包括我們所有持份者，創造某種比我們日常監察和執法這些基本工作更高的價值。「公眾價值」的理念其實可以很具體：如果

though there is room for improvement. We shall make such stocktaking an ongoing process, so that we do not lose touch with the foundations of our work.

During the year, all Regulatory Services Divisions contributed to the compilation of our Crisis Prevention, Response and Management Plan and, in the process, identified gaps and issues that we might not have paid sufficient attention to in the past. We have been working to close those gaps and enhance the skills of our staff in dealing with crisis situations via simulation drills and refresher training.

At the same time, we have also taken pro-active steps to make our operations more transparent to the media and the public, in particular with regard to communication on specific issues of interest or concern. We are happy to note that with our increased efforts to pro-actively disseminate information and data, the media and public are now better informed about the issues concerned.

PUBLIC VALUE AND OUTCOME

The discussion of “outcome” cannot be separated from the bigger issue of “public value”. “Public value” is a living concept and its meaning will change as society evolves. For our purposes, we believe that Regulatory Services should deliver some kind of value to the public, including all our stakeholders, above and beyond our basic duty of gate-keeping and law enforcement. It is not as vague as it sounds – if we put the question “what

建立影響力

“理想地說，規管服務應逐步在持份者之間建立影響力，再運用影響力去達成我們的工作目標。這固然需要極高的技巧和努力，但長遠來說是較有效的方法。”

On Building Influence

“Ideally, Regulatory Services should build up its influence with stakeholders and leverage that influence to achieve its objectives. This will take great skill and effort, but should be a more effective approach in the long run.”

我們暫時放下規管者的身份，嘗試從市民的角度出發，就我們服務的每一個範疇問，我們創造了甚麼公眾價值？我們就不難分辨出，哪一些是投入高而成效低的次要工作，而哪一些是真正創造價值的工作。了解規管服務的「公眾價值」，有助我們聚焦去做最重要的工作。

前瞻2011年，我們的工作重點之一，是落實並進一步改善規管服務的《危機預防、應變與處理計劃》，並加強員工培訓、提高工作能力，為未來的工作和新挑戰做好準備。

規管服務全體同事盡心盡力，表現出色，各個持份者對我們的工作也鼎力支持，本人謹衷心致謝。我們必繼續全力以赴，不負眾望。



副署長 / 規管服務
陳帆

public value do we create” to each aspect of our work, and look at things from the public’s point of view rather than our own, we could better differentiate those mundane, high-input low-outcome tasks from the truly value-generating work. Understanding our “public value” will help us stay focused on what is important.

Looking ahead, a key task in 2011 is to implement and improve our Crisis Prevention, Response and Management Plan, and to step up staff training and capacity building in preparation for new work and unexpected challenges.

I wish to close by reiterating our appreciation for the good work and dedication of the entire Regulatory Services staff team, and every stakeholder who has assisted and supported our work. We shall strive to continue to live up to the trust they place in us.



Chan Fan, Frank
Deputy Director / Regulatory Services

保障公眾安全 Protecting Public Safety







我們的督察運用流動通訊技術，把巡查大廈固定電力裝置工作做得更好。
Inspector using mobile communication technology to assist in the inspection of fixed electrical installation of buildings.



確保電力供應穩定，對本港經濟和生活質素都十分重要。
Ensuring the stability of electricity supply is vital to the economy and quality of life in Hong Kong.

電力安全

電力安全事故下降

電力事故於2010年持續下降，第三者損毀供電電纜事故創新低至73宗，電氣產品事故減至55宗，而固定電力裝置事故則減至33宗。正如附圖顯示，各類事故數字，近年均見持續下降趨勢。

與業界合作

2010年對電力法例部是平穩的一年。值得一提的，是我們為約7萬2千名註冊電業工程人員和9千間註冊電業承辦商，順利完成了每3年一次的註冊續期手續，兌現了我們對業界的服務承諾。我們現正與業界工會磋商，探討在下次註冊續期時，引入持續進修要求的可能性。

我們也主動與業界合作，為社區提供更佳服務，例如2010年12月花園街小販攤檔發生火警後，我們第一時間作出回應行動。電力法例部當時與其他政府部門攜手合作，為受影響的攤檔迅速恢復電力，並動員業界組織、電業工會及職業訓練局提供支援，並得各方慷慨協助，迅速為各攤檔重建電力裝置，使他們得以及時於聖誕購物旺季期間重開做生意。攤檔販商對我們的額外努力均表示讚賞。



業界義工幫助於2010年12月花園街大火中受影響的攤檔，迅速重建電力裝置。
Volunteers from the trade help reinstate electrical installations at the Fa Yuen Street market stalls affected by a fire in December 2010.



巡查大廈固定電力裝置時，使用設有地理資訊系統的平板電腦能有助確定大廈的準確位置。
Using tablet PCs with GIS during inspection of fixed electrical installations helps locate buildings accurately.

ELECTRICAL SAFETY

Electrical Incidents Fall

Electrical incidents continued to fall in 2010, with a record low of 73 in third-party damage to electrical supply line incidents, 55 in electrical product incidents, and 33 in fixed electrical installation incidents. As shown in the chart, the downward trend has now continued for several years in a row.

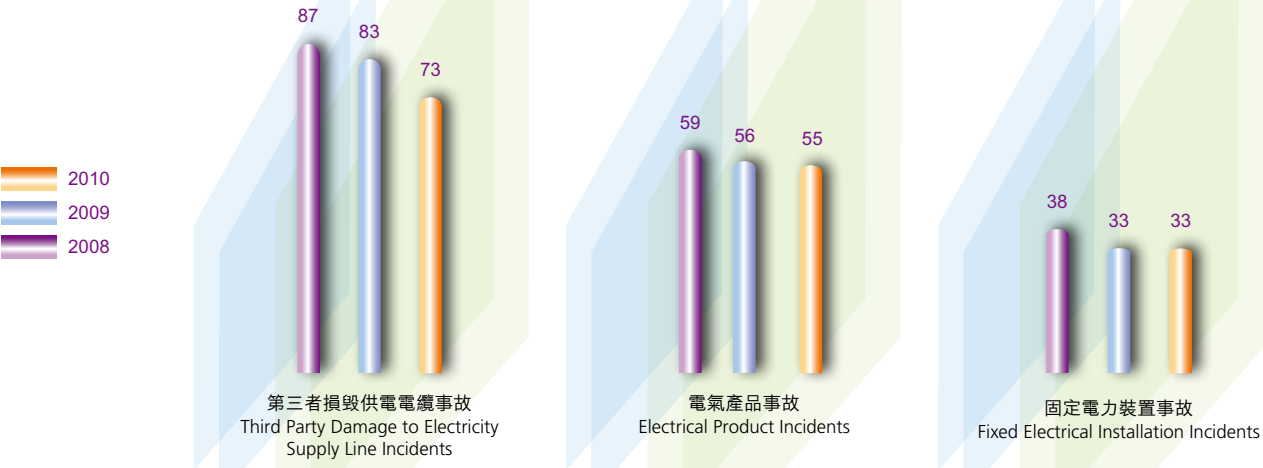
Working with the Trade

2010 has been a steady year for the Electricity Legislation Division. It is worth noting that we handled smoothly the renewal of some 72,000 Registered Electrical Workers (REWs) and 9,000 Registered Electrical Contractors (RECs) during the year, as part of the three-year renewal cycle, meeting all our service performance pledges to the trade. We are now consulting the trade unions on the possibility of adding continuing professional development requirements in the next renewal cycle.

We work pro-actively with the trade to better serve the community. A case in point is our response to the fire at the Fa Yuen Street market stalls in December 2010. Working with other government departments, we helped expedite the resumption of power supply to affected stalls. We also took the initiative to mobilise trade associations, unions and the Vocational Training Council, which all generously provided volunteers to help reinstate the electrical installations so that stalls could reopen in time for the Christmas shopping season. Stall owners were appreciative of our extra efforts.

電力事故持續減少

Electrical Incidents Falling Trend Continues





我們巡查固定電力裝置的工作遍及全港各區。
Our inspection of fixed electrical installations in buildings covers the entire territory.

風險為本提升安全

一如以往，我們繼續運用科技提高工作效率。年內，我們不但把電腦系統升級，以助執法工作，並為全港建築物進行一次普查，提高我們數據庫的準確程度，以加強大廈巡查工作。此外，我們也應用了地理資訊系統，協助籌劃和監察大廈巡查工作、及固定電力裝置定期檢測的執法工作。至於固定電力裝置的定期檢測，我們更採用了風險為本的方式去審核有關申請，務求更有效地核實呈報的數據，及找出不合規格的個案。自從採用了風險為本的方法去審查定期檢測申請，我們對違反《電力條例》的註冊電業工程人員已採取了39宗紀律處分和8宗檢控行動，藉此提升電力安全水平。

保護地下供電電纜，對維持穩定供電十分重要，加上香港正展開大量基建工程，掘路工程勢必增加，保護地下供電電纜的工作更形重要。我們已採用一套以風險為本的宣傳方法，向一些選定的承辦商及工務部門，主動進行外展訪問及宣傳教育工作，以提高他們對有關法例要求的認識。

長期合作與溝通

電氣產品安全方面，我們與消費者委員會緊密合作，聯合測試產品，並與有關的生產商進行跟進工作。我們與國家質量監督檢驗檢疫總局的合作，也擴展至已成為製造業樞紐的長三角一帶。

兩電方面，透過不同層次的定期工作會議，我們保持積極溝通。

通過大眾傳媒和網上平台的互相結合，我們為各類公眾教育和宣傳工作不斷注入新活力。

展望2011年，我們計劃引入新的措施，如為註冊電業工程人員推出持續進修計劃等，以加強電力安全。



2010年，約7萬2千名註冊電業工程人員和9千間註冊電業承辦商，順利完成了每3年一次的註冊續期手續。
Some 72,000 REWs and 9,000 RECs smoothly renewed their once-every-three-years registration in 2010.

Risk-based Approach to Enhancing Safety

New technology continues to be deployed to raise our operational efficiency. During the year, we upgraded our computer system to facilitate law enforcement work, conducted a comprehensive territory-wide survey of buildings to improve the accuracy of our database used for building inspection, and applied Geographic Information System (GIS) technology for effective planning and monitoring of building inspection and Periodic Inspection, Testing and Certification (PITC) enforcement work. A risk-based approach has also been adopted in vetting PITC submissions so as to enhance the effective identification of non-compliant cases and verification of the data submitted. This had led to 39 disciplinary actions and eight prosecution cases taken against REWs contravening the Electricity Ordinance, raising the level of safety for all.

The protection of underground electricity cables is vital to stable electricity supply, particularly in view of the fact that a plethora of new infrastructure projects will commence in Hong Kong shortly, leading to more road works. We have adopted a risk-based approach by carrying out proactive outreach visits and targeted publicity for certain selected contractors and works departments to further enhance their awareness of the relevant legislative requirements.

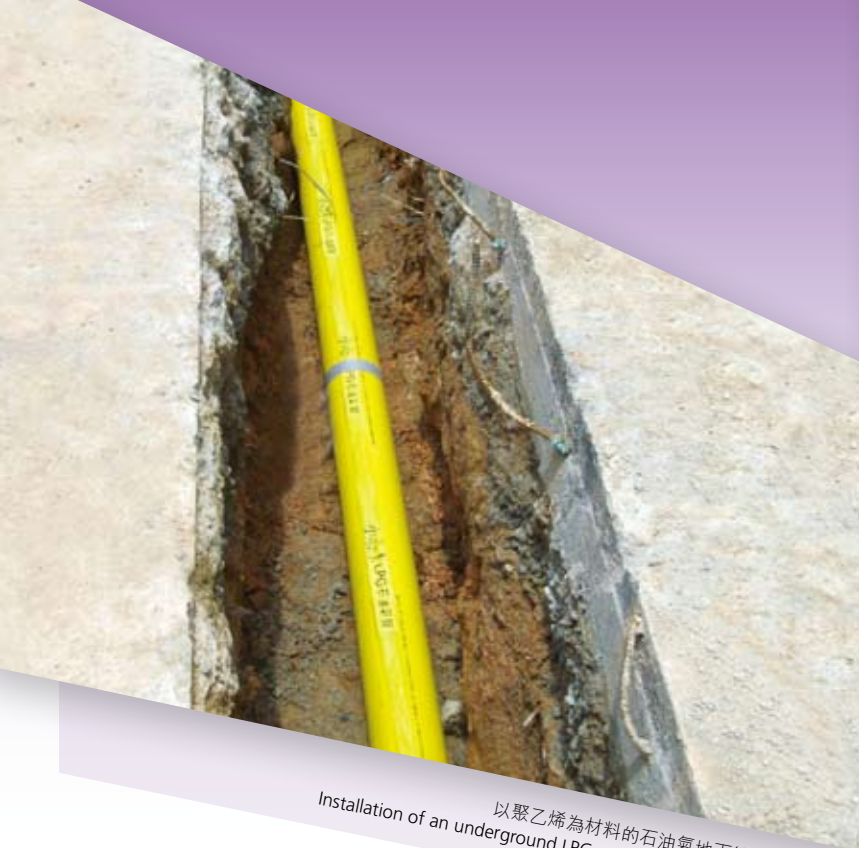
Ongoing Cooperation and Communication

On enhancing electric product safety, we work closely with the Consumer Council on joint product tests and any necessary follow-up with appliance suppliers. Our cooperation with the Mainland's General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) has also extended to cover the Yangtze delta area, which has become a major manufacturing hub.

There is also on-going, pro-active communication with the two power companies, including regular working meetings at various levels.

We have also maintained the momentum in our public education and publicity programmes via a mix of mass media and online platforms.

Looking to 2011, our plan is to further enhance electrical safety by measures such as introducing a continuing professional development scheme for REWs.



以聚乙烯為材料的石油氣地下管道安裝工程。
Installation of an underground LPG main using polyethylene material.



工作人員抽取車用石油氣樣本以檢驗質素。
檢驗結果定期上載機電工程署網頁。
Taking auto LPG samples for quality test.
Test results are posted on the EMSD website regularly.

氣體安全

整體氣體事故數字去年再創新低，由2009年的259宗，下降至2010年的224宗，相等於每百萬人31.7宗。去年本港並未錄得因氣體事故導致的死亡個案，2009年則有一宗。去年的成績，再次證明我們以風險管理巡查及預防事故的模式奏效。

跨海煤氣管

去年另一工作成績，是透過我們的努力協助，跨海煤氣喉管改道及相關兩個煤氣檢管站建造之計劃，終成功獲得城市規劃委員會通過。喉管的改道是為了配合政府發展啟德郵輪碼頭，喉管的新走線是由土瓜灣至北角。

自2006年以來，我們一直就新喉管的走線和鋪設方法、及新檢管站的選址、佈局和設計等，積極提供意見。我們也審核了多個不同的技術方案，並從氣體安全角度，向關注此事的政府政策局／部門、區議會、當區居民及城規會會員解釋技術方案，最終獲城規會批准改道。

石油氣安全工作

年內，我們實施了多項加強石油氣安全的措施，例如我們與業界達成共識，新的地底石油氣管道，必須以中密度聚乙烯（MDPE）製造，以加強喉管的堅固度。我們也加強了與各類勝任人士的溝通工作，以進一步提高石油氣缸車及其他石油氣貯存設施的巡查水平。

此外，我們也因應「石油氣車輛事件專案小組」2010年3月份報告的建議，開始定期抽樣檢查石油氣樣本，確保石油氣質素符合車用石油氣技術規格。抽查結果更定期於機電工程署網站發放，供公眾參考。

氣體標準事務處與國家質量監督檢驗檢疫總局的合作，年內更新增一個石油氣品質相互通報機制。

聚焦公眾教育及建立團隊

我們持續向業界和公眾人士推動氣體安全，並負責籌辦一年一度的「機電安全香港通」活動。此活動由2010年4月至2011年3月舉行。

內部工作方面，我們致力建立員工的團隊協作能力，例如於2011年初為氣體標準事務處的同事，安排烹飪工作坊等建立團隊的活動。

繼往開來，來年我們會繼續竭盡所能，為業界和市民提供公眾教育活動，務求進一步減少氣體事故。

GU標誌已成為本港所有家用氣體爐具的安全標誌。
The "GU mark" has become the symbol of safety
on all domestic gas appliances in Hong Kong.



我們的員工服務出色，屢獲嘉許獎狀。
Our staff have received many commendations for
outstanding service.

GAS SAFETY

Gas Incidents Reach New Low

Total gas incidents reached a new low last year, dropping from 259 in 2009 to 224 in 2010, equivalent to 31.7 per million capita. No fatalities arising from gas incidents were recorded last year, down from one in 2009. The results once again proved the effectiveness of our risk-based inspection and preventive approach.

Cross-harbour Towngas Pipeline

Another remarkable accomplishment last year was our success in helping to obtain the Town Planning Board's approval of the diversion of the cross-harbour town gas pipelines and the associated construction of two new pigging stations. The new pipelines have adopted a new alignment from To Kwa Wan to North Point, and the diversion serves to make way for the Government's development of the Kai Tak Cruise Terminal.

Ever since 2006, we have been deeply involved in providing gas safety advice on the new pipeline alignment and laying methods as well as siting, layout and design of the new pigging stations. We have also been vetting various associated optional technical proposals and explaining the proposals to concerned Bureaux/Departments, District Councillors, the local communities and the Town Planning Board from a gas safety point of view. All these have led to the approval of the diversion by the Town Planning Board.

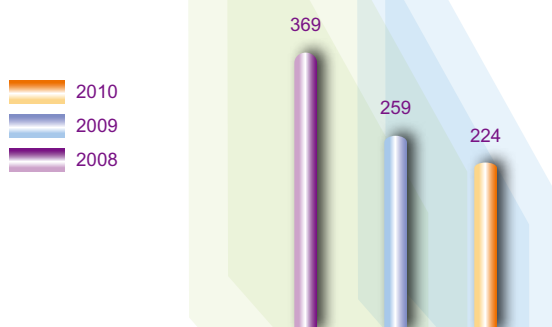
LPG Safety Initiatives

On LPG safety, a number of initiatives were implemented during the year. We have discussed and agreed with the trade that new underground LPG pipes will be made with medium density polyethylene, or MDPE, wherever practicable for better pipe integrity. Communication with various classes of competent persons has been stepped up so as to foster the inspection quality of LPG road tankers and other LPG storage facilities.

In addition, acting on recommendations made by the Task Force on LPG Vehicle Stalling Incident in March 2010, we have been conducting regular random LPG sample tests to ensure that LPG quality complies with auto-LPG specifications. Test results have been published regularly on the EMSD website for the public's reference.

The Gas Standards Office's cooperation with AQSIQ was extended during the year to include an LPG quality mutual notification mechanism.

氣體事故持續下降 Total Gas Incidents Falling



Focus on Education and Teamwork

We also continued with our gas safety trade publicity and public education programme, and spearheaded the annual E&M Safety Campaign, which ran from April 2010 to March 2011.

Internally, we have sustained efforts to foster team work, through activities such as cooking workshops for Gas Standards Office staff in early 2011. At the same time, we are prepared to capitalise on every opportunity we have to further reduce incident numbers in the coming year, in particular to make sure that our trade and public education efforts maintain their momentum.



昂坪360系統於2010年運作正常。
Ngong Ping 360 operated normally in 2010.

機械安全

全新升降機及自動梯安全法案

經廣泛公眾諮詢後，有關修訂《升降機及自動梯（安全）條例》（第327章）的建議，有關方面已於2010年初決定草擬一條全新的升降機及自動梯安全條例，並製訂全新的規管架構及改善執法程序，配合社會需要。一般法例部已開始草擬法例工作，預計於2011年中向立法會呈交法例草案。

為了提高透明度，和幫助市民明智挑選註冊升降機承建商，我們定期在機電工程署網站定期發放「註冊升降機承建商表現評級」的結果。我們去年曾檢討評級制度，並改進計分方程式，把原有的10分滿分改為100分滿分，讓市民更清楚看到承建商表現的細緻分別。同時，我們對犯例的承建商也加強了檢控工作，有幾宗更已定罪。

加強現有升降機安全

現有升降機、尤其是安裝了20年或以上的，則有另一種安全問題。安裝的時候，這批升降機確已達到當年的安全水平，但近年科技發展迅速，現有升降機未必能與最先進的技術水平看齊。不過，必須強調的是，只要保養維修得宜，現有升降機是安全的，但有很大的改善空間。因此，我們主動推出了一份《優化升降機指引》，幫助現有升降機加強安全。為配合這套指引，我們會安排講座和研討會，以提醒升降機擁有人和物業管理公司，改善現有升降機安全的責任。

此外，屋宇署近年透過「樓宇更新大行動」，向舊樓業主提供財政資助及一站式技術支援，幫助業主進行包括升降機在內的維修保養工程。我們鼓勵大廈業主善用這資助計劃。



「海洋列車」重開前，進行仔細的安全檢查。
Thorough safety inspection was conducted prior to the re-opening of Ocean Express.

審批新機動遊戲機設計

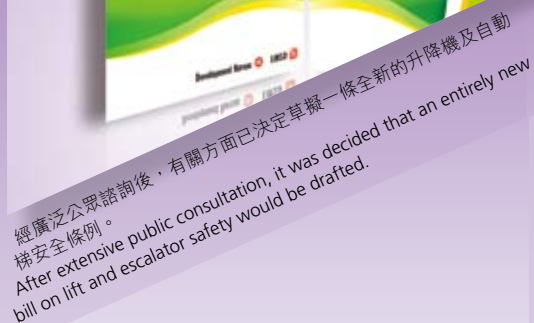
機動遊戲機方面，我們已開始就海洋公園和香港迪士尼樂園的新機動遊戲機設計，進行審批工作。海洋公園的新機動遊戲機「翻天覆地」，已於2010年投入服務，而香港迪士尼樂園的5個新機動遊戲機，設計則仍在審核中，預計於2011至2013年間投入服務。

海洋公園的機動遊戲機「海洋列車」去年12月初發生事故，須馬上停止運作以進行調查。經調查後，我們建議海洋公園採取若干改善措施，包括為列車控制板上的路軌煞車開關掣安裝保護蓋，防止系統被意外啟動；將列車最高行車車速由每秒10米減低至每秒7米，並為所有「海洋列車」操作人員提供進修培訓等。系統已於12月中獲准重開。

至於小童機動遊戲機，2010年並無發生需呈報的事故。昂坪360纜車系統也運作正常。

繼續推廣「共同責任」

展望來年，我們會繼續廣泛接觸電梯擁有人和物業管理公司，以提高他們電梯維修保養的意識。我們也會緊密追蹤和監察註冊電梯承建商的安全表現，並草擬電梯及自動梯安全的新法例草案，讓本港的規管架構能與時並進。



經廣泛公眾諮詢後，有關方面已決定草擬一條全新的升降機及自動梯安全條例。
After extensive public consultation, it was decided that an entirely new bill on lift and escalator safety would be drafted.

MECHANICAL SAFETY

New Bill on Lift and Escalator Safety

Following extensive public consultation with regard to amending the Lifts and Escalators (Safety) Ordinance (Cap. 327), it was decided in early 2010 that an entirely new bill on lift and escalator safety would be drafted, with a new regulatory framework and streamlined procedures to better satisfy community needs. The General Legislation Division has been working on drafting the bill, scheduled to be submitted to LegCo in mid-2011 for vetting.

To enhance transparency and help the public to make informed choices about Registered Lift Contractors (RLC), we have continued to regularly publish the results of the Contractors' Performance Rating (CPR) on the EMSD website. After a review of the CPR system last year, we have further improved the rating system by changing the marking formula from the current maximum of ten marks to 100 marks, so that finer differentiations in performance will be more visible. At the same time, prosecutions have also been stepped up against offending RLCs and several have been convicted.

Guidelines to Enhance Existing Lift Safety

Existing lifts, especially those installed over 20 years ago, present another safety challenge. Although existing lifts were installed to the safety level appropriate at the time, rapid technology advancement in recent years means that these are no longer state-of-the-art. It must be emphasised that properly maintained existing lifts are safe and reliable, but there is room for improvement. To this end, we have taken the initiative to formulate a set of "Modernising Existing Lifts Guidelines" to enhance the safety of existing lifts. Through talks and seminars on these guidelines, we have been able to remind lift owners and property management of their responsibilities to improve the safety performance of their lifts.

We have also urged building owners to make use of funding available from the Buildings Department's "Operation Building Bright" programme, which provides subsidies and one-stop technical assistance to help owners of old buildings to carry out repair works, including lift repairs.



海洋公園的機動遊戲機和自動梯安全，均為我們的規管範圍。
The safety of amusement rides as well as escalators in Ocean Park is within our scope of regulatory work.

Vetting New Amusement Ride Designs

As to amusement rides, we have been conducting design vetting and risk assessment of new rides at Ocean Park and Hong Kong Disneyland. During 2010, a new ride called "The Flash" went into operation at Ocean Park. Five new rides, scheduled to be operational from 2011 to 2013, are currently being vetted for Hong Kong Disneyland.

Ocean Express, the funicular ride at Ocean Park, had an incident in early December 2010 and was closed immediately for investigation. The system was approved for re-opening in mid-December, upon completion of our investigation and Ocean Park's adoption of several improvement measures, including the installation of flip covers on all the track brake switches at the ride control panels to prevent accidental activation, a reduction of the maximum speed of the Ocean Express from 10m/sec to 7m/sec, and refresher training for all operators of the system.

There were no reportable incidents for kiddie rides and builders' lifts during 2010. The Ngong Ping 360 system also operated normally.

Continuous Promotion of "Shared Responsibility"

Looking ahead, we shall continue to reach out to lift owners and property management companies to raise their awareness of their responsibility to properly maintain and repair lifts, while closely tracking and monitoring the performance of RLCs. At the same time, we shall continue to work on the drafting and enactment of the new bill governing lift and escalator safety, so that our regulatory framework may stay abreast of the times.



車門是否安全運作，是我們定期巡查的內容之一。
Train door safety is one of the areas of our regular safety inspection.



首部進行車身現代化的電車已在正線上行駛。
The first modernised tramcar has been put into service.

鐵路安全

月台安全改善工程

2010年本港並無新鐵路落成啟用，但本地鐵路系統仍持續進行安全改善工作，例如港鐵8個仍未安裝自動化月台閘門的車站，其中的杏花邨站和柴灣站，已率先完成有關的安裝工程，而其餘6個車站，即觀塘、牛頭角、九龍灣、葵興、葵芳和荃灣站，也將於2011年完成安裝工程。

此外，東鐵線的14個車站，也計劃安裝自動化月台閘門，而其中更包括一些工程複雜性較高的彎曲月台。預計這批工程將與沙田至中環線的工程同時展開，並將於2020年完成。

鐵路項目全面展開

高鐵方面，廣深港高速鐵路香港段已於2010年開始動工，預計於2015年完工。香港段的西九龍總站面積達11公頃，有15個月台，有關的設計安全審批工作我們正進行得如火如荼。審批的範圍很廣，包括消防、通風和通訊等各種系統的安全裝備和設施等。

電車改善工作

2010年，香港電車有限公司引進新設施，進一步改善電車路軌的維修保養工作，例如引入自動焊接和打磨設備，提高效率；並計劃為所有電車現行的直流電摩打，全部更換為交流電摩打，除了提高效能外，當電車加速或煞車時，乘客會感到較舒適。

共同安全指標

正如我們在去年的《業務概覽》指出，鐵路科一直都密切留意歐洲鐵路局為歐盟主要鐵路制訂共同安全指標的進展，以供本港參考。我們嘗試使用5個相關的安全指標，即「對乘客的風險」、「對員工的風險」、「出軌」、「列車衝過停車訊號」和「與列車碰撞」，用以比較本港和外國鐵路營運機構的安全表現。

科技與安全

前瞻未來，新科技在鐵路營運和安全方面的角色會更趨重要。以全自動駕駛鐵路運作為例，透過設計把傳統上由車長負責的駕駛和緊急應變工作，移交給系統和控制中心或車站的操作人員。繼香港國際機場的旅客捷運系統成功推出後，香港欣澳的港鐵迪士尼線，已是第一條全自動無人駕駛的港鐵路線。

為了掌握最新的科技發展趨勢，鐵路科會繼續派員工往國內及海外的鐵路營運機構，進行參觀及接受合適的附屬培訓。



車身以白色為主的新輕鐵列車已投入服務。
New Light Rail Vehicles with a white exterior livery have been put into operation.



副署長/規管服務及鐵路科人員參觀長春軌道客車的生產廠房。
Deputy Director/Regulatory Services and staff from Railways Branch visiting the production plant of Changchun Railway Vehicles Co. Ltd.

RAILWAY SAFETY

Platform Safety Improvements

No new railways were opened in 2010, but safety improvements within the local railway system were made with the construction of Automatic Platform Gates (APG) completed at two of the eight remaining above-ground MTR urban line stations, namely Heng Fa Chuen and Chai Wan. The other six stations, Kwun Tong, Ngau Tau Kok, Kowloon Bay, Kwai Hing, Kwai Fong and Tsuen Wan, will see their APGs completed in 2011.

APGs have also been planned for the 14 stations along the East Rail Line, where some platforms are curved, adding to the technical complexity. The works are scheduled to be completed by 2020. APG works will also commence concurrently for stations along the Shatin-to-Central Link.

Rail Projects Under Construction

On the high-speed railway front, construction of the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL) commenced in 2010, and is scheduled for completion in 2015. Our work to vet the safety design submissions for its 11-hectare 15-platform West Kowloon Terminus is in full swing, covering an extensive range of safety features and facilities such as fire services, ventilation and communication systems.

Tram Improvements

During 2010, Hong Kong Tramways Limited introduced further improvements in track maintenance and repairs, such as an automatic welding and grinding machine for better efficiency. It has also planned to replace DC motors with higher-performance AC motors in all its trams, which also increases riding comfort during acceleration and braking.

Common Safety Indicators

As reported last year, the Railways Branch has been monitoring the progress of the European Railway Agency (ERA) in its development of common safety indicators for main line railways in the European Union, for local reference in Hong Kong. We have tried to use five relevant common safety indicators, namely "risk to passengers", "risk to employee", "derailment", "signal passed at danger" and "collision of trains", to benchmark the safety performance of the railway operator in Hong Kong with that of other countries.

Technology and Safety

Looking ahead, new technology will play an increasing role in railway operation and safety. An example is fully automatic operations where normal and emergency duties traditionally handled by drivers are, by design, catered by the system itself or otherwise transferred to operations staff in the control centre or stations. In Hong Kong, the Disneyland Resort Line at Sunny Bay was the first fully automated driverless MTR line, following the successful implementation of the Automated People Mover system at the Hong Kong International Airport.

To stay abreast of the latest railway technology, the Railways Branch will continue to send its staff to the mainland and overseas railway operators for visits and attachment training where appropriate.

推廣能源效益及節能

Promoting Energy Efficiency and Conservation







源效益（註冊能源效益評核人）規例》，也於2011年3月獲立法會通過，並於2011年3月21日開始實施。對於條例的執行，註冊能源效益評核人擔當著重要的角色，其註冊亦於同日開始接受申請。

至於條例的核心部分，會於寬限期過後，待2012年9月才會全面實施，讓各持份者和市民大眾，有充分時間去適應和熟習新法例的要求。

條例的目的是提升建築物的能源效益，以助紓緩氣候變化帶來的不良影響。為達致此目的，條例會規管訂明建築物內的4類主要屋宇裝備裝置—即空調、照明、電力、電梯與自動梯裝置—符合《建築物能源效益守則》指明的最低能源效益標準和《建築物能源審核守則》指明的能源審核規定。

我們正為全面推行條例而進行籌備工作，包括為相關的實務守則刊憲、出版/製作各種指引和宣傳刊物、及舉行研討會與工作坊等。

規管淡水冷卻塔突破性發展

為了推廣能源效益，我們在本港推行更廣泛使用淡水於節能空調系統的淡水冷卻塔計劃。這計劃雖已實施了一段時間，但本港並未有全面的單一法例去管制和規管淡水冷卻塔。

繼審計署署長於2009年底作出改善建議後，這方面的規管工作於2010年出現了突破性的發展：在發展局的帶動下，相關部門推出了一籃子多管齊下的加強管制措施，以規管未經批准的淡水冷卻塔。這些措施已於2010年11月得到立法會發展事務委員會認同。

在其中新的措施安排下，機電工程署已獲食物及環境衛生署署長授權，根據《公眾衛生及市政條例》（第132章），由2011年1月24日起，規管淡水冷卻塔。這一突破性發展，賦予能源效益事務處法定權力，去規管那些維修欠妥或受污染、足以損害或危害健康的淡水冷卻塔，特別是那些可能引發退伍軍人病症的冷卻塔，並可發出《妨擾事故通知》，要求處所擁有人或佔用人合理時限內，糾正淡水冷卻塔的欠妥情況。

強制性能源效益標籤計劃踏進第二年

2010年是執行《能源效益（產品標籤）條例》（第598章）的第二年。根據條例，強制性能源效益標籤計劃的第一階段，已由2009年11月9日起全面推行，至今已有3,300多個空調機、冷凍器具和緊湊型熒光燈表列型號，可供消費者作出精明的選擇。我們並定期抽查不同表列型號的樣本，交由獨立的認可實驗室作能效表現監察測試，所有測試結果均上載機電工程署網頁，供公眾參考。

強制性能源效益標籤計劃的第二階段更涵蓋洗衣機和抽濕機，經立法會批准後，已於2010年3月19日生效。待18個月的寬限期結束後，將由2011年9月19日起全面推行。此外，已更新的《產品能源標籤實務守則（2010年3月版）》已經刊憲，內容包含第一和第二階段的所有5類產品，以助業界符合條例要求。能源效益事務處也加強宣傳，提高公眾對強制性能源效益標籤計劃的認識，同時也為業界舉辦研討會、走訪全港電器零售店和加強巡查，以確保業界符合法例要求。

電視機自願性能源效益標籤計劃

我們已完成諮詢業界的工作，並將於2011年初，推出一個為電視機而設的級別式自願性能源效益標籤計劃。該計劃會跟隨現行的國際慣例，同時量度電視機「開啟模式」的耗電量，作為評估能效表現的一部份。

《建築物能源效益條例》順利通過

經過幾乎一年的審議，《建築物能源效益條例草案》已於2010年11月獲得立法會通過，並於2010年12月刊憲，成為《建築物能源效益條例》（第610章）。至於條例下的兩條附屬規例，即《建築物能源效益（費用）規例》和《建築物能



技術研究小組出版推廣新能源效益技術的小冊子。
Pamphlets by our R&D team to promote new energy efficiency technology.

SECOND YEAR OF MANDATORY ENERGY EFFICIENCY LABELLING SCHEME

2010 marks the second year of enforcement of the Energy Efficiency (Labelling of Products) Ordinance (Cap. 598). Under the Ordinance, the Mandatory Energy Efficiency Labelling Scheme (MEELS) has been in its initial phase of full implementation since 9 November, 2009, with more than 3,300 models of room air conditioners, refrigerating appliances and compact fluorescent lamps now listed to help consumers make informed choices. We regularly select samples of listed models for energy performance monitoring testing by independent accredited laboratories. All test results are uploaded to the EMSD website for the public's information.

The second phase of MEELS, covering washing machines and dehumidifiers, commenced on 19 March, 2010 after being approved by LegCo. With an 18-month grace period, phase two will thus begin full implementation on 19 September, 2011. A revised Code of Practice on Energy Labelling of Products (March 2010 Edition) covering all five products under phases 1 and 2 has been gazetted to help the trade in compliance matters. The Energy Efficiency Office has also stepped up publicity efforts to raise public awareness of MEELS, while conducting regular trade education activities such as seminars, territory-wide retail store visits and inspections to ensure compliance.

VOLUNTARY ENERGY EFFICIENCY LABELLING SCHEME FOR TELEVISIONS

We have completed trade consultation work with a view to launching in early 2011 a grading-type Voluntary Energy Efficiency Labelling Scheme (VEELS) for televisions. This VEELS will also include the "on-mode" power consumption of televisions for energy efficiency performance assessment, which is in line with current international practice.

BUILDINGS ENERGY EFFICIENCY ORDINANCE LAUNCHED

After nearly one year of vetting, the Buildings Energy Efficiency Bill was passed by the Legislative Council in November 2010 and then gazetted to be the Buildings Energy Efficiency Ordinance (Cap. 610) in December 2010. The two subsidiary regulations under the Ordinance, namely the Buildings Energy Efficiency (Fees) Regulation and the Buildings Energy Efficiency (Registered Energy Assessors) Regulation, were also passed by the Legislative Council in March 2011 and came into operation on 21 March 2011. The application for registration

as Registered Energy Assessors, who will play a vital role in the implementation of the Ordinance, also commenced on the same day.

However, the core parts of the Ordinance will only be fully implemented in September 2012 after a grace period in order to allow various stakeholders and the public to have ample time to adapt to and familiarise themselves with the requirements of the new legislation.

The objective of this Ordinance is to enhance energy efficiency in buildings, and thus help alleviate the adverse effects of climate change, by regulating the four key building services installations, namely air-conditioning, lighting, electrical, lift and escalator installations in prescribed buildings to comply with the minimum energy efficiency standards specified in the Building Energy Code, and the energy audit requirements specified in the Energy Audit Code.

Preparatory work for full implementation of the Ordinance is underway, such as gazetting of the associated codes of practice, publication/production of the guidelines/publicity materials, as well as seminars and workshops, among others.

REGULATORY BREAKTHROUGH FOR THE CONTROL OF FRESH WATER COOLING TOWERS

Whilst the Fresh Water Cooling Towers Scheme has been in place to promote the wider use of fresh water in cooling towers for air-conditioning systems for energy efficiency, there is no specific legislation to control and regulate fresh water cooling towers in a holistic manner. However, further to the Director of Audit's recommendations in late 2009, a major regulatory breakthrough was made in 2010 with the formulation of a package of multi-pronged enhancement measures to control unauthorised cooling towers, under the lead of the Development Bureau. The measures were endorsed by the Legislative Council's Panel on Development in November 2010.

Among the new arrangements, EMSD has been delegated with powers from the Director of the Food and Environmental Hygiene Department to take regulatory control of fresh water cooling towers in Hong Kong under the Public Health and Municipal Services Ordinance (Cap. 132) from 24 January



自數年前我們總部天台安裝了先導性的太陽能光伏板系統後，全港不少大廈也陸續安裝了光伏板系統。Many buildings in Hong Kong have installed photovoltaic systems, subsequent to the pioneering photovoltaic project on our headquarters rooftop installed a few years ago.

District Cooling System at Kai Tai Development



區域供冷系統，將為啟德發展區提供具能源效益的水冷空調設施。
The District Cooling System will provide energy efficient, water-cooled air-conditioning to Kai Tak Development.

我們已向不同持份者如設計顧問、冷卻塔擁有人和物業管理公司加強宣傳，推廣就淡水冷卻塔在設計、操作和維修方面的良好作業；並就最近於全港性冷卻塔普查所確定的現有9,600多個淡水冷卻塔，著手製訂全面的數據庫，使日後的監察工作更為有效。

區域供冷系統動工

至於啟德發展區的區域供冷系統，施工合約已於2011年批出，工程也已於2011年2月展開。作為項目經理，我們的角色是全面監督工程，確保工程無論在進度、質素和預算各方面都按計劃進行。由於郵輪碼頭的客運大樓將於2013年開始營運，因此區域供冷項目的首個重要里程碑，是要依期完成部份冷凍系統，趕及於2012年底前供應冷水給郵輪碼頭使用。

新節能技術的研究和參考工具

在2010年，我們的技術研究小組進行了多個研究項目，當中包括能追蹤太陽的光伏系統、和空調冷凍水系統的全面水力平衡。此外，就市面上快速發展的發光二極管照明技術，我們亦開始了個別試點研究項目，以評估有關的發光二極管照明較長期的能效表現。有關節能技術的刊物，會上載於機電工程署網頁供市民參考。我們在完成了有關發光二極管照明的初步研究後，已於網頁上載了一套指引，幫助項目設計師和擁有人製訂技術規格及選購發光二極管照明產品。

此外，我們也像往年，於9月在機電工程署網頁發表了《2010年香港能源最終用途數據》，涵蓋了本港由1998至2008年的能源最終用途數據。2010年的版本，更首次列出不同類別的各種能源消耗數據，資料更詳盡。

太陽能裝置

我們在本港致力推動和引進各種可再生能源科技，並且在適當的情況下，通過本地的工程項目，示範可再生能源科技的實際應用方法。

以薄膜太陽能光伏技術為例：薄膜非晶體矽片與市面上常用的傳統晶體矽片比較，優點是在光度較弱和溫度較高的環境、例如在光線擴散或陰暗處和炎夏中午，其表現都比較穩定。為了示範如何在本港應用薄膜太陽能光伏技術，我們特別在4家學校安裝了接駁市電網的光伏板裝置，既運用了地面安裝的模式，也有與建築物結合的安裝方法，務求吸引學生和市民大眾的注意力，關注可再生能源在本港環境的實際應用。另一個示範項目，是一家私營發電廠屋頂的大型薄膜太陽能光伏系統。

為了方便私營企業在建築物安裝太陽能發電系統，原本就私人樓宇安裝太陽能熱水系統和光伏板系統建築工程（例如安裝支撐結構）而要求的法定批准程序，現已透過「小型工程監管制度」的新規例予以簡化。由現在起，太陽能熱水系統和光伏板系統的建築工程，如符合規例指定的結構，有關的建築圖則已無須事先申請批准和就展開工程申請同意。

展望未來

未來數年，新近立法的能源效益條例會陸續推行，能源效益事務處也會不斷調節其執法框架和工作，並進行廣泛的公眾教育和宣傳工作，以提高節能意識。我們也會時常檢討現行各種能效計劃的表現，務求滿足現今社會的需要。



我們委託獨立的認可實驗室進行能效表現監察測試。
Independent accredited laboratories are commissioned to carry out energy performance monitoring testing.

2011 onwards. This development has given the Energy Efficiency Office the statutory power to regulate improperly maintained or contaminated fresh water cooling towers which are injurious or dangerous to health, particularly those that may potentially cause Legionnaires' disease, and, by issuing a nuisance notice, require owners/occupiers of the premises to rectify unsatisfactory conditions of their cooling towers within a reasonable period of time.

We have also initiated the stepping up of publicity to promote good practice in design, operation and maintenance of cooling towers to different stakeholders, such as consultants, owners and property management companies. We have also begun compiling a comprehensive database of the some 9,600 existing cooling towers identified recently in a territory-wide survey for more effective monitoring.

DISTRICT COOLING SYSTEM CONSTRUCTION BEGINS

As to the District Cooling System at the Kai Tak Development, the construction contracts were awarded in 2011 and works have started in February 2011. As project manager, our role is to oversee the works and ensure that progress, quality and budget are in line with plans. The first milestone will be the completion of some of the chiller plants so that cold water will be available to the Cruise Terminal by the end of 2012 before the Terminal commences operations in 2013.

NEW ENERGY EFFICIENCY TECHNOLOGY STUDIES AND REFERENCE TOOLS

In 2010, our R&D team undertook various studies such as those on sun-tracking photovoltaic systems and total hydronic balancing for chilled water systems. Pilot projects to study certain types of LED lighting have also begun to monitor and evaluate the longer term performance of fast-developing LED lighting technology now available in the market. Publications on these energy efficiency technologies are released on the EMSD website for public access. Following the completion of an initial LED lighting study, a set of guidelines to help project designers and owners to specify and procure LED lighting products for their lighting projects is already posted there.

Another useful reference document published during the past year is the 2010 Hong Kong Energy End-use Booklet posted on the EMSD website. The booklet covers Hong Kong's energy end-use data from 1998 to 2008 and contains more detailed data on different fuels by sectors, now available for the first time.



我們舉行巡迴展覽，讓學生更深入了解強制性能源效益標籤計劃。
Roving exhibitions are held to help students better understand the Mandatory Energy Efficiency Labelling Scheme.

SOLAR ENERGY INSTALLATIONS

We are committed to promoting and adopting various types of renewable energy technologies in Hong Kong, and we showcase the application of the technologies by local projects as examples where appropriate.

Take thin film solar photovoltaic (PV) technology as an example. Thin film amorphous silicon cell have the advantages of stable performance under weak light conditions, such as diffused light and shadow and in high temperature environments, such as hot summer noon, as compared to traditional crystalline silicon cells which have been commonly used in the solar energy market. To demonstrate the local application of thin film PV technology, we completed grid-connected installations at four schools, using both floor mounted and building integrated configurations to draw the attention of students and the general public on the deployment of renewable energy in local situations. Another showcase project is a large scale thin film PV system installed on the roof of a power plant in the private sector.

To facilitate the private sector to install solar energy systems in their buildings, the statutory procedures for approving the building works, such as the erection of supporting structures for solar water heating and PV systems in private buildings have been simplified through the Minor Works Control System under a new regulation. From now on, minor building works for solar water heating and PV systems no longer require prior approval of plans or obtaining consent for commencement of works, if such systems fall within the prescribed configurations of the regulation.

LOOKING AHEAD

With the forthcoming full implementation of new legislation in various areas, the Energy Efficiency Office will be busy in the next few years fine-tuning its enforcement framework while working extensively on public education and publicity to raise awareness. The effectiveness and energy efficiency performance of existing schemes will also be reviewed from time to time to ensure they satisfy current community needs.

提高公眾安全及節能意識 **Raising Public Awareness**







Public education is as important as law enforcement. Experience shows that pro-active engagement with the regulated trades and the community can foster law-compliant behaviour. Engagement and communication also inculcate a sense of shared responsibility among businesses and citizens so that each contributes to E&M safety and energy efficiency in their own way.

公眾教育與執法同樣重要。根據經驗，積極與被規管的業界及市民大眾溝通，有助加強持份者的守法行為。鼓勵參與、積極溝通，也能帶動業界和市民共同分擔安全責任，讓每個持份者各司其職，為機電安全和能源效益作出貢獻。

多媒體多渠道推動電氣安全

MULTIPLE MEANS AND CHANNELS PROMOTE ELECTRICAL SAFETY

Electrical safety education is targeted and specific. The "Video for Electrical Workers 2: Eight Steps for Periodic Inspection, Testing and Certification Work" was released in 2010 to promote to electrical workers the proper work procedures in periodic inspection and testing works on electrical installations. For the public, a new portal called "Electricity Information Corner" was launched on the EMSD website in September. It is a one-stop hub for vital information about household electric safety, complete with online games, electricity classroom and interactive safety messages, being both fun and practical.

Apart from advertising in mainstream media such as television and radio, we also launched a YouTube channel to push electrical safety messages and produced a series of new promotional materials in which Astro Boy appears to help drive the messages home.

電氣安全教育是聚焦而具體的。2010年，我們製作了「電工學堂2」之「定期檢測8部曲」短片，讓電業工程人員更易掌握電力裝置定期檢測的工作程序。此外，我們於9月在機電工程署的網頁上推出了全新的「電力資訊站」入門網站，為市民提供一站式家居電氣安全資訊，還有網上遊戲、電力教室和互動安全訊息等，趣味與實用兼備。

除了透過電視和電台等大眾傳媒進行宣傳外，我們也在YouTube推出了專用頻道，主動發放電氣安全資訊；並與動漫人物「阿童木」合作，製作了一系列全新的宣傳電氣安全刊物。

加強現有升降機安全 ONGOING INITIATIVE TO ENHANCE EXISTING LIFT SAFETY

As our city's infrastructure ages, we must be alert to the safety challenges of existing lifts, in particular those in operation 20 years or more. Although existing lifts are safe if properly maintained, there is always room for improvement. We began compiling in 2010 a set of "Modernising Existing Lifts Guidelines" to explain the approaches and technical options by which lift owners and property management companies can make their existing lifts more safe, reliable and comfortable.

The Guidelines will be promulgated in 2011 and will be supported by a series of talks and seminars for lift owners, property management companies and the trade.

隨著城市老化，我們必須加強警惕，留意現有升降機的安全，特別是安裝了20年以上的升降機。雖然，只要保養維修得宜，現有升降機是安全的，但總會有改善空間。我們於2010年開始編制一份《優化升降機指引》，向升降機擁有人和物業管理公司，介紹優化現有升降機的方法和技術方案，使現有升降機變得更安全可靠和舒適。

指引將於2011年出版，屆時我們會舉辦一系列專為升降機擁有人、物業管理公司和業界而設的講座和研討會，以作配合。



「機電安全香港通」十周年 E&M SAFETY CAMPAIGN CELEBRATES ITS FIRST DECADE



The E&M Safety Campaign celebrated its tenth year in 2010. The event has become an important annual initiative for EMSD and leading organisations and trade associations in Hong Kong to promote E&M safety and energy efficiency to the general public.

Spearheaded by the Gas Standards Office this year, the E&M Safety Campaign 2010 featured a rich array of competitions and fun activities for the public. The Campaign also, for the first time, staged its grand finale, the E&M Safety Carnival, in the New Territories, at Sha Tsui Road Playground in Tsuen Wan. The Carnival, which was held on 13 and 14 November and featured 20 game booths, exhibitions, and Canto-pop and drama performances as well as a children's corner, attracted a record high of more than 18,000 visitors. The 2010 Campaign was supported by 15 leading organisations and trade associations from the utilities, gas, public transport, public housing and recreation sectors.



「機電安全香港通」至2010年已踏進第十年，成為機電工程署和其他合辦機構聯手向市民推廣機電安全和能源效益的重要周年活動。

2010年的「機電安全香港通」活動由氣體標準事務處牽頭，為市民大眾安排了豐富多采的比賽和活動。我們並首次把活動的壓軸項目「機電安全嘉年華」移師新界，於11月13及14兩日假荃灣沙咀道球場舉行。嘉年華會設置20多個遊戲攤位，加上展覽、歌星和話劇表演、兒童天地等，吸引了1萬8千多名市民入場，人數創歷年之冠。2010年的「機電安全香港通」活動，承蒙來自電力、氣體、公共交通、房屋、遊樂等全港15家主要機構全力支持。

網上推廣鐵路安全

RAILWAY SAFETY GOES ONLINE

Complementing ongoing safety promotions jointly held with MTRCL to remind passengers of safe behaviour while using railway facilities, we organised a "Safe Railway Touring" online game as part of the Chinese language education materials on railway safety distributed to all primary schools in September 2010. With Education City as a partner, an online competition for primary schools and students was also held in September and October 2010. Comprising mini-games and a quiz, it drew very enthusiastic feedback.



我們近年一直與港鐵公司聯手進行鐵路安全推廣活動，提醒乘客使用鐵路設施時必須注意安全。2010年，我們更與香港教育城合作，推出「鐵路安全之旅」網上遊戲，並於2010年9月向全港小學派發一套鐵路安全中文教材，「鐵路安全之旅」是內容之一。我們與香港教育城也於9月和10月舉行了小學網上比賽，通過網上遊戲和問答比賽進行比試，反應熱烈。

宣傳強制性能源效益標籤計劃及協助業界守法

PROMOTING MEELS AND FACILITATING TRADE COMPLIANCE

With the commencement of phase two of the Mandatory Energy Efficiency Labelling Scheme (MEELS) in March 2010, concurrent with the ongoing implementation of MEELS phase one, we have been busy promoting the Scheme to different stakeholders in Hong Kong.

On the community front, we launched an outreach ambassador visit programme to over 80 secondary schools to brief students on MEELS and energy efficiency in general, and also held exhibitions in schools on the topic. For the trade, we visited each of the over 3,000 appliance retailers to provide them with compliance reminders and assistance. Trade seminars for importers, retailers and manufacturers, as well as print materials and other media publicity activities, supplemented the programme throughout the year.



強制性能源效益標籤計劃第二階段已於2010年3月生效，加上計劃第一階段已全面推行，我們去年忙於向持份者做推廣宣傳的工作。

在社區層面，我們推出了外展大使活動，走訪了80多家中學，主動向學生介紹強制性能源效益標籤計劃，同時簡介能源效益知識，並於中學舉辦有關的展覽。業界方面，我們逐家走訪全港3千多家電器零售店，提醒零售商必須遵守法例要求，並提供協助。年內我們也為進口商、零售商和製造商舉辦了多次研討會、出版宣傳刊物和舉辦其他媒體推廣活動，加強宣傳之效。

推出「機電青少年大使計劃」

E&M YOUNG AMBASSADOR PROGRAMME LAUNCHED

We launched the E&M Young Ambassador Programme in early 2010 with the aim to empower youngsters to become ambassadors of E&M safety and energy efficiency in their daily lives. The Scheme is EMSD's first Web-based initiative tailored for children and teenagers. By equipping our ambassadors with solid knowledge of E&M safety and energy efficiency, we enable them to help us spread the word and share best practices with their friends and families.

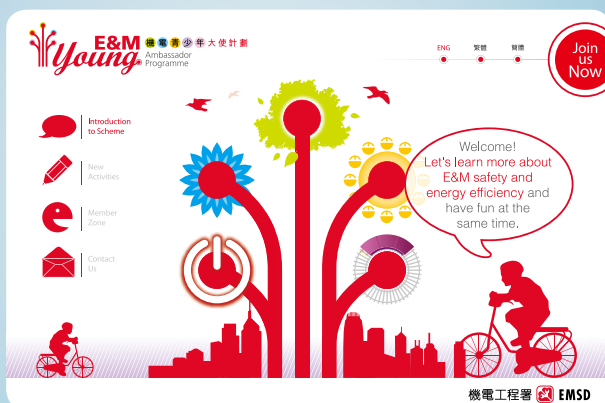
Several hundred young ambassadors have registered online and been invited to participate in EMSD events such as open days and carnivals. Ambassadors also receive email updates from time to time, and are encouraged to enhance their knowledge by visiting the Web portal we have dedicated to the Scheme.

我們於2010年初推出「機電青少年大使計劃」，目的是培養青少年成為日常生活中推動機電安全與能源效益的大使。這計劃也是機電工程署首個以兒童和青少年為對象的

網上活動。我們會為青少年大使提供機電安全和能源效益的知識，讓他們在日常生活中，可以向親友推廣良好的安全和節能習慣。

計劃至今已吸引了數百人在網上登記成為大使，我們並邀請大使出席多項部門活動，如機電工程署開放日和嘉年華會等。我們也不時向大使發出電郵，告知最

新資訊，並鼓勵他們瀏覽青少年大使專用網頁，增進有關知識。





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