機電工程署二零二四至二五年年報
Electrical and Mechanical Services Department Annual Report 2024/25

革新求進 守正惠民
INNOVATING FOR ADVANCEMENT SERVING THE COMMUNITY WITH INTEGRITY

機電工程署
EMSD

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機電工程署
ELECTRICAL AND MECHANICAL SERVICES DEPARTMENT

機電工程署（機電署）是中華人民共和國香港特別行政區政府轄下的部門，主要負責提供機電工程服務。機電署設有兩個主要功能機構，包括規管服務和營運服務，後者又稱為機電工程營運基金（營運基金）。我們透過提供專業、全面且具成本效益的機電工程服務，執法規管及公眾教育活動，致力提升社區安全和市民的生活質素。

作為機電署的監察機構和執法部門，規管服務團隊負責保障香港的機電安全和推廣能源效益。團隊由多個專業部別組成，負責監管不同範疇，包括透過規管工作和公眾教育活動，監管機電系統安全、氣體和鐵路營運，以及根據《管制計劃協議》監察電力公司的技術表現和發展計劃。此外，我們亦就多項安全和環境措施，為政府提供專業建議和技術指導。

營運基金竭誠為多個政府部門及公營機構提供優質的機電工程服務，涵蓋多種設施，包括但不限於醫院、學校、紀律部隊設施、運輸設施及公路、港口及海港、機場、政府合署和法院大樓，以及公眾文娛康樂設施。營運基金提供全面的機電系統、屋宇裝備和電子系統支援服務，範圍涵蓋機電設施的操作、維修保養、工程策劃和顧問服務。

The Electrical and Mechanical Services Department (EMSD) is a department of the Government of the Hong Kong Special Administrative Region of the People's Republic of China, committed to providing electrical and mechanical (E&M) services. The EMSD comprises two functional units: Regulatory Services (RS) and Trading Services, with the latter also known as the Electrical and Mechanical Services Trading Fund (EMSTF). Through a combination of professional, comprehensive and cost-effective E&M engineering services, the enforcement of relevant laws and regulations, and public education initiatives, the EMSD strives to enhance community safety and improve our citizens' quality of life.

As the regulatory body and law enforcement department of the EMSD, the RS team is responsible for ensuring E&M safety and promoting energy efficiency across Hong Kong. It consists of specialised divisions that oversee various areas, including the safety of E&M systems, the gas and railway operations through its regulatory functions, public outreach efforts, and the monitoring of the technical performance and development plans of power companies under the Scheme of Control Agreements. Furthermore, the RS team provides professional advice and technical expertise to the Government on several safety and environmental initiatives.

The EMSTF team remains deeply engaged in delivering high-quality E&M engineering services to various government departments and public entities, spanning a wide range of facilities, including but not limited to hospitals, schools, disciplined services facilities, transport facilities and highways, ports and harbours, airport, government offices and law court buildings as well as public recreational and leisure facilities. The EMSTF team offers full-spectrum support for E&M systems, building services, and electronic systems, covering operation, maintenance, project management and consultancy-related services for E&M facilities.

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署長的話
MESSAGE FROM THE DIRECTOR

機電工程署（機電署）在2024/25年度成果豐碩。規管服務以預防事故為本，年內縱使極端天氣事件更趨頻繁，仍設法把機電事故宗數維持於低水平；同時繼續推進能源效益和新能源工作，幫助香港實現碳中和。營運服務 — 又稱機電工程營運基金（營運基金）— 則秉持創新、以客為本和追求卓越服務的精神，透過各項策略計劃，為客戶和市民創造重大價值。

我們欣然報告，年內營運基金總收入達98.33億港元，較上年度增長6%；收入回報率微升至2.4%，符合我們收回成本的營運原則。

部門的卓越表現，促使我們回顧過往成就，並專注發展最具變革創新潛力的項目，這對推動機電署服務持續進步和改善民生福祉至關重要。總的來說，我們已全面準備就緒，迎接變革，包括進一步推動部門運作和服務自動化，並持續提升營運水平，以更有效地服務社會。

The Electrical and Mechanical Services Department (EMSD) delivered a fruitful year in 2024/25. Focused on incident prevention, our Regulatory Services managed to maintain a low level of electrical and mechanical (E&M) incidents despite more frequent extreme weather events during the year, while continuously advancing energy efficiency and new energy initiatives to help Hong Kong achieve carbon neutrality. Our Trading Services, also called the Electrical and Mechanical Services Trading Fund (EMSTF), created significant value for clients and the public through strategic initiatives rooted in innovation and customer-focused service excellence.

We are delighted to report that total revenue of the EMSTF reached HK$9,833 million in 2024/25, marking a 6% increase over the previous year. Return on revenue rose slightly to 2.4%, in line with our cost-recovery operating principle.

The strong performance has prompted us to reflect on past achievements and concentrate on initiatives with the greatest potential for transformative innovation, which is an essential driver for advancing the EMSD's services and enhancing people's livelihood and well-being. Overall, we stand ready to embrace changes, which include further automating our operations and services, while continuously raising our operational standards to serve the community in a more effective manner.

年內亮點：持續進步 服務社會

《行政長官2024年施政報告》以「齊改革同發展 惠民生建未來」為主題，營運基金緊扣這個方向，加快創新步伐，深化與各方合作，為香港締造更美好前景。我們的業務取得長足進展，與多個政府部門和公營機構簽訂或續簽服務水平協議，進一步提升財政穩定性和服務質素。

營運基金2024年的客戶意見調查結果，反映客戶對我們的卓越服務相當滿意。以8分為滿分計，客戶滿意指數（7.27分）和整體服務競爭力指數（7.38分）均創歷史新高。客戶讚賞我們靈活應變、協作解難、度身訂造的服務，以及具前瞻性的創新科技（創科）應用。

機電署的創科工作持續獲得國際肯定，在第五十屆日內瓦國際發明展榮獲12個獎項，包括享負盛名的日內瓦州特別大獎，成為首個獲此殊榮的中華人民共和國香港特別行政區政府部門。

HIGHLIGHT: CONTINUOUS ADVANCEMENT AND SERVING THE COMMUNITY

Guided by the Chief Executive's 2024 Policy Address themed "Reform for Enhancing Development and Building Our Future Together", the EMSTF accelerated innovation and fostered multipartite collaboration to shape a brighter future for Hong Kong. We made significant strides by securing new and renewed Service Level Agreements with various government departments and public bodies, further enhancing our financial stability and service quality.

Client satisfaction reflects our service excellence, as evidenced by the 2024 Customer Opinion Survey results. The EMSTF achieved record highs in both the Customer Satisfaction Index (7.27) and the Overall Service Competitiveness Index (7.38) on an 8-point scale. Clients praised our flexibility, collaborative problem-solving, customised services and forward-looking approach to innovation and technology (I&T) adoption.

The EMSD's I&T efforts continued to gain international recognition. We earned 12 awards at the 50th International Exhibition of Inventions of Geneva, including the prestigious Prize of the Republic and Canton of Geneva, a great honour first ever awarded to a department of the Government of the Hong Kong Special Administrative Region of the People's Republic of China.

潘國英太平紳士
Mr Poon Kwok-ying, Raymond, JP
機電工程署署長
機電工程營運基金總經理
Director of Electrical and Mechanical Services
General Manager, Electrical and Mechanical Services Trading Fund

署長的話
MESSAGE FROM THE DIRECTOR

年內規管服務與營運基金攜手協作，為政府建築物推行重新校驗等節能措施，以在公營部門推動環境可持續發展。此舉協助政府提前達成「綠色能源目標」，整體能源表現提升6%。

During the year, the Regulatory Services and the EMSTF collaborated to advance environmental sustainability in the public sector through implementation of energy-saving measures, such as retro-commissioning across government buildings. This initiative contributed to the Government's "Green Energy Target" of a 6% improvement in overall energy performance ahead of schedule.

為進一步提升建築物的能源效益表現，我們修訂了《屋宇裝備裝置能源效益實務守則》和《建築物能源審核守則》，整體能源效益標準較2015年版本提高了20%。我們也協助環境及生態局修訂《建築物能源效益條例》，以擴大其規管範圍、縮短能源審核周期和增加透明度。

To further enhance the energy efficiency performance of buildings, we have revised the Code of Practice for Energy Efficiency of Building Services Installation and the Code of Practice for Building Energy Audit, raising overall energy efficiency standards by 20% compared to the 2015 versions. We have also assisted the Environment and Ecology Bureau (EEB) in revising the Buildings Energy Efficiency Ordinance to widen regulatory scope, shorten audit cycles, and increase transparency.

有見極端天氣事件日趨頻繁，營運基金改善了水浸監測和緊急應變機制，以保障關鍵機電資產。規管服務則與受規管的公用事業機構緊密合作，透過優化通訊系統、更新緊急應變手冊和加強員工培訓等，做好應對惡劣天氣的部署工作。

In view of increasing occurrence of extreme weather events, the EMSTF has improved its flood monitoring and emergency response mechanisms to protect critical E&M assets, while the Regulatory Services has worked closely with regulated public utilities to enhance preparedness for severe weather conditions through measures like optimising communication systems, updating emergency manuals, and intensifying staff training.

年內發生數宗涉及電力供應中斷、電壓驟降和鐵路服務延誤的重大事故，引起公眾關注相關服務是否可靠。我們與受規管機構和持份者緊密合作，查找肇事原因和實施改善措施。每一次緊急情況或簡單錯誤，往往揭示背後更深層的問題，值得我們反思與學習。我們從每次事故中吸取教訓，把所得經驗應用於類似設施，以加強受規管機構機電系統的整體穩健程度，並提升公共安全。

During the year, several major incidents involving power supply interruptions, voltage dips, and railway service delays raised public concern about service reliability. We worked closely with regulatees and stakeholders to identify the root causes and implement improvement measures. Every emergency or minor error can shed light on deeper underlying issues that warrant reflection and learning. We have drawn lessons from each incident and applied the insights gained to similar installations, thereby enhancing the overall robustness of the regulatees' E&M systems and improving public safety.

創新轉型 求變發展

數十年來，創新一直深植於機電署的文化。我們致力推動變革性創科項目，最新例子包括支援香港的氫燃料計劃和低空經濟發展。

"INNO-TRANSFORMATION" FOR ADVANCEMENT

Innovation has been embedded in the EMSD's culture for decades. Recent examples of our commitment to transformative I&T include support for hydrogen fuel initiatives and the development of the low-altitude economy in Hong Kong.

規管服務協助環境及生態局擬備的《2025年氣體安全（修訂）條例草案》，於2025年4月提交立法會，而《2025年氣體安全（修訂）條例》亦隨後於同年7月刊憲。修訂後的條例為安全使用氫氣作燃料建立規管架構，涵蓋全面的安全和技術要求。同時，營運基金為食物環境衛生署的氫燃料電池洗街車試驗計劃提供技術支援，推動使用潔淨能源，為本港於2050年前達致碳中和的目標作出貢獻。

Regulatory Services assisted the EEB in drafting the Gas Safety (Amendment) Bill 2025, which was introduced to the Legislative Council in April 2025 and the Gas Safety (Amendment) Ordinance 2025 was subsequently gazetted in July of the same year. The amended Ordinance establishes the regulatory framework for the safe use of hydrogen as fuel, with comprehensive safety and technical requirements. Meanwhile, the EMSTF has provided technical support for the Food and Environmental Hygiene Department in piloting hydrogen fuel cell street washing vehicles, promoting the use of clean energy and contributing to Hong Kong's carbon neutrality target by 2050.

除了為本港使用氫燃料建立規管架構，我們也持續為「氫能源跨部門工作小組」提供專業支援，以評估和測試各種氫能應用項目。截至2025年3月，我們已協助該工作小組為超過18個項目發出原則上同意，涵蓋跨境氫能運輸、供應設施、本地交通運輸和綠色氫氣生產。

Further to establishing the regulatory framework for using hydrogen as fuel in Hong Kong, we continued to provide professional support for the Inter-departmental Working Group on Using Hydrogen as Fuel (IWG) to assess and test various hydrogen energy applications. As at March 2025, we have assisted the IWG in granting agreement-in-principle to more than 18 projects, covering cross-boundary hydrogen transportation, supply facilities, local transport and green hydrogen production.

我們亦開始制訂本港綠色氫氣認證計劃的框架。憑藉技術專長，以及與國際和中國標準機構的緊密聯繫，機電署具備獨特優勢，協助制訂一套適用於本港、中國內地（內地）、區域以至全球市場的標準。

We also began developing the framework for a green hydrogen certification scheme in Hong Kong. Leveraging our technical expertise and strong ties with international and Chinese standardisation bodies, the EMSD is uniquely positioned to help shape standards that align with local, Chinese Mainland (Mainland), regional and global markets.

為推動在2024年《施政報告》中強調的低空經濟，我們與消防處合作，修改其地面數碼集羣無線電系統的微波連接網絡，轉用通訊事務管理局辦公室編配的新頻帶，從而釋放更多頻譜供新興低空經濟活動應用，例如無人機緊急救援、基建設施巡查、包裹派遞和空中的士服務。

To advance the low-altitude economy highlighted in the 2024 Policy Address, we collaborated with the Fire Services Department to modify the microwave links of its Terrestrial Trunked Radio communications system. The transition to a frequency band newly assigned by the Office of the Communications Authority will free up spectrum for emerging low-altitude applications such as drone-based emergency rescue, infrastructure inspection, parcel delivery and sky taxi service.

新重點策略推動技術發展

機電署持續物色具潛力的新技術，為客戶、機電業界和我們的規管工作創造巨大價值。營運基金已鎖定三項重點技術，包括人工智能、「機電裝備合成法」和開放式建築信息模擬（open BIM）。我們正加快發展這些技術，並推廣在更多客戶的場地應用。

NEW PRIORITIES TO SPUR TECHNOLOGY DEVELOPMENT

The EMSD is always on the lookout for new technologies with strong potential to create significant value for clients, the E&M sector and our regulatory work. The EMSTF has identified three priority technologies, namely artificial intelligence (AI), Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP), and open Building Information Modelling (open BIM) to expedite their development and scale up their implementation at more client venues.

為滿足客戶對人工智能方案日益殷切的需求，我們已在14個客戶場地安裝由營運基金自主研發、屢獲殊榮的「ChillStream®」人工智能製冷機組優化系統。我們首個人工智能空氣處理機組優化方案，亦已在麥理浩牙科中心成功試行。這些項目展示人工智能有助把公營部門的運作效率、自動化和節能水平提升至更高層次。

To meet the growing demand for AI applications, we have deployed our award-winning, in-house-developed ChillStream® AI-based chiller optimisation solution at 14 client venues, while our first AI-based Air-side Equipment Optimisation solution was successfully piloted at the MacLehose Dental Centre. These projects have demonstrated how AI can take public sector operations to new levels of efficiency, automation and energy saving.

我們在機電設施安裝和更換工程中已採用「機電裝備合成法」，部分個案工期大幅縮短達30%至40%，並提升工程質素和安全。至今我們已完成29個「機電裝備合成法」先導項目，另外69個項目則在籌備中。為了向業界推廣「機電裝備合成法」，我們於2024年11月舉辦機電裝備合成法研討會，並於2025年發布《機電裝備合成法維修、保養、改建和加建項目工程指南》。

MiMEP has been adopted for installation and replacement of E&M facilities, significantly shortening project timelines by up to 30% to 40% in some cases, while improving works quality and safety. To date, we have completed 29 MiMEP pilot projects, with another 69 projects in the pipeline. To promote the technology to the trade, we hosted the MiMEP Symposium in November 2024 and released the Engineering Guidelines on MiMEP for Repair, Maintenance, Alteration and Addition Projects in 2025.

署長的話
MESSAGE FROM THE DIRECTOR

另一個令人振奮的發展領域是open BIM，利用開放資料格式，讓不同的建築信息模擬軟件和工程團隊之間無縫互通，降低對單一品牌的依賴風險。機電署開發了一套工具，簡化open BIM格式轉換流程，並在香港首個且規模最大的公共buildingSMART數據詞典中，分享我們對各類機電資產信息的要求和豐富經驗。數據詞典為業界進行及驗證其open BIM格式轉換，提供實用的網上資料。

Another exciting development is open BIM. By using open data formats, open BIM enables seamless interoperability between different BIM software and engineering teams to reduce brand dependence risks. The EMSD has developed tools to simplify open BIM conversion and has shared our requirements and rich experience on various E&M asset information in Hong Kong's first and largest public buildingSMART Data Dictionary, a useful online resource for the trade as they conduct and verify their open BIM conversions.

營運基金團隊的努力，讓我們去年10月在摩洛哥舉行的全球「openBIM Awards 2024」中榮獲「項目交付組別」大獎，並在「2024年香港開放式建築信息模擬/開放式地理信息系統比賽」中奪得「技術解決方案組別」大獎，充分肯定機電署在推動open BIM發展方面的貢獻。

Thanks to the team's efforts, we won the Grand Award (Handover category) at the global openBIM Awards 2024 in Morocco in October last year, and the Technology Solution Grand Award at the Hong Kong openBIM/open GIS Awards 2024, both recognising our contribution to open BIM development.

與此同時，機電署一直主導太陽能發電建築和區域供冷系統技術在本港的發展。正如2024至25年度《財政預算案》宣布，我們開展了太陽能發電建築先導計劃，探討在政府建築物幕牆應用太陽能發電技術，以推動可再生能源發展，並以機電署總部大樓為初步試點。先導計劃的目的，是評估太陽能發電建築技術的成效和可行性，以判斷該技術是否可推展至其他公私營機構。

Meanwhile, the EMSD has been spearheading the development of Building-Integrated Photovoltaics (BIPV) and District Cooling System (DCS) technologies in Hong Kong. As announced in the 2024-25 Budget, we conducted the Pilot Scheme on BIPV to foster renewable energy development by exploring PV technology applications on the facades of government buildings, using the EMSD Headquarters Building for initial trials. The pilot scheme aims to assess BIPV's effectiveness and feasibility for potential extension to other public and private organisations.

啟德區域供冷系統三號廠房成功投入運作，滿足區內如啟德體育園等新設施的供冷需求。在此基礎上，我們會繼續運用專業知識，支持政府各項舉措，包括如2025至26年度《財政預算案》所提出，邀請非政府機構和私營發展商自主建設區域供冷系統。機電署會給予技術支援，例如提供詳細設計和作業指引等。

Building on the successful commissioning of the Kai Tak DCS Plant No. 3, which meets cooling demand from new facilities in the area like Kai Tak Sports Park, we will continuously leverage our expertise to support the Government's initiatives. These include, as outlined in the 2025-26 Budget, inviting non-governmental organisations and private developers to independently develop DCS projects. The EMSD will provide technical support, such as detailed design and operational guidelines.

為此，我們會於2025年12月舉辦「區域供冷創新領域研討會」，分享本地和國際私營區域供冷系統項目的經驗。我們也倡導古洞北新發展區和東涌新市鎮擴展的各個區域供冷系統項目，採用「組裝合成」建築法、「機電裝備合成法」、建築信息模擬和人工智能技術，以優化運作效率，並更準確地預測供冷需求。

To this end, we are hosting a District Cooling System Innovation Conference in December 2025 for experience sharing on local and international private-sector DCS projects. We also advocate the adoption of Modular Integrated Construction, MiMEP, BIM and AI technologies in DCS projects across Kwu Tung North New Development Area and Tung Chung New Town Extension to optimise operational efficiency and predict cooling demand more accurately.

秉持核心價值 守正惠民

誠信、關懷、卓越服務，以及致力提升公眾安全和社區福祉，一直是機電署的核心價值。年內，我們透過在重大事故後提供支援，並推出各種惠民的科技措施，把這些價值付諸實踐。

UPHOLDING CORE VALUES TO ENHANCE PEOPLE'S LIVELIHOOD

Integrity, care, service excellence and a commitment to enhancing public safety and well-being of our community have remained the EMSD's core values. During the year, we put these values into practice through our support to major incidents and various public-serving I&T initiatives.

2024和2025年，本港發生數宗涉及停電、電壓驟降，以及鐵路工程車導致鐵路服務延誤的重大事故。我們隨即要求相關公用事業公司採取糾正措施，並主動徹查事故肇因；同時，我們敦促受規管機構加強巡查，全面審視其系統和流程。我們更提出改善建議，交予受規管機構落實執行，並密切監測其進度。此外，我們委託第三方進行獨立檢視和審計，以全新視角加強相關機構的維修保養機制，並且提出創科方案，從而提升營運安全和可靠程度。

In 2024 and 2025, Hong Kong witnessed several major incidents involving power outages, voltage dips, and railway service delays caused by railway engineering trains. We promptly required the relevant public utilities to implement immediate corrective measures, and proactively investigated the root causes of these incidents. At the same time, we urged the regulatees to step up inspections and comprehensively review their systems and procedures. We further made recommendations for improvement to the regulatees for implementation and closely monitored their progress. Moreover, we commissioned third-party independent reviews and audits to provide fresh perspectives for strengthening their maintenance regimes, while proposing I&T solutions to enhance operational safety and reliability.

我們也為受事故影響的社羣提供多方面支援。以2024年4月佐敦華豐大廈火災為例，我們除協助調查事故外，還與各持份者合作，盡快恢復升降機運作、電力和氣體供應等必要服務，從而確保居民安全無恙，及早回復正常生活。

We also provided multi-faceted support for communities affected by incidents, such as the tragic fire at New Lucky House in Jordan in April 2024. Apart from assisting in the incident investigation, we collaborated with various stakeholders to swiftly restore essential services, such as lift operation, power and gas supplies, ensuring residents' safety and prompt return to normalcy.

營運基金持續引領客戶採用嶄新創科方案，以提升營運效率。我們運用人工智能、數據分析和智能機械人技術，重塑客戶服務大眾的模式。例如康樂及文化事務署(康文署)轄下的暢通易達洗手間，已成功試用「智能意外感應系統」；在深圳灣管制站為香港海關試行的人工智能閉路電視監控系統，鞏固本港堵截違禁品的第一道防線，為公眾提供更大保障；至於研發中的「戶外光度測量機械人」，則能更快地測量行人天橋和地下通道的照明水平，並比對歷史數據，從而使公共空間更安全舒適。

The EMSTF continues to lead clients in deploying advanced I&T solutions to improve operational efficiency. Leveraging AI, data analytics and smart robotics, we reshape how our clients serve the public. Examples include the Intelligent Fall Detection System successfully trialled in accessible toilets under the Leisure and Cultural Services Department (LCSD); the AI-enhanced closed-circuit television system trialled at the Shenzhen Bay Control Point for the Customs and Excise Department, which strengthens our first-line defence against contraband for greater public safety; and the Outdoor Illuminance Measuring Robot under development, which enables faster illuminance measurement and historical data comparison of lighting in pedestrian bridges and underground walkways for safer and more comfortable public spaces.

走在問題前 防患於未然

我們致力培養預防事故的文化，持續優化受規管者和客戶的相關系統與機制，讓市民安心，確信本港公共服務安全可靠。

We are committed to fostering a culture of incident prevention and continuously improving the relevant systems and mechanisms of regulatees and clients, so the community may have full confidence in the safety and reliability of the public services of Hong Kong.

近年超強颱風和特大暴雨頻繁出現，促使我們與客戶加強合作，提升機電資產的保護措施。機電署的「資產管理網站」是應對極端天氣的重要工具。這個企業級別網上平台整合多個本地控制中心，並透過實時物聯網系統，遙距管理、監察和優化主要關鍵機電資產的營運效率和環保表現。

In recent years, the increasing frequency of super typhoons and severe rainstorms has prompted us to work more closely with clients to strengthen protective measures for their E&M assets. A powerful tool in this effort is the EMSD Asset Management Portal, our corporate-level digital portal that integrates multiple local control centres. Through a real-time Internet of Things system, the Portal enables remote management, monitoring and optimisation of the operational efficiency and environmental performance of major critical E&M assets.

署長的話
MESSAGE FROM THE DIRECTOR

為保障客戶的關鍵機電資產，我們在惡劣天氣來臨前，預先部署各種水浸監測和防護系統。例如，智能水浸偵測及預警系統能針對行人隧道發出水浸警報，提升公眾安全。該系統成效卓越，將會擴展至三條主要道路，加強水浸監測和應變能力。我們還採取額外措施，包括全面檢查各種設施、測試備用設備和提供現場緊急支援。在颱風和特大暴雨期間，機電署會啟動緊急事故控制中心，監察交通燈、街燈和隧道設施等重要基建設施，確保公共服務穩定運作。

此外，規管服務密切監察各公用事業機構，包括兩家電力公司、香港中華煤氣有限公司和香港鐵路有限公司（港鐵公司），確保其機電設施的設計符合標準，足以抵禦極端天氣，並已落實加強防洪設施、實時水浸監測系統，以及加強架空電纜防雷措施。規管服務亦與這些機構進行聯合巡查和演練，確認其人員、設備和操作流程已為應對惡劣天氣事件做好充分準備，並有完善的緊急事故處理和應變計劃作支援。在颱風和暴雨期間，規管服務團隊密切監察公用事業機構，並與他們保持聯繫，在服務中斷時提供所需支援，並監督修復工作。

吸引年輕新血　培育人才

機電署持續透過一系列多元外展活動，向年青人推廣創科、數碼化和節能減碳理念，鼓勵他們投身機電工程事業。以我們的「機電青少年大使計劃」為例，繼2023/24學年成功推出「校園先導計劃」後，我們於2024/25學年更推出「機電青少年大使2.0校園計劃」，旨在透過STEAM工作坊、比賽、職業分享會和工作體驗活動，提升學生對機電安全、能源效益和機電行業的興趣。

在2024/25年度，我們與灣仔民政事務處合辦「建『機』灣仔 — 青少年社區設施優化計劃」，邀請來自12間學校共170名學生參與多元化活動，包括以科技提升市民生活質素的社區建設比賽，加深他們對機電安全、能源效益、節能減碳和創科的認識。

「建『機』灣仔」計劃亮點之一為2024年10月舉行的粵港澳大灣區創科考察團。活動獲廣東省科學技術協會支持，一行約40名師生參觀廣東東莞多個創科設施，了解機械人、新能源、生命科學和材料科學等產業。這項計劃成效顯著，我們會研究把它擴展至其他地區。

To safeguard clients' critical E&M assets, we installed flood monitoring and prevention systems well ahead of severe weather, such as the Smart Flood Detection and Warning System that enhances public safety by alerting people to flood risk at pedestrian subways. The highly effective system will be extended to three critical roads to enhance flood monitoring and response. Additional measures included thorough inspections, testing of backup equipment, and on-site emergency support. During typhoons and severe rainstorms, the EMSD Emergency Control Centre was activated to monitor essential infrastructure, including traffic lights, streetlights, and tunnel installations, ensuring stable operation of public services.

In addition, Regulatory Services maintained close oversight of public utilities, including the two power companies, the Hong Kong and China Gas Company Limited and the MTR Corporation Limited (MTRCL), to ensure that their E&M facilities were designed to meet standards capable of withstanding extreme weather conditions and that strengthened flood protection facilities, real-time flood monitoring systems and reinforced lightning protection measures for overhead power lines were in place. Joint inspections and drills with these utilities were held to confirm that their personnel, equipment and operational procedures were fully prepared for adverse weather events and well supported by emergency handling and response plans. During typhoons and rainstorms, our team closely monitored the public utilities and liaised with them, provided necessary support in the event of service suspensions, and oversaw the recovery work.

ATTRACTING YOUTH, NURTURING TALENTS

The EMSD continues to inspire young people to pursue careers in E&M engineering by promoting interest in I&T, digitalisation and decarbonisation through a rich array of outreach activities. Taking our E&M Young Ambassador Programme (EMYA) an as example, following the successful launch of the School Pilot Programme in the 2023/24 academic year, we introduced the EMYA2.0 School Programme in the 2024/25 academic year, aiming to raise students' interest in E&M safety, energy efficiency and the E&M industry through STEAM workshops, competitions, career sharing sessions and job-tasting activities.

In 2024/25, we launched the "Engineering Opportunities for Wan Chai – Youth Community Facilities Enhancement Programme" in collaboration with the Wan Chai District Office, engaging 170 students from 12 schools in diverse activities. These included a community building competition using technology to improve people's quality of life, deepening students' understanding of E&M safety, energy efficiency, decarbonisation and I&T.

A highlight of the programme was a Greater Bay Area (GBA) I&T study tour in October 2024, supported by the Guangdong Association for Science and Technology. Around 40 students and teachers visited various I&T facilities in Dongguan, Guangdong, exploring industries such as robotics, new energy, life sciences and materials science. We will explore the possibility of expanding this successful programme to other districts.

我們也透過不同項目培訓年輕人才。例如，我們在2025年8月聯同職業訓練局、電梯業協會和註冊電梯營造商聯會舉辦首屆「升降機及自動梯技能挑戰賽」。這是香港首個以升降機及自動梯技術為主題的全方位技能挑戰賽，旨在加強升降機及自動梯行業的專業形象、吸納更多人才和促進技術交流。

此外，透過與廣州市人力資源和社會保障局簽署的兩份合作備忘錄，機電署員工得以在廣州多間技術員培訓學院接受專業訓練。單在2024年，已有68名見習技術員在廣州接受多個領域的培訓，涵蓋空調製冷、電氣工程、屋宇裝備和車輛維修保養。

值得一提的是，廣州合作伙伴一直為備戰世界技能大賽的機電署年輕見習技術員提供頂尖訓練和悉心指導。繼2024年兩位見習技術員代表香港到法國里昂參賽後，我們正積極籌備參加2026年在上海舉行的賽事，期望憑藉主場優勢，爭取佳績。

通力協作　發揮超級聯繫人角色

另一項令人期待的主場盛事，是將於2025年11月舉行的第十五屆全國運動會（全運會），由廣東、香港和澳門三地共同承辦，亦是香港首次承辦全運會賽事。我們的籌備工作包括提升康文署場地的技術系統和設備、確保政府場地的電力供應穩定、改善照明設施，並參與各項綵排和模擬賽。

全運會也為我們帶來契機，於2024年11月舉辦為期三天的深圳和廣州考察團。營運基金代表參觀兩地多個體育館和表演場地，包括全運會指定比賽場地，深入了解場地所採用的先進技術。這是我們首次與大灣區進行類似交流，所得經驗對全運會工作以至未來項目均具重要參考價值。

年內，機電署與國家市場監督管理總局（市場監管總局）簽署合作備忘錄，加強與內地的合作，並鞏固我們在香港融入國家發展策略中的角色，其中一例是參與草擬《綠色產品評價 — 氫》的國家標準。透過與市場監管總局合作，機電署有機會參與標準草擬過程，利用香港氫能示範場景所得的經驗，協調國家與國際氫能標準的對接。透過跨境資料共享、氫氣壓力容器的批准互認，以及在香港制訂綠色氫能認證框架，這項合作有助加快我們的氫能發展工作。

We also trained young talent through various initiatives. For example, we co-organised the inaugural Lift and Escalator Skills Competition with the Vocational Training Council, the Lift and Escalator Contractors Association and the Registered Elevator and Escalator Contractors Association Limited in August 2025. As Hong Kong's first comprehensive skills competition focused on lift and escalator technology, the event sought to enhance the professional image of the lift and escalator industry, attract more talent and foster technical exchange.

Moreover, through two Memoranda of Co-operation signed with the Guangzhou Municipal Human Resources and Social Security Bureau, many EMSD staff have received specialised training in various technician training colleges in Guangzhou. In 2024 alone, 68 Technician Trainees (TTs) were trained in Guangzhou in diverse fields including refrigeration, air-conditioning and electrical engineering, building services and vehicle maintenance.

Notably, our Guangzhou partner has been providing top-notch training and generous coaching to our young TTs preparing for the WorldSkills Competition. Following our two TTs' participation in WorldSkills Lyon, France in 2024, we are actively gearing up for the WorldSkills Shanghai in 2026, where we are aiming for victories with the advantage of competing on our home ground.

COLLABORATIONS AND SUPER CONNECTOR

Another exciting mega event on our homeland is the upcoming 15th National Games, co-hosted by Guangdong, Hong Kong and Macao in November 2025. This marks Hong Kong's first time hosting National Games competitions. Our preparations include upgrading technical systems and equipment at LCSD venues, ensuring reliable power supply and enhancing lighting facilities at government venues, and taking part in rehearsals and event simulations.

The National Games also presented a valuable opportunity to organise a three-day study mission to Shenzhen and Guangzhou in November 2024. The EMSTF delegates explored advanced technologies used in sports and performance venues in the two cities, including several designated National Games competition sites. This was our first exchange of its kind with the GBA, and the experience gained will be instrumental to the National Games and future projects.

During the year, the EMSD strengthened Mainland collaboration by signing a Memorandum of Cooperation with the State Administration for Market Regulation (SAMR), reinforcing our role in Hong Kong's integration into national development strategies. A prime example is our involvement in the drafting of national standard – "Green product assessment – Hydrogen", where the collaboration with SAMR enables us to participate in the drafting process to leverage our experience gained from Hong Kong's hydrogen as fuel trial projects for the alignment of national and international hydrogen standards. The collaboration will accelerate our hydrogen development work through cross-boundary data sharing, mutual recognition of approvals for hydrogen pressure vessels, and formulation of a green hydrogen certification framework in Hong Kong.

機電署與市場監管總局的合作，增強了我們在阻截有潛在風險的機電產品通過電子商貿進入香港的能力，因此對部門監察和規管電氣產品和機械裝置的工作也大有助益。

統一標準是我們與內地合作的另一範疇。我們與大灣區機構合作制訂統一標準，包括《機電設備人工智能數據標準化指南》，並已在廣州一個先進建築項目中成功試行。

2025年4月，我們舉辦亞太區經濟合作組織（亞太經合組織）能源工作組四個專家小組聯合會議，這是促進內地與其他國家建立聯繫的里程碑。會議匯聚來自內地和其他亞太經合組織經濟體逾百位代表，就能源效益和可持續發展等議題進行交流。

另外，機電署正聯同國家鐵路局和港鐵公司，合作籌辦於2025年11月在香港舉行的2025年國際鐵路安全理事會年度會議；而我們繼2025年成功舉辦「國際氫能發展論壇2025」後，也將於明年再辦「國際氫能發展論壇2026」。兩個盛會將雲集數百位來自香港、內地及海外的政府部門、公營機構、專業機構及學術組織專家，共同分享經驗。

2035－2050願景研究成形

我欣然報告，機電署的2035－2050願景研究進展順利。這項研究旨在預測從現在至2050年間，影響香港以至全球的宏觀變化，例如科技發展和地緣政治格局轉變，並評估機電署的優勢，制訂短期、中期和長期發展情景，為我們制訂未來的願景、目標、策略和行動提供指引。

過去一年，我們的研究團隊努力不懈，匯集跨部別的專業知識，並與規管服務和營運基金的管理層和各級同事交流，收集意見和建議。雖然相關策略路線圖仍待敲定，但核心主題已明確：機電署必須維持在機電業界的領導地位，同時審視和調整未來數十年角色定位。

研究分析了七個關鍵領域，即地緣政治環境、融入國家發展、城市基建設施、能源、生活方式、工作模式和勞動力結構，從中識別出重要挑戰和新興機遇。初步結果顯示，人工智能和機械人技術的迅速發展，將徹底革新機電操作和維修保養模式 — 由例行檢查轉型為預測性維修保養，由單一部件更換轉向智能綠色改造。

Our work in monitoring and regulating electrical products and mechanical installations will also benefit significantly from our collaboration with the SAMR, as such collaboration has enhanced our capability to intercept potentially risky E&M products from entering Hong Kong via e-commerce.

Standards harmonisation is another aspect of Mainland collaboration. We worked with GBA entities to develop harmonised standards, including the E&M AI Data Standardisation Guideline, which was successfully piloted during the construction of a state-of-the-art building in Guangzhou.

A milestone in bridging the Mainland with other countries was our hosting of the joint meeting of four expert groups under the Asia-Pacific Economic Cooperation (APEC) Energy Working Group in April 2025, bringing together over 100 delegates from the Mainland and other APEC economies for exchanges on topics such as energy efficiency and sustainable development.

Likewise, we are working with the National Railway Administration and the MTRCL to host the annual conference of International Railway Safety Council 2025 in Hong Kong in November 2025. We will also organise the International Hydrogen Development Symposium 2026, further to the success of the 2025 symposium. Both events will gather hundreds of experts of government departments, public organisations, professional bodies and academic institutions from Hong Kong, the Mainland and overseas regions for experience sharing.

2035-2050 VISION STUDY SHAPING UP

I am pleased to report that the EMSD 2035-2050 Vision Study is progressing well. The study aims to anticipate macro-level changes such as technological advancements and geopolitical shifts impacting Hong Kong and the world between now and 2050, assess our strengths, and develop short-, medium-, and long-term development scenarios. These will inform and guide our future vision, goals, strategies and actions.

Throughout the year, our dedicated team worked tirelessly, drawing on cross-divisional expertise and engaging with management and staff from both Regulatory Services and the EMSTF to gather insights and recommendations. While the strategic roadmap is still in development, the core theme is clear: the EMSD must continue to lead in E&M excellence while re-evaluating and redefining our role for the decades ahead.

The study has analysed seven key areas, namely geopolitical context, national integration, urban infrastructure, energy, lifestyle, work models, and workforce structure, from which we identify critical challenges and emerging opportunities. Preliminary findings suggest that rapid advancements in AI and robotics will fundamentally transform E&M operations and maintenance, shifting from routine inspections to predictive maintenance, and from single-component replacements to smart, green retrofits.

面對香港人口急速老化，加上財政資源壓力，我們必須加快改革勞動力結構和服務提供模式。同時，內地信息技術應用創新產業的崛起，亦為機電署帶來長遠發展機遇。

下一步，我們會着手制訂策略和行動路線圖。首要工作包括推行人工智能、機械人技術和大數據方面的技能提升計劃，培育韌性十足的員工團隊；建立靈活高效的組織架構；以及把內地機電工程的卓越成果推向國際舞台。我們的團隊會繼續全力以赴，迎接未來挑戰。

致謝與感恩

2026年是營運基金成立30周年的重要里程碑，提醒我們堅守初心，持續推動創新與轉型，為客戶和社會提供更高效、更優質的服務。創新、效率和質素，也是規管服務為市民確保機電安全和提高能源效益所依賴的基石。2035－2050願景研究將引領我們繼續前行，恪守使命。

我們衷心感謝機電業界、所有客戶、專業團體、學術界和培訓與研究機構多年來的支持與信任，也感謝內地與海外伙伴的緊密合作與支援。

對於各決策局的指導、各政府部門通力合作，以及全體同事的敬業精神與卓越表現，我們深表謝意。我們亦十分重視立法會議員、傳媒、意見領袖和市民的監察與回饋，感謝他們為機電署持續改進作出貢獻。

憑藉大家的支持，我們深信機電署來年定能更上一層樓，再創高峯，為香港和市民締造更美好的未來。

潘國英
機電工程署署長
機電工程營運基金總經理

Hong Kong's rapidly ageing population and fiscal constraints also prompt urgent transformation in our workforce structure and service delivery models. At the same time, the rise of the Information Technology Application Innovation industry on the Mainland presents long-term growth opportunities for the EMSD.

Our next steps are to formulate strategies and an action roadmap. Key priorities will include building a resilient workforce through upskilling programmes in AI, robotics, and big data, creating an agile organisational structure, and showcasing the Mainland's E&M excellence on the global stage. Our team remains fully committed to meeting future challenges head-on.

MESSAGE OF THANKS AND GRATITUDE

The year 2026 marks the 30th anniversary of the EMSTF, a significant milestone that reminds us to stay true to our founding purpose: to drive innovation and transformation for more efficient, higher-quality services to clients and the community. Innovation, efficiency and quality are also the cornerstones upon which Regulatory Services rely to ensure E&M safety and enhance energy efficiency for the public. The 2035-2050 Vision Study will guide us forward as we remain steadfast in our purpose.

We extend our sincere thanks to the E&M trade, all our clients, professional bodies, academics, and training and research institutions for their enduring support and trust over the years. We are equally grateful to our Mainland and overseas partners for their collaboration and support.

Our heartfelt appreciation goes to the policy bureaux for their guidance, government departments for their co-operation, and all our colleagues for their dedication and outstanding work. We value the vigilance and feedback from Legislative Council members, the media, opinion leaders, and the public, all of whom contribute to our continuous improvement.

With your unwavering support, we are confident that the EMSD will reach new heights in the coming year, achieving even greater success and helping build a brighter future for Hong Kong and its people.

Poon Kwok-ying, Raymond
Director of Electrical and Mechanical Services
General Manager, Electrical and Mechanical Services Trading Fund

我們的管理層
OUR MANAGEMENT

署長 DIRECTOR

01 潘國英太平紳士
Mr Poon Kwok-ying, Raymond, JP
機電工程署署長
Director of Electrical and Mechanical Services

02 陳柏祥先生
Mr Chan Pak-cheung
副署長 / 規管服務
Deputy Director/Regulatory Services

03 周厚強太平紳士
Mr Chow Hau-keung, Vincent, JP
副署長 / 營運服務
Deputy Director/Trading Services

04 陳耀漢先生
Mr Chan Yiu-hon
助理署長 / 鐵路
Assistant Director/Railways

05 江茂誠先生
Mr Kong Mau-shing, Marsden
助理署長 / 電力及能源效益
Assistant Director/Electricity and Energy Efficiency

06 王磊先生
Mr Wong Lui, Eric
助理署長 / 氣體及一般法例
Assistant Director/Gas and General Legislation

07 姚德泰先生
Mr Yiu Tak-tai, Boris
助理署長 /1
Assistant Director/1

08 楊秀權先生
Mr Yeung Sau-kuen, Sammy
助理署長 /2
Assistant Director/2

09 李志良先生
Mr Lee Chi-leung, Eric
助理署長 /3
Assistant Director/3

10 黃妍旻女士
Ms Wong Yin-man, Yammy
總庫務會計師 / 財政管理
Chief Treasury Accountant/ Financial Management

11 鍾蔚欣女士
Miss Chung Wai-yan
高級庫務會計師 / 會計服務
Senior Treasury Accountant/ Financial Services

12 鄭元峰先生
Mr Cheng Yuen-fung
署理員工關係主任
Staff Relations Officer (Acting)

13 韋美珠女士
Ms Wai Mei-chu, Jenny
主任秘書
Departmental Secretary

14 王瑩瑩女士
Ms Wong Ying-ying, Regina
高級機電工程師 / 技術服務
Senior Engineer/Technical Services

11 12 05 04 06 02 01 03 13 08 07 09 14 10

* 陳志偉太平紳士出任機電工程署副署長 / 營運服務至2024年8月6日
Mr Chan Chi-wai, Richard, JP was Deputy Director/Trading Services, EMSD up to 6 August 2024

* 周厚強太平紳士出任機電工程署助理署長 / 氣體及一般法例至2024年8月6日
Mr Chow Hau-keung, Vincent, JP was Assistant Director/Gas and General Legislation, EMSD up to 6 August 2024

* 陳秋發太平紳士出任機電工程署助理署長 / 鐵路至2024年9月29日
Mr Chan Chau-fat, JP was Assistant Director/Railways, EMSD up to 29 September 2024

* 姚德泰先生出任機電工程署助理署長 / 電力及能源效益至2024年12月22日
Mr Yiu Tak-tai, Boris was Assistant Director/Electricity and Energy Efficiency, EMSD up to 22 December 2024

* 李志良先生出任機電工程署助理署長 /1至2024年12月22日
Mr Lee Chi-leung, Eric was Assistant Director/1, EMSD up to 22 December 2024

* 李學賢先生出任機電工程署助理署長 /3至2024年12月22日
Mr Lee Hok-yin, Arthur was Assistant Director/3, EMSD up to 22 December 2024

* 劉志偉先生出任機電工程署員工關係主任至2025年4月21日
Mr Lau Chi-wai, Wilfred was Staff Relations Officer, EMSD up to 21 April 2025

規管服務業務概覽
REGULATORY SERVICES ACHIEVEMENTS OVERVIEW

抱負 VISION

促使香港在機電安全及善用能源方面，達到國際首要都會級水平。

To make Hong Kong a top-ranking world city in the electrical and mechanical (E&M) safety and efficient use of energy.

使命 MISSION

充分發揮專業及創新精神，致力確保機電及能源科技以安全、可靠、經濟及環保的方式得以善用，藉此促進社會安全及提升生活質素。

To enhance the safety and quality of life of our community through our professionalism and innovation to ensure 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
靈活創新 INNOVATION

高層管理人員
SENIOR MANAGEMENT

01 潘國英太平紳士
Mr Poon Kwok-ying, Raymond, JP
機電工程署署長
Director of Electrical and Mechanical Services

02 陳柏祥先生
Mr Chan Pak-cheung
副署長 / 規管服務
Deputy Director/Regulatory Services

03 陳耀漢先生
Mr Chan Yiu-hon
助理署長 / 鐵路
Assistant Director/Railways

04 江茂誠先生
Mr Kong Mau-shing, Marsden
助理署長 / 電力及能源效益
Assistant Director/Electricity and Energy Efficiency

05 王磊先生
Mr Wong Lui, Eric
助理署長 / 氣體及一般法例
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06 鍾蔚欣女士
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高級庫務會計師 / 會計服務
Senior Treasury Accountant/Financial Services

07 韋美珠女士
Ms Wai Mei-chu, Jenny
主任秘書
Departmental Secretary

* 周厚強太平紳士出任機電工程署助理署長 / 氣體及一般法例至2024年8月6日
Mr Chow Hau-keung, Vincent, JP was Assistant Director/Gas and General Legislation, EMSD up to 6 August 2024

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Mr Chan Chau-fat, JP was Assistant Director/Railways, EMSD up to 29 September 2024

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Mr Yiu Tak-tai, Boris was Assistant Director/Electricity and Energy Efficiency, EMSD up to 22 December 2024

服務回顧
OPERATIONS REVIEW

陳柏祥先生
Mr Chan Pak-cheung
副署長/
規管服務
Deputy Director/
Regulatory Services

隨着極端天氣事件日益頻繁，加上機電設施逐漸老化，各種外在因素為本港機電安全構成重大挑戰。為此，規管服務始終秉持「走在問題前」的專業精神，積極預防事故，並以創新進取的態度穩步邁向「碳中和」目標，致力為市民締造「零意外」的綠色都市。

2024/25年度曾發生數宗備受關注的機電事故，規管服務人員堅守崗位，迎難而上，展現高度的專業精神。我們不僅運用創新技術提升機電安全，更主動接觸社會各持份者，深化跨境和國際合作。這些工作進一步提升能源效益，有助建設綠色未來，充分體現我們「革新求進 守正惠民」的承諾。

With the frequent occurrence of extreme weather events and gradual aging of electrical and mechanical (E&M) facilities, a range of external factors pose significant challenges to E&M safety in Hong Kong. In response, the Regulatory Services have been upholding the professional ethos of "act before challenge strikes" to proactively prevent accidents. Adopting an innovative and forward-looking approach, we are steadily advancing towards the carbon neutrality goal, striving to build a "zero-accident" green city for the public.

Several concerning E&M incidents took place in 2024/25. The staff of the Regulatory Services remained steadfast in their duties and rose to the challenges, demonstrating a high degree of professionalism. We not only applied innovative technologies to enhance E&M safety, but also took the initiative to engage with various stakeholders in society, deepening cross-border and international co-operation. These efforts have further optimised energy efficiency and contributed to a greener future, truly exemplifying our commitment to "Innovating for Advancement and Serving the Community with Integrity".

秉持惠民精神 竭力守護機電安全

先天下之憂而憂，後天下之樂而樂。作為香港機電安全的守護者，我們恪守此志，除了從源頭堵截漏洞，消除機電安全的潛在風險外，更預先制定應變措施，把事故影響減至最低。憑藉「走在問題前」的方針，我們持續提升抵禦風險的能力，致力提供穩定可靠的機電服務。

為確保兩間電力公司（兩電）持續提供安全可靠的電力供應，機電署採取多管齊下的方式，除增加巡查兩電的供電設施外，亦在審視事故報告後提出針對性改善措施，密切監察其實施進度，以防同類事故再次發生。此外，環境及生態局（環境局）於2024年要求機電署聘請獨立顧問，覆檢過去三年所有電壓驟降和電力供應中斷事故，並全面檢視中華電力有限公司（中電）的供電系統，使其更可靠和穩定。在2025年，檢視工作已完成，機電署會密切監察中電執行相關改善措施，務求進一步提高中電供電系統的穩定性和可靠度，減低未來發生電力事故的機會。

UPHOLDING THE SPIRIT OF SERVING THE COMMUNITY AND VIGOROUSLY PROTECTING E&M SAFETY

As the guardian of E&M safety in Hong Kong, we steadfastly uphold the principle of "putting the public concerns first and our comforts last". Apart from addressing vulnerabilities at their source to eliminate potential risks to E&M safety, we pre-emptively develop contingency measures to minimise the impact of incidents. Guided by our "act before challenge strikes" approach, we continuously enhance our resilience against risks, striving to provide secure and reliable E&M services.

To ensure that the two power companies continue to provide safe and reliable power supply, the EMSD adopted a multi-pronged approach. In addition to stepping up inspections on both companies' power supply facilities, the EMSD recommended targeted improvement measures upon reviewing the incident reports, and closely monitored their implementation progress to prevent similar incidents from reoccurring. Furthermore, in 2024, the Environment and Ecology Bureau (EEB) requested the EMSD to engage an independent consultant to review all voltage dip and supply interruption incidents occurred over the past three years, and thoroughly examine the power supply system of the CLP Power Hong Kong Limited (CLP) to enhance its reliability and stability. The review was completed in 2025. The EMSD will closely monitor CLP to implement the improvement measures so as to further enhance the stability and reliability of CLP's power supply system and minimise the occurrence of power supply incidents in future.

此外，為應對電力故障可能引致的升降機困人事故，機電署在徵詢業界意見後，於2025年2月修訂《升降機及自動梯設計及構造實務守則》。是次修訂要求所有新升降機必須配備自動救援裝置，並鼓勵升降機負責人為現有升降機加裝該裝置，以免乘客因大廈電力故障已被困升降機內。

Moreover, to deal with potential lift entrapments caused by power failures, the EMSD revised the Code of Practice on the Design and Construction of Lifts and Escalators in February 2025 in consultation with the trade. The revision mandates that all new lifts must be equipped with an automatic rescue device. Responsible persons of lifts are also encouraged to retrofit such device in existing lifts to prevent passengers from being trapped in lifts due to building power failures.

自2023年年中起，機電署持續監察及抽樣查核港鐵東鐵線自動月台閘門安裝工程，以降低乘客墮軌的風險。工程期間，我們嚴格把關，確保每個安裝環節均符合安全標準，並在啓用前進行全面測試和檢查。最終，東鐵線自動月台閘門於2025年5月底全面投入服務，為市民提供更安全的乘車環境。

Starting from mid-2023, the EMSD continuously monitored and conducted random inspections of the installation of automatic platform gates (APGs) on the MTR East Rail Line to reduce the risk of passengers falling onto the tracks. We exercised stringent control throughout the project to ensure every installation stage met safety standards, and carried out comprehensive testing and examination before commissioning. Ultimately, the APGs on the East Rail Line were put into full service at the end of May 2025, providing a safer travelling environment for the public.

年內，我們積極響應「智慧出行」的策略，全力支持發展機械化泊車系統，以緩解停車位短缺問題。我們於2024年批准首個地下圓筒式機械化泊車系統，預計於2026/2027年度在深水埗落成。為配合「粵車南下」的政策，我們亦為港珠澳大橋香港口岸大型停車場內採用自動導引車技術的機械化泊車系統展開審核工作。該停車場會提供逾2 500個泊位，屬全球規模最大之一，也是香港首個整合自動導引車技術的機械化泊車系統。機電署與製造商和承辦商合作制訂香港專屬審核標準，並進行多次預檢，以確保系統運作安全。在我們與機場管理局和承辦商的協作下，使用許可證的簽發工作順利推進，預計停車場於2025年年底前試業。

During the year, we actively responded to the Smart Mobility strategy by fully supporting the development of mechanised vehicle parking systems (MVPS) to alleviate the shortage of parking spaces. In 2024, we approved the first underground circular shaft-type MVPS, scheduled for completion in Sham Shui Po in 2026/2027. In line with the Southbound Travel for Guangdong Vehicles policy, we also began the vetting process for an MVPS using automated guided vehicle (AGV) technology in the mega car park at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port. The car park will provide over 2 500 parking spaces, making it one of the world's largest MVPS and the first in Hong Kong to integrate AGV technology. The EMSD worked with the manufacturers and contractors to develop specific vetting standards for Hong Kong, and conducted multiple pre-inspections to ensure the system's operational safety. Through our collaboration with the Airport Authority and contractors, the issuance of the use permit is progressing smoothly, and the car park is expected to commence trial operation by the end of 2025.

為保障社區氣體安全，機電署近年積極打擊使用和售賣未經批准的卡式石油氣爐，並於年內展開全港性巡查行動，重點檢查食肆及零售店鋪。巡查期間，我們發現部分未附有「GU」標誌的卡式石油氣爐在網購平台出售。有鑑於此，我們加強網上監察，要求涉嫌違反《氣體安全條例》的平台即時移除相關銷售帖文，務求從源頭堵截違規爐具流入市場。針對少數網店屢勸不改，繼續銷售違規產品，我們展開深入調查，首度喬裝顧客購買未附有「GU」標誌的卡式石油氣爐，蒐集證據以提出檢控。機電署更發出新聞公報，首次詳列違規卡式石油氣爐的品牌和型號，呼籲市民提高警覺，此舉成功引起社會關注。

To safeguard gas safety in the community, the EMSD has been actively combating the use and sale of non-approved LPG cassette cookers in recent years. This year, we launched a territory-wide inspection campaign focusing on restaurants and retail outlets. During the inspections, we found some LPG cassette cookers without a GU mark being sold on online shopping platforms. In view of this, we intensified our online monitoring and required platforms suspected of violating the Gas Safety Ordinance to immediately remove the relevant sale posts, aiming to intercept at source the entry of non-compliant appliances into the market. In response to a small number of online retailers who continued to sell non-compliant goods despite repeated warnings, we launched an in-depth investigation, posing as customers for the first time to purchase LPG cassette cookers without the GU mark to gather evidence for prosecution. The EMSD also issued a press release, detailing for the first time the brand names and model numbers of non-compliant LPG cassette cookers, urging the public to exercise caution. This successfully aroused public attention.

從提升公共基建的機電安全，以至打擊未經批准的氣體產品，機電署始終秉持「以民為本」的理念。我們的使命是透過嚴謹規管、創新技術和優化標準，全方位守護本港的機電安全，充分體現機電署防患未然的精神。

Ranging from enhancing E&M safety of public infrastructure to cracking down on non-approved gas products, the EMSD has consistently upheld its "people-oriented" philosophy. Our mission is to comprehensively protect Hong Kong's E&M safety through stringent regulation, innovative technologies and optimised standards, which fully exemplifying the EMSD's spirit of proactive prevention.

全力推動節能減排 攜手邁向碳中和

SPEARHEADING ENERGY CONSERVATION AND EMISSIONS REDUCTION TO JOINTLY ACHIEVE CARBON NEUTRALITY

除預防事故外，機電署亦積極為香港實現碳中和目標作出貢獻。我們全面推動節能減排，加強發展新能源，藉以加快能源轉型，攜手共建綠色未來。

Apart from incident prevention, the EMSD is actively contributing to Hong Kong's carbon neutrality goal. We holistically promote energy conservation and emissions reduction while intensifying efforts in new energy development, so as to accelerate energy transition and collectively build a greener future.

我們每三年更新一次《屋宇裝備裝置能源效益實務守則》和《建築物能源審核實務守則》，以提升建築物能源效益。2024年11月22日刊憲的新版守則規定，大型中央空調系統必須配置能源優化控制系統，同時放寬新一代環保雪種的使用限制。與2015年版本相比，整體能源效益標準提升20%，預計到2035年每年可節省約54億度電（與2015年相比），為實現2050年碳中和目標奠定堅實基礎。《2025年建築物能源效益（修訂）條例草案》亦於2025年3月刊憲，預期可於2026年全面實施，進一步加強本港建築物能源效益管理制度。

We update the Code of Practice for Energy Efficiency of Building Services Installation and the Code of Practice for Building Energy Audit every three years to enhance the energy efficiency of buildings. The new editions, gazetted on 22 November 2024, require large-scale central air-conditioning systems to be equipped with energy optimisation control systems, while also relaxing restrictions on the use of new-generation environmentally friendly refrigerants. Compared to the 2015 edition, the overall energy efficiency standard has been raised by 20%, with an estimated annual energy saving of approximately 5.4 billion kWh by 2035 (compared with 2015). This lays a solid foundation for achieving the 2050 carbon neutrality goal. The Buildings Energy Efficiency (Amendment) Bill 2025, also gazetted in March 2025, is expected to be fully implemented in 2026, further strengthening Hong Kong's building energy efficiency management system.

為進一步鼓勵業界深度減碳，機電署繼續舉辦「全民節能減碳2024」運動。逾3 300個場所簽署《節能約章》，承諾於夏季保持室溫在24至26度和選購一級能源標籤產品；另有780個場所簽署《4T約章》，承諾透過設定節能目標和確保能源數據透明化，推動低碳轉型。

To further encourage deep decarbonisation across the trade, the EMSD continued to organise the Energy Saving and Decarbonisation for All 2024 Campaign. Over 3300 premises signed up for the Energy Saving Charter, committing to maintaining indoor temperatures between 24°C and 26°C during summer and procuring products with Grade 1 energy labels. Additionally, 780 premises signed up for the 4T Charter, pledging to promote low-carbon transformation through setting energy-saving targets and ensuring transparency of energy data.

此外，「強制性能源效益標籤計劃」第四階段於2024年12月1日全面實施，涵蓋範圍擴展至發光二極管燈、氣體煮食爐和即熱式氣體熱水爐。該計劃目前涵蓋11類產品，佔住宅總能源消耗量八成。與此同時，第三次能源效益級別標準提升於2024年6月30日生效，並設有15個月過渡期。此項提升聯同計劃的第四階段，預計每年可節省約3.5億度電，為住宅領域節能減排注入新動力。

Furthermore, Phase IV of the Mandatory Energy Efficiency Labelling Scheme (MEELS) was fully implemented on 1 December 2024, with its scope extended to cover LED lamps, gas cookers and gas instantaneous water heaters. At present, MEELS covers 11 product types, accounting for 80% of the total energy consumption in the residential sector. Concurrently, the third upgrading of energy efficiency grading standards took effect on 30 June 2024, with a 15-month transition period. The upgrading, together with Phase IV of the MEELS, is expected to save approximately 350 million kWh of electricity annually, injecting new momentum into energy conservation and emissions reduction in the residential sector.

為履行在《基加利修正案》下的義務，機電署協助環境局完成《保護臭氧層條例》的修訂工作。修訂條例已於2025年4月獲立法會通過，期望在2036年前把氫氟碳化物的使用量削減85%。政府現正草擬相關附屬法例，新規例將會管制具危害性製冷劑的處理工作。機電署於2024年9月成立「臨時製冷劑技術諮詢委員會」，並確保適時推出製冷劑處理培訓課程。截至2025年3月，委員會已認可七家培訓機構的課程，全面支援業界安全處理製冷劑。另外，截至2025年3月底，已有超過1700名工程人員在「家用冷氣機輕度易燃雪種處理工程人員自願註冊計劃」下完成註冊，約佔業界從業員總數55%。

To fulfil the obligations under the Kigali Amendment, the EMSD assisted the EEB in completing the amendments to the Ozone Layer Protection Ordinance. The amended ordinance was passed by the Legislative Council (LegCo) in April 2025, aiming to reduce the use of hydrofluorocarbons by 85% by 2036. The Government is currently drafting the relevant subsidiary legislation to regulate handling of hazardous refrigerants. The EMSD established the Provisional Refrigerant Technical Advisory Committee in September 2024, and ensured that the training courses on refrigerant handling were launched in a timely manner. As at March 2025, endorsement was given to the training courses organised by seven training organisations, providing full support to the industry for the safe handling of refrigerants. Besides, as at the end of March 2025, over 1 700 technicians, representing about 55% of the total number of trade practitioners, completed registration under the Voluntary Registration Scheme for Technicians Handling Mildly Flammable Refrigerant of Household Air-Conditioners.

在綠色運輸方面，機電署全力支持電動交通工具發展，以實現2050年前車輛零排放的願景。為此，我們積極提升電動車維修服務的安全水平，透過在「車輛維修技工自願註冊計劃」和「車輛維修工場自願註冊計劃」新增電動車維修服務，滿足電動車維修保養的迫切需求。

In terms of green transport, the EMSD fully supports the development of electric transportation to realise the vision of zero vehicle emissions by 2050. To this end, we actively enhance the safety standard of electric vehicle (EV) maintenance services by adding EV maintenance service scope to the Voluntary Registration Scheme for Vehicle Mechanics and the Voluntary Registration Scheme for Vehicle Maintenance Workshops, so as to meet the pressing need for EV maintenance.

另一方面，政府計劃透過發展「油電站」建構公共快速充電網絡，以「一地多用」的模式，在現有加油站和石油氣加氣站內加裝電動車輛充電設施。為此，機電署於2024年9月發布《石油氣加氣站內的電動車輛充電設施指引》，為業界提供清晰的技術指引和定量風險評估要求。此外，機電署協助環境局審視在石油氣加氣站內增設電動車充電設施的定量風險評估報告，確保相關風險處於適當水平。

Separately, the Government plans to establish a public fast-charging network through the development of petrol-cum-charging stations. Under the "single site, multiple use" model, EV charging facilities will be installed at existing petrol and LPG filling stations. To this end, the EMSD issued the Guideline for Electric Vehicles Charging Facilities at Liquefied Petroleum Gas Filling Stations in September 2024, providing clear technical guidance and quantitative risk assessment requirements for the industry. Furthermore, the EMSD assisted the EEB in reviewing quantitative risk assessment reports for the addition of EV charging facilities at LPG filling stations, ensuring that the associated risks are at an appropriate level.

除推動節能減排外，機電署正積極探索各種「淨零發電」方案，以加快能源轉型。我們在機電工程署總部大樓開展具前瞻性的「太陽能發電建築先導計劃」，研究光伏技術在建築物外牆的應用，以及向建築物供應可再生能源的可行性。首階段的可行性研究於2024年12月完成，次階段的安裝工程則於2025年5月展開，並於同年7月竣工。我們會收集一年的運作數據，全面評估系統的發電效能、節能表現和經濟效益，為日後推廣至其他公私營機構提供科學依據。

In addition to promoting energy conservation and emissions reduction, the EMSD is actively exploring various "net-zero electricity generation" solutions to accelerate the energy transition. We launched a forward-looking Pilot Scheme on Building-Integrated Photovoltaics at the EMSD Headquarters to explore the feasibility of the application of photovoltaic technology on building facades and the supply of renewable energy to buildings. The first-phase feasibility study was completed in December 2024, followed by the second-phase installation works that commenced in May 2025 and completed in July of the same year. We will collect one year of operational data to comprehensively evaluate the system's power generation efficiency, energy-saving performance and economic benefits, thereby providing a scientific basis for future promotion to other public and private organisations.

為鼓勵私營機構在其物業應用可再生能源，環境局聯同發展局推出一系列便利措施，包括加快審批流程和提供總樓面面積寬免，為私營機構在戶外停車場安裝太陽能發電系統創造有利條件。同時，上網電價計劃提供經濟誘因，讓私營機構以高於標準電費的價格出售所生產的電力，從而抵銷可再生能源系統的投資成本。香港首個獲政策支持的太陽能停車場上蓋項目，已在香港迪士尼樂園度假區演藝人員停車場分階段展開。首階段於2025年2月完成，安裝了200塊雙面太陽能板，覆蓋40個泊車位；第二階段會增設200塊太陽能板，覆蓋額外40個泊車位，預計於2025年年底竣工。整個項目預期每年可生產超過20萬度電，為香港可再生能源發展樹立新典範。

To encourage the private sector to adopt renewable energy in their properties, the EEB, in collaboration with the Development Bureau, has introduced a series of facilitation measures. These include accelerating approval processes and granting gross floor area exemptions, which create favourable conditions for private organisations to install solar power systems in outdoor car parks. At the same time, the Feed-in Tariff Scheme provides financial incentives by allowing private organisations to sell generated electricity at a rate higher than standard tariffs, thereby offsetting the investment costs of renewable energy systems. Hong Kong's first policy-supported solar car park canopy project has been implemented in phases at the cast members' car park of the Hong Kong Disneyland Resort. The first phase was completed in February 2025, with 200 bifacial solar panels installed to cover 40 parking spaces. The second phase with another 200 solar panels for 40 additional parking spaces is scheduled for completion by the end of 2025. The entire project is expected to produce over 200 000 kWh of electricity annually, setting a new benchmark for renewable energy development in Hong Kong.

年內，啟德區域供冷系統三號廠房成功投入運作，為啟德體育園開幕及後續國際賽事提供可靠的冷凍水供應，確保區域供冷系統能有效支持大型公共活動的需求。另外，針對位於沙嶺的有機資源回收中心第二期（O · Park 2），機電署從氣體安全角度進行O · Park 2內應具報氣體裝置的審批程序，並於2024年4月完成相關工作，為本港的「轉廢為能」歷程樹立新里程碑。

During the year, the Kai Tak District Cooling System (DCS) Plant No. 3 successfully commenced operation. It provides a reliable chilled water supply for the opening of the Kai Tak Sports Park and subsequent international events, ensuring the DCS can effectively support the demands from large-scale public activities. Additionally, for Phase 2 of the Organic Resources Recovery Centre (O·PARK 2) in Sha Ling, the EMSD carried out the approval process of notifiable gas installations at the O·PARK 2 from a gas safety perspective. The process was completed in April 2024, marking a new milestone in Hong Kong's "Waste to Energy" journey.

除了積極發展綠色基建外，我們亦不遺餘力地推動氫能發展。我們展開《氣體安全條例》的修訂工作，制訂監管框架及把氫燃料納入規管範圍，進一步保障公眾安全，並為業界訂立明確的安全與技術要求，從而營造有利香港氫能發展的環境。隨着《2025年氣體安全(修訂)條例草案》獲立法會通過，《2025年氣體安全（修訂）條例》於2025年7月刊憲，我們正草擬相關附屬法例，預計於2026年提交立法會審議。在完善法規的同時，我們更於2024年8月展開研究，以制訂氫能標準認證模式。我們正透過參考內地、歐洲聯盟及其他國家的標準，逐步建立適用於香港的氫能標準認證框架。

In addition to actively developing green infrastructure, we made every effort to promote the development of hydrogen energy. We started the legislative amendments to the Gas Safety Ordinance to establish a regulatory framework and bring hydrogen fuel within its purview. This will further protect public safety and set clear safety and technical requirements for the industry, thereby creating an environment conducive to the development of hydrogen energy in Hong Kong. Following the passage of the Gas Safety (Amendment) Bill 2025 by the LegCo, and the gazettal of the Gas Safety (Amendment) Ordinance 2025 in July 2025, we are now drafting related subsidiary legislation, which is expected to be submitted to the LegCo for scrutiny in 2026. While improving the legislation, we also undertook review in August 2024 to formulate the approach of hydrogen standard certification. By referencing standards from the Mainland, the European Union and other countries, we are gradually establishing a certification framework for hydrogen standards suitable for Hong Kong.

與此同時，機電署繼續支持氫能源跨部門工作小組（工作小組）的工作，並為氫燃料技術試驗項目提供技術意見，為香港氫能應用普及化做好準備。截至2025年6月，機電署已協助工作小組審視並原則上同意27個試驗項目，涵蓋跨境氫能運輸、供氫設施、綠色氫能生產裝置等。年內，共有三個氫燃料技術試驗項目順利完成，包括以非載客形式在屯門試行氫能源有軌電車，以及使用氫燃料為河套區工地辦公室供電。此外，機電署亦已完成對氫燃料車輛行走隧道的風險評估，並在本地及國際專業學會的官方期刊發表研究成果。另外，香港首輛氫燃料電池雙層巴士已於2024年7月14日首次行駛隧道，其後更行駛多條行經過海隧道的路線，成功為香港的氫能發展譜寫新章。

At the same time, the EMSD continued to support the work of the Inter-departmental Working Group on Using Hydrogen as Fuel (Working Group) and provided technical advice for trial projects on hydrogen fuel technology, preparing for the popularisation of hydrogen applications in Hong Kong. As at the end of June 2025, the EMSD assisted the Working Group in examining and granting approvals in principle to 27 trial projects, covering cross-border hydrogen transport, hydrogen supply facilities, and green hydrogen production installations. Within the year, a total of three trial projects on hydrogen fuel technology were successfully completed, including the trial of a hydrogen fuelled light rail vehicle in Tuen Mun as a non-revenue train and the use of hydrogen fuel to supply electricity to a construction site office at the Loop. In addition, the EMSD completed a risk assessment of hydrogen fuelled vehicles using tunnels and published the findings in official journals of local and international academic communities. Moreover, Hong Kong's first hydrogen fuel cell (HFC) double-decker bus traversed tunnels for the first time on 14 July 2024. Subsequently, it has operated on multiple routes that traverse cross-harbour tunnels, successfully marking a new chapter in Hong Kong's hydrogen development.

機電署會繼續切實推進能源轉型、綠色基建與低碳生活的工作，與社會各界攜手邁向碳中和，共建可持續未來。

The EMSD will continue to take solid steps to advance energy transition, green infrastructure and low-carbon living, working hand in hand with various sectors of society towards a carbon-neutral and sustainable future.

善用科技前瞻部署 開啓規管新時代

HARNESSING TECHNOLOGY FOR FORWARD-LOOKING DEPLOYMENT TO PIONEER A NEW ERA OF REGULATION

為持續加強規管服務，機電署致力促進創新科技(創科)發展，積極引入尖端技術，加快數碼轉型。隨着人工智能和圖像分析技術日趨成熟，機電署於2024年11月正式推出「升降機及自動梯狀況分析系統」，協助分析上傳至「升降機及自動梯數碼工作日誌」的照片，以評估升降機和自動梯關鍵部件的狀況。目前系統可識別12種升降機和自動梯部件，並能偵測懸吊纜索和制動襯墊的異常情況。我們會持續擴展系統功能，逐步涵蓋其他部件的健康分析，為業界提供更全面的預警支援。

To continuously strengthen regulatory services, the EMSD is committed to fostering innovation and technology (I&T) development, actively introducing cutting-edge technologies to accelerate its digital transformation. With growing maturity of artificial intelligence (AI) and image analysis technologies, the EMSD officially launched the Lift and Escalator Condition Analysis System in November 2024, helping analyse photos uploaded to the Digital Log-books System for Lifts and Escalators to assess the condition of critical lift and escalator components. Currently, the system can identify 12 types of lift and escalator components and detect anomalies in suspension ropes and brake pads. We will continue to extend the system's features to gradually cover health analysis of other components, providing more comprehensive early warning support for the trade.

2024年第二季，機電署研發的人工智能遙距監測系統正式投入運作，有效監察海上液化天然氣接收站的氣體安全。該系統突破地域與天氣限制，讓技術人員可透過自動警示功能實時掌握接收站的氣體安全狀況。我們正進一步整合人工智能技術，透過分析火警及氣體警報信號，主動識別潛在風險，實現「早預警、早應對」的安全管理目標。

In the second quarter of 2024, the AI Remote Monitoring System developed by the EMSD was officially put into operation to effectively oversee gas safety at the offshore liquefied natural gas terminal. The system overcomes geographical and weather constraints, allowing technicians to monitor the gas safety conditions of the terminal in real time through the automatic alert function. We are further integrating AI technology to proactively identify potential risks by analysing fire and gas alarm signals, thereby achieving the safety management goal of "early warning and early response".

此外，機電署聯同香港理工大學和香港中華煤氣有限公司（煤氣公司），探索利用光纖傳感與人工智能技術自動探測地下管道泄漏的可行性。我們已在2024年12月完成概念驗證研究，證明有關技術能成功探測地下管道的氣體泄漏情況。相關研究成果已交予煤氣公司，以評估大規模應用的可行性。

Additionally, the EMSD, in collaboration with the Hong Kong Polytechnic University and the Hong Kong and China Gas Company Limited (HKCG), explored the feasibility of using optical fibre sensing and AI technologies to automatically detect underground pipeline leakage. We completed the proof-of-concept study in December 2024, demonstrating the technologies' successful detection of gas leakage from underground pipelines. The relevant findings were shared with the HKCG to assess the feasibility of large-scale application.

除了運用科技監察機電設施以期及早識別風險外，我們亦希望透過智能方案減少人為失誤，防止意外發生。為此，機電署引領香港鐵路有限公司（港鐵公司）在輕鐵車輛安裝影像分析系統，自動偵測路軌前方障礙物，在偵測到障礙物時透過「綜合車速及位置監督系統」向駕駛員發出警報，讓其能及時採取行動。此外，機電署亦鼓勵港鐵公司加強員工培訓，添置高速鐵路模擬器。該模擬器現已在石崗列車停放處全面投入運作，透過模擬真實駕駛情況，大幅提升駕駛員處理突發危機的能力。

Apart from leveraging technology to monitor E&M facilities for early risk identification, we also aim to reduce human error and prevent accidents through smart solutions. To this end, the EMSD led the MTR Corporation Limited (MTRCL) to install on Light Rail vehicles a video analytics system to automatically detect obstacles ahead on the tracks. Upon detection of an obstacle, an alert will be sent to drivers via the Integrated Speed and Position Supervision System, allowing timely action to be taken. Furthermore, the EMSD encouraged the MTRCL to enhance staff training by acquiring a High Speed Rail simulator. The simulator, now fully operational at the Shek Kong Stabling Sidings, significantly improves drivers' capability in handling unexpected crises through realistic driving simulations.

機電署亦鼓勵兩電在營運上積極運用創科，並探索具成效的應用方案。香港電燈有限公司（港燈）引入「智慧管家」機械人和流動電池儲能櫃，前者可減少工作人員進入「密閉空間」的次數和風險，提升職業安全和檢查效率；後者則以電池代替發電機提供後備電力支援，增強緊急應變能力，有效減少空氣和噪音污染，亦有助減少碳排放。中電亦自2024年9月起應用與本地網絡營辦商合作研發的人工智能管理系統（Grid-V）。系統整合中電現有的監控系統，並運用人工智能技術，實時監察供電系統，包括關鍵供電設施、變電站、高壓開關裝置、架空電纜等。系統也運用人工智能技術識別異常情況和潛在危險，如火焰、煙霧等，以及辨識架空電纜是否受大型起重機、路面工程或飛行物件等干擾。如發生上述情況，系統會發出不同級別的警報，通知工程人員處理，從而降低事故發生的風險。

The EMSD also encourages the two power companies to actively integrate I&T into their operations and explore effective application solutions. The Hongkong Electric Company Limited (HKE) has introduced an "Intelligent Steward" robot and an energy storage truck. The former improves occupational safety and inspection efficiency by reducing the frequency and risks of workers entering "confined spaces". The latter uses batteries instead of generators to provide backup power supply, strengthening emergency response capabilities while effectively reducing air and noise pollution and contributing to carbon emissions reduction. Starting from September 2024, the CLP has adopted the AI smart management system (Grid-V) jointly developed with a local network operator. By integrating the CLP's existing monitoring systems and utilising AI technology, the system provides real-time monitoring of the power supply system, including critical power supply facilities, substations, high voltage switchgear and overhead lines. AI technology is also utilised to detect anomalies and potential hazards like flames and smoke, as well as to identify whether the overhead lines are being affected by large cranes, roadworks or flying objects. In the event of such situations, the system will issue alerts of different levels to notify engineering personnel for appropriate action, thereby reducing the risk of incidents.

從升降機維修保養到燃氣管道監測，以至能源基建管理到運輸和供電安全，機電署正運用創新技術鞏固城市安全防線。這不僅呼應《香港智慧城市藍圖》，更為未來基建管理樹立新的標竿。

From lift maintenance to gas pipeline monitoring, and from energy infrastructure management to transport and power supply safety, the EMSD is using innovative technologies to solidify the city's safety defence. This not only echoes the Smart City Blueprint for Hong Kong, but also sets a new benchmark for future infrastructure management.

背靠祖國、聯通世界 持續深化區域合作

香港擁有「背靠祖國、聯通世界」的優勢，機電署可善用這些有利條件，持續發揮「超級聯繫人」與「超級增值人」的角色，透過深化跨境及國際合作，推動創新技術、人才培育、機電安全和能源效益等範疇的發展。

機電署持續深化與國家海關總署（海關總署）在《機電產品安全及能源效益合作安排》下的合作，並進一步拓展跨境合作機制。我們與國家市場監督管理總局（國家市監總局）簽訂《質量安全管理合作安排》，並與深圳海關和深圳市前海深港現代服務業合作區管理局（前海管理局）簽署《共建國家級進出口商品質量安全風險評估中心（深圳）合作安排》，進一步加強兩地合作。

在簽訂《質量安全管理合作安排》後，機電署隨即展開不同工作小組的工作，加強內地和香港就機電產品的安全監督、信息溝通及協調配合方面的合作，共同推進機電產品的安全與質量管理。另外，我們正與國家市監總局合作建立標準對接平台，旨在協調國家與國際氫能標準的對接，便利跨境數據共享和氫氣壓力容器審批互認，以及制訂適用於香港、內地和全球的氫能標準認證框架。此外，我們亦與海關總署建立「綠色通道」，簡化氫氣樣本的跨境運送安排，務求加速兩地氫能產業的發展。

在《共建國家級進出口商品質量安全風險評估中心(深圳)合作安排》下，機電署與深圳海關和前海管理局三方合作，在前海設立中國第七個「國家級進出口商品質量安全風險評估中心」。該中心在監測和評估機電產品安全風險方面發揮關鍵作用，推動創新機電產品和技術的專題研究，並促進國際合作。作為三方協作平台，該中心發揮三方各自的優勢，提升大灣區家用電氣產品的品質和安全。

CONTINUOUSLY DEEPENING REGIONAL CO-OPERATION WITH STRONG SUPPORT OF THE MOTHERLAND AND CLOSE CONNECTION TO THE WORLD

Hong Kong enjoys the advantages of strong support from the Motherland and close global connectivity. Capitalising on these favourable conditions, the EMSD continues to play its role as a super-connector" and "super value-adder", driving the development in areas such as innovative technologies, talent cultivation, E&M safety and energy efficiency through deeper cross-boundary and international collaboration.

The EMSD continued to deepen its co-operation with the General Administration of Customs of the People's Republic of China (GACC) under the Co-operation Arrangement on Electrical and Mechanical Products Safety and Energy Efficiency, while further expanding its cross-boundary collaboration mechanism. We signed the Co-operation Arrangement on Quality and Safety Management with the State Administration for Market Regulation (SAMR), and the Co-operation Arrangement on Jointly Building a National Import and Export Commodity Quality and Safety Risk Assessment Centre (Shenzhen) with the Shenzhen Customs and the Authority of Qianhai Shenzhen-Hong Kong Modern Service Industry Co-operation Zone of Shenzhen Municipality (Qianhai Authority), further enhancing co-operation between the two places.

Following the signing of the Co-operation Arrangement on Quality and Safety Management, the EMSD immediately initiated the work of various working groups to strengthen co-operation between the Mainland and Hong Kong in the safety supervision, information exchange and co-ordination regarding E&M products, jointly advancing the safety and quality management of these products. Furthermore, we are working with the SAMR to establish a standard-alignment platform, with the aim of co-ordinating the alignment of national and international hydrogen standards, facilitating cross-border data sharing and mutual recognition of hydrogen pressure vessel certifications, and formulating a hydrogen standard certification framework suitable for Hong Kong, the Mainland and the world. We also established the "Green Corridor" with the GACC to streamline cross-border transportation arrangements for hydrogen samples, thereby accelerating the development of the hydrogen industry in both places.

Under the Co-operation Arrangement on Jointly Building a National Import and Export Commodity Quality and Safety Risk Assessment Centre (Shenzhen), the EMSD, the Shenzhen Customs and the Qianhai Authority collaborate to set up China's seventh National Import and Export Commodity Quality and Safety Risk Assessment Centre in Qianhai. The Centre plays a crucial role in monitoring and assessing the safety risks of E&M products, promoting specialised research on innovative E&M products and technologies and driving international co-operation. Serving as a tripartite collaborative platform, the Centre leverages the strengths of all three parties, improving the quality and safety of household electrical products in the Greater Bay Area.

在跨境培訓方面，機電署與廣州市交通技師學院合辦首個為期九天的電動車維修技工認可課程。課程在廣州舉行，特設週末班（週五至日），深受業界好評。年內，我們亦與廣東省特種設備檢測研究院合辦為期五天的升降機維修保養培訓課程，內容涵蓋定期保養規範、法規要求和安全管理程序，以促進粵港兩地升降機安全標準對接和技術交流。與此同時，機電署正積極支持發展升降機及自動梯科技中心，並參與探討吸引資深升降機及自動梯技術人員來港，從而擴大本港的專業人才庫。

除了跨境合作外，機電署亦積極籌辦國際交流活動，實踐把海外企業「引進來」和協助內地企業「走出去」的策略。2025年4月8至11日，我們舉辦亞太區經濟合作組織(亞太經合組織)能源工作組四個專家小組聯合會議，並同時舉辦「亞太經合組織提升發電能源效率工作坊」和「第八屆油氣安全網論壇」。是次會議首次匯聚能源工作組轄下四個專家小組，吸引逾百位來自18個亞太經合組織成員經濟體及四個國際組織的代表來港參與，就能源安全、清潔能源、可再生能源、能源效益、能源數據分析等議題展開深入交流。

繼2023年9月香港首次承辦第71屆國際纜車監管機構會議後，機電署代表於2024年9月22至26日遠赴瑞典參與第72屆會議。我們透過工作會議、實地考察和事故檢討等活動，與海外和內地的纜車監管機構交流有關架空纜車和地面纜車系統的安全管理和規管工作。

年內，機電署主辦、中國氫能聯盟協辦首屆「國際氫能發展論壇2025」，吸引超過800名來自本地、內地及海外的政府部門、公共機構、專業組織及學術界代表參與。是次盛事活動為業界提供互動交流平台，分享與氫能有關的最新技術發展、工程解決方案及未來發展趨勢。

培育未來人才 注入機電新血

要為香港締造更好的未來，機電業持續發展是不可或缺的一環。為此，我們一直致力推動各項社區教育和青年發展計劃，積極培育機電業的未來優秀人才。

In terms of cross-boundary training, the EMSD partnered with the Guangzhou Communications Technician Institute to launch the first recognised nine-day course for EV mechanics. Held in Guangzhou, the course featured a tailor-made weekend schedule (Friday to Sunday) and received high praise from the trade. During the year, we also co-organised a five-day lift maintenance training course with the Guangdong Institute of Special Equipment Inspection and Research, covering periodic maintenance specifications, regulatory requirements and safety management procedures, so as to facilitate the alignment of lift safety standards and technical exchange between Guangdong and Hong Kong. Meanwhile, the EMSD is actively supporting the development of a Lift and Escalator Technology Centre, and participating in discussions to attract experienced lift and escalator technicians to Hong Kong, thereby expanding the local pool of professional talent.

In addition to cross-boundary collaboration, the EMSD actively organised international exchange activities to implement the strategy of attracting overseas enterprises and assisting Mainland enterprises to go global. From 8 to 11 April 2025, we hosted a joint meeting of four expert groups under the Asia-Pacific Economic Cooperation (APEC) Energy Working Group (EWG). The APEC Workshop on Promoting Energy Efficiency Enhancement in Electricity Generation and the 8th Oil and Gas Security Network Forum were held concurrently. The meeting marked the first occasion to bring together four expert groups under the EWG, attracting over 100 representatives from 18 APEC member economies and four international organisations to Hong Kong for in-depth exchanges on topics such as energy security, clean energy, renewable energy, energy efficiency and energy data analysis.

Following the 71st International Meeting of Technical Authorities for Cableways (ITTAB), which was held in Hong Kong for the first time in September 2023, our delegates attended the 72nd ITTAB in Sweden from 22 to 26 September 2024. Through activities like working meetings, site visits and incident reviews, we exchanged views with overseas and Mainland cableway regulators on the safety management and regulation of aerial ropeway and funicular systems.

The inaugural International Hydrogen Development Symposium 2025, hosted by the EMSD and co-organised by the China Hydrogen Alliance, was held this year, attracting over 800 representatives of government departments, public bodies, professional organisations and academia from Hong Kong, the Mainland and overseas regions. This mega event provided the trade with an interactive exchange platform to share the latest technological developments, engineering solutions and future development trends related to hydrogen energy.

NURTURING FUTURE TALENT AND INJECTING NEW BLOOD INTO THE E&M INDUSTRY

The sustainable development of the E&M industry is an indispensable part for building a better future for Hong Kong. To this end, we have all along been committed to promoting various community education and youth development programmes to proactively cultivate excellent E&M talent for the future.

在公眾教育方面，機電署年內在學校、社區中心和長者屋邨等舉辦合共130場外展講座，傳遞能源效益和節能減碳的知識，參與人數超過16 000人。為進一步推廣節能減排理念，我們分別在香港中央圖書館和香港科學館舉辦兩場大型公眾研討會，主題為「能源效益與節能」和「可再生能源」，邀請業界、學術界和政府部門代表分享最新技術與實踐經驗。兩場研討會以線上線下混合模式舉行，吸引超過630人參與，成為社會各界交流環保理念的重要平台。

In terms of public education, the EMSD held a total of 130 outreach talks in schools, community centres and elderly estates during the year to convey knowledge on energy efficiency, energy conservation and carbon reduction, with over 16 000 participants. To further promote the concept of energy saving and emission reduction, we hosted two large-scale public seminars themed "Energy Efficiency and Conservation" and "Renewable Energy" at the Hong Kong Central Library and the Hong Kong Science Museum respectively. Representatives from the industry, academia and government departments were invited to share the latest technologies and practical experience. Conducted in hybrid mode with both online and in-person participation, the two seminars attracted over 630 participants and served as an important platform for various sectors of the community to exchange environmental ideas.

在青年培育方面，機電署與教育局緊密合作，推出多項創新計劃，「邁向碳中和學生校園大使培訓計劃」便是一例。我們在2025年2月為80名學生大使及90名教師舉辦專題培訓，透過專業講解，加深他們對氣候變化、氫能發展和香港可再生能源現況的認識。為配合學校教學需要，我們亦精心編製「能源效益教材套」，內容涵蓋香港能源概況、可再生能源及建築物能源效益等主題，期望透過系統化的教學資源，協助師生掌握節能知識。

On youth development, the EMSD worked closely with the Education Bureau (EDB) to launch various innovative initiatives, including the Achieving Carbon Neutrality Student Ambassador Training Scheme. In February 2025, we organised thematic training sessions for 80 student ambassadors and 90 teachers. Through professional presentations, participants gained deeper understanding of climate change, hydrogen development, and the current status of renewable energy in Hong Kong. To support the teaching needs of schools, we also meticulously compiled an Energy Efficiency Education Kit, covering topics such as Hong Kong's energy scene, renewable energy and building energy efficiency, with a view to assisting teachers and students in mastering energy conservation knowledge through systematic teaching resources.

此外，為促進實務經驗傳承，避免出現人才斷層的局面，機電署聯同香港專業教育學院、港九電器工程電業器材職工會和香港電器工程商會，為香港專業教育學院學生舉辦「『實踐未來』先導計劃」，讓學生透過計劃掌握電力安全知識，並能提早接觸未來的工作環境和行業發展前景。我們希望藉此計劃加強學生對電業界的了解，為投身電氣工程行業作好準備。

In addition, to facilitate the transfer of practical experience and prevent a talent gap, the EMSD, in collaboration with the Hong Kong Institute of Vocational Education (IVE), the Hong Kong & Kowloon Electrical Engineering & Appliances Trade Workers Union and the Hong Kong Electrical Contractors' Association, organised the "Practicing for Future" Pilot Scheme for IVE students. The scheme enabled students to acquire electrical safety knowledge and gain early exposure to their future work environment and career prospects of the trade. We hope this scheme will strengthen students' understanding of the electrical trade and better prepare them for careers in electrical engineering.

備受矚目的「氫能零碳STEAM嘉年華」於2025年2月在九龍灣零碳天地盛大舉行。這項活動由機電署聯同教育局和建造業議會合辦，設有創意科普工作坊和互動遊戲攤位，並展出氫燃料電池洗街車和氫燃料電池發電機，成功吸引15 000人次參與，充分展現科技教育與低碳技術的完美結合。其後舉辦的首屆「氫能車競賽大挑戰2025」更掀起全港中學參與熱潮，共有來自67所學校的77支隊伍報名參賽。學生透過親手設計及製作氫能模型車，把課堂理論轉化為實踐體驗，深刻體會低碳技術的無限潛力。

The highly anticipated Hydrogen Zero Carbon STEAM Carnival was grandly held at the Zero Carbon Park in Kowloon Bay in February 2025. Jointly organised by the EMSD, the EDB and the Construction Industry Council, the event featured creative popular science workshops and interactive game booths, while showcasing HFC street washing vehicles and HFC generators. The carnival successfully attracted 15 000 participants, fully demonstrating the perfect integration of technology education and low-carbon technology. Subsequently, the first HydroRace Challenge 2025 even sparked a widespread enthusiasm among secondary schools across Hong Kong, with 77 teams from 67 schools signing up to compete. By designing and building their own hydrogen-powered model cars, students transformed classroom theories into hands-on experience and gained a profound appreciation of the infinite potential of low-carbon technologies.

為拓展青少年的專業視野，機電署於年內繼續推行「機電青少年大使計劃」，透過科普工作坊、工作影子等多元活動，讓來自60多所中小學的師生親身體驗機電工程與日常生活的緊密聯繫。計劃內容多采多姿，不僅啟發年輕一代對機電科技與環保議題的興趣，更為香港的未來發展培育寶貴人才。

To broaden the professional horizons of young people, the EMSD continued to implement the E&M Young Ambassador Programme during the year. Through a variety of activities such as popular science workshops and job shadowing, the programme enabled students and teachers from over 60 primary and secondary schools to experience first-hand the close connection between E&M engineering and daily life. This rich and diverse programme not only arouses the younger generation's interest in E&M technology and environmental issues, but also cultivates valuable talent for Hong Kong's future development.

來年展望

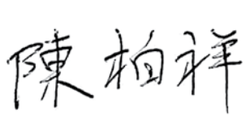
回望過去一年，機電署再次迎難而上、堅守使命。我們積極聯通受規管對象、業界伙伴、學術機構、專業團體、非政府組織、培訓院校和普羅大眾，凝聚各界力量惠民生、謀發展。我們深諳穩定可靠的機電服務是市民安居樂業的基石，而科技創新則是社會邁向可持續未來的關鍵所在。在此，我由衷感謝全體同仁和各持份者的鼎力支持與真誠合作。

THE YEAR AHEAD

Reflecting on the past year, the EMSD once again risen to challenges and remained steadfast in its mission. We actively engaged with regulatees, industry partners, academic institutions, professional bodies, non-governmental organisations, training institutes and the general public to harness our collective strengths for improving people's livelihoods and pursuing development. We fully understand that stable and reliable E&M services are the cornerstone of a secure and prosperous life for citizens, and that technological innovation is the key leading the society towards a sustainable future. Here, I extend my heartfelt thanks to all our colleagues and stakeholders for their unwavering support and sincere co-operation.

展望未來，機電署會竭誠本著「人民至上」的宗旨，持續提升本港機電安全標準。為應對升降機和電力裝置老化所帶來的挑戰，我們會貫徹「走在問題前」的方針，全面增強抵禦風險和應急應變能力。與此同時，我們亦會持續開發創新技術，以新維度解決痛點，並與業界攜手提升新質生產力。我們期望能在嚴防意外的同時，穩步邁向碳中和目標。誠邀社會各界繼續與機電署並肩同行，齊心建設更宜居、更幸福的香港，為下一代編織更美好的明天。

Looking ahead, the EMSD will wholeheartedly uphold the principle of "putting people first" and remain committed to raising Hong Kong's E&M safety standards. To meet the challenges from aging lifts and electrical installations, we will stay true to the "act before challenge strikes" approach to comprehensively strengthen our risk resilience and emergency response capabilities. Meanwhile, we will persistently develop innovative technologies to tackle pain points from new perspectives, and join hands with the trade to enhance new quality productive forces. While maintaining rigorous accident prevention measures, we aim to steadily move towards the carbon neutrality goals. We sincerely invite all sectors of society to join the EMSD in this endeavour, working in unison to build a more liveable and happier Hong Kong and weave a better tomorrow for the future generations.



陳柏祥
機電工程署副署長 / 規管服務

Chan Pak-cheung
Deputy Director/Regulatory Services, EMSD

年度亮點
HIGHLIGHTS OF THE YEAR

年內，機電工程署（機電署）持續加強與內地當局的協作。我們於2024年12月與國家市場監督管理總局簽訂《質量安全管理合作安排》（合作安排），並在合作安排下成立多個工作小組，展開在燃氣安全、機械裝置安全、電器產品安全、能效標識及標籤、標準及計量等範疇的合作和交流，攜手推動兩地的安全監督和品質管理工作。除積極推動跨境協作外，我們亦在年內執行多項規管工作，推動創新科技（創科）發展，並創造更多國際交流機會。

During the year, the Electrical and Mechanical Services Department (EMSD) continued to strengthen collaboration with Mainland authorities. In December 2024, we signed the Co-operation Arrangement on Quality and Safety Management (Co-operation Arrangement) with the State Administration for Market Regulation (SAMR), under which multiple working groups were established to initiate co-operation and exchange in areas such as gas safety, mechanical installations safety, electrical products safety, energy efficiency marking and labelling, standards and metrology, jointly advancing safety supervision and quality management in both places. In addition to actively promoting cross-boundary collaboration, we carried out a number of regulatory tasks, fostered innovation and technology (I&T) development, and created more opportunities for international exchange throughout the year.

能源效益
ENERGY EFFICIENCY

主辦亞太區經濟合作組織能源工作組專家小組聯合會議
HOSTING THE JOINT MEETING OF EXPERT GROUPS OF THE ASIA-PACIFIC ECONOMIC COOPERATION ENERGY WORKING GROUP

機電署作為中國香港代表，於2025年4月成功在香港舉辦亞太區經濟合作組織（亞太經合組織）能源工作組轄下四個專家小組的首次聯合會議，並同期舉辦「亞太經合組織提升發電能源效率工作坊」和「第八屆油氣安全網論壇」。是次活動雲集逾百名來自18個亞太經合組織成員經濟體和四個國際組織的專家和代表，就能源和可持續發展等議題分享及交流經驗。這次具歷史意義的會議促進更深層的國際合作，充分體現香港作為內地與國際之間「超級聯繫人」和「超級增值人」的重要角色。

Representing Hong Kong, China, the EMSD successfully hosted the first joint meeting of the four Expert Groups under the Asia-Pacific Economic Cooperation (APEC) Energy Working Group in Hong Kong in April 2025. The APEC Workshop on Promoting Energy Efficiency Enhancement in Electricity Generation and the 8th Oil and Gas Security Network Forum were also held at the same time. The flagship event brought together over 100 experts and delegates from 18 APEC member economies and four international organisations to share and exchange on topics such as energy and sustainable development. This meeting of historic significance fostered deepened international co-operation and fully demonstrated Hong Kong's vital role as "Super-Connector" and "Super Value-adder" between the Mainland and the international community.

「綠色校園2.0 – 智能慳電」計劃圓滿結束
SUCCESSFUL CONCLUSION OF THE "GREEN SCHOOLS 2.0 – ENERGY SMART" INITIATIVE

「綠色校園2.0 – 智能慳電」計劃已於2025年3月圓滿結束，資助及協助300間學校更換變頻式冷氣機和發光二極管燈，以及安裝實時能源監察系統。實時能源監察系統所得數據顯示，更換相關裝置每年平均可節省約4 000萬度電，相當於12 000個三人家庭一年的用電量。

The "Green Schools 2.0 – Energy Smart" initiative successfully concluded in March 2025, subsidising and assisting 300 schools in the replacement of variable-speed air-conditioners and LED lighting, and the installation of real-time energy monitoring (RTEM) systems. Data obtained from the RTEM systems indicated that the replacement of such devices could save approximately 40 million kWh of electricity every year on average, equivalent to the annual electricity consumption of 12 000 three-person households.

在啟德區域供冷系統應用創新科技
APPLYING INNOVATION AND TECHNOLOGY IN THE KAI TAK DISTRICT COOLING SYSTEM

為提升啟德區域供冷系統的營運和維修保養效率，並使系統更加穩定，我們在年內研發了「DCSmart」人工智能系統。該系統運用機器學習技術，分析用戶過往的製冷需求，並結合天氣預報數據，預測未來的製冷負荷；同時，通過分析區域供冷系統各機組在不同運行條件下的能源效率，從而制定最有效的控制策略。此外，我們採用光纖傳感系統，結合人工智能技術，以監測地下管道狀況，確保區域供冷系統穩定可靠。這個創新項目在2025年第五十屆日內瓦國際發明展上，榮獲評審團嘉許金獎。

To enhance the operational and maintenance efficiency of the Kai Tak District Cooling System (DCS) and improve its stability, we developed the DCSmart artificial intelligence (AI) system during the year. This system utilises machine learning technology to analyse users' cooling demand in the past and integrates weather forecast data to predict future cooling loads. At the same time, by analysing the energy efficiency of various DCS units under different operating conditions, the system formulates the most effective control strategy. Moreover, we have implemented an optical fibre sensing system that employs AI technologies to monitor the conditions of underground pipelines, ensuring stability and reliability of the DCS. This innovation received a gold medal with congratulations of the jury at the 50th International Exhibition of Inventions of Geneva in 2025.

一般法例
GENERAL LEGISLATION

持續推廣升降機及自動梯數碼工作日誌
CONTINUOUS PROMOTION OF THE DIGITAL LOG-BOOKS SYSTEM FOR LIFTS AND ESCALATORS

為實現升降機和自動梯維修保養記錄數碼化，方便各持份者實時監察、記錄和管理相關資料，機電署於2022年推出「升降機及自動梯數碼工作日誌」（數碼工作日誌）。截至2025年3月，超過62 000部升降機和自動梯已使用數碼工作日誌，遠超去年所定的48 000部目標。我們亦持續優化數碼工作日誌，例如推出不同作業系統的版本、新增「提交特別保養記錄」功能等。

To digitise the maintenance records of lifts and escalators, and facilitate real-time monitoring, recording and management of relevant information by various stakeholders, the EMSD launched the Digital Log-books System for Lifts and Escalators (DLBs) in 2022. As at March 2025, over 62 000 lifts and escalators have adopted the DLBs, far exceeding the target of 48 000 set last year. We also continued to optimise the DLBs, such as releasing versions for different operating systems and adding a Submit Special Maintenance Records function.

參考「灣區標準」對尚未配備必須安全裝置的升降機進行風險評估
REFERENCING GREATER BAY AREA STANDARDS FOR RISK ASSESSMENTS OF LIFTS LACKING ESSENTIAL SAFETY DEVICES

為持續推進「粵港澳大灣區標準」（「灣區標準」）發展，機電署參考相關「灣區標準」、本港指引和業界做法，制訂本地升降機風險評估指南。指南涵蓋157項測試項目，以提升尚未配備必須安全裝置的升降機的安全。經過一輪業界和公眾咨詢後，我們會盡快展開首階段的風險評估。

To continuously advance the development of Guangdong-Hong Kong-Macao Greater Bay Area (GBA) Standards, the EMSD has formulated a local risk assessment guideline on lifts by referencing relevant GBA Standards, local guides and industry practices. The guideline covers 157 test items to improve the safety of lifts lacking essential safety devices. After a round of industry and public consultations, we will launch the first phase of risk assessments as soon as possible.

年度亮點
HIGHLIGHTS OF THE YEAR

鐵路
RAILWAY

落實「全面及直接審核」以提升鐵路安全
IMPLEMENTING COMPREHENSIVE AND DIRECT ASSESSMENT TO ENHANCE RAILWAY SAFETY

機電署自2019年起落實「全面及直接審核」機制，採取「治未病」方法，及早識別鐵路系統的潛在風險。截至2025年第一季，我們已完成52次常規審核和12次特別審核，並向香港鐵路有限公司（港鐵公司）提出1 300多項改善建議，當中逾1 100項已落實執行。除了定期審核港鐵公司的路軌、配電系統、列車和信號系統等資產外，機電署一直推動港鐵公司應用創科，以實踐「智慧鐵路」的願景。展望未來，機電署會繼續調整規管策略，把經驗融入下一個五年審核周期，進一步提升鐵路系統的可靠程度，以預防「黑天鵝」事故。

Since 2019, the EMSD has implemented the Comprehensive and Direct Assessment regime, adopting a preventive approach to identify potential risks in the railway systems at an early stage. As at the first quarter of 2025, we have completed 52 routine audits and 12 special audits, making over 1 300 recommendations for improvement to the MTR Corporation Limited (MTRCL). Of these, more than 1 100 items have been implemented. In addition to regularly auditing the MTRCL's assets, such as permanent ways, power distribution systems, rolling stock and signalling systems, the EMSD has been driving the MTRCL to apply I&T for realising the vision of a "smart railway". Looking ahead, the EMSD will continue to refine its regulatory strategies, integrating experience into the next five-year audit cycle, with a view to further enhancing the reliability of the railway systems and preventing "black swan" incidents.

氣體標準
GAS STANDARDS

積極推動食肆氣體爐具安全
ACTIVELY PROMOTING GAS APPLIANCE SAFETY IN RESTAURANTS

為進一步保障社區氣體安全，機電署於年內展開全港巡查行動，重點檢查1 300間火鍋及其他使用卡式石油氣爐的食肆，確保其所有爐具都附有「GU」標誌。在巡查期間，我們亦加強宣傳教育，向食肆負責人詳細講解使用附有「GU」標誌爐具的重要，以及分享安全操作指引。此外，我們亦在進口及銷售層面加強監管，包括重點巡查零售店鋪和監察網購平台，從源頭阻截未經批准的爐具，以防流入市面。對於涉嫌違反《氣體安全條例》進口及售賣規定的網上平台，我們會發出警告，並展開跟進調查。機電署人員更首度採取「放蛇」行動，喬裝顧客購買未附有「GU」標誌的卡式石油氣爐，以蒐集證據，最終成功檢控違規網店，彰顯我們嚴正執法的決心。

To further guarantee gas safety in the community, the EMSD conducted a territory-wide inspection campaign during the year, focusing on 1 300 hotpot restaurants and other eateries using cassette cookers, so as to ensure that all their appliances bore the GU mark. During the inspections, we also stepped up our educational efforts, expounding on the importance of using appliances bearing the GU mark, and sharing safe operation guidelines to responsible persons of the restaurants. Furthermore, we have tightened regulations at the import and sale levels, including targeted inspections of retail stores and monitoring of online shopping platforms to intercept non-approved appliances at source and prevent them from entering the market. As for online platforms suspected of violating the import and sales requirements under the Gas Safety Ordinance, we would issue warnings and conducted follow-up investigations. EMSD officers even conducted their first-ever undercover operations by posing as customers to purchase cassette cookers without the GU mark for evidence collection. These efforts ultimately led to the successful prosecution against the non-compliant online shops, demonstrating our firm resolve to enforce the law rigorously.

全面推動氫能發展
FULLY PROMOTING THE DEVELOPMENT OF HYDROGEN ENERGY

過去一年，香港在氫能發展方面取得重大進展。截至2025年3月，「氫能源跨部門工作小組」已審視及原則上同意18個氫能試驗項目，其中在屯門以非載客形式試行氫能源有軌電車（輕鐵）及其供氫設施，以及在落馬洲工地使用氫燃料發電機為辦公室供電的項目已順利完成。《2025年氣體安全（修訂）條例》亦於今年七月獲立法會通過，機電署正草擬相關附屬法例，以全面規管氫燃料的安全。另外，我們已完成研究及初步制定適用於本港的氫能標準認證模式，並計劃於2025年年底展開業界諮詢。在區域合作方面，機電署與國家市場監督管理總局於2024年12月簽署合作安排，共同推動氫能發展。為加強推廣氫能應用和公眾教育，我們過去一年舉辦「氫能洗街車命名及繪畫比賽」、「氫能零碳STEAM嘉年華」和「氫能車競賽大挑戰」等活動，更於2025年3月舉辦首屆「國際氫能發展論壇」，促進國內外氫能技術交流。

Over the past year, Hong Kong has made significant progress in the development of hydrogen energy. As of March 2025, the Inter-departmental Working Group on Using Hydrogen as Fuel has reviewed and granted agreement-in-principle to 18 trial projects of hydrogen energy. Among these, the trial of a hydrogen fuelled light rail vehicle as a non-revenue train in Tuen Mun, together with its hydrogen refuelling facility, and the use of hydrogen fuel cell generators to power a construction site office in Lok Ma Chau have been successfully completed. Moreover, the Gas Safety (Amendment) Ordinance 2025 was passed by the Legislative Council in July this year, and the EMSD is drafting the associated subsidiary legislation to comprehensively regulate the safety of hydrogen as fuel. Additionally, we have finished research and preliminarily formulated the approach of hydrogen standard certification suitable for Hong Kong, with a plan to consult the industry at the end of 2025. In terms of regional co-operation, the EMSD signed the Co-operation Arrangement with the SAMR in December 2024 to jointly promote the development of hydrogen energy. To strengthen the promotion of hydrogen applications and public education, we organised activities such as the Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest, Hydrogen Zero Carbon STEAM Carnival and HydroRace Challenge 2025 over the past year, as well as the inaugural International Hydrogen Development Symposium in March 2025 to foster the exchange of hydrogen technologies both locally and internationally.

電力法例
ELECTRICITY LEGISLATION

推動業界善用創新科技
PROMOTING THE UTILISATION OF INNOVATION AND TECHNOLOGY AMONG THE TRADE

為推動業界善用創科，以全面保障電力安全，我們成立工作小組，負責檢討《電力（線路）規例工作守則》。工作小組檢視最新的國際安全標準、行業現行做法和創新技術，並提出修訂建議。同時，工作小組下設由業界代表組成的電弧故障檢測裝置、電池儲能系統和智能掣櫃專責小組，就相關設備收集意見及建議修訂方案，從而推動創科發展。此外，我們亦積極推動電力公司在營運中應用創科，例如香港電燈有限公司的「智慧管家」機械人和流動電池儲能櫃，以及中華電力有限公司的人工智能管理系統（Grid-V），藉此提升供電安全、穩定和應急能力。

To promote the utilisation of I&T among the trade to comprehensively ensure electrical safety, we have established a working group to review the Code of Practice for the Electricity (Wiring) Regulations. The working group examined the latest international safety standards, current industry practices and innovative technologies, and proposed amendment recommendations. At the same time, specialised task forces comprised of trade representatives were formed under the working group, focusing on arc fault detection devices, battery energy storage systems and smart switchboards. These task forces collected opinions and put forth revision proposals, thereby promoting I&T development. Furthermore, we have been actively encouraging power companies to adopt I&T in their operations. Examples include the Hongkong Electric Company Limited's "Intelligent Steward" robot and energy storage truck, and the CLP Power Hong Kong Limited's AI smart management system (Grid-V). These initiatives aim to enhance power supply safety, reliability and emergency response capabilities.

重要數字
KEY FIGURES

電業工程人員
ELECTRICAL WORKERS

註冊電業工程人員
REGISTERED ELECTRICAL WORKERS

85 950 名 NOS.
2024/25
（截至2025年3月31日 As at 31 March 2025）

84 718 名 NOS.
2023/24

電業承辦商
ELECTRICAL CONTRACTORS

註冊電業承辦商
REGISTERED ELECTRICAL CONTRACTORS

15 416 間 NOS.
2024/25
（截至2025年3月31日 As at 31 March 2025）

15 340 間 NOS.
2023/24

升降機及自動梯
LIFTS AND ESCALATORS

升降機
LIFTS

74 672 部 NOS.
2024/25

73 325 部 NOS.
2023/24

自動梯
ESCALATORS

10 910 部 NOS.
2024/25

10 691 部 NOS.
2023/24

燃氣供應
GAS SUPPLY

氣體喉管網絡總長
TOTAL LENGTH OF GAS PIPE NETWORK

3 741 公里 KM
2024/25
（截至2025年3月31日 As at 31 March 2025）

3 729 公里 KM
2023/24

車輛維修技工
VEHICLE MECHANICS

註冊車輛維修技工
REGISTERED VEHICLE MECHANICS

7 352 名 NOS.
2024/25

7 953 名 NOS.
2023/24

車輛維修工場
VEHICLE MAINTENANCE WORKSHOPS

註冊車輛維修工場
REGISTERED VEHICLE MAINTENANCE WORKSHOPS

1 914 間 NOS.
2024/25

1 976 間 NOS.
2023/24

鐵路
RAILWAY

鐵路年度載客量
RAILWAY ANNUAL PATRONAGE

1 896 百萬 MILLION
2024/25

1 857 百萬 MILLION
2023/24

保障公眾安全
PROTECTING PUBLIC SAFETY

電力安全

加強規管電力公司 提升供電可靠程度

中華電力有限公司（中電）於2024年上半年發生多宗電力供應中斷和電壓驟降事故，包括6月中旬的黃大仙大範圍停電事件，引起市民對供電可靠性的廣泛關注。機電工程署（機電署）對此表示嚴重關切，並密切跟進事故成因的調查工作及相應改善措施的落實情況，以防止同類事故再次發生。

因應上述事故，機電署全面加強對兩間電力公司（兩電）的規管，除增加巡查兩電的供電設施外，亦在審視事故報告後提出針對性改善措施，密切監察其實施進度。此外，環境及生態局於2024年要求機電署聘請獨立顧問，覆檢過去三年所有電壓驟降和電力供應中斷事故，並全面檢視中電的供電系統，使其更可靠和穩定。獨立顧問已於2025年完成檢討並提交報告。

ELECTRICAL SAFETY

Strengthening Regulation of Power Companies to Enhance Reliability of Power Supply

The CLP Power Hong Kong Limited (CLP) experienced a number of power interruption and voltage dip incidents in the first half of 2024, including a large-scale power outage in Wong Tai Sin in mid-June, which raised widespread public concern about the reliability of power supply. The Electrical and Mechanical Services Department (EMSD) expressed grave concern and closely followed up on the investigation into the causes of incidents and the implementation of corresponding improvement measures, in order to prevent recurrence of similar incidents.

In response to the above incidents, the EMSD holistically strengthened the regulation of the two power companies. Apart from stepping up inspections on both companies' power supply facilities, the EMSD proposed targeted improvement measures upon reviewing the incident reports, and closely monitored their implementation progress. Furthermore, in 2024, the Environment and Ecology Bureau requested the EMSD to engage an independent consultant to review all voltage dip and supply interruption incidents occurred over the past three years, and thoroughly examine the CLP's power supply system to enhance its reliability and stability. The independent consultant completed the review and submitted the report in 2025.

機電署署長率領團隊與兩電管理層會晤，要求強化供電系統抵禦惡劣天氣的能力，從而提升供電的可靠程度。

The Director of Electrical and Mechanical Services led his team to meet with the management of the two power companies and requested both companies to improve the resilience of the power supply system against adverse weather, thereby enhancing power supply reliability.

機電署敦促兩電全面落實改善措施，以提升供電系統抵禦外在因素影響的能力。為此，兩電在變電站加裝防水閘，降低惡劣天氣引起的水浸風險，從而提升供電的可靠程度。

The EMSD urged the two power companies to fully implement improvement measures, in order to enhance the capability of the power supply system to withstand the impact of external factors. To this end, both companies installed additional flood gates at substations to minimise flooding risks induced by adverse weather, thereby enhancing power supply reliability.

香港位處亞熱帶地區，在7月至9月的雨季期間較易受熱帶氣旋影響。為應對惡劣天氣對維持可靠供電帶來的挑戰，機電署與兩電保持緊密溝通。機電署署長於2024年6月27日和7月3日分別造訪兩電，親自了解其應對惡劣天氣的措施，並要求強化供電系統的抵禦外在因素影響的能力。我們會積極敦促兩電落實改善措施，包括為架空電纜系統加裝避雷器和在變電站加裝防水閘，以提升供電的可靠程度。

Located in the subtropics, Hong Kong is more susceptible to tropical cyclones during the rainy season from July to September. To meet the challenges posed by adverse weather to power supply reliability, the EMSD maintains close communication with the two power companies. The Director of Electrical and Mechanical Services visited the two companies on 27 June and 3 July 2024 respectively to gain a first-hand understanding of their measures in response to adverse weather, and requested enhancement to the resilience of the power supply system against the impact of external factors. We will proactively urge both companies to implement improvement measures to enhance power supply reliability, including the installation of additional lightning arresters on overhead line systems and additional flood gates at substations.

加強規管電業工程人員

除了規管兩電，機電署亦十分重視業界從業員的專業操守，並依據相關法例及規例執法和規管業界。廉政公署（廉署）早前就涉嫌偽造工作經驗證明以申請註冊為A級電業工程人員的個案採取拘捕行動，機電署對此極為重視，全力配合廉署的調查工作。我們在知悉事件後，隨即根據《電力條例》展開調查，發現有申請人以誤導性資料獲得A級電業工程人員註冊資格，遂依法取消相關註冊牌照。

所有電業工程人員的註冊申請均須經過嚴謹審批，由機電署核實及審查申請者的資歷證書和工作經驗證明，以確保符合相關法律要求。如有懷疑，我們會要求申請人或發證機構/人士提交證明文件，以作進一步審查。此外，機電署已即時加強審批程序，包括派員到發證機構辦事處審核證明文件，以核實申請人的工作經驗。

Strengthening Regulation of Electrical Workers

Apart from regulating the two power companies, the EMSD attaches great importance to the professional conduct of trade practitioners, and enforces the law and regulates the trade in accordance with the relevant ordinances and regulations. Regarding the Independent Commission Against Corruption (ICAC)'s earlier arrest operation involving suspected forgery of proof of work experience to apply for registration as Grade A electrical workers, the EMSD took this matter very seriously and fully co-operated with the ICAC's investigation. Upon learning of the case, we immediately launched our investigation under the Electricity Ordinance. We found that some applicants had obtained Grade A electrical worker registration using misleading information, and therefore cancelled the registration licences in accordance with the law.

All applications for registration as electrical workers are required to undergo a rigorous vetting process, during which the EMSD verifies and examines the applicants' qualification certificates and proof of work experience to ensure compliance with relevant legal requirements. In case of doubt, we will request the applicant or the issuing organisation/individual to submit supporting documents for further examination. Besides, the EMSD has immediately strengthened the vetting and approval procedures, including dispatching officers to the issuing organisations' offices to examine the supporting documents for verification of the applicant's work experience.

保障公眾安全
PROTECTING PUBLIC SAFETY

推動業界善用創新科技

機電署積極推動創新科技(創科)發展，鼓勵業界擴展創新技術的應用，以保障電力安全。為維持香港高水平的電力安全，機電署於2024年成立工作小組，負責檢討《電力（線路）規例工作守則》。工作小組檢視最新的國際安全標準、行業現行做法和創新技術，並提出修訂建議。同時，工作小組下設電弧故障檢測裝置、電池儲能系統和智能掣櫃專責小組，各專責小組由業界代表組成，就相關設備收集意見並建議修訂方案，從而推動創科發展。

Promoting the Utilisation of Innovation and Technology among the Trade

The EMSD actively promotes the development of innovation and technology (I&T), encouraging the trade to broaden the application of innovative technologies to guarantee electrical safety. To maintain a high level of electrical safety in Hong Kong, the EMSD established a working group in 2024 to review the Code of Practice for the Electricity (Wiring) Regulations. The working group examined the latest international safety standards, current industry practices and innovative technologies, and proposed amendment recommendations. Specialised task forces focusing on arc fault detection devices, battery energy storage systems and smart switchboards, composed of trade representatives, were also formed under the working group to collect opinions on the equipment and put forth revision proposals, thereby promoting I&T development.

為推動業界積極應用創科，機電署舉辦「活用科技『創』新安全」短片比賽，並獲得業界大力支持和踴躍參與。

To promote the active adoption of I&T in the trade, the EMSD organised the Short Film Competition on Innovative Technology for Electrical Safety, which received strong support and enthusiastic participation from the trade.

為推動業界應用創科，機電署同年9月舉辦「活用科技『創』新安全」短片比賽，鼓勵電力從業員透過短片分享如何利用創科改善工作環境，並提升電力安全意識。比賽作品類型多元，包括數碼動畫和運用「AI數字人」解說作品。得獎作品別出心裁，包括應用人工智能進行預測性維護，以及使用機器人協助檢查電力裝置等，有助提升電力安全標準。

To promote the application of I&T among the trade, the EMSD organised the Short Film Competition on Innovative Technology for Electrical Safety in September of the same year, encouraging electrical practitioners to share ways to leverage I&T to improve work environment and raise electrical safety awareness through short films. The competition featured diverse entries, including digital animations and presentations using "AI Digital Human". The winning entries demonstrated novelty, including the application of artificial intelligence (AI) in predictive maintenance and robots assisting in electrical installation inspections, contributing to improving electrical safety standards.

機電署亦鼓勵兩電在營運上運用創科，並探討創科應用方案。港燈引入「智慧管家」機械人和流動電池儲能櫃，前者可減少工作人員進入「密閉空間」的次數和風險，提升職業安全和檢查效率；後者則以電池代替發電機提供後備電力支援，增強緊急應變能力，有效減少空氣和噪音污染。至於中電，其人工智能管理系統（Grid-V）整合物聯網感測器和閉路電視，24小時實時監察關鍵變電站、架空電塔及其電纜的狀況，識別架空電纜是否受異物或動物干擾，以及監測變電站是否受水浸影響，從而有效提升緊急應變能力。

The EMSD also encourages the two power companies to adopt I&T in their operations and explore application of I&T solutions. The Hongkong Electric Company Limited (HKE) has introduced an "Intelligent Steward" robot and an energy storage truck. The former reduces the frequency and risks of workers entering "confined spaces" to improve occupational safety and inspection efficiency. The latter uses batteries instead of generators to provide backup power supply, strengthening emergency response capabilities while effectively reducing air and noise pollution. As for the CLP, its AI smart management system (Grid-V) integrates Internet-of-Things sensors and closed-circuit television to monitor the status of key substations, overhead towers and overhead lines in real-time around the clock. It can identify interference by foreign objects or animals to overhead lines and monitor flooding risks at substations, thereby effectively enhancing the emergency response capabilities.

港燈於年內引入兩項創新技術：一是「智慧管家」機械人，用於提升隧道檢查的效率和安全；二是流動電池儲能櫃，用於增強緊急應變能力。

During the year, the HKE introduced two innovative technologies: an "Intelligent Steward" robot for improving the efficiency and safety of tunnel inspections and an energy storage truck for strengthening emergency response capabilities.

中電應用人工智能管理系統（Grid-V），全天候監察關鍵電力資產，從而增強緊急應變能力。

The CLP adopted the AI smart management system (Grid-V) for monitoring the critical electrical assets around the clock, thereby strengthening emergency response capabilities.

在機電署的協調下，中電以小型無人機進行「超視距飛行」作業，成功獲選為首批低空經濟「監管沙盒」的試點項目。以往中電工程人員需徒步巡查供電線路，既耗時又費力。透過「超視距飛行」操作，預計可提升巡查輸電塔和架空電纜的效率。

Under the EMSD's co-ordination, the CLP adopted small unmanned aircraft to carry out Beyond Visual Line of Sight (BVLOS) drone operations, which were successfully selected as one of the first pilot projects for the Low-altitude Economy Regulatory Sandbox. Previously, the CLP's engineering staff had to conduct power supply lines on foot, which was a time-consuming and labour-intensive task. With the use of BVLOS operations, it is expected that the efficiency of inspecting transmission towers and overhead lines can be improved.

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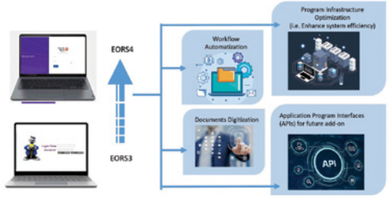
善用科技提升效率

此外，機電署推出新的「電力條例規管系統」，在現有系統基礎上升級，減省每項任務的處理時間。新推出的流動巡查模組可在現場巡查時自動生成報告，大幅減少人手工作量和準備時間。同一系統的查詢模組亦有效簡化處理註冊電業工程人員查詢的流程。我們正考慮引入自動化電腦系統，協助發出紀律處分通知書，以進一步提高工作效率。在應對事故方面，我們研發了「即時事故簡報系統」，整合事故資訊並生成簡潔報告，以提升應急工作的效率。

Leveraging Technology to Enhance Efficiency

The EMSD has launched the new Electricity Ordinance Regulatory System, an upgrade to the existing system to reduce the processing time for each task. The newly introduced mobile inspection module can automatically generate reports during on-site inspections, significantly reducing manual workload and preparation time. The enquiry module of the same system also effectively streamlines the procedures for handling enquiries from registered electrical workers (REWs). We are considering using an automated computer system to assist in issuing disciplinary action notices, with a view to further improving work efficiency. In terms of incident response, we have developed an Instant Incident Briefing System that integrates incident information and generates concise reports, thereby improving the emergency response efficiency.



機電署於年內完成「電力條例規管系統」的升級工作，以全面提升工作效率。

The EMSD completed the upgrade of the Electricity Ordinance Regulatory System during the year to comprehensively enhance work efficiency.

保障社區電力安全

《行政長官2024年施政報告》宣布以立法方式制訂住宅樓宇分間單位的出租制度，合標單位將名為「簡樸房」，須安裝獨立電錶。機電署正就「簡樸房」安裝電錶的要求，與電力公司及持份者持續溝通，商討技術細節和落實安排。同時，機電署正制定有關獨立電錶安裝流程和注意事項的指引，為持份者提供清晰實用的參考。

此外，機電署與鄉事委員會合作，在村屋宣傳電力系統保護裝置的安全信息，並進行一系列安全巡查，確保微型斷路器、保護接地導體、電熱水爐和電流式漏電斷路器等設備妥善安裝，以保障社區電力安全。

Safeguarding Community Electrical Safety

The Chief Executive's 2024 Policy Address announced a system on the renting of subdivided units in residential buildings through legislation. Compliant units will be named as Basic Housing Units (BHUs), for which installation of individual electricity meters is mandatory. The EMSD is maintaining communication with power companies and stakeholders regarding the requirements for installing electricity meters in BHUs, and discussing the technical details and implementation arrangements. Concurrently, the EMSD is formulating guidelines on the installation procedures and precautions for individual electricity meters to provide stakeholders with clear and practical reference.

Furthermore, the EMSD is collaborating with Rural Committees to disseminate safety messages about electrical system protection devices in village houses and conduct a series of safety inspections, ensuring that devices such as miniature circuit breakers, protective earthing conductors, electric water heaters and residual current devices are properly installed, so as to safeguard electricity safety in the community.

為保障電力安全，機電署除舉辦講座外，亦派員在村屋進行安全巡查，確保電力系統保護裝置妥善安裝。

To ensure electrical safety, the EMSD not only organised seminars, but also dispatched officers to conduct safety inspections in village houses, so as to ensure that electrical system protection devices are properly installed.

機電署於年內舉行以「活用科技『創』新安全」為主題的電力規例研討會，藉此推動電業界應用創科。

To promote I&T adoption within the electrical trade, the EMSD hosted the Annual Technical Seminar themed "Leveraging Technology to Innovate Safety" during the year.

提升業界及公眾人士的電力安全意識

為提高業界人士對電力安全的關注，機電署定期出版《電力快訊》，提供最新的規管要求及技術指引，並把電力安全資訊上載至流動應用程式「機電行業通」，讓業界人士掌握最新行業發展和須留意事項。除上述推廣渠道外，機電署在部門信封印上電力安全及相關規管信息，讓目標受眾更清楚了解相關法例要求。此外，機電署分別於2024年和2025年舉辦「活用科技『創』新安全」短片比賽和電力規例研討會，推動電業界採用創科。我們又積極參與業界舉辦的講座及分享會，藉活動與業界分享最新的電力安全信息。

機電署採用多元化的宣傳策略，透過網上媒體和實體活動推廣電力安全，從而提升公眾安全意識。我們製作一系列簡單易明的新海報，上載至機電署網頁和張貼在港鐵車站範圍內。為向少數族裔推廣電氣安全，我們編製八種少數族裔語言版本的《家居電氣安全手冊》。此外，我們持續在社交媒體、搜尋引擎及網上新聞平台發放電力安全資訊，擴大市民接觸面。年內，我們與社區不同持份者合力推動電力安全，包括與海怡東和海怡西小區關愛隊合作，為義工舉辦電力安全工作坊，並與鄉事委員會合作，為鄉村村民舉辦關於電力系統保護裝置及家用電氣產品安全講座。我們亦積極參與其他政府部門舉辦的活動，例如參與民政事務總署的大廈管理工作坊，以及在地區防火嘉年華或消防及救護學院舉行的公眾活動中設置遊戲攤位，藉此推廣和傳遞電力安全信息。我們秉持「電力安全，從小做起」的理念，持續在學校進行教育工作，年內為幼稚園和中小學生舉辦講座，宣傳電力安全。

Enhancing Electrical Safety Awareness for Industry and Public

To enhance electrical safety awareness among trade members, the EMSD regularly publishes the Electricity News to provide the latest regulatory requirements and technical guidance, and uploads electrical safety messages to the mobile application "E&M Connect" to keep trade members informed of the latest industry developments and key issues. In addition to the above promotional channels, the EMSD includes electrical safety and related regulatory messages on departmental envelopes, enabling the target audience to better understand the relevant statutory requirements. Moreover, the EMSD organised the Short Film Competition on Innovative Technology for Electrical Safety and the Annual Technical Seminar respectively in 2024 and 2025 to promote I&T adoption within the electrical trade. We also actively participated in seminars and sharing sessions organised by the trade, sharing the latest electrical safety messages with trade members through these events.

The EMSD adopts diversified publicity strategies to promote electrical safety through online media and physical activities, with a view to enhancing public awareness. We produced a series of simple and easy-to-understand new posters for uploading to the EMSD website and display within the precincts of MTR stations. To promote electrical safety among ethnic minorities, we compiled the Household Electrical Safety Handbook in eight ethnic minority languages. We continuously disseminated electrical safety information via social media, search engines and online news platforms to enhance public reach. Throughout the year, we collaborated with various community stakeholders to promote electrical safety, including partnering with the Care Teams of South Horizons East and South Horizons West Sub-districts to organise electrical safety workshops for volunteers, and working with the Rural Committees to conduct safety seminars on electrical system protection devices and household electrical products for villagers. We also actively participated in activities organised by other government departments, such as attending the building management workshops hosted by the Home Affairs Department, and setting up game booths at district fire safety carnivals or public events held at the Fire and Ambulance Services Academy, with the aim of promoting and conveying electrical safety messages. Upholding the philosophy of "learning electrical safety at young age", we continued our educational efforts in schools, conducting seminars for kindergarten, primary and secondary students to promote electrical safety.

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註冊及許可證辦事處經翻新後重新投入服務

位於機電署總部大樓的註冊及許可證辦事處於2025年完成翻新工程，並已重新投入服務。經翻新的辦事處採用「開放、自然」的設計理念，正門改用落地玻璃，引入天然光線，提升空間感。拆除原有房間後，公眾空間得以擴大，等候區現可提供19個座位和4個站立位置。辦事處設有Wi-Fi無線上網服務、平板電腦和「智方便」自助登記站，讓市民可即場登記「智方便+」，方便日後在網上申請續牌。註冊電業工程人員亦可透過電子設備使用「註冊電業工程人員持續進修計劃」的網上訓練平台。

The Registration and Permit Office Resumed Service following its Renovation

The Registration and Permit Office (RPO) at the EMSD Headquarters Building completed its renovation and resumed operation in 2025. Adopting an "open and natural" design concept, the renovated RPO features floor-to-ceiling glass panels at the main entrance to let in natural light and enhance spatial openness. Following removal of the original rooms, the public area has been expanded, with the waiting area now offering 19 seats and 4 standing spaces. The new RPO provides Wi-Fi service, tablets and an iAM Smart self-registration kiosk, allowing the public to register for iAM Smart+ on the spot for more convenient online licence renewal applications in the future. REWs can also access the online training platform of the Continuing Professional Development Scheme for Registered Electrical Workers via electronic devices.

註冊及許可證辦事處已完成翻新工程，並重新投入服務。經翻新的辦事處不僅擴大了公眾空間，更增設「智方便」自助登記站和電子設備，便利市民。

The RPO completed its renovation and resumed operation. The renovated RPO not only features expanded public area, but also provides an iAM Smart self-registration kiosk and electronic devices for public convenience.

拓展跨境合作

機電署持續深化與國家海關總署在《機電產品安全及能源效益合作安排》下的合作，並於2024年12月與國家市場監督管理總局簽訂《質量安全管理合作安排》，與其轄下多個單位，包括質量發展局、執法稽查局、產品質量安全監督管理司、認證監督管理司和缺陷產品召回技術中心保持緊密合作，務求全面提升對家用電氣產品從生產到缺陷產品回收的品質和安全風險監測、預警和防控能力。

Expanding Cross-boundary Collaboration

The EMSD continued to deepen its co-operation with the General Administration of Customs of the People's Republic of China under the Co-operation Arrangement on Electrical and Mechanical Products Safety and Energy Efficiency. It also signed the Co-operation Arrangement on Quality and Safety Arrangement with the State Administration for Market Regulation (SAMR) in December 2024, fostering close collaboration with various SAMR units, including the Quality Development Bureau, Enforcement and Inspection Bureau, Department of Product Quality and Safety Supervision and Regulation, Department of Certification Supervision and Regulation, and Defective Product Recall Technical Centre, with an aim to holistically enhance the capabilities in monitoring, early warning, prevention and control of the quality and safety risks for household electrical products, from manufacturing to defective product recall.

此外，機電署於2024年與深圳海關和深圳市前海深港現代服務業合作區管理局（前海管理局）共同建設「國家級進出口商品質量安全風險評估中心」，並訂立三方合作方向。該中心作為三方協作平台，結合機電署在機電產品安全監管方面的專業知識、深圳海關在進出口監管方面的豐富經驗，以及前海管理局在區域經濟發展和政策協調方面的優勢，將有效提升大灣區家用電氣產品的品質和安全。三方其後於2025年4月27日簽署《共建國家級進出口商品質量安全風險評估中心（深圳）合作安排》，推動深度合作。該中心會監察大灣區相關產品的品質，並進行安全測試和專題研究，以進一步提升區內家用電氣產品安全。

Furthermore, in 2024, the EMSD collaborated with the Shenzhen Customs and the Authority of Qianhai Shenzhen-Hong Kong Modern Service Industry Co-operation Zone of Shenzhen Municipality (Qianhai Authority) to establish a National Import and Export Commodity Quality and Safety Risk Assessment Centre and set the direction for tripartite co-operation. Serving as a tripartite collaborative platform, the Centre integrates the EMSD's expertise in E&M product safety regulation, the Shenzhen Customs' extensive experience in import and export supervision, and the Qianhai Authority's strengths in regional economic development and policy co-ordination, effectively enhance the quality and safety of electrical products in the Greater Bay Area (GBA). Subsequently on 27 April 2025, the three parties signed the Co-operation Arrangement on Jointly Building a National Import and Export Commodity Quality and Safety Risk Assessment Centre (Shenzhen), advancing in-depth collaboration. The Centre will monitor the quality of relevant products in the GBA and conduct safety tests and specialised research to further enhance household electrical product safety in the region.

機電署透過與海關總署簽訂的合作安排，進一步拓展與內地的跨境合作機制，共同推進機電產品的安全與質量管理。

Through the co-operation arrangement signed with the GACC, the EMSD further expanded its cross-boundary collaboration mechanism with the Mainland, jointly advancing the safety and quality management of E&M products.

機電署與深圳海關和前海管理局簽訂《共建國家級進出口商品質量安全風險評估中心(深圳)合作安排》，旨在結合三方的優勢，合力提升大灣區家用電氣產品的品質和安全。

The EMSD signed the Co-operation Arrangement on Jointly Building a National Import and Export Commodity Quality and Safety Risk Assessment Centre (Shenzhen) with the Shenzhen Customs and the Qianhai Authority, with an aim to integrate the strengths of the three parties and collaboratively improve the quality and safety of household electrical products in the Greater Bay Area.

未來工作重點 Future Work Focuses

重點一：善用科技提升效率 Focus 1: Leveraging Technology to Enhance Efficiency

機電署正進行有關固定電力裝置定期測試的研究，透過有系統地收集全港固定電力裝置及相關事故記錄的資料，並運用大數據分析技術，結合人工智能演算法，深入分析事故成因及其潛在關聯性。

我們會建立風險評估系統，準確預測各類裝置的風險優次等級，使我們可依據風險程度與裝置擁有人共同擬訂具體改善方案。此外，系統運用人工智能技術分析電力線路圖，識別異常情況，進一步提升風險評估的準確性和效率。

The EMSD is currently undertaking a study on the periodic testing of fixed electrical installations. By systematically collecting data on fixed electrical installations across Hong Kong and related incident records, and employing big data analytics technology combined with AI algorithms, the study aims to deeply analyse incident causes and their potential correlations.

We will develop a risk assessment system to accurately predict the risk priority levels of various types of installations, so that we can formulate concrete improvement plans with the installation owners based on the risk levels. In addition, utilising AI technology, the system analyses electrical schematic diagrams and identifies anomalies, further enhancing the accuracy and efficiency of risk assessments.

重點二：提升電力安全標準 Focus 2: Enhancing Electrical Safety Standards

機電署已透過檢討《電力（線路）規例工作守則》工作小組，收集業界就工作守則提出的寶貴意見和修訂建議。新版工作守則預計在2025年年底出版，並在2026年年底全面實施。

The EMSD has collected from the trade valuable feedback and amendment proposals on the Code of Practice for the Electricity (Wiring) Regulations through its review working group. The new edition of the Code of Practice is expected to be published by the end of 2025, with full implementation by the end of 2026.

鑑於部分電力事故源於第三方損壞地下電纜和架空電纜，機電署同步展開《有關在供電電纜附近工作實務守則》的修訂工作，並聯同電力公司及業界探討更有效的工地安排和措施，以避免因地下電纜或架空電纜受損而影響電力供應的安全和可靠性。

In light of some electrical incidents stemming from third-party damage to underground cables and overhead lines, the EMSD has simultaneously commenced revisions to the Code of Practice on Working near Electricity Supply Lines, and will collaborate with power companies and the trade to explore more effective site arrangements and measures, so as to avoid compromising the safety and reliability of power supply owing to underground cable or overhead line damage.

重點三：進一步深化跨境合作 Focus 3: Further Deepening Cross-boundary Co-operation

機電署會透過在2024年和2025年簽訂的兩項新合作安排，進一步深化與內地的跨境合作和溝通。我們會善用「國家級進出口商品質量安全風險評估中心」的資源，就大灣區的家用電氣產品進行安全風險信息交流，以防不安全的家用電氣產品流入香港。我們亦會監察大灣區家用電氣產品的品質，並進行安全測試和專題研究，以加強識別和管理供港的不安全家用電氣產品。該中心會發揮橋樑角色，促進國內和國際合作，與國內外相關行業領袖和組織合辦機電產品專業培訓，以提升人員技術水平、拓闊國際視野，並促進知識交流與協作。

Through the two new co-operation arrangements signed in 2024 and 2025, the EMSD will further deepen cross-border collaboration and communication between the Mainland and Hong Kong. We will leverage the resources of the National Import and Export Commodity Quality and Safety Risk Assessment Centre to exchange information on safety risks relating to household electrical products in the GBA, thereby preventing unsafe household electrical products from entering Hong Kong. We will also monitor the quality of household electrical products in the GBA and conduct safety tests and specialised research to strengthen the identification and management of unsafe household electrical products supplied to Hong Kong. The Centre will endeavour to play its bridging role to enhance domestic and international co-operation, working with relevant domestic and international industry leaders and organisations to offer professional training related to electrical products, with a view to raising the technical standards and widening the international perspectives of personnel while fostering knowledge exchange and collaboration.

重點四：提升業界和公眾的電力安全意識 Focus 4: Enhancing Electrical Safety Awareness among the Trade and the Public

鑑於近年非註冊電業承辦商承辦電力工程的個案有所增加，機電署會針對室內設計和裝修公司展開特別宣傳行動，呼籲他們在承辦電力工程前，必先註冊成為註冊電業承辦商。

此外，我們計劃與職業訓練局學徒事務署合作，為導師舉辦講座，讓他們溫故知新，向學徒傳授正確的電力安全知識。新版《電力（線路）規例工作守則》出版後，我們會展開宣傳工作，協助業界人士了解更新內容，亦會透過不同渠道向市民推廣電力安全。

Given the recent increase in cases of unregistered electrical contractors undertaking electrical works, the EMSD will launch a special publicity campaign targeting interior design and renovation companies, urging them to register as registered electrical contractors before undertaking any electrical works.

Furthermore, we plan to collaborate with the Office of the Director of Apprenticeship of the Vocational Training Council to provide seminars for instructors, enabling them to refresh their knowledge and impart accurate electrical safety knowledge to their students. Upon publication of the new edition of the Code of Practice for the Electricity (Wiring) Regulations, we will launch promotional activities to help trade members understand the updates, and will promote electrical safety to the public through various channels.

保障公眾安全
PROTECTING PUBLIC SAFETY

關懷基層 深入社區宣傳電力安全

CARING FOR THE GRASSROOTS AND REACHING OUT TO THE COMMUNITY TO PROMOTE ELECTRICITY SAFETY

機電署一直致力透過各種渠道向市民宣傳電力安全資訊，成效素來不俗。為更有效令基層市民認識電力安全，機電工程師鄭明輝先生積極聯繫不同社區團體，把電力安全資訊植入社區，進一步加深基層市民對電力安全的認識。

The EMSD has been endeavouring to disseminate electricity safety information to the public through various channels, consistently achieving positive results. To educate grassroots citizens about electricity safety more effectively, Mr Cheng Ming-fai, Electrical and Mechanical Engineer, has actively engaged with different community groups to embed electricity safety information in the community and further deepen the understanding of electricity safety among grassroots citizens.

鄭先生初加入電力法例部時，曾於用戶裝置分部擔任工程師，調查電力事故屬其職責之一。他在調查過程中，不時目睹事故現場的慘況和受害者家屬的悲痛，深感惋惜。其後，他因緣際會調任宣傳及檢控分部，決心開拓嶄新宣傳渠道，提高基層市民的電力安全意識，以減少電力事故發生。他表示：「我也是基層家庭出身，深明基層市民經濟拮据，未必願意花錢改善電力安全，亦難以抽空參與電力安全講座。」

因此，鄭先生選擇創新求變，積極聯繫不同社區團體合辦地區活動，吸引更多基層市民參與，以在社區內廣泛傳播電力安全訊息。例如，他與旺角街坊會陳慶社會服務中心和香港明恩義診協會合辦地區活動，為基層家庭和劏房住戶提供中醫義診，同時舉辦電力安全講座。

鑑於近年來漏電引致的電力事故頻生，且多涉及劏房和村屋，鄭先生於是聯同非牟利組織和村代表，為相關住戶舉辦講座和協調安排電力安全檢查。他明白基層市民在改善電力裝置方面或面對困難，所以決心為他們多走一步，運用其專業知識並整合各項社會資源，協助基層解決問題。最近，他成功與業界的義工隊合作，為多個村屋和劏房安裝或更換電流式漏電斷路器，從而減低因漏電而引致電力事故的風險。

展望未來，鄭先生期望繼續秉持「創新求變，開拓機遇；聯繫社區，服務基層」的精神，向基層市民推廣電力安全，並提升家居電力安全質素。

In the early days of joining the Electricity Legislation Division, Mr Cheng worked as an engineer in the Consumer Installations Sub-division, where investigating electrical incidents was part of his duties. During these investigations, he often witnessed the tragic scenes and the grief of the victims' families, which deeply saddened him. Later, he was posted to the Publicity and Prosecution Sub-division by chance, and became determined to explore new promotional channels to raise electrical safety awareness among grassroots citizens, thereby reducing the occurrence of electrical incidents. He stated, "Hailing from a grassroots family myself, I fully understand grassroots citizens often face financial constraints. They may be reluctant to spend on improving electrical safety or have no time to attend electrical safety seminars."

Therefore, Mr Cheng chose to innovate and change, actively liaising with different community groups to co-organise district activities that attract more grassroots' participation, so as to spread electrical safety messages within the community widely. For example, he collaborated with the Mongkok Kai-fong Association Limited Chan Hing Social Service Centre and Love of Hong Kong to co-host a district activity, providing free Chinese medical consultations to grassroots families and residents of subdivided units (SDUs), while holding electrical safety seminars at the same time.

In light of the frequent electrical incidents caused by current leakage in recent years, most of which involved SDUs and village houses, Mr Cheng has partnered with non-profit organisations and village representatives to hold seminars and co-ordinated electrical safety inspections for residents of these dwellings. Understanding that grassroots citizens might face difficulties in improving their electrical installations, he was determined to go the extra mile for them, leveraging his professional knowledge and consolidating various social resources to address these issues for the grass roots. Recently, he successfully worked with a volunteer team from the trade to install or replace residual current devices in a number of village houses and SDUs, thereby reducing the risk of electrical incidents caused by current leakage.

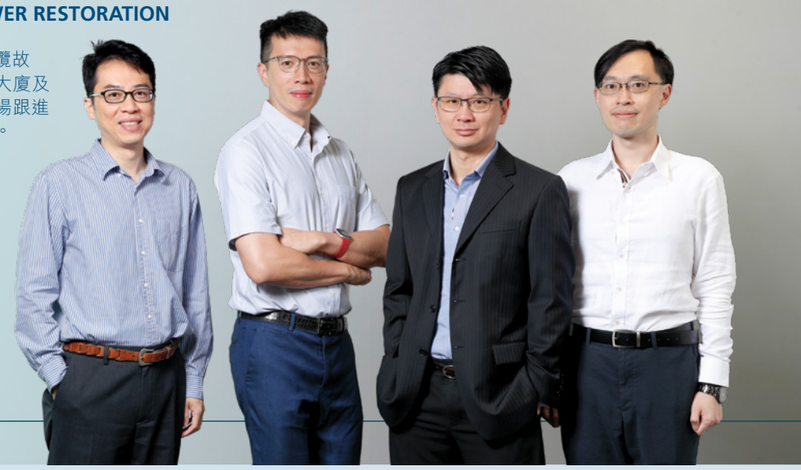
Looking ahead, Mr Cheng hopes to continue embodying the spirit of "embracing innovation and changes to explore new opportunities; engaging with the community to serve the grass roots", so as to promote electricity safety to grassroots citizens and improve the quality of household electricity safety.

專業應對電力事故 緊守崗位促復供電

PROFESSIONALISM IN RESPONSE TO POWER INCIDENTS AND DEDICATION TO FACILITATE POWER RESTORATION

2024年6月12日傍晚，黃大仙區發生地下電纜故障，導致電力供應中斷，影響區內多幢住宅大廈及商場。機電署接獲通報後，立即派員前往現場跟進並提供技術支援，最終於翌日凌晨恢復供電。

On the evening of 12 June 2024, an underground cable fault occurred in Wong Tai Sin, resulting in a power supply interruption that affected multiple residential buildings and shopping malls in the area. Upon receiving the report, the EMSD immediately dispatched staff to the scene to follow up and provide technical support. Power supply was eventually restored in the early hours of the following day.



2024年初接連發生的電力事故，引起市民高度關注。機電署電力法例部團隊一直堅守崗位，全力跟進。當晚得知黃大仙區發生大規模停電，勢必在炎炎夏日為區內居民帶來極大不便，團隊即時果斷行動，迅速應對，展現高度專業及團隊合作精神，務求盡快恢復供電。

電力法例部機電工程師林天相先生當晚擔任當值工程師。他表示：「事發時我正與家人晚餐，接獲中華電力有限公司（中電）的事故通知後，我立即向高級機電工程師黃子冲先生匯報，並迅速攜帶裝備趕赴現場跟進復電工作。」

憑藉過往經驗，黃先生即時評估事故嚴重性，妥善分配團隊職責。他憶述，當晚工作期間接獲一名電力法例部休班同事來電，對方正是受影響居民之一，主動詢問是否需要協助。「即使同事已下班，也不忘『以民為本』的精神，把市民需求放在首位，竭盡所能，實在令人感動。」黃先生補充說。

林先生抵達現場後，眼見多幢大廈烏燈黑火，大批受影響居民離開住所到樓下「抖氣」，感到事態嚴峻，立即把握時間與中電商討，擬定最高效的復電方案。他一方面全程跟進地下電纜搶修工程並提供技術支援，另一方面敦促中電安排流動發電機和鋪設臨時電纜協助復電。

在各方協調及努力下，電力供應於翌日凌晨順利恢復。林先生憶述，復電一刻，居民鼓掌歡呼，但他仍緊守崗位，直至確認每幢受影響大廈的燈光亮起且供電穩定後，才帶着疲乏身軀安心回家。稍作休息後，他翌日清早便回到辦公室，繼續與團隊積極跟進事故善後工作，確保黃大仙區供電系統維持穩定可靠。

A series of power incidents took place in early 2024 raised a significant public concern. The EMSD's Electricity Legislation Division (ELD) team remained steadfastly on duty, pursuing all necessary follow-up actions. Upon learning of the large-scale power outage in Wong Tai Sin that evening, which would inevitably cause considerable inconvenience to residents during the sweltering summer heat, the team acted decisively and responded swiftly, demonstrating a high level of professionalism and teamwork, striving to restore power as quickly as possible.

Mr Lam Tin-sheung, Timmy, Electrical and Mechanical Engineer in the ELD, was the duty engineer that evening. He stated, "At that time, I was having dinner with my family. Upon receiving notification of the incident from the CLP Power Hong Kong Limited (CLP), I immediately reported it to Senior Electrical and Mechanical Engineer, Mr Wong Tsz-chung, and rushed to the scene with gear to follow up on the power restoration work."

Drawing on his experience, Mr Wong promptly assessed the severity of the incident and efficiently assigned responsibilities to team members. He recalled, while working that night, he received a call from an off-duty ELD colleague who happened to be one of the affected residents and proactively offered assistance. "Even after finishing his shift, the colleague upheld the people-oriented spirit, putting public needs above all else. It was truly touching," Mr Wong added.

Upon arriving at the scene, Mr Lam witnessed multiple buildings plunged into darkness, with many affected residents leaving their home and gathering downstairs for fresh air. Recognising the urgency of the situation, he immediately seized the time to discuss with CLP to formulate the most efficient power restoration plan. He closely followed up on the underground cable repair works and provided technical support; while urging CLP to arrange mobile electric generators and lay temporary cables to support power restoration.

Through concerted efforts, power supply was successfully restored by the early hours of the following morning. Mr Lam recalled the cheers and applause from the residents when electricity returned, yet he remained on site until confirming that the lights of every affected building were on and the power supply was stable. Only then did he return home, exhausted but reassured. After a brief rest, Mr Lam returned to the office early the next morning to continue working proactively with the team on the incident's follow-up, ensuring the power supply to Wong Tai Sin remained stable and reliable.

保障公眾安全
PROTECTING PUBLIC SAFETY

氣體安全

保障社區氣體安全

2024年，全港共錄得224宗氣體事故，較2023年呈溫和下降趨勢。儘管事故率有所改善，機電署仍保持高度警覺，以「治未病」策略持續加強氣體安全監管工作。

年內，為加強打擊非法進口及銷售未附有「GU」標誌的卡式石油氣爐，我們以食肆及零售店鋪為重點，展開全港性巡查行動，巡查超過1 300間提供火鍋或類似菜式的食肆，發現部分食肆使用未附有「GU」標誌的卡式石油氣爐。除採取執法行動外，我們亦向食肆經營者詳細說明使用附有「GU」標誌爐具的重要性，以確保食肆的氣體安全。

GAS SAFETY

Ensuring Gas Safety in Community

In 2024, Hong Kong recorded a total of 224 gas incidents, showing a moderate downward trend compared with the previous year. Despite the improvement in incident rate, the Electrical and Mechanical Services Department (EMSD) remains highly vigilant and continues to strengthen gas safety regulation through a preventive strategy.

In order to step up efforts against the illegal import and sale of cassette cookers without a GU mark, the EMSD launched a territory-wide inspection campaign this year, with a focus on restaurants and retail outlets. Over 1 300 restaurants serving hotpot or similar dishes were inspected, and some were found using cassette cookers without the GU mark. In addition to enforcement actions, the EMSD explained in detail to restaurant operators the importance of using appliances bearing the GU mark to ensure gas safety in the premises.

機電署於年內展開針對食肆的全港性巡查行動，並提醒食肆應使用附有「GU」標誌的卡式石油氣爐。

The EMSD launched a territory-wide inspection campaign targeting restaurants during the year, and reminded the restaurants that only LPG cassette cookers bearing the GU mark should be used.

此外，調查發現部分違規卡式石油氣爐經由網購平台流入市場。有鑑於此，我們加強網上監察，向有關平台發出警告，要求即時移除相關銷售帖文，並就涉嫌違反《氣體安全條例》的進口及售賣規定展開調查。雖然大部分網店已停止銷售違規產品，但仍有少數屢勸不改，機電署已就此採取升級執法行動。

有別於以往只發放一般安全提示的做法，我們首次在新聞公報中公開披露涉事卡式石油氣爐的品牌及型號，此舉不但成功引起公眾關注，更促使網店迅速移除相關銷售帖文。為從源頭堵截未附有「GU」標誌的卡式石油氣爐流入市場，我們的調查團隊更首度採取「放蛇」行動，喬裝顧客購買未附有「GU」標誌的卡式石油氣爐，以蒐集證據。團隊在行動中鎖定貨物供應鏈並收集重要交易記錄，最終成功檢控涉事網店，彰顯機電署打擊違規氣體爐具的決心。

In addition, investigations revealed the market entry of some non-compliant cassette cookers through online shopping platforms. In view of this, the EMSD strengthened online surveillance and issued warnings to the relevant platforms, requiring immediate removal of the associated sale posts, and initiated investigations into suspected violations of the import and sale provisions under the Gas Safety Ordinance. While most online vendors ceased selling non-compliant goods, some continued to do so despite repeated warnings. In response, the EMSD took escalated enforcement actions.

Unlike previous practice of merely issuing general safety advice, we publicly disclosed the brand names and model numbers of the concerned cassette cookers in press releases for the first time. This not only successfully drew public attention but also prompted swift removal of the relevant sale posts by the online shops. To intercept at source the entry of cassette cookers without the GU mark into the market, the EMSD investigation team conducted their first-ever undercover operations by posing as customers to purchase cassette cookers without the GU mark for evidence collection. The team targeted the supply chain and gathered crucial transaction records during the operations, ultimately leading to successful prosecutions against the online retailers concerned and demonstrating the EMSD's unwavering commitment to combating non-compliant gas appliances.

機電署聯同民政事務總署和關愛隊向舊式屋邨的居民推廣氣體安全。

The EMSD collaborated with the Home Affairs Department and the Care Teams to promote gas safety to residents of older housing estates.

針對舊式屋邨的氣體熱水爐一氧化碳中毒事故，機電署採取多管齊下的宣傳及執法策略，成效顯著。在社區宣傳方面，我們與民政事務總署及關愛隊緊密合作，深入舊式屋邨舉辦多場安全講座和派發宣傳單張，向居民講解正確使用氣體熱水爐的方法。為加強宣傳效果，我們透過電視節目和媒體訪談，並邀請具社區影響力的關鍵領袖製作網上短片，進一步推廣氣體安全資訊。除加強宣傳外，我們亦與香港中華煤氣有限公司（煤氣公司）合作，為舊式屋邨的老化氣體熱水爐進行特別檢查，務求從源頭消除安全隱患。

為進一步保障瓶裝石油氣的安全，機電署於2024年年中展開修訂《瓶裝石油氣分銷商工作守則》和「瓶裝石油氣分銷商安全表現評級計劃」的諮詢工作。是次修訂考慮到業界的實際營運情況，透過優化相關安全操作指引，切實提升整體安全水平，並加強對分銷商的監管效能。此外，修訂加入創新科技元素，為石油氣業界引入石油氣瓶追蹤系統，推動註冊氣體供應公司及其分銷商等業界持份者積極採用該系統，以全面提升瓶裝石油氣在供應、分銷及使用等各範疇的整體安全管理水平。

In response to carbon monoxide poisoning incidents involving gas water heaters in older housing estates, the EMSD adopted a multi-pronged publicity and enforcement strategy, achieving significant results. Regarding publicity in the community, in close collaboration with the Home Affairs Department and the Care Teams, we organised safety seminars and distributed promotional leaflets in older communities to explain to residents the proper use of gas water heaters. To amplify the impact of our publicity efforts, the EMSD leveraged television programmes and media interviews, and invited influential community leaders to produce online videos, further promoting gas safety information. Apart from strengthening publicity, the EMSD partnered with the Hong Kong and China Gas Company (HKCG) to conduct special inspections of aged gas water heaters in older housing estates, with the aim of eliminating potential safety hazards at source.

To further safeguard the safety of liquefied petroleum gas (LPG) cylinders, the EMSD launched consultation in mid-2024 on the revisions to both the Code of Practice for LPG Cylinder Distributors and the LPG Cylinder Distributor Safety Performance Recognition Scheme. Taking into consideration the actual operational circumstances of the industry, the revisions aimed to enhance the overall safety standards and strengthen the efficiency in regulating distributors by optimising relevant safety operational guidelines. Moreover, the revisions incorporated innovation and technology (I&T) elements by introducing an LPG cylinder tracking system for the LPG industry to promote active adoption of the system by industry stakeholders, including registered gas supply companies (RGSCs) and their distributors, so as to comprehensively enhance the overall safety management standards across all aspects of LPG cylinders from supply, distribution to end-user applications.

機電署就《瓶裝石油氣分銷商工作守則》的修訂工作積極與持份者溝通，並在相關的安全表現評級計劃中加入創科元素，以提升整體安全水平。

The EMSD actively engaged stakeholders on the revisions to the Code of Practice for LPG Cylinder Distributors and incorporated I&T elements into the related safety performance recognition scheme to enhance the overall safety standards.

機電署於2024年11月就更新《香港石油氣業工作守則第7單元：石油氣庫及石油氣瓶儲存間緊急事故處理程序》進行業界諮詢。

In November 2024, the EMSD conducted trade consultation on the update of the Code of Practice for Hong Kong LPG Industry, Module 7 – Operating Procedures for Emergencies at LPG Compounds and Cylinder Stores.

另外，機電署於2024年全面審視《香港石油氣業工作守則第7單元：石油氣庫及石油氣瓶儲存間緊急事故處理程序》，並就更新工作守則展開業界諮詢。我們已在2025年5月完成更新及發布新版工作守則，當中特別強調註冊氣體供應公司、應具報氣體裝置擁有人及其操作人員在氣體緊急事故中的具體職責範圍，以及事故通報內容和時限方面的要求，確保監管部門能及時掌握緊急情況並採取適當的應對措施，進一步鞏固香港的氣體安全。

Parallel to these efforts, in 2024, the EMSD conducted a thorough review of the Code of Practice for Hong Kong LPG Industry, Module 7 – Operating Procedures for Emergencies at LPG Compounds and Cylinder Stores, and commenced trade consultation on the update of the Code of Practice. In May 2025, we completed the update and published the new version of the Code of Practice, with particular emphasis on the specific duties and responsibilities of RGSCs, owners of notifiable gas installations (NGIs) and their operators during gas emergencies, and the requirements on the content and timeframe for incident reporting, ensuring that the regulatory departments can make timely appraisal of the emergency situation and take appropriate response measures to further strengthen gas safety in Hong Kong.

全力推動氫能發展

為配合國家的「雙碳」目標，香港特別行政區政府於2024年6月公布《香港氫能發展策略》（《策略》），爭取在2035年前將香港的碳排放總量從2005年的水平減半，並在2050年前達致碳中和。機電署作為氫能源跨部門工作小組（工作小組）的成員，致力支持並落實《策略》提出的「完善法規」、「制訂標準」、「配合市場」和「審慎推進」四大策略，積極推動香港氫能發展。

Fully Promoting the Development of Hydrogen Energy

To align with our country's "dual carbon" goals, the Government of the Hong Kong Special Administrative Region promulgated the Strategy of Hydrogen Development in Hong Kong in June 2024, striving to reduce Hong Kong's total carbon emissions by 50% before 2035 from the 2005 level and achieve carbon neutrality before 2050. As a member of the Inter-departmental Working Group on Using Hydrogen as Fuel (Working Group), the EMSD is committed to supporting and implementing the four core strategies proposed in the Strategy, namely "Improving Legislation", "Establishing Standards", "Aligning with the Market" and "Advancing with Prudence", actively driving the development of hydrogen energy across the city.

機電署致力推動氫能發展和科普教育，並舉辦「小畫家，大改變」碳中和－氫能洗街車命名及繪畫比賽和「氫能零碳STEAM嘉年華」。

The EMSD is committed to promoting the development of hydrogen energy and popular science education, and organised the "Little Artists, Big Changes" Carbon Neutrality – Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest and the Hydrogen Zero Carbon STEAM Carnival.

機電署於2025年3月安排能源諮詢委員會參觀元朗凹頭公眾加氫站，加深委員對加氫站運作的了解。

In March 2025, the EMSD arranged a visit to the public hydrogen refuelling station at Au Tau, Yuen Long, for the Energy Advisory Committee to deepen members' understanding of its operation.

年內共有三個氫燃料技術試驗項目順利完成，包括以非載客形式在屯門試行氫能源有軌電車及其供氫設施，以及使用氫燃料為落馬洲工地辦公室供電。此外，元朗凹頭公眾加氫站和氫燃料電池洗街車項目，已於2025年6月獲工作小組同意並展開試驗。機電署正收集相關安全數據進行評估，以持續優化安全和技術指引。

A total of three trial projects on hydrogen fuel technology were successfully completed during the year. These included the trial of a hydrogen fuelled light rail vehicle in Tuen Mun as a non-revenue train and its hydrogen filling facility, and the use of hydrogen fuel to supply electricity to a construction site office in Lok Ma Chau. Additionally, the projects involving a public hydrogen filling station at Au Tau, Yuen Long, and hydrogen fuel cell (HFC) street washing vehicles have commenced trials with approvals from the Working Group in June 2025. The EMSD is currently collecting relevant safety data for assessment to continuously refine safety and technical guidelines.

工作小組在過去一年審視並原則上同意13個氫燃料技術試驗項目的申請（截至2025年6月，共有27個試驗項目獲原則上同意），涵蓋跨境及本地氫燃料電池客貨運車輛、從現有煤氣網路提取氫氣發電供電動車充電，以及為第十五屆全國運動會高爾夫球賽事提供氫能發電設備等。同時，一些製氫試驗項目正進入設計和建造階段，包括在新界東南堆填區的擴建部分利用堆填氣體製氫，以及在屯門望后石谷已修復堆填區利用太陽能製氫。

The Working Group examined and granted AIPs to 13 applications for trial projects on hydrogen fuel technology in the past year (as at June 2025, a total of 27 trial projects were granted agreement-in-principle (AIPs)), covering cross-boundary and local HFC passenger and cargo vehicles, extraction of hydrogen from the existing town gas network to generate electricity for charging electric vehicles (EVs), and provision of hydrogen power generation equipment for the golf events at the 15th National Games. Meanwhile, several hydrogen production trial projects are progressing to design and construction phases, including production of hydrogen using landfill gas at the South East New Territories Landfill Extension, and production of hydrogen with solar energy at the restored Pillar Point Valley Landfill in Tuen Mun.

保障公眾安全
PROTECTING PUBLIC SAFETY

在「完善法規」方面，為確保安全使用氫氣作為燃料，機電署全面審視現行相關法例，並建議修訂《氣體安全條例》，以規管整個氫燃料供應鏈，包括進口、生產、儲存、運送、供應和使用。我們在2024年完成業界諮詢並獲得廣泛支持，其後於2025年4月16日向立法會提交《2025年氣體安全（修訂）條例草案》。條例草案經立法會審議後順利通過，《2025年氣體安全（修訂）條例》於2025年7月25日刊憲。修訂後的條例涵蓋各個範疇，包括氫氣品質、氫氣裝置、系統及儲存器的安全、氫氣供應公司的註冊、運載氫氣車輛、技術人員和應急處理等。相關附屬法例預計於2026年提交立法會審議，以全面規管氫燃料的安全。

In terms of "Improving Legislation", to ensure the safe use of hydrogen as fuel, the EMSD comprehensively reviewed the existing relevant legislation and proposed amendments to the Gas Safety Ordinance to regulate the entire hydrogen fuel supply chain, including importation, manufacture, storage, transport, supply and use. With broad support from trade consultation completed in 2024, the Gas Safety (Amendment) Bill 2025 was introduced to the Legislative Council (LegCo) on 16 April 2025. After scrutiny by the LegCo and the smooth passage of the Bill, the Gas Safety (Amendment) Ordinance 2025 was gazetted on 25 July 2025. The amended ordinance encompasses various aspects, including hydrogen quality, safety of hydrogen installations, systems and containers, registration of hydrogen supply companies, hydrogen conveyance vehicles, technical personnel and emergency handling. It is anticipated that the relevant subsidiary legislation will be introduced to the LegCo for scrutiny in 2026, with a view to comprehensively regulating the safety of hydrogen fuel.

機電署為香港的氫能應用制訂合適標準，除發布三份技術指引供業界參考外，亦率先完成對氫燃料車輛行走隧道的風險評估，並向本地及國際學術界展示研究結果，分別在2024年10月和12月於英國燃氣專業學會官方期刊*Gas International*和香港工程師學會官方期刊*Hong Kong Engineer*刊登題為《香港隧道內使用氫燃料車輛的全面風險評估研究》的學術論文。另外，香港首輛氫燃料電池雙層巴士於2024年7月首次行駛隧道，至今已行駛港九多條行經高速公路和過海隧道的路線，並逐步推展到在全港各路線行走。

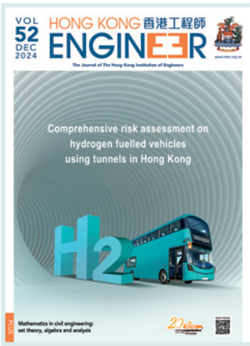
The EMSD established appropriate standards for hydrogen energy applications in Hong Kong. In addition to publishing three technical guidelines for industry reference, we completed a pioneering risk assessment of hydrogen fuelled vehicles using tunnels and shared the research findings with both local and international academic communities. The academic paper titled "Comprehensive Risk Assessment Study on Hydrogen Fuelled Vehicles Using Tunnels in Hong Kong" was featured in Gas International, the official journal of the Institution of Gas Engineers and Managers, in October 2024; and in Hong Kong Engineer, the official journal of the Hong Kong Institution of Engineers, in December 2024. Besides, Hong Kong's first HFC double-decker bus traversed tunnels for the first time in July 2024. Since then, it has been operating on multiple highways and cross-harbour tunnel routes across Hong Kong Island and Kowloon, with plans to gradually expand service to routes territory-wide.

機電署秉持安全為先的原則，配合《策略》，務實推進與法規、標準、技術發展和應用，以及人才培訓相關的工作，穩慎有序地營造有利本地氫能發展的環境，加速香港的低碳轉型。

The EMSD remains steadfast in its principle of putting safety first, in alignment with the Strategy, pragmatically advancing work related to regulations, standards, technological development and application, and talent training, so as to create an environment conducive to local hydrogen energy development in a prudent and orderly manner, thereby accelerating Hong Kong's transition to a low-carbon future.

機電署就《氣體安全條例》的修訂工作廣泛諮詢業界，以收集持份者和各專業團體的意見。

The EMSD conducted extensive trade consultations on the amendments to the Gas Safety Ordinance to collect opinions from stakeholders and various professional bodies.



機電署率先完成對氫燃料車輛行走隧道的風險評估，研究結果在2024年12月7日於香港工程師學會官方期刊Hong Kong Engineer刊登。

The EMSD completed a pioneering risk assessment of hydrogen fuelled vehicles using tunnels. The research findings were published in Hong Kong Engineer, the official journal of the Hong Kong Institution of Engineers, on 7 December 2024.

轉廢為能

機電署與環境保護署（環保署）及承辦商在有機資源回收中心（O·PARK）項目中緊密合作，共同推進「轉廢為能」的發展。有機資源回收中心第二期（O·PARK2）座落於沙嶺，機電署已於2024年4月完成O·PARK2內所有應具報氣體裝置的審批程序，包括生物氣儲氣鼓、氣體調節設備和厭氧消化缸等。目前，O·PARK2每日可處理300公噸廚餘，將廢物轉化為沼氣（主要成分是甲烷）和有機肥料。沼氣會用作發電，除了可供O·PARK2使用外，預計每年可向電網輸出約2 400萬度剩餘電力，相當於5 000戶家庭的用電量。此外，透過減少堆填區的有機廢物，預計O·PARK2每年可減少約67 000公噸的溫室氣體排放，為實現碳中和作出重大貢獻。

Waste to Energy

The EMSD collaborated closely with the Environmental Protection Department (EPD) and contractors on the Organic Resources Recovery Centre (O·PARK) project to jointly advance the development of "Waste to Energy". Phase 2 of the O·PARK (O·PARK2) is located in Sha Ling. In April 2024, the EMSD completed the approval process of all NGIs at the O·PARK 2, including biogas holders, gas conditioning equipment and anaerobic digestion tanks. At present, O·PARK 2 is capable of handling 300 tonnes of food waste daily, converting waste into biogas (primarily composed of methane) and organic fertiliser. The biogas will be used to generate electricity and, aside from consumption by the O·PARK2 itself, about 24 million kWh of surplus electricity, which is equivalent to the electricity consumption of about 5 000 households, can be exported to the grid annually. By reducing organic waste destined for landfills, it is estimated that the O·PARK2 will cut greenhouse gas emissions by about 67 000 tonnes annually, making a substantial contribution towards carbon neutrality.

「油電站」的氣體安全

隨着香港推動可再生能源發展，廣泛使用電動車已成為實現「綠色運輸」願景的重要策略。為在2050年前達到車輛零排放和運輸界別零碳排放，香港正全力建設公共快速充電網絡。政府提出創新方案，計劃在部分現有的加油站和石油氣加氣站內加裝電動車輛充電設施，透過「一地多用」的模式有效增加公共充電設施數目。

Gas Safety of Petrol-cum-Charging Stations

As Hong Kong advances the development of renewable energy, the widespread adoption of EVs has become a key strategy in realising the vision of "green transport". To achieve zero vehicular emissions and zero-carbon emissions in the transport sector by 2050, the city is vigorously developing a public fast charging network. The Government has proposed an innovative plan to retrofit EV charging facilities in some existing petrol and LPG filling stations. This "single site, multiple use" model will effectively increase the number of public charging facilities.

為配合電動車普及化，政府邀請加油站營運商提交建議書，就在現有加油站和石油氣加氣站內加裝電動車輛充電設施提出意見。

To support the popularisation of EVs, the Government invited petrol filling station operators to submit proposals on retrofitting EV charging facilities at their existing petrol and LPG filling stations.

為此，機電署於2024年9月發布《石油氣加氣站內的電動車輛充電設施指引》，向業界提供清晰的技術指引和進行定量風險評估的要求。此外，機電署協助環境及生態局審視在石油氣加氣站內增設電動車充電設施的定量風險評估報告，確保所有相關風險水平均符合政府標準，並保障石油氣加氣安全。

To support this initiative, EMSD issued the Guideline for Electric Vehicles Charging Facilities at Liquefied Petroleum Gas Filling Stations in September 2024, providing clear technical guidance and quantitative risk assessment requirements for the industry. Additionally, the EMSD assisted the Environment and Ecology Bureau (EEB) in reviewing quantitative risk assessment reports for retrofitting EV charging facilities at LPG filling stations, ensuring all associated risk levels meet government standards and safeguarding the safety of LPG filling operations.

保障公眾安全
PROTECTING PUBLIC SAFETY

規管製冷劑處理工作的安全

為履行香港在國際公約《基加利修正案》下的義務，機電署全力支援環境及生態局的《保護臭氧層條例》修訂工作，加入對處理具易燃性、高毒性或高操作壓力的低全球升溫潛能值製冷劑的規管規定。修訂條例已於2025年4月11日刊憲生效。政府亦正草擬兩項相關附屬法例，禁止特定產品的進口和規管製冷劑處理工作，為實現在2036年前把氫氟碳化物使用量削減85%的目標奠定法律基礎。若全球能達至這個減排幅度，將可避免全球氣溫於本世紀末前上升攝氏0.5度，有助減緩氣候變化。

機電署於2024年9月成立「臨時製冷劑技術諮詢委員會」，及早與業界商議有關製冷劑的管理和使用，以及技術員的培訓。截至2025年3月，委員會已認可七家培訓機構的課程。我們亦正制定《製冷劑處理工作守則》，為業界提供處理製冷劑的技術及安全指引。

另外，機電署一直推廣「家用冷氣機輕度易燃雪種處理工程人員自願註冊計劃」，計劃於2023年5月推出，旨在提升業界的安全意識和技術水平；截至2025年3月，註冊人數已突破1700人，充分體現業界的支持與配合。

Regulating the Safety of Refrigerant Handling

To fulfil Hong Kong's obligations under the Kigali Amendment, an international treaty, the EMSD provided full support to the EEB in amending the Ozone Layer Protection Ordinance, introducing regulatory provisions governing the handling of low global warming potential (GWP) refrigerants with flammability, higher toxicity or high operating pressures. The amended ordinance came into effect upon gazettal on 11 April 2025. The Government is also drafting two related pieces of subsidiary legislation to prohibit the import of certain products and regulate the handling of refrigerants, in order to establish the legal foundation for achieving an 85% reduction in hydrofluorocarbon usage by 2036. If achieved globally, this reduction can prevent a 0.5°C rise in global temperatures by the end of the century, thereby helping mitigate climate change.

The EMSD established the Provisional Refrigerant Technical Advisory Committee (P-RTAC) in September 2024 to engage early with the industry on the management and use of refrigerants and technician training. As at March 2025, the committee endorsed training courses from seven training providers. The EMSD is also developing the Code of Practice for Refrigerant Handling to provide the industry with technical and safety guidelines on refrigerant handling.

In addition, EMSD has been promoting the Voluntary Registration Scheme for Technicians Handling Mildly Flammable Refrigerant of Household Air-conditioners. Introduced in May 2023, the Scheme aims at enhancing safety awareness and technical standards within the industry. As at March 2025, the number of registrants exceeded 1 700 participants, demonstrating strong support and co-operation from the industry.

機電署成立「臨時製冷劑技術諮詢委員會」，加強規管製冷劑的使用、管理和處理，以及技術員培訓。

The EMSD established the Provisional Refrigerant Technical Advisory Committee (P-RTAC) to strengthen regulation of the use, management and handling of refrigerants, as well as technician training.

善用創科規管燃氣安全

香港現有長達3 700公里的地下煤氣管網系統，目前由煤氣公司負責定期以人手進行管網泄漏探測，以監察管網狀況並安排必要維修。然而，這種傳統人工探測方式不僅耗費大量人力資源，探測結果亦容易受多項因素影響，包括現場環境條件、儀器精準度等，或會降低探測結果可靠度。

為解決這些限制，機電署積極引入尖端科技，並聯同香港理工大學、煤氣公司及人工智能服務供應商，研究利用光纖傳感與人工智能技術自動探測地下管道泄漏的可行性。我們已在2024年12月完成概念驗證研究，成功透過上述技術探測地下管道的氣體泄漏情況，而相關的研究成果已交予煤氣公司以評估大規模應用的可行性。

Leveraging I&T to Regulate Gas Safety

Hong Kong's existing 3 700-km underground gas pipe network is currently monitored through regular manual leak detection conducted by the HKCG, in order to assess the network condition and arrange necessary maintenance. However, this conventional manual detection approach demands substantial manpower resources, and the results are easily affected by various factors, including in-situ circumstances and instrument accuracy, potentially compromising the reliability of detection results.

To address these limitations, the EMSD proactively introduced cutting-edge technologies and collaborated with the Hong Kong Polytechnic University, the HKCG and the artificial intelligence (AI) solution providers to explore the feasibility of using optical fibre sensing and AI technologies to automatically detect underground pipeline leakage. We completed the proof-of-concept research in December 2024, which demonstrated successful detection of underground pipeline leakage with the above technologies. The relevant research findings were shared with the HKCG to assess the feasibility of large-scale implementation.

機電署聯同香港理工大學、煤氣公司和人工智能服務供應商進行概念驗證研究，探討利用光纖傳感與人工智能技術自動探測地下管道泄漏的可行性。

The EMSD partnered with the Hong Kong Polytechnic University, the HKCG and the AI solution providers to carry out the proof-of-concept research on the feasibility of using optical fibre sensing and AI technologies to automatically detect underground pipeline leakage.

機電署積極推動石油氣業界應用創科，多間註冊氣體供應公司正部署或已展開「石油氣瓶追蹤系統」測試計劃。

The EMSD actively promotes the adoption of I&T within the LPG industry. A number of RGSCs have made plans for, or already initiated the pilot trials of the LPG cylinder tracking system.

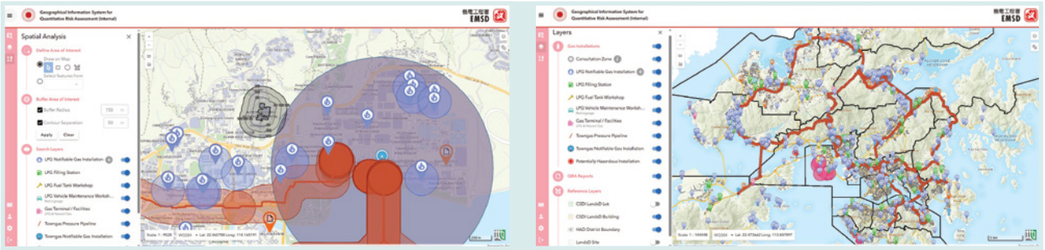
為推動石油氣業界積極應用創科，機電署會在新修訂的「瓶裝石油氣分銷商安全表現評級計劃」中增設獎勵機制，向設置並有效使用石油氣瓶追蹤系統的分銷商給予額外獎勵分數，以鼓勵和支持業界啓動試行計劃，並逐步擴大系統應用範圍。該系統可記錄石油氣瓶在供應鏈的流向、使用歷程和安全檢查等關鍵資料，從而提升石油氣瓶的可追溯性與管理效率，進一步加強整體安全水平。目前，多間註冊氣體供應公司已開始部署或測試相關技術方案。機電署會持續監察試行成效，並鼓勵業界由初步試行邁向全面應用。

To promote the active adoption of I&T within the LPG industry, the EMSD will introduce an incentive mechanism in the newly revised LPG Cylinder Distributor Safety Performance Recognition Scheme. Distributors who have installed and effectively utilised the LPG cylinder tracking system will be awarded bonus points, with the aim of encouraging and supporting the industry in launching a pilot trial and gradually broadening the application of the system. The system records key information such as the movement of LPG cylinders throughout the supply chain, usage history, and safety inspections, thereby enhancing the traceability and management efficiency of LPG cylinders while further strengthening overall safety standards. At present, several RGSCs have already commenced deployment or testing of the relevant technological solution. The EMSD will continue to monitor the effectiveness of these pilot trials and encourage the industry to progress from initial trials to full-scale implementation.

保障公眾安全
PROTECTING PUBLIC SAFETY

機電署為「綜合氣體安全執法系統」進行全面升級，簡化日常巡查流程，讓巡查人員可透過流動裝置即時記錄檢查結果。

The EMSD carried out a comprehensive upgrade of the Integrated Gas Safety Enforcement System to streamline the regular inspection processes, enabling inspectors to record inspection results instantly via mobile devices.



機電署應用地理資訊系統進行分析，在可視化地圖上顯示全港各區應具報氣體裝置的位置詳情，藉此提升土地用途的審查效率。

The EMSD applied a geographic information system to analyse and display all NGIs across Hong Kong on a visualisation map, thereby improving land use review efficiency.

機電署自2024年1月起推行「綜合氣體安全執法系統」的全面升級項目，共實施133項優化措施，以提升系統效能。升級系統增設流動巡檢功能，讓巡查人員可透過流動裝置於現場即時記錄檢查結果；並結合地理資訊系統，在可視化地圖上顯示全港各區應具報氣體裝置的位置詳情。其他主要升級包括建立電子化風險評估資料庫、氣體安全指標儀表板和自動生成報告功能。此無紙化系統大幅提升土地用途申請的審查效率，簡化文件處理流程，讓巡查人員能更專注於實質監管工作。

此創科項目不僅簡化了監管流程，更標誌着香港燃氣安全管理邁入智能新時代。機電署會持續推動創新，與業界攜手構建更安全高效的燃氣供應體系，為市民提供更優質的公共服務。

The EMSD has commenced a comprehensive upgrade of the Integrated Gas Safety Enforcement System since January 2024, with 133 optimisation measures implemented to enhance the system performance. The modernised system incorporates a mobile inspection feature, allowing inspectors to record inspection results instantly on site via mobile devices. It also integrates a geographic information system to display all NGIs across Hong Kong on a visualisation map. Other major enhancements include the establishment of a digital risk assessment database, a gas safety indicators dashboard, and an automated report generation function. The paperless system has dramatically improved land use application review efficiency and streamlined documentation processes, enabling inspectors to focus on substantive regulatory duties.

This I&T initiative not only streamlines the regulatory processes, but also marks a significant milestone in Hong Kong's transition to a new era of intelligent gas safety management. The EMSD remains committed to fostering innovation, working alongside the industry to build safer and more efficient gas supply systems, with a view to delivering enhanced public services.

利用人工智能提升監察效率

由機電署研發的人工智能遙距監測系統於2024年第二季正式投入服務，有效監察海上液化天然氣接收站的氣體安全。該系統突破地域限制，令技術人員無需親赴偏遠接收站或受惡劣天氣影響，便可全天候實時掌握氣體安全狀況。該系統還使用人工智能主動識別潛在風險並發出預警，以便人員及早介入解決安全隱患，從而大幅提升安全水平和緊急應變能力。

除善用科技外，機電署於2024年11月28日聯同消防處、海事處、警務處、飛行服務隊、兩間電力公司（兩電）、香港液化天然氣接收站有限公司和接收站工作人員，舉行跨部門海上緊急事故演習。演習模擬接收站發生天然氣泄漏和火警，導致工作人員受傷的嚴重氣體事故，旨在加強各方的緊急事故通報機制和處理規程，以及跨部門的協調與溝通。演習期間，我們透過遙距監測系統實時掌握接收站情況，在抵達現場前已準確評估狀況，大幅提升後續救援和調查工作的效能。我們會持續優化系統，以提升監察效率，保障本港燃氣供應安全。

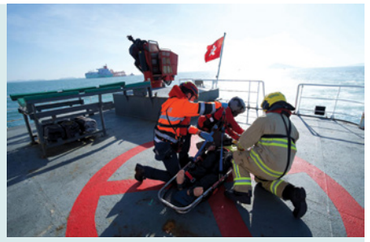
Leveraging Artificial Intelligence to Improve Regulation Efficiency

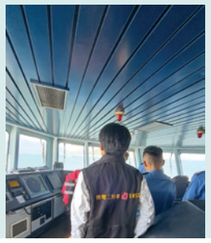
The AI remote monitoring system developed by the EMSD was officially put into operation in the second quarter of 2024 to effectively oversee gas safety at the offshore liquefied natural gas (LNG) terminal. This system overcomes geographical limitations, enabling technical personnel to conduct real-time monitoring of gas safety conditions around the clock, without being physically present at the remote terminal or hindered by adverse weather. Besides, the system proactively identifies potential risks using AI and issues early warnings, allowing for prompt intervention to address safety hazards. This significantly improves safety and emergency response capabilities.

In addition to leveraging technology, the EMSD collaborated with the Fire Services Department, Marine Department, Hong Kong Police Force, Government Flying Service, two power companies, Hong Kong LNG Terminal Limited, and terminal staff to conduct an inter-departmental maritime emergency drill on 28 November 2024. The drill simulated a serious gas incident involving a natural gas leak and fire at the terminal, resulting staff injuries. It aimed to enhance the emergency reporting mechanism and handling protocols among all parties, and strengthen inter-departmental co-ordination and communication. During the drill, we grasped the terminal's situation in real time through the remote monitoring system and accurately assessed the conditions before arriving on the scene, significantly facilitating subsequent rescue and investigation efforts. We will continue to optimise the system to improve monitoring efficiency and ensure the safety of gas supply in Hong Kong.

為提升危機管理能力，機電署聯同多個政府部門、兩電、香港液化天然氣接收站有限公司和接收站工作人員，舉行海上緊急事故演習。

To enhance crisis management capabilities, the EMSD collaborated with multiple government departments, the two power companies, Hong Kong LNG Terminal Limited and terminal staff to conduct a maritime emergency drill.





保障公眾安全
PROTECTING PUBLIC SAFETY

加強跨境及國際合作

在推動綠色能源轉型的進程中，機電署積極與內地相關部門展開戰略合作，並取得豐碩成果。機電署與中華人民共和國海關總署（海關總署）建立「綠色通道」，簡化把氫燃料樣本運送至內地進行品質測試和認證的流程，以及運氫車輛的通關安排，方便氫燃料由內地運送至香港。該措施在2024年11月舉行的年度合作會議上獲海關總署全力支持。同年12月18日，機電署與國家市場監督管理總局簽訂《質量安全管理合作安排》（合作安排），標誌着兩地在氫能領域的合作邁進新階段。合作安排涵蓋國家與國際氫能標準的對接、跨境數據共享、氫氣壓力容器認證互認，以及制定適用於香港、中國內地乃至全球的綠色氫能標準認證框架，把區域做法與國際標準銜接起來。

Strengthening Cross-Boundary and International Collaboration

In advancing green energy transition, the EMSD has actively pursued strategic co-operation with relevant Mainland authorities and achieved fruitful results. The EMSD and the General Administration of Customs of the People's Republic of China (GACC) established the "Green Corridor" to streamline procedures for transporting hydrogen fuel samples to the Mainland for quality testing and certification, as well as customs clearance arrangements for hydrogen conveyance vehicles, in order to facilitate the delivery of hydrogen fuel from the Mainland to Hong Kong. This initiative gained full support from the GACC at the annual co-operation meeting held in November 2024. On 18 December of the same year, the EMSD signed the Co-operation Arrangement on Quality and Safety Management (Co-operation arrangement) with the State Administration for Market Regulation, marking a new phase of collaboration between both places in the hydrogen energy field. The co-operation arrangement covers the alignment of national and international hydrogen standards, cross-border data sharing, mutual recognition of hydrogen pressure vessel certifications, as well as the development of a certification framework for green hydrogen standards that is suitable for Hong Kong, Mainland and even the world – bridging regional practices with international standards.

香港與內地簽訂的《質量安全管理合作安排》涵蓋多個範疇，包括推動氫能發展、燃氣安全、機械裝置安全、電器產品安全、標準對接等方面的合作與交流，目標是確保兩地有效執行安全監督和質量管理的工作。

The Co-operation Arrangement on Quality and Safety Management signed between Hong Kong and the Mainland covers a wide range of areas, including the co-operation and exchanges on promoting hydrogen development, gas safety, mechanical installations safety, electrical products safety and standard alignment. The objective is to ensure effective implementation of safety supervision and quality management in both places.

機電署成功主辦首屆「國際氫能發展論壇2025」，匯聚來自世界各地的代表，分享與氫能有關的最新技術發展、工程解決方案及未來發展趨勢。

The EMSD successfully hosted the inaugural International Hydrogen Development Symposium 2025, bringing together representatives from around the world to share the latest technological developments, engineering solutions and future development trends related to hydrogen energy.

由機電署主辦、中國氫能聯盟協辦的首屆「國際氫能發展論壇2025」於2025年3月舉行，吸引逾800名來自香港、內地及海外的政府部門、公營機構、專業機構和學術界代表參與。是次論壇不僅展示最新的氫能技術發展和工程解決方案，更為業界提供交流未來發展趨勢的寶貴平台。同月，我們再次與中國氫能聯盟合作，在北京舉辦為期三天的「2025國際氫能大會暨國際氫能及燃料電池產業展覽會」。機電署聯同煤氣公司和中國檢驗有限公司在展覽會上設立香港展區，展示本港綠色氫能發展的最新成果。機電工程署署長亦在展覽會上發表主題演講，並接受中國中央電視台專訪，向全國觀眾分享香港氫能的進展。

The inaugural International Hydrogen Development Symposium 2025, hosted by the EMSD and co-organised with the China Hydrogen Alliance, was held in March 2025, attracting over 800 representatives of government departments, public organisations, professional bodies and the academia from Hong Kong, Mainland and overseas regions. The symposium not only showcased the latest development of hydrogen technologies and engineering solutions, but also served as a valuable platform for the trade to exchange ideas on future development trends. In the same month, we partnered again with the China Hydrogen Alliance to host the three-day China International Hydrogen Congress and Exhibition 2025 in Beijing. The Hong Kong exhibition area, jointly set up by the EMSD, the HKCG and China Inspection Company Limited highlighted the city's latest achievements in green hydrogen development. The Director of Electrical and Mechanical Services also delivered a keynote speech at the venue and gave an exclusive interview to the China Central Television, sharing the progress of hydrogen energy in Hong Kong with a national audience.

有見跨境購物日益普及，機電署聯同海關和入境事務處在香園圍邊境管制站展示氣體安全宣傳橫額，以提高市民對附有「GU」標誌家用氣體爐具的安全意識。

Given the growing popularity of cross-border shopping, the EMSD joined hands with the Customs and the Immigration Department to display gas safety promotional banners at the Heung Yuen Wai Border Control Point, raising public awareness of household gas appliances bearing the GU mark.

在產品安全監管方面，機電署與海關總署持續推進「節能環」的監管工作，為內地電商平台和製造商代表舉辦簡報會，詳細說明家用燃氣器具和一次性石油氣瓶進口香港的審批要求。隨着便攜式烘烤爐日益普及，機電署與海關總署及日本瓦斯機器檢查協會等國際認證機構合作，制定統一的安全評估標準，確保新產品進入香港市場前，都符合嚴格安全規定。為提高市民對相關風險的認識，我們與海關和入境事務處加強宣傳工作，在香園圍、深圳灣和羅湖等邊境管制站展示宣傳橫額，提醒市民切勿攜帶未經批准的家用氣體爐具入境。

Regarding regulation of product safety, the EMSD and the GACC continued to advance regulatory efforts for the "energy-saving rings", holding briefings for representatives of Mainland e-commerce platforms and manufacturers to detail the approval requirements for importing household gas appliances and disposable LPG cylinders into Hong Kong. With the rising popularity of portable grill stoves, the EMSD collaborated with the GACC and international certification bodies like the Japan Gas Appliances Inspection Association to establish unified safety assessment standards, ensuring that new products comply with stringent safety requirements before entering the Hong Kong market. To raise public awareness of associated risks, we joined hands with the Customs and the Immigration Department to step up publicity campaigns by displaying promotional banners at border control points like Heung Yuen Wai, Shenzhen Bay and Lo Wu, reminding the public not to bring non-approved household gas appliances into Hong Kong.

在國際合作層面，機電署作為亞太區經濟合作組織（亞太經合組織）能源工作組轄下潔淨化石能源專家小組的成員，於2025年4月在香港舉行的會議上匯報香港的燃料供應和應急準備狀況，並分享油氣儲備政策和經驗。此外，由香港主導的氫能陸路運輸初步研究已經完成，並計劃於2025年9月舉辦能力培訓工作坊。這些合作與交流，凸顯香港作為連接內地與國際市場重要樞紐的關鍵角色，攜手邁向綠色未來。

On the front of international co-operation, the EMSD, as a member of the Expert Group on Clean Fossil Energy under the Asia-Pacific Economic Cooperation (APEC), reported on Hong Kong's fuel supply and emergency preparedness, and shared oil and gas reserve policies and experiences at the meeting held in Hong Kong in April 2025. Additionally, a preliminary study on hydrogen land transport led by Hong Kong was completed, with a capacity-building workshop scheduled for September 2025. These collaborative efforts and exchanges underscore Hong Kong's pivotal role as a key hub connecting the Mainland with international markets, working together towards a green future.

未來工作重點 Future Work Priorities

重點一：為規管氫燃料安全做好準備

隨着《2025年氣體安全（修訂）條例》刊憲，機電署會於2026年內草擬有關氫燃料的附屬法例，並提交立法會審議。我們亦準備發布第四份氫燃料應用技術指引，作為固定式氫燃料電池發電系統的暫行標準。與此同時，機電署繼續推廣氫能產業的人才培訓，包括支持職業訓練局開辦「氫燃料應用安全認知證書」課程，以及即將推出的氫燃料車輛維修技工課程，為業界培育專業技術人員。

Focus 1: Preparing for Regulation of Hydrogen Fuel Safety

Following the gazettal of the Gas Safety (Amendment) Ordinance 2025, the EMSD will draft subsidiary legislation on hydrogen fuel and introduce it into the LegCo for deliberation in 2026. The fourth technical guidelines on hydrogen fuel applications will also be published, serving as an interim standard for stationary HFC power generation systems. Concurrently, the EMSD continues to promote talent training for the hydrogen industry, including supporting the Vocational Training Council in offering a programme for the Certificate in Safety Awareness for Hydrogen Fuel Application, and the forthcoming courses for hydrogen fuelled vehicle mechanics, nurturing professional technicians for the trade.

重點二：建立綠色氫能標準認證框架

目前，國際社會對「綠色氫能」尚未有統一標準。為此，機電署於2024年8月展開研究，以制定一套既切合香港實際情況、又能與國家與國際基準接軌的氫能標準認證框架。我們計劃於2025年年底諮詢業界，並預計於2027年或之前全面落實相關框架，以推動綠色氫能發展，並創造新的經濟機遇。

Focus 2: Setting up a Certification Framework for Green Hydrogen Standards

Currently, there are no unified standards of "green hydrogen" in the international community. To this end, the EMSD undertook research in August 2024 to develop a certification framework for hydrogen standards tailored to Hong Kong's context while aligning with national and international benchmarks. Trade consultation will commence at the end of 2025, with full implementation targeted by 2027 to accelerate the development of green hydrogen and create new economic opportunities.

重點三：國際氫能發展論壇2026

繼2025年成功首辦「國際氫能發展論壇」後，機電署計劃在2026年5月18至20日舉辦第二屆論壇，並同時舉辦首屆「亞太經濟合作組織潔淨與低碳氫能年度會議」，以及一系列相關氫能宣傳活動。是次活動預計吸引全球氫能專家、企業領袖、政策制定者和持份者參與，共同探討尖端氫能技術和應用方案，促進國際交流與合作。

Focus 3: International Hydrogen Development Symposium 2026

Following the successful debut of the International Hydrogen Development Symposium 2025, the EMSD plans to host the second Symposium from 18 to 20 May 2026, concurrently with the first APEC Clean and Low-Carbon Hydrogen Annual Convention, and a series of hydrogen energy publicity campaigns. The event is expected to attract the participation of global hydrogen experts, trade leaders, policymakers and stakeholders to collaboratively explore cutting-edge hydrogen technologies and application solutions, fostering international exchange and co-operation.

重點四：全面檢視屋苑地下石油氣管道

鑑於地下石油氣管道的潛在問題難以透過目測方式識別，機電署計劃與註冊氣體供應公司合作，審視所有屋苑地下石油氣管道的風險因素，例如管道的使用年期、物料、周邊環境、維修記錄和居民人數。我們期望註冊氣體供應公司按照風險為本的原則，策略性地制定更換或加強維護地下石油氣管道的全面計劃，以確保氣體安全。

我們還積極與業界探討，除了在地下石油氣管道進行定期壓力測試外，可否進行氣密測試。相較於需要額外加壓的壓力測試，氣密測試可在正常運作壓力下進行，從而減少對用戶的干擾。在業界支持下，我們已按照風險為本的原則，在六個選定屋苑完成試點測試。未來，我們會繼續與註冊氣體供應公司協調，擴大測試範圍，以全面提升地下石油氣管道的安全水平。

Focus 4: Comprehensive Review of Underground LPG Pipelines in Residential Estates

Given the difficulty in identifying potential problems in underground LPG pipelines through visual inspections, the EMSD plans to collaborate with RGSCs to review risk factors associated with underground LPG pipelines in all residential estates, such as pipeline age, materials, surrounding environment, maintenance records and number of residents. We hope that RGSCs will strategically develop comprehensive plans for replacement or enhanced maintenance of underground LPG pipelines based on a risk-based principle to ensure gas safety.

We are also actively exploring with the trade the possibility of conducting air-tightness tests, alongside regular pressure tests for underground LPG pipelines. Compared to pressure tests that require additional pressurisation, air-tightness tests can be conducted at normal operating pressure, minimising disruption to users. With the trade support, we have completed pilot tests in six selected residential estates based on a risk-based principle. Moving forward, we will continue to co-ordinate with RGSCs to expand the scope of testing, with a view to comprehensively improving the safety of underground LPG pipelines.

重點五：提升石油氣裝置的安全標準

為進一步提升石油氣裝置的安全標準，機電署正與註冊氣體供應公司協調，在麗晶花園的石油氣庫安裝與電動閥門聯動的氣體偵測系統。當系統偵測到石油氣庫內有氣體泄漏，會立即自動關閉閥門，防止氣體進一步泄漏，從而大減火災或爆炸的風險。展望未來，我們會繼續鼓勵業界在其他石油氣庫採用同類系統，利用科技提升本港石油氣設施的安全標準。

Focus 5: Raising the Safety Standards of LPG Installations

To further raise the safety standards of LPG installations, the EMSD is co-ordinating with RGSCs to install a gas detection system interlocking with electric valves at the LPG compound in Richland Gardens. When a gas leakage is detected within the LPG compound, the system will automatically shut off the valves to prevent further gas leakage, thereby significantly mitigating the risk of fire or explosion. Looking ahead, we will continue to encourage the trade to adopt similar systems at other LPG compounds, leveraging technology to raise the safety standards of LPG installations in Hong Kong.

重點六：加強應對氣體事故的能力

機電署會持續加強與註冊氣體供應公司及其他政府決策局/部門的協作，以提升應對極端天氣事件和重大氣體事故的應變能力。在災害應變方面，我們已建立極端天氣預警機制，並與各方保持緊密溝通，確保氣體供應設施做好充分準備應對緊急情況。我們亦與註冊氣體供應公司合作，定期檢視應變程序手冊和人員培訓課程，以持續改善業界的在處理緊急事故方面的準備和應變能力。

在演習機制方面，我們會擴大模擬範圍，涵蓋洪水、雷暴和颱風等極端天氣事件與重大氣體事故，旨在全面檢視重要氣體設施所有消防和防水設備的運作效能，並評估應急人員的準備能力，以及與相關政府決策局/部門的協調能力。

Focus 6: Strengthening Capabilities to Respond to Gas Incidents

The EMSD will continue to deepen collaboration with RGSCs and other government bureaux/departments to enhance the capabilities to respond to extreme weather events and major gas incidents. Regarding disaster response, we have established an extreme weather warning mechanism and maintained close communication with various parties to ensure that gas supply facilities are fully prepared for emergencies. We also work with RGSCs to regularly review emergency procedure manuals and staff training modules, continuously improving the trade's preparedness and resilience in handling emergencies.

In terms of drill mechanisms, we will widen the scope of simulations to include extreme weather events like floods, thunderstorms and typhoons, as well as major gas incidents, with the aim of comprehensively reviewing the operational effectiveness of all firefighting and waterproofing equipment at critical gas facilities, and assessing the preparedness of emergency personnel and co-ordination with relevant government bureaux/departments.

重點七：發展輸氣管道無人機巡視系統

為配合低空經濟發展，機電署積極支持煤氣公司的創新項目，利用無人機巡視大帽山至大欖郊野公園之間的高壓輸氣管道。無人機配備高解析度攝影機和靈敏氣體感測器，透過定期拍攝和影像比對，準確識別地形變化，以及潛在的山泥傾瀉和氣體泄漏風險。

項目現正處於設計階段，預計於2025年第三季展開實地測試。我們期望透過採用預設的自動化飛行路線，對該段全長14公里、跨越山區的高壓輸氣管道進行智能巡查，從而減少對勞力密集和高風險人工巡查的需求。

Focus 7: Developing Drone Inspection Systems for Gas Pipelines

To support the development of low-altitude economy, the EMSD is actively backing the HKCG's innovative project that utilises drones to inspect the high-pressure gas pipeline between Tai Mo Shan and Tai Lam Country Park. Equipped with high-resolution cameras and sensitive gas detectors, the drones can accurately identify terrain changes, and potential risks of landslides or gas leaks through regular photography and image comparison.

The project is now in the design stage, with a field test scheduled for the third quarter of 2025. By employing pre-programmed, automated flight routes, we hope to conduct intelligent inspections of this 14-km section of high-pressure gas pipeline running over mountainous terrains, thereby reducing the need for labour-intensive and risky manual surveys.

重點八：香港國際熱氣球節

香港首個大型「國際熱氣球節」將於2025年9月4日至7日在中環舉行，展出來自世界各地以石油氣為燃料的熱氣球。由於石油氣的運送、儲存及使用必須符合《氣體安全條例》（香港法例第51章）的規定，因此機電署會審批主辦機構提交有關石油氣瓶的類型設計和批准使用與建造石油氣瓶儲存間的申請，確保相關設備及設施符合安全標準和法定要求。此外，機電署會檢視石油氣瓶的運送及現場操作安排，並在活動期間派員巡查，嚴格監察各項氣體安全措施的執行情況，確保活動安全和順利進行。

Focus 8: International Hot Air Balloon Fest Hong Kong

Hong Kong's first large-scale International Hot Air Balloon Fest will be held in Central from 4 to 7 September 2025, showcasing hot air balloons fuelled by LPG from around the world. As the transportation, storage and use of LPG must comply with the Gas Safety Ordinance (Cap. 51), the EMSD will review the organiser's applications for type approval of LPG cylinders and approval of construction and use of an LPG cylinder store to ensure that all relevant equipment and facilities meet safety standards and statutory requirements. Furthermore, the EMSD will examine the arrangements for LPG cylinder transportation and on-site operations, and deploy staff to conduct inspections during the event to strictly monitor the implementation of gas safety measures, ensuring a safe and smooth festival experience.

重點九：規管製冷劑處理工作，提升技術員專業水平

新修訂的《保護臭氧層條例》將規管製冷劑的處理工作。為此，機電署會聯同環境及生態局和環保署擬定相關附屬法例，協助業界開辦更多培訓課程，並制定《製冷劑處理工作守則》，以提升操作規範。此外，機電署會成立正式的「製冷劑技術諮詢委員會」，延續政府與業界的協作，為空調及冷凍業界提供技術支援，提升技術員在製冷劑處理方面的專業水平。

Focus 9: Regulating Refrigerant Handling Works and Raising Professional Standards of Technicians

The newly amended Ozone Layer Protection Ordinance will introduce regulatory control over the handling of refrigerants. To this end, the EMSD will collaborate with the EEB and the EPD to prepare the relevant subsidiary legislation, assist the trade in offering more training courses and compile the Code of Practice for Refrigerant Handling, so as to enhance operational practices. Besides, the EMSD will set up the official Refrigerant Technical Advisory Committee to continue the collaboration between the Government and the trade, providing technical support for the air-conditioning and refrigeration sector, and enhancing the professional competence of technicians in refrigerant handling.

重點十：協助建設廢紙回收設施

為落實《2020年施政報告》和《香港資源循環藍圖2035》提出的廢物管理政策，位於屯門環保園的大型現代化紙漿生產設施預計於2025年投入運作。該設施採用先進技術，把本地回收所得的廢紙轉化為紙漿原料，過程中由廢水產生的沼氣會轉化為電力，用於設施運作。機電署與環保署及承建商緊密合作，從氣體風險角度提供專業意見，並審批註冊氣體供應公司及應具報氣體裝置的申請，確保設施符合安全規範。

Focus 10: Facilitating the Construction of Waste Paper Recycling Facilities

To implement the waste management policies outlined in the 2020 Policy Address and the Waste Blueprint for Hong Kong 2035, a large-scale modern pulping facility located in the EcoPark in Tuen Mun is expected to commence operation in 2025. Using advanced technology, the facility will convert locally-recycled waste paper into raw pulp material, while the biogas generated from wastewater during the process will be converted into electricity to power the facility. The EMSD closely collaborates with the EPD and contractors, providing professional advice from a gas-risk perspective and reviewing applications for RGSCs and NGIs to ensure compliance with safety standards.

保障公眾安全
PROTECTING PUBLIC SAFETY

重點巡查食肆與商店　提升氣體安全

ENHANCING GAS SAFETY THROUGH FOCUSED INSPECTIONS OF RESTAURANTS AND SHOPS

火鍋料理一直深受香港市民喜愛，不少食肆會提供卡式石油氣爐，以提升顧客的用餐體驗。然而，部分食肆使用未經機電署審批的卡式石油氣爐（「非GU爐具」），對公眾構成安全隱患。

Hotpot cuisine has long been a favourite among Hong Kong citizens, with many restaurants providing LPG cassette cookers to enhance the dining experience. However, some restaurants use LPG cassette cookers that have not been approved by the EMSD ("non-GU appliances"), posing otential safety hazards to the public.

為保障市民安全，機電署團隊於年內展開全港性巡查行動，重點檢查逾千間提供火鍋或類似菜式的食肆，以及出售卡式石油氣爐的商店。是次大型行動需周詳部署，以確保能在不影響部別正常運作的情況下完成任務。負責統籌行動的工程師蔡家裕先生表示：「約1300間相關食肆分布全港各區，且多於傍晚營業，令巡查時段受限。為減低對食肆營業的影響，我們特別規劃巡查路線和時間表，務求高效率地完成工作。」

To safeguard public safety, the EMSD team launched a territory-wide inspection campaign during the year, targeting over 1000 restaurants serving hotpot or similar dishes and retailers selling LPG cassette cookers. The large-scale operation required meticulous planning to ensure the mission could be accomplished without disrupting the division's normal operations. Mr Choi Ka-yu, Ray, Engineer cum campaign co-ordinator, remarked, "Around 1300 such restaurants are spread across various districts, and most operate during evening hours, thus limiting our inspection window. We strategically planned inspection routes and schedules to maximise efficiency while minimising disruption to their businesses."

談到行動的挑戰，助理機械督察謝國寧先生表示：「巡查工作時間緊迫，我們還需兼顧日常職務。幸好團隊通力合作，靈活應對，僅花四個月便完成所有巡查，成功克服挑戰。」

Talking about the operational challenges, Mr Tse Kwok-ning, Assistant Mechanical Inspector, remarked, "The tight inspection schedule coincided with our routine duties. Fortunately, with strong teamwork and flexibility, we completed all inspections within just four months and successfully overcame the challenges."

面對食肆東主對巡查有所顧慮，機械督察鄧冠榮先生認為耐心溝通至為重要。他說：「部分東主起初擔心巡查會影響生意，但在我們詳細講解過往事故成因後，他們都明白保障安全的重要性，願意積極配合和作出改善。」

In response to the concerns of restaurant proprietors about the inspections, Mr Tang Kwun-wing, Mechanical Inspector, highlighted the importance of patient communication. He said, "Some proprietors were initially worried that inspections might affect their business. However, after our team explained in detail the causes of past incidents, they came to understand the importance of ensuring safety and were willing to co-operate and make improvements proactively."

巡查期間，團隊發現部分食肆使用「非GU爐具」。為從源頭堵截「非GU爐具」，團隊每月巡查30間零售店舖。助理機械督察吳序強先生和劉致成先生強調：「一旦發現使用或銷售『非GU爐具』，我們會即時檢取證物進行調查；如證據充足，便會作出檢控。我們致力保障氣體安全，絕不姑息違規行為。」

During the inspections, the team identified the use of "non-GU appliances" in some restaurants. To intercept such appliances at source, the team conducted monthly inspections of 30 retail outlets. Mr Ng Chui-keung, Nick and Mr Lau Chi-shing, Assistant Mechanical Inspectors, emphasised, "Whenever we discover the use or sale of 'non-GU appliances', we will immediately seize the exhibits for investigation. Prosecution will follow if sufficient evidence is found. We are committed to safeguarding gas safety and upholding a zero-tolerance stance on non-compliance."

展望未來，機電署會持續加強社區和食肆的宣傳教育工作，特別在公共屋邨和邊境管制站推廣氣體安全，進一步提升公眾意識。蔡先生表示：「我們會主動預防，防患未然，竭力守護香港的氣體安全。」

Looking ahead, the EMSD will continue to strengthen publicity and education efforts in communities and restaurants, with a particular focus on promoting gas safety in public housing estates and at boundary control points to further raise public awareness. "Embracing a proactive prevention approach, we will make every effort to safeguard gas safety in Hong Kong." Mr Choi stated.

推動氫能發展　說好香港故事

PROMOTING HYDROGEN DEVELOPMENT AND TELLING GOOD STORIES OF HONG KONG

推動氫能發展是2050年前實現碳中和的關鍵策略之一。除了推展《氣體安全條例》的修訂工作，機電署亦成功舉辦兩項標誌性的國際活動，促進本地與國際氫能技術的交流，說好香港故事。

Promoting hydrogen development is one of the key strategies for achieving carbon neutrality by 2050. In addition to advancing amendments to the Gas Safety Ordinance, the EMSD successfully hosted two signature international events to foster the exchange of hydrogen technologies both locally and globally, telling the good stories of Hong Kong.

由今年初向立法會提交《2025年氣體安全（修訂）條例草案》至最終獲得通過，整個立法程序歷時半年。工程師趙國華先生表示：「修例過程極具挑戰，我們需在短時間內準備技術概要文件，以回應議員的質詢。在團隊的共同努力下，草案順利通過，讓我們獲得很多寶貴經驗。」附屬法例預計於明年下半年提交立法會審議。修訂條例及附屬法例將有效規管氫燃料的整個供應鏈，保障市民安全。

The legislative process for the Gas Safety (Amendment) Bill 2025 took six months, from its initial submission to the Legislative Council (LegCo) earlier this year to final passage. Engineer Chiu Kwok-wah noted, "The amendment process presented significant challenges. We had to prepare technical briefs within a short timeframe to address legislators' enquiries. Through our team's concerted efforts, the bill was passed smoothly, and we gained a lot of invaluable experience." The subsidiary legislation is scheduled for submission to the LegCo for scrutiny in the latter half of next year. The amended ordinance and its subsidiary legislation will effectively regulate the entire hydrogen fuel supply chain, ensuring public safety.

機電署肩負「超級聯繫人」的角色，於今年三月首辦「國際氫能發展論壇」。工程師曾慶煒先生表示：「儘管困難重重，但我非常榮幸能參與籌辦這次論壇。我們只有四個月時間籌備這項盛事，但憑藉團隊合作與多方協調，成功邀請來自本地、內地及海外多家氫能機構的70多位講者支持，吸引超過800名專家出席。論壇展示了香港在氫能發展方面的進步，真正實現『引進來、走出去』的目標。」

Shouldering the role of a "super-connector", the EMSD organised the first International Hydrogen Development Symposium this March. Engineer Tsang Hing-wai remarked, "Despite the challenges, I am very honoured to have participated in organising the Symposium. We had only four months to prepare for this mega event, but thanks to teamwork and multi-party co-ordination, we successfully secured the support of over 70 speakers from various hydrogen organisations in the local community, the Mainland and overseas, drawing an attendance of more than 800 experts. This Symposium showcased Hong Kong's advancements in hydrogen development and truly achieved our goal of 'going global and attracting foreign investment'."

同月下旬，機電署與中國氫能聯盟在北京合辦「2025國際氫能大會暨國際氫能及燃料電池產業展覽會」。工程師林向涌先生憶述：「我們設立了香港展區，署長不僅在現場發表主題演講，更接受中國中央電視台專訪。我們非常榮幸能向全國分享香港氫能發展，並向在場學生講解香港氫燃料電池雙層巴士和加氫站的試驗計劃。透過科普活動培養下一代的低碳意識，實在饒有意義。」

Later that month, the EMSD co-hosted the China International Hydrogen Congress and Exhibition 2025 in Beijing with the China Hydrogen Alliance. "We set up a Hong Kong exhibition area. Our Director not only delivered a keynote speech on-site, but also gave an exclusive interview to the China Central Television," Engineer Lam Heung-chung recalled. "We were very honoured to share the development of hydrogen energy in Hong Kong with the nation, and explain the trial scheme for hydrogen fuel cell double-decker bus and hydrogen filling station in Hong Kong to the students present. It is exceptionally meaningful to foster low-carbon awareness among the next generation through popular science events."

林先生補充：「誠如署長所言，我們可以發揮香港『背靠祖國，聯通世界』的獨特優勢，推動香港成為氫能發展的示範基地，為下一代建設綠色未來。」

"As our Director said, by leveraging Hong Kong's distinctive advantages of enjoying strong support of the motherland and being closely connected to the world, we can promote Hong Kong as a demonstration base for the development of hydrogen energy, building a green future for the next generation," Mr Lam added.

保障公眾安全
PROTECTING PUBLIC SAFETY

機械安全

善用創新科技

機電工程署（機電署）積極推動創新科技應用，以全面提升機電安全和服務效率。截至2025年3月，超過62 000部升降機和自動梯已使用「升降機及自動梯數碼工作日誌」（數碼工作日誌），遠超去年所定的48 000部目標。數碼工作日誌於同年推出多項新功能，包括開放應用程式介面，可在不同電腦系統之間自動傳輸工作數據，讓升降機和自動梯的負責人與承辦商掌握最新資料。此外，我們亦為華為設備用戶推出與鴻蒙作業系統兼容的流動應用程式版本。新增的「提交特別保養記錄」功能，讓從業員把尚未配備必須的安全裝置的升降機的特別保養記錄上載至數碼工作日誌。

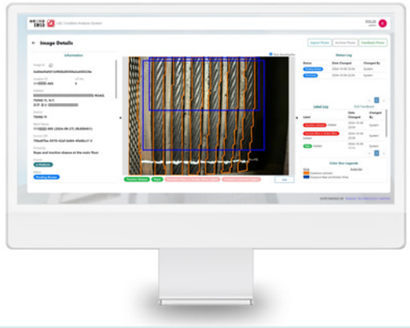
與此同時，由機電署開發的「升降機及自動梯狀況分析系統」於2024年11月推出。系統利用深度機器學習技術，分析數碼工作日誌中的照片，以評估關鍵零件的狀況。目前，該系統可識別12種升降機和自動梯部件，並檢測懸吊纜索和制動襯墊等的異常情況。機電署正致力擴展系統功能，透過增加可識別的部件種類，提升規管工作的效率。

MECHANICAL SAFETY

Utilising Innovation and Technology

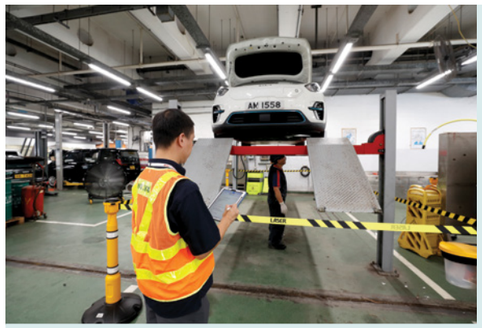
The Electrical and Mechanical Services Department (EMSD) actively promotes the application of innovation and technology to comprehensively improve electrical and mechanical (E&M) safety and service efficiency. As of March 2025, over 62 000 lifts and escalators adopted the Digital Log-books System for Lifts and Escalators (DLBs), far exceeding the target of 48 000 set last year. In the same year, a number of new DLB features were introduced, including an open application programming interface for automatic transfer of operational data among different computer systems, allowing responsible persons and contractors of lifts and escalators to stay abreast with the latest information. Besides, a HarmonyOS-compatible version of the mobile app has been launched for Huawei devices users. Also, the new Submit Special Maintenance Records function allows practitioners to upload special maintenance records of lifts lacking essential safety devices to the DLBs.

Meanwhile, the Lift and Escalator Condition Analysis System, developed by the EMSD, was launched in November 2024. The system leverages deep machine learning to analyse photos from the DLBs to assess the condition of critical components. It can currently identify 12 types of lift and escalator components and detect anomalies in items such as suspension ropes and brake pads. The EMSD is endeavouring to expand the system's capabilities by increasing the number of identifiable components to enhance regulatory efficiency.



機電署研發的「升降機及自動梯狀況分析系統」已投入運作。系統運用深度機器學習技術分析圖像，以評估升降機及自動梯12種關鍵部件的狀態。

The Lift and Escalator Condition Analysis System, developed by the EMSD, has been put into operation. Utilising deep machine learning to analyse images, the system assesses the condition of 12 critical components in lifts and escalators.



機電署已全面採用平板電腦進行車輛維修工場的稽核巡查，以實現相關數據和記錄數碼化。此舉不僅簡化報告流程，更提高審核數據的可追溯性。

The EMSD has fully adopted tablet computers for audit inspections of vehicle maintenance workshops, thereby achieving the digitalisation of related data and records. This initiative has not only streamlined the reporting process, but also enhanced the traceability of audit data.

為提升處理註冊申請的效率，車輛維修註冊組採用人工智能光學字元辨識技術，開發「智慧登記系統」。該系統可從手寫表格和各類證明文件（例如工作經驗證明、資格證書、培訓記錄和商業登記證）中自動提取關鍵資料，實現數據輸入及審核自動化，大幅減少以人手處理文書工作。

我們亦以平板電腦取代傳統紙本記錄方式，使車輛維修工場稽核巡查數碼化。這些平板電腦配備人工智能影像處理功能，稽核人員只需使用內置攝影機拍攝工場照片，系統便能自動識別影像中的各類設備，並直接儲存數據，把對工場日常運作的影響減至最低。同時，平板電腦可即時上載稽核結果及相關照片，實現數據同步，不僅簡化報告流程，提高數據可追溯性，還讓我們即時查閱相關檢查清單和歷史數據。

To increase the efficiency of registration processing, the Vehicle Maintenance Registration Unit has developed a Smart Registration System using AI-driven optical character recognition (OCR) technology. The system automatically extracts key information from handwritten forms and supporting documents, such as proof of work experience, qualification certificates, training records and business registration certificates, and automates data entry and review, significantly reducing manual paperwork.

We have also replaced traditional paper-based records with tablet computers to digitise audit inspections of vehicle maintenance workshops. These tablets are equipped with AI-powered image processing, enabling auditors to capture workshop photos using the built-in camera. The system automatically identifies various equipment in the images and directly stores the data, minimising disruption to the workshops' daily operations. The tablets have also realised data synchronisation by supporting real-time uploading of audit results and related photos, which not only have streamlined reporting process and improved data traceability, but also allows instant access to relevant inspection checklists and historical data.

保障公眾安全
PROTECTING PUBLIC SAFETY

為支持智能城市建設，機電署積極推廣「機械化泊車系統」，以緩解停車位短缺問題。首個地下圓筒型機械化泊車系統於2024年獲得種類許可，並預計於2026/27年度在深水埗落成。年內，機電署持續跟進港珠澳大橋香港口岸大型停車場內自動導引車式機械化泊車系統的安裝進度，為該系統制定專用檢驗報告，並多次進行現場預檢，以識別需改善項目。在機電署、機場管理局和承辦商的共同努力下，三分一的系統已通過檢查，並於2025年3月獲發准用證。項目預計於2025年第四季試運，以滿足旅客的停車需求。此外，註冊車輛維修技工現可透過網上平台「VM加分站」，隨時隨地查閱及管理其持續專業進修記錄，並上載其他機構頒發的持續專業進修證書，安坐家中即可完成續牌申請。

In support of smart city initiatives, the EMSD has actively promoted mechanised vehicle parking systems (MVPSs) to alleviate the shortage of parking spaces. Type approval was granted to the first underground circular shaft-type MVPS in 2024, with expected completion in Sham Shui Po in 2026/27. During the year, the EMSD continued to follow up on the installation progress of an automated guided vehicle-type MVPS in the mega car parks at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port. A new specialised examination report was tailor-made for the system, and multiple on-site pre-inspections were conducted to identify areas for improvement. Through the joint efforts of the EMSD, the Airport Authority and the contractors, one-third of the MVPS passed the inspection, and received use permits in March 2025. A soft opening of the car park is expected in the fourth quarter of 2025 to meet the parking needs of travellers. Moreover, registered vehicle mechanics can now access and manage their continuing professional development (CPD) records anytime, anywhere, and upload CPD certificates issued by other organisations via the online platform VM Learning Station, allowing licence renewal to be completed from home.

機電署積極推廣「機械化泊車系統」，跟進港珠澳大橋香港口岸大型停車場內自動導引車式機械化泊車系統的安裝進度，為該系統制定專用檢驗報告，並多次進行現場預檢，以識別需改善項目。

The EMSD has actively promoted MVPSs, following up on the installation progress of an automated guided vehicle-type MVPS in the mega car parks at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port. A new specialised examination report was tailor-made for the system, and multiple on-site pre-inspections were conducted to identify areas for improvement.

「優化升降機資助計劃」

截至2025年第一季，「優化升降機資助計劃」進展順利，約有5 500部升降機正展開籌備工作。目前已有1 780部升降機完成更換或優化並投入運作，另約2 000部已簽訂工程合約或正在施工，預計完工數量會穩步上升。值得一提的是，98%的申請個案（按升降機數目計算）選擇全面更換，不僅涉及安裝現代化安全裝置，還包括高效節能的曳引機和控制組件。這些升級大幅提升了升降機的性能和可靠程度，同時達致更佳的節能效果。

Lift Modernisation Subsidy Scheme

As of the first quarter of 2025, the Lift Modernisation Subsidy Scheme (LIMSS) has been progressing smoothly, with preparatory work underway for approximately 5 500 lifts. To date, 1 780 lifts have been replaced or modernised and put into operation, while works contracts have been signed or construction has commenced for approximately 2 000 lifts. The number of completed projects is expected to rise steadily. Notably, 98% of the applications (by lift count) have opted for a complete replacement, which not only involves the installation of modern safety devices but also includes highly efficient and energy-saving traction machines and control components. These upgrades have significantly enhanced lift performance and reliability while achieving better energy-saving results.

機電署與市區重建局緊密合作，為在「優化升降機資助計劃」下合資格且有需要的居民提供社區外展服務，以緩解升降機工程期間居民出行不便的問題，展現以民為本的服務精神。

The EMSD worked closely with the Urban Renewal Authority to provide outreach social services for eligible residents in need under the "Lift Modernisation Subsidy Scheme". This initiative aims to alleviate mobility inconveniences during the lift works period, demonstrating a people-oriented service ethos.

計劃實施期間，我們與市區重建局緊密合作，為合資格且有需要的居民提供多項外展社會服務，有效緩解工程期間居民出行不便的問題。這些貼心服務成效顯著，深受居民好評和讚賞。

During the implementation of the scheme, we worked closely with the Urban Renewal Authority to provide a wide range of outreach social services for eligible residents in need, effectively mitigating mobility inconveniences during the construction period. This thoughtful support has proven effective and received high praise and recognition from residents.

確保基建和節慶活動的機電安全

2024年，香港有兩項重大設施相繼落成，分別為香港國際機場三跑道系統和啟德體育園。為迎接三跑道系統啟用，機電署與香港機場管理局等持份者保持緊密溝通和協調。我們在短時間內順利完成系統內117部升降機、自動梯和自動行人道的檢查及審批工作。

作為香港最大的綜合體育與娛樂地標，啟德體育園設有139部升降機和自動梯。為確保主場館、室內體育館、運動健康中心，以及相關零售和餐飲設施內的升降機和自動梯順利啟用，我們調配額外人手，加快審批文件和檢查現場，確保體育園於2025年3月1日盛大開幕前，每部升降機和自動梯都符合安全標準。

此外，為籌備2024年冬季在中環海濱活動空間舉行的嘉年華，機電署早於同年7月便開始與主辦單位協調，處理25項機動遊戲機的申請。儘管貨運出現延誤，我們仍與主辦單位保持緊密溝通和協調，優先對所有機動遊戲機進行全面安全測試和檢查。在各方共同努力下，嘉年華於2024年12月20日安全如期舉行。

Ensuring Electrical and Mechanical Safety for Infrastructure and Festive Events

The year 2024 marked the completion of two major facilities in Hong Kong, namely the Three-runway System at Hong Kong International Airport and the Kai Tak Sports Park. In preparation for the launch of the Three-runway System, the EMSD maintained close communication and co-ordination with stakeholders, including the Airport Authority Hong Kong. We successfully completed the inspection and approval of 117 lifts, escalators and moving walkways of the system in a short time.

As Hong Kong's largest integrated sports and entertainment landmark, the Kai Tak Sports Park is equipped with 139 lifts and escalators. To ensure their smooth commissioning in the main stadium, indoor sports hall, sports and health centre, and the associated retail and dining facilities, we deployed additional manpower to expedite document reviews and on-site inspections. This ensured that every lift and escalator complied with safety standards ahead of the sports park's grand opening on 1 March 2025.

Furthermore, to prepare for the carnival held at the Central Harbourfront Event Space in the winter of 2024, the EMSD initiated co-ordination with the organisers as early as July of the same year, processing 25 applications for amusement rides. Despite freight delays, we maintained close communication and co-ordination with the organisers, prioritising thorough safety testing and inspections of all the rides. Thanks to the concerted efforts of all parties, the carnival was held as scheduled on 20 December 2024 in a safe manner.

機電署與嘉年華主辦單位保持緊密協調，優先對所有機動遊戲機進行安全測試和檢查，讓活動得以安全如期舉行。

The EMSD maintained close co-ordination with the carnival organisers, prioritising safety testing and inspections of all the rides, so that the carnival could be held safely as scheduled.

保障公眾安全
PROTECTING PUBLIC SAFETY

預防安全事故

本港目前約有2 500部升降機處於合約批出或施工階段，這對項目和資源規劃構成重大挑戰。機電署會與業主、業界和項目顧問保持緊密聯繫，密切監察工程進度，確保項目如期完成。同時，「申請在主要更改後升降機/自動梯的復用證」的遞交數目顯著增加，由去年約1 800份申請上升至今年的2 200份。為應對此增長，機電署鼓勵業界使用網上預約系統，靈活高效地安排檢驗日期。此舉進一步把處理時間由13天縮短至平均約4天，確保市民能在節日前安全舒適地使用經優化的升降機和自動梯。

2024年上半年，惡劣天氣引發連串大規模電壓驟降和電力故障，導致多部升降機同時發生困人事故。為此，機電署與業界設立聯絡機制，以提升應對類似情況的能力。我們還與纜車和主題公園營運商建立有效的溝通協議，並會監督其緊急演練和惡劣天氣的應變準備工作。

除了加強與業界溝通外，機電署亦透過修訂實務守則，規管升降機的安全設備。我們已發布《升降機及自動梯設計及構造實務守則》第DC03號增編，當中規定除非大廈能提供替代電源（如緊急發電機），在停電時仍能操作升降機及釋放被困乘客，否則所有新安裝的升降機必須配備自動救援裝置。就該增編內容，我們已諮詢業界、專業團體和相關政府部門意見。在升降機及自動梯安全諮詢委員會的支持下，第DC03號增編於2025年2月刊憲，並於2025年6月1日生效。同時，我們要求參與「優化升降機資助計劃」的項目，若其升降機更換或優化工程涉及更改控制系統，且於生效日期後招標，則必須安裝自動救援裝置。此外，這些升降機還需配備雙重制動系統、機廂非預定移動保護裝置、機廂上行超速保護裝置，以及機廂門鎖門裝置及安全門刀等現代化安全裝置，以保障乘客安全。

機電署同樣重視工作安全和推廣安全文化。為此，我們牽頭與升降機業界成立工作小組，持續檢討工作安全事宜並制定新措施。我們定期向工程人員和註冊承辦商發送安全提示，並在《電梯通訊》中撰寫安全專欄，鼓勵業界分享案例，以防重蹈覆轍。我們亦開發了升降機及自動梯安全的虛擬實境培訓模組，用作培訓工程人員和提高其工作安全意識。

Preventing Safety Incidents

Currently, there are approximately 2 500 lifts in Hong Kong at the contract awarding or construction stage, posing significant challenges to project and resource planning. The EMSD will maintain close liaison with owners, the trade and project consultants to closely monitor the progress and ensure timely project completion. Concurrently, the number of submissions for the Application for a Resumption Permit for Resuming the Use and Operation of a Lift or an Escalator after Major Alteration has increased significantly from approximately 1 800 last year to 2 200 this year. To address this surge, the EMSD encourages the trade to use the online booking system to flexibly and efficiently arrange for inspection dates. This initiative has further reduced the processing time from 13 days to an average of around 4 days, ensuring that the public can safely and comfortably use the modernised lifts and escalators before the holidays.

In the first half of 2024, adverse weather triggered a series of large-scale voltage dips and power failures, resulting in numerous simultaneous lift entrapment incidents. In this connection, the EMSD established a liaison mechanism with the trade to strengthen our capabilities to cope with similar situations. We also set up effective communication protocols with cable car and theme park operators, and will oversee their emergency drills and contingency preparations for adverse weather.

In addition to enhancing communication with the trade, the EMSD regulates lift safety equipment through revisions to codes of practice. We have issued Addendum No. DC03 to the Code of Practice on the Design and Construction of Lifts and Escalators, mandating that all newly installed lifts be equipped with an automatic rescue device (ARD), unless the building can provide an alternative power source (e.g., an emergency generator) to operate the lift and release trapped passengers during an outage. The trade, professional bodies and relevant government departments were consulted on the addendum. With the support of the Lift and Escalator Safety Advisory Committee, Addendum No. DC03 was gazetted in February 2025 and came into effect on 1 June 2025. Meanwhile, for those LIMSS projects whose lift replacement or modernisation works involve control system replacement, installation of an ARD is mandatory if the tender is issued after the effective date. Moreover, these lifts must be equipped with modern safety devices, including the double braking system, unintended car movement protection device, ascending car overspeed protection device, and car door locking device and door safety edge to ensure passenger safety.

The EMSD also places great importance on work safety and promotion of a safety culture. To this end, we have taken the lead in establishing a working group with the lift industry to continuously review work safety issues and develop new measures. We regularly disseminate safety reminders to workers and registered contractors, while contributing a safety column to the Lift and Escalator Newsletter to encourage case sharing in the trade, with a view to preventing recurrence of similar incidents. We have also developed a virtual reality (VR) training module on lift and escalator safety for training workers and raising their workplace safety awareness.

加強業界互動與推廣

為協助車輛維修行業與時俱進，並應對本地電動車維修服務的需求，機電署於2024年7月22日宣布在「車輛維修技工自願註冊計劃」和「車輛維修工場自願註冊計劃」新增電動車維修範圍，標誌着行業發展邁出重要一步。隨後，我們於2024年9月13日舉辦「電動車維修培訓課程學員分享會暨電動車維修服務類別技工註冊證頒發儀式」，讓從業員交流電動車維修經驗。此外，我們於2025年2月20日舉辦電動車（高電壓）註冊工場註冊流程簡介會，吸引約100名業界代表參與。在活動中，六家第三方認證機構介紹其服務，協助持份者準備註冊申請，並確保符合相關安全標準。是次簡介會加深了業界對新增電動車（高電壓）工場註冊類別的理解，並促進電動車維修發展的討論。

Strengthening Industry Interaction and Promotion

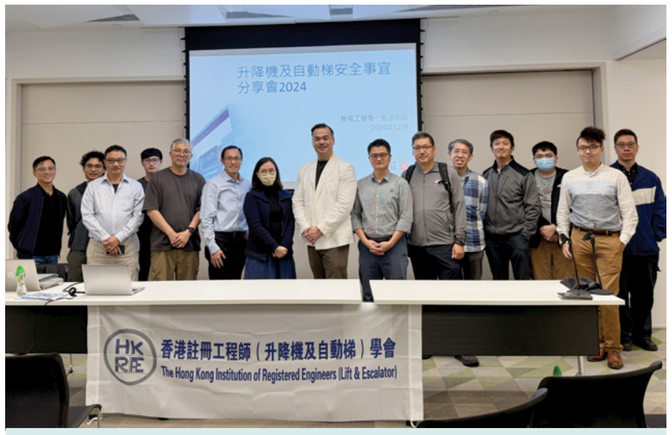
To help the vehicle maintenance industry keep pace with the times and cope with local demand for electric vehicle (EV) maintenance services, the EMSD announced the introduction of EV maintenance scope to the Voluntary Registration Scheme for Vehicle Mechanics and the Voluntary Registration Scheme for Vehicle Maintenance Workshops on 22 July 2024, marking a significant step forward in the trade's development. Subsequently, on 13 September 2024, we held a Sharing Session by Students of Electric Vehicle Maintenance Courses cum Presentation Ceremony of Registration Cards for Vehicle Mechanics with Electric Vehicle Maintenance Service Classes, allowing practitioners to exchange experience in EV maintenance. Moreover, on 20 February 2025, we organised a briefing session on the registration process for EV (High Voltage) (EVH) Workshops, drawing the attendance of around 100 industry representatives. During the event, six third-party certification bodies introduced their services to help stakeholders prepare registration applications and ensure compliance with relevant safety standards. The session deepened the trade's understanding of the newly introduced registration category for EVH workshops and facilitated discussions on the development of EV maintenance.

「電動車維修培訓課程學員分享會暨電動車維修服務類別技工註冊證頒發儀式」於2024年9月13日圓滿舉行，為從業員提供平台進行交流。

A Sharing Session by Students of Electric Vehicle Maintenance Courses cum Presentation Ceremony of Registration Cards for Vehicle Mechanics with Electric Vehicle Maintenance Service Classes was successfully held on 13 September 2024, providing a platform for exchanges among practitioners.

為協助業界掌握電動車維修工場的註冊流程，機電署於2025年2月20日舉辦電動車（高電壓）註冊工場註冊流程簡介會。活動特別邀請第三方認證機構介紹其服務，協助持份者準備註冊申請，並確保符合相關註冊要求。

To assist the trade in grasping the registration process for electric vehicle maintenance workshops, the EMSD organised a briefing session on the registration process for EVH Workshops on 20 February 2025. Third-party certification bodies were specially invited to introduce their services to help stakeholders prepare registration applications and ensure compliance with relevant registration requirements.



為確保業界掌握升降機和自動梯的最新安全資訊和技術標準，機電署積極參與各類業界活動，與業界分享相關資訊。例如，2024年12月11日，我們在業界活動上與超過80名業界從業員分享重要安全資訊。

To ensure that the trade kept abreast of the latest safety information and technical standards for lifts and escalators, the EMSD actively participated in various industry events, sharing relevant information with the trade. For instance, on 11 December 2024, we shared vital safety information with over 80 trade practitioners in an industry event.

在升降機及自動梯安全方面，機電署於2024年12月11日獲邀在業界活動上分享最新安全資訊，吸引超過80名業界從業員以面對面或線上方式參與。此外，我們一直推行「優質升降機服務認可計劃」，鼓勵升降機負責人（包括業主、業主立案法團和物業管理公司）透過改善措施，提高現有升降機的安全水平、可靠程度和舒適感。為進一步提高計劃參與度，我們於2024/25年度簡化申請程序、優化審批流程，以及舉辦超過八場宣傳演講。這些工作讓負責人認識《升降機及自動梯條例》（第618章）、闡明其法定責任，並凸顯優化升降機的重要。全賴相關推廣措施，計劃的參與率較往年增長逾三倍。

As regards lift and escalator safety, the EMSD was invited to share the latest safety information in an industry event on 11 December 2024, which attracted over 80 trade practitioners attending either in person or online. Furthermore, we have been implementing the Quality Lift Service Recognition Scheme to encourage responsible persons (RPs) of lifts (including owners, owners' corporations and property management companies) to enhance the safety, reliability and comfort of existing lifts through improvement measures. To further boost participation in the scheme, we simplified the application procedures, optimised the approval workflow, and conducted over eight promotional presentations in 2024/25. These efforts helped RPs better understand the Lifts and Escalators Ordinance (Cap. 618), clarified their statutory responsibilities, and underscored the importance of lift modernisation. As a result of these promotional initiatives, the scheme participation rate has increased more than threefold compared to previous years.

促進國際及跨境協作

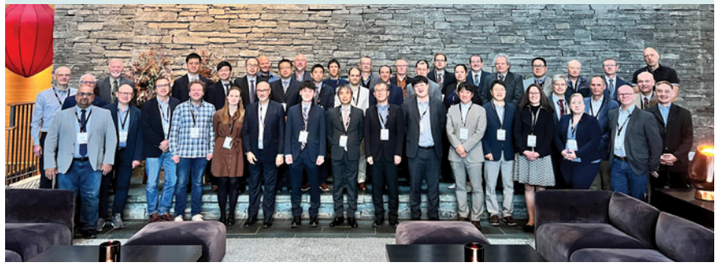
機電署積極參與國際平台，持續深化與全球伙伴的合作，共同提升機電安全標準和技術能力。機電署代表於2024年9月22日至26日出席第72屆國際纜車監管機構會議，就架空纜車和地面纜車系統的安全規管交換技術觀點。我們在會上分享昂坪360纜車事故的案例摘要，並詳述有關纜車車廂側面板物料完整性的調查和測試結果。該案例引起來自16個司法管轄區的與會專家關注，法國和新加坡代表更提出把相關資料分享給當地營運商和製造商，以供借鑑。

Promoting International and Cross-boundary Collaboration

The EMSD actively participates in international platforms, continuously deepening co-operation with global partners to jointly improve E&M safety standards and technical capabilities. Representatives of the EMSD attended the 72nd International Meeting of Technical Authorities for Cableways from 22 to 26 September 2024, exchanging technical perspectives on the safety regulation of aerial ropeway and funicular systems. During the conference, we shared a case summary of the Ngong Ping 360 cable car incident, detailing the investigation and test results regarding the integrity of cable car cabin side panels. The case drew attention of participating experts from 16 jurisdictions, with delegates from France and Singapore requesting to share the materials with their local operators and manufacturers for reference.

機電署持續派員出席各類國際會議，以深化國際專業技術交流。其中，我們於2024年派員參與第72屆國際纜車監管機構會議，分享香港纜車系統的規管經驗和典範作業。

The EMSD continuously sent officers to attend various international conferences to deepen international professional and technical exchanges. Among them, in 2024, we dispatched officers to attend the 72nd International Meeting of Technical Authorities for Cableways and shared Hong Kong's regulatory experience and best practices in cableway systems.



機電署持續深化與內地的合作聯繫，派員到上海參與「境外特種設備監管與檢驗技術交流會」。與會期間，我們與內地和國際對口部門交流心得，並分享升降機和自動梯種類許可審批的經驗。

The EMSD continued to deepen co-operation and ties with the Mainland, dispatching officers to attend the Exchange Conference on Overseas Special Equipment Supervision and Inspection Technology in Shanghai. During the conference, we exchanged ideas and shared experience in type approval process for lifts and escalators with our Mainland and international counterparts.

除積極參與國際研討會外，機電署亦持續深化與內地的合作聯繫。2024年7月，我們派員參與由上海市特種設備監督檢驗技術研究院主辦的「境外特種設備監管與檢驗技術交流會」。與會期間，我們分享香港升降機和自動梯種類許可審批的經驗，並與內地及國際對口部門交流心得。同年12月，我們再派員前往北京，出席國家市場監督管理總局與機電署《質量安全管理合作安排》（合作安排）的簽署儀式，並參與根據合作安排成立的「機械裝置工作小組」首次會議，以加強兩地在機械裝置安全規管方面的合作。

In addition to active participation in international seminars, the EMSD has continued to deepen co-operation and ties with the Mainland. In July 2024, we sent officers to attend the Exchange Conference on Overseas Special Equipment Supervision and Inspection Technology organised by the Shanghai Institute of Special Equipment Inspection and Technical Research. During the conference, we shared Hong Kong's experience in type approval process for lifts and escalators, and exchanged ideas with our Mainland and international counterparts. In December of the same year, we further dispatched officers to Beijing to attend the signing ceremony of the Co-operation Arrangement on Quality and Safety Management (Co-operation Arrangement) between the State Administration for Market Regulation and the EMSD. We also participated in the inaugural meeting of the Mechanical Equipment Working Group established under the Co-operation Arrangement to strengthen collaboration between the two sides on mechanical equipment safety regulation.

保障公眾安全
PROTECTING PUBLIC SAFETY

機電署同時積極與大灣區城市的政府合作，培育業界人才。2024年12月5日，我們與廣東省特種設備檢測研究院合辦為期五天的培訓計劃，匯聚兩地參加者就一系列升降機安全議題進行深入討論，從而促進與廣東對口部門的知識交流，並在升降機安全和維修保養標準方面接軌。此外，我們與廣州市人力資源和社會保障局及廣州市交通技師學院合作，開辦獲車輛維修技術諮詢委員會認可的電動車（低電壓）和電動車（高電壓）維修課程。機電署人員與業界資深技工一同在廣州市交通技師學院接受培訓。截至2025年3月底，我們已成功舉辦七個電動車（低電壓）和九個電動車（高電壓）維修課程。

The EMSD is also actively collaborating with governments of cities in the Greater Bay Area to nurture industry talent. On 5 December 2024, we co-organised a five-day training programme with the Guangdong Institute of Special Equipment Inspection and Research, bringing together participants from both places for in-depth discussions on a range of lift safety topics, thereby promoting knowledge exchange and aligning safety and maintenance standards with our Guangdong counterparts. In addition, we partnered with the Guangzhou Municipal Human Resources and Social Security Bureau, and the Guangzhou Communications Technician Institute (GCTI) to offer EV (Low Voltage) (EVL) and EVH maintenance courses recognised by the Vehicle Maintenance Technical Advisory Committee. The EMSD staff, together with experienced mechanics from the trade, received training at the GCTI. As of the end of March 2025, seven EVL and nine EVH maintenance courses were successfully conducted.

機電署與廣東省特種設備檢測研究院合辦為期五天的培訓計劃，建立兩地交流升降機安全事宜的專業平台。為滿足長遠的人力需求，我們亦與廣州市人力資源和社會保障局及廣州市交通技師學院合作，開辦獲車輛維修技術諮詢委員會認可的電動車（低電壓）和電動車（高電壓）維修課程。

The EMSD jointly organised a five-day training programme with the Guangdong Institute of Special Equipment Inspection and Research to establish a professional platform for exchanges on lift safety matters between the two places. To meet the long-term demand for manpower, we also collaborated with the Guangzhou Municipal Human Resources and Social Security Bureau and the GCTI to offer EVL and EVH maintenance courses recognised by the Vehicle Maintenance Technical Advisory Committee.

未來工作重點 The Way Ahead

重點一：推動人才發展 Focus 1: Fostering Talent Development

為應付升降機及自動梯行業的人力需求，以及配合《行政長官2024年施政報告》中推動智慧城市發展的措施，職業訓練局（職訓局）擬把香港專業教育學院（葵涌）現有的附屬校舍改建為升降機及自動梯科技中心（科技中心），以提升行業培訓設施及推廣職業專才教育。機電署會與職訓局緊密溝通，積極支持科技中心的建設。我們亦支援入境事務處「一般就業政策」和「輸入內地人才計劃」（技術專才類別）的申請審查，吸引具經驗的技術專才來港，以紓緩升降機和自動梯技術員短缺的問題。

To meet the manpower demand of the lift and escalator industry and support smart city development as outlined in the Chief Executive's 2024 Policy Address, the Vocational Training Council (VTC) proposes to convert the existing annex building of the Hong Kong Institute of Vocational Education (Kwai Chung) into a Lift and Escalator Technology Centre (LETC), so as to enhance training facilities for the trade, and promote vocational and professional education. The EMSD will maintain close communication with the VTC and actively support the LETC's construction. We are also supporting the Immigration Department in vetting applications under the General Employment Policy and the Admission Scheme for Mainland Talents and Professionals (Technical Professionals Stream), in order to attract experienced technical professionals to Hong Kong to ease the shortage of lift and escalator technicians.

重點二：全面採用升降機及自動梯數碼工作日誌 Focus 2: Full Adoption of the Digital Log-books

機電署計劃加強推廣數碼工作日誌，透過舉辦講座及分享成功案例，鼓勵業界更廣泛採用。我們亦會持續優化系統，推出更多新功能以便利業界。擬新增功能包括電子呈交法定表格、「升降機及自動梯性能綜合指數」、以及用作儲存及顯示物聯網感應器故障信號的物聯網平台。我們計劃於2025年第四季發出通告，公布取消紙本工作日誌作為指定表格，以及強制使用數碼工作日誌的實施時間表。

The EMSD plans to step up promotion of the DLBs by organising seminars and sharing success stories to encourage wider adoption by the trade. We will also continue to optimise the system by introducing more functions to facilitate the trade. Proposed new features include e-submission of statutory forms, a Lift and Escalator Performance Integrated Index, and an IoT platform for storing and displaying fault signals from IoT sensors. Moreover, we plan to issue a notice in the fourth quarter of 2025, announcing the implementation schedule for the discontinuation of paper-bound log-books as a specified form and the mandatory adoption of the DLBs.

重點三：善用創新科技提升升降機安全和風險管理

機電署參考內地與其他國家的相關經驗和標準、本地指引和業界做法，制訂本地升降機風險評估指南。根據新指南要求，尚未配備必須安全裝置的升降機負責人須至少每五年聘用合資格風險評估人員進行一次獨立風險評估。如結果顯示需加強監察，則下一次評估須在三年內進行。評估內容包括收集機齡、型號、維修保養記錄和使用模式等數據，繼而進行現場檢查和量化矩陣風險分析，以提出相應改善措施。

除了對尚未配備必須安全裝置的升降機推行風險評估外，我們亦計劃引入「人工智能電梯自動巡查規劃系統」，利用大數據分析數碼工作日誌數據和記錄，因應使用模式、保養歷史和地理位置等因素，識別高風險升降機和自動梯，然後自動排定巡查優先次序，以提升資源分配效率和巡查效益。系統還可透過數據分析判別風險模式和趨勢，以制定未來的預防性巡查策略。

此外，我們正重點研發「InspectVision系統」，結合人工智能分析功能和便攜式隨身攝錄機，實時記錄維修保養工作，並透過人工智能影像分析自動偵測潛在風險，期望實現全面監控，並提高巡查效率。

機電署還計劃採用光學字符識別和人工智能技術，把升降機/自動梯工程人員新註冊及續牌流程自動化，取代以人手輸入數據，並初步審核申請人學歷和工作經驗等資歷。預期此項優化措施可有效提升申請處理效率，為申請者帶來更暢順的體驗。

Focus 3: Leveraging Innovation and Technology to Enhance Lift Safety and Risk Management

The EMSD has drawn on relevant experiences and standards from the Mainland and other countries, as well as local guidelines and industry practices, to develop a local risk assessment guideline for lifts. Under the new guideline, RPs of lifts lacking essential safety devices will be required to engage qualified risk assessors to conduct an independent risk assessment at least once every five years. If the results indicate a need for closer monitoring, the next assessment must be scheduled within three years. The assessment involves collecting data such as the lift age, model, maintenance records and usage patterns, followed by on-site inspections and a quantitative matrix risk analysis to recommend improvement measures.

In addition to implementing risk assessments for lifts lacking essential safety devices, we plan to introduce an AI Lift and Escalator Automatic Inspection Planning System. This system utilises big data to analyse data and records from the DLBs, and identify high-risk lifts and escalators based on factors such as usage patterns, maintenance history and geographic location. It then automatically prioritises inspection schedules, enabling efficient resource allocation and improving inspection effectiveness. It can also identify risk patterns and trends through data analysis to shape future preventive inspection strategies.

Besides, we are focusing on developing the InspectVision System, which integrates AI analytics with a portable, body-worn camera for real-time recording of maintenance work, and uses AI-powered image analysis to automatically detect potential risks. The system is expected to realise comprehensive monitoring and increase inspection efficiency.

The EMSD also plans to adopt OCR and AI technologies to automate the process for new and renewal registrations of lift/escalator workers to replace manual data entry, and conduct preliminary verification of applicants' qualifications, such as academic credentials and work experience. This optimisation is expected to effectively enhance the efficiency of application processing and provide a smoother application experience.

重點四：提升業界和公眾的升降機及自動梯安全意識

由機電署主辦，職訓局、電梯業協會和註冊電梯營造商聯會協辦的首屆「升降機及自動梯技能挑戰賽」，已於2025年8月11日至13日順利舉行。作為香港首個聚焦升降機及自動梯技術的全方位技能挑戰賽，旨在為業界提供展示專業知識和促進技術交流的平台。比賽不但展示了參賽者在安裝、維修保養、故障排除和創新設計等方面的能力，更促進技術提升和專業對話。

比賽設有「青年巧匠組」（18至25歲的參加者）和「卓越精匠組」（具至少兩年相關工作經驗的參加者），涵蓋青年和資深技工。兩組別的獲獎隊伍都有機會獲推薦參加國家級賽事。

我們亦計劃開發一套虛擬實境模組，模擬使用自動梯時可能發生的各種事故情況。模組會應用於外展宣傳活動，以加強公眾安全使用自動梯的意識。

Focus 4: Raising Awareness of Lift and Escalator Safety among the Trade and Public

The first Lift and Escalator Skills Competition organised by the EMSD and co-organised by the VTC, the Lift and Escalator Contractors Association, and the Registered Elevator and Escalator Contractors Association, was successfully held from 11 to 13 August 2025. As Hong Kong's first comprehensive skills competition focused on lift and escalator technology, it aimed to provide a platform for the trade to showcase professional expertise and foster technical exchange. This competition not only demonstrated the participants' abilities in areas such as installation, maintenance, troubleshooting and innovative design, but also promoted technical advancement and professional dialogue.

The competition featured the Youth Innovator Group (for participants aged between 18 and 25) and the Skilled Practitioner Group (for those with at least two years of relevant work experience), encompassing both young and experienced technicians. Winning teams from both categories will have the opportunity to be recommended for national-level competitions.

We also plan to develop a VR module that simulates various possible incident scenarios when using escalators. This module will be deployed in outreach activities for publicity to strengthen public awareness of safe escalator use.

保障公眾安全
PROTECTING PUBLIC SAFETY

應用人工智能分析 確保升降機和自動梯安全

APPLYING AI ANALYSIS TO GUARANTEE LIFT AND ESCALATOR SAFETY

機電工程署（機電署）推出「升降機及自動梯狀況分析系統」，運用人工智能技術對升降機和自動梯主要部件的照片進行精準分析，以監測其健康狀況，從而協助相關人士採取適當的跟進行動。

The Electrical and Mechanical Services Department (EMSD) has launched the Lift and Escalator Condition Analysis System, which utilises artificial intelligence (AI) technology to perform precise analysis of photos capturing key components of lifts and escalators to monitor their health status, thereby assisting relevant personnel in taking appropriate follow-up actions.

機電工程師陳俊偉先生指出：「我們每年進行約30 000次巡查，並經各種渠道收集數百萬張照片。日積月累下，構成了龐大的圖像數據庫，不僅佔用大量儲存空間，以人手檢索更是耗時費力。」正是這一實際挑戰，啟發了運用人工智能系統自動識別及分類照片的創新構思。

為物色最合適的人工智能研發伙伴，機電署團隊舉辦比賽，向參賽公司提供100張升降機和自動梯零件的照片，以評估其人工智能的識別能力。在選定合作伙伴後，團隊投入大量時間和精力協助系統的研發工作。

團隊首先從歷史數據庫中，篩選及標註升降機和自動梯零件的照片，再框選出照片有問題的部分，以訓練人工智能模組。團隊亦為人工智能公司的員工提供培訓，教導他們識別零件的異常情況，確保人工智能模組獲得充足的學習資訊和維持準確率。在團隊與人工智能公司緊密協作下，系統目前已能成功識別及判斷兩類升降機和自動梯零件的異常情況，準確率高達九成。

陳先生坦言，起初曾憂慮業界對系統的接受程度，甚至擔心會影響數碼工作日誌的推廣。然而系統推出至今，業界反應正面，至今已上載超過25萬張照片，成果令人鼓舞。用戶還可透過系統內置的回饋機制進行修正，進一步提高系統的準確率。團隊會持續優化系統，未來會擴展至識別更多類型的升降機和自動梯零件，從而提升規管工作的效率和精準度。

Electrical and Mechanical Engineer Mr Chan Chun-wai noted, “We conduct approximately 30 000 inspections and collect millions of photos through various channels each year. Over time, it has resulted in a massive image database, which not only takes up substantial storage space, but also requires considerable time and effort for manual retrieval.” This practical challenge has given rise to the innovative idea of using an AI system to automatically identify and categorise the images.

To identify the most suitable partner for AI research and development, the EMSD team organised a competition, providing 100 photos of lift and escalator components for participating companies to assess their AI recognition capabilities. After selecting the collaborative partner, the team dedicated substantial time and effort to support the system development.

The team first screened and annotated photos of lift and escalator components from historical databases, then selected problematic areas within the images to train the AI module. The team also provided training for the AI company employees, instructing them how to identify component anomalies to ensure that the AI module could have sufficient learning data while maintaining accuracy. Through close collaboration between the team and the AI company, the system is now capable of successfully identifying and diagnosing anomalies in two types of lift and escalator components with an accuracy rate of up to 90%.

Mr Chan admitted that he was initially concerned about the trade’s acceptance of the system, and even worried that it might hinder the promotion of the Digital Log-books. However, since the launch of the system, feedback from the trade has been positive, with over 250 000 photos uploaded to date, which is a gratifying result. Users can also make corrections through the system’s built-in feedback mechanism, further improving system accuracy. The team will continue optimising the system, expanding its capabilities to identify a wider range of lift and escalator components, thereby enhancing the efficiency and precision of regulatory work.

優化舊式升降機 細節盡顯關懷

MODERNISING AGED LIFTS WITH METICULOUS CARE

為減少升降機優化工程對居民的影響，機電工程署與市區重建局（市建局）透過外展社會支援服務，協助行動不便的人士解決出行問題。其中，工程師利少文先生持續為相關大廈提供支援，確保工程盡快竣工。

To minimise the impact of lift modernisation works on residents, the Electrical and Mechanical Services Department and the Urban Renewal Authority (URA) assist individuals with mobility difficulties in addressing their travel needs through outreach social support services. Among these efforts, Engineer Mr Lee Siu-man has been offering ongoing support to the affected buildings, ensuring timely completion of the projects.

土瓜灣一幢僅設有一部升降機的舊樓參與了「優化升降機資助計劃」，住客普遍擔心工程會影響日常生活。我們透過問卷調查，發現其中一戶居民因家庭成員有特殊情況需每日出行，但其身體狀況既不適合使用樓梯機，亦難以負擔另覓住宿的費用。在獲悉該個案後，利先生決定為市民的福祉「多走一步」，盡力協助該大廈加快進行升降機更換工程，並得到市建局的支援為該戶居民安排配備特殊復康設施的臨時住所，切實解決其出行困難。

在施工前的勘查中，我們發現該大廈機房空間非常狹窄，且因樓宇結構老舊，需先修繕機房和升降機井道。這些因素增添了工程難度，並壓縮施工周期。為此，利先生與工程顧問和升降機承辦商合作，設計一套專用的滑輪系統，以解決空間狹小的限制。他定期視察現場，以監察工程進度，並適時提供技術意見，確保工程問題得以即時解決。在最終檢驗前，他發現升降機制動器系統的組件運作不穩定，遂立刻指示承辦商重新訂購及更換新組件，以確保升降機順利通過檢驗。全賴各方迅速緊密合作，工期由原定90天大幅縮短至60天，居民不但可更快恢復出行，該戶有特殊需要住戶亦得以提前返回居所。

利先生謙稱：「能就此個案獲得區議員和大廈業主立案法團的認同和致函表揚，我們深感榮幸。我們只是盡公務員的本分，時刻秉持『多走一步、以民為本』的精神，在工程每個細節盡顯關懷。」

An old building in To Kwa Wan, equipped with only one lift, participated in the Lift Modernisation Subsidy Scheme. Residents were generally concerned that the works would disrupt their daily lives. Through a questionnaire survey, we identified a household that needed to commute daily due to a family member’s special circumstances. However, the resident’s physical condition made the use of a stair-climber unsuitable while the cost of alternative accommodation was unaffordable. Upon learning of the case, Mr Lee decided to go an extra mile for the public’s well-being. He made every effort to help expedite the lift replacement works of the building, and obtained the URA’s support to arrange temporary accommodation equipped with special rehabilitation facilities for the household, effectively resolving their travel difficulties.

During the pre-construction inspection, we found that the building’s machine room was exceptionally cramped. Additionally, due to the building’s aging structure, both the machine room and lift shaft required preliminary repairs. These factors increased the project’s complexity and compressed the construction schedule. To this end, Mr Lee collaborated with the project consultant and lift contractor to devise a customised pulley system to overcome the spatial constraints. He also conducted regular on-site inspections to monitor the progress and offered timely technical advice, ensuring that engineering issues were resolved in a prompt manner. Just before the final inspection, he identified an unstable component in the lift’s brake system, and therefore immediately instructed the contractor to re-order a new component for replacement, ensuring that the lift could successfully pass the inspection. The swift and close co-operation among all parties dramatically shortened the project duration from 90 days to 60 days, not only restoring the residents’ mobility sooner, but also allowing the affected household with special needs to return home earlier.

Mr Lee humbly stated, “We felt privileged to have received recognition and commendation letters from the District Council member and Incorporated Owners of the building for this case. We simply fulfilled our duty as civil servants, always upholding the spirit of ‘going the extra mile and putting people first’ to demonstrate care in every detail of our works.”

保障公眾安全
PROTECTING PUBLIC SAFETY

鐵路安全

防範鐵路安全事故

安全可靠的鐵路系統對香港市民的日常生活至關重要。機電署鐵路科一直秉持「走在問題前面」的策略，持續規管本港各個鐵路系統（包括高鐵、港鐵、輕鐵、機場旅客捷運系統、電車和山頂纜車），以維持世界級的安全水平。對於2025年年初兩宗因工程車故障引致服務延誤的事故，我們深表關注，一直密切跟進事態發展，並已敦促港鐵公司展開調查和提交改善措施報告。

經詳細檢查相關設備、與港鐵公司職員會面和審閱文件後，我們發現其中一宗工程車事故的成因，是在進行復位操作時，意外觸發了車輛的安全保護機制，導致水平調節系統自動鎖定，基於安全理由無法移走工程車。此外，涉事工程車的操作手冊和復修指引未有涵蓋所需復修程序，令操作人員未能及時重置系統。我們亦發現現行風險評估機制未能充分考慮不同極端情境對鐵路服務的潛在影響，且缺乏相應的應急計劃。

為持續加強鐵路安全規管，確保鐵路服務質素，機電署自2019年起推行「全面及直接審核」，主動審核港鐵公司的軌道、配電系統、列車和信號系統的資產管理系統。截至2025年第一季，機電署已完成對港鐵公司所有營運鐵路線列車資產管理系統（包括工程車資產）的審核工作。我們向港鐵公司提出一系列建議，以加強對工程車使用年期和機件狀況的評估和監察，包括把工程車車種、關鍵子系統和易損部件納入資產健康監察表。在「全面及直接審核」框架下，我們就工程車維修保養和緊急應變工作展開特別審核，以檢視工程車風險，並制定合適的預防、管控和緊急應變措施，預期在2025年第三季內完成。

RAILWAY SAFETY

Preventing Railway Safety Incidents

A safe and reliable railway system is crucial to the daily lives of Hong Kong citizens. The Railways Branch of the EMSD has consistently adopted the strategy of "staying on top of things", continuously regulating Hong Kong's various railway systems (including the High-speed Rail, MTR, Light Rail, airport automated people mover, trams and Peak Tram) to maintain world-class safety standards. We are deeply concerned about the two incidents of service delays caused by engineering train failures in early 2025, and have been closely following up on the developments. We have urged the MTR Corporation Limited (MTRCL) to investigate and submit a report outlining improvement measures.

Following a detailed inspection of the relevant equipment, interviews with MTRCL staff and a review of documents, we found that one of the engineering train incidents was caused by the accidental triggering of the train's safety protection mechanism during a reset operation. This led to the automatic locking of the levelling system, making it impossible to remove the engineering train for safety reasons. Moreover, the operating manual and recovery guidelines for the engineering train involved did not cover the necessary recovery procedures, preventing operators from resetting the system in a timely manner. We also found that the prevailing risk assessment mechanism had failed to adequately consider the potential impact of various extreme scenarios on railway services and lacked corresponding contingency plans.

To continuously strengthen the regulation of railway safety and ensure the quality of railway services, the EMSD has been implementing a Comprehensive and Direct Assessment (C&DA) since 2019 to proactively audit the MTRCL's asset management systems for the permanent ways, power distribution systems, rolling stock and signalling systems. As of the first quarter of 2025, the EMSD completed audits of the train asset management systems for all operational railway lines of the MTRCL, including engineering train assets. We made a series of recommendations to the MTRCL to strengthen the assessment and monitoring of engineering trains' service life and mechanical condition, including incorporating types of engineering trains, key subsystems and vulnerable components into an asset health monitoring list. Under the C&DA framework, a special audit of the maintenance of engineering trains and emergency responses has been initiated to review the risks associated with engineering trains and formulate appropriate prevention, control and emergency response measures, with expected completion in the third quarter of 2025.

除了定期資產審核，機電署亦鼓勵港鐵公司採用創新科技實現「智慧鐵路」，提升資產管理和維修保養的效率，包括使用智能感應器和監察系統，收集行車期間的數據作實時分析和監察。我們亦敦促港鐵公司加強風險管理、員工培訓和緊急應變能力，例如就各種極端情況進行定期和隨機模擬演練。

大規模資產更新　提升鐵路安全

港鐵公司於2023年年中展開東鐵線自動月台閘門安裝工程，在沿線13個露天段車站35個月台安裝接近1 600對自動月台閘門。為免影響乘客日常出行，工程主要在晚間非行車時間進行。對於設有備用月台的車站，港鐵公司加派人手在日間非繁忙時間施工，以加快進度。安裝工程於2025年5月竣工，較預期提前六個月。現時東鐵線全線都裝有自動月台閘門，防止乘客墜軌，保障安全。

In addition to regular asset audits, the EMSD encourages the MTRCL to adopt innovative technologies to realise the Smart Railway and enhance the efficiency of asset management and maintenance. This includes using smart sensors and monitoring systems to collect data during train operations for real-time analysis and surveillance. We also urge the MTRCL to strengthen risk management, staff training and emergency response capabilities, such as conducting regular and random simulated drills for various extreme scenarios.

Large-Scale Asset Renewal to Improve Railway Safety

The MTRCL commenced the installation of automatic platform gates (APGs) on the East Rail Line in mid-2023, installing approximately 1 600 pairs of APGs across 35 platforms at 13 open-section stations along the line. To minimise disruption to daily commuting of passengers, the works were mainly carried out during non-traffic hours at night. For those stations with spare platforms, the MTRCL deployed additional workforce to carry out the works during daytime non-peak hours to expedite the progress. The installation was completed in May 2025, six months ahead of schedule. Now, the entire East Rail Line is equipped with APGs to prevent passengers from falling onto tracks to ensure safety.

機電署敦促港鐵公司持續升級和更新基建資產，以全面保障鐵路系統的安全。其中，東鐵線自動月台閘門安裝工程於2025年5月提前竣工，加強保障乘客安全。

The EMSD urged the MTRCL to continuously upgrade and renew its infrastructure assets to comprehensively safeguard the safety of the railway system. For example, the installation of APGs on the East Rail Line was completed ahead of schedule in May 2025, providing enhanced protection for passengers.

保障公眾安全
PROTECTING PUBLIC SAFETY

港鐵公司亦逐步更換市區線的第一代列車（俗稱M車）。M車由1979年投入服務至今，已屆資產年限。港鐵公司於2015年宣布訂購93列新列車（俗稱Q車），以分批更換市區線的現有M車。年內，觀塘線引入13列Q車，港島線則引入15列Q車。港鐵公司會陸續更換港島線、荃灣線和將軍澳線的M車，93列Q車預計於2029年全部投入服務。

The MTRCL is also gradually replacing the first-generation trains (commonly known as M-Trains) on the urban lines. These M-Trains, which have been in service since 1979 to date, have reached the end of their asset lifespan. In 2015, the MTRCL announced an order for 93 new trains (commonly known as Q-Trains) to replace the existing M-Trains on the urban lines in phases. During the year, 13 Q-Trains were introduced to the Kwun Tong Line and 15 Q-Trains to the Island Line. The MTRCL will continue to replace M-Trains on the Island, Tsuen Wan and Tseung Kwan O lines, with all 93 Q-Trains expected to be in service by 2029.

觀塘線是香港最早的地鐵線路之一，油麻地站早於1979年啓用。在觀塘線油麻地站附近的「交叉渡線」（即列車換軌位置），該段隧道頂部懸掛電纜的大型金屬吊架已使用超過40年。儘管零件仍可安全使用，但考慮到其狀況和使用周期，為確保公眾安全和設備可靠，港鐵公司決定更換該段近50個金屬吊架。由於「交叉渡線」隧道通常比一般隧道高，而油麻地站「交叉渡線」更高達7米，因此需全面隔離高壓電源並搭建大型工作平台，使這項工程成為香港鐵路史上首個大規模資產更新項目。

The Kwun Tong Line is one of Hong Kong's earliest MTR lines, with Yau Ma Tei station opening as early as 1979. Near a "crossover" section of the Kwun Tong Line at Yau Ma Tei Station (where trains switch tracks), the large metal hangers on the tunnel ceiling that suspended power cables had been in use for over 40 years. Although the parts were still safe to operate, the MTRCL decided to replace nearly 50 of these metal hangers in that section to ensure public safety and equipment reliability, considering their condition and life cycle. Given that a tunnel with a "crossover" is usually higher in height than a typical tunnel, and the one at the Yau Ma Tei Station even reaches up to 7 metres high, complete isolation of high-voltage power supply and construction of a large work platform are required, making it the first large-scale asset renewal project of its kind in Hong Kong's railway history.

經慎重評估後，機電署與港鐵公司認為項目規模龐大，無法在晚間非行車時間內完成。為盡量減少對市民的影響，工程定於2024年7月28日凌晨至7月29日上午連續28小時進行，其間封閉觀塘線油麻地站至何文田站段。施工當天，機電署連同多個政府部門全程監督工程，並派出多個專業團隊實地監察工程質素和檢查相關機電設備，以確保施工期間和後續運作的安全。在更新工程完成後，港鐵公司向機電署提交測試報告，證明符合相關安全要求。觀塘線於2024年7月29日上午全線順利恢復通車，繼續服務市民。

After careful assessment, the EMSD and the MTRCL believed that the project was on such a massive scale that it could not be completed during non-traffic hours at night. To minimise disruption to the public, 28 consecutive hours of works were scheduled from the early morning of 28 July to the morning of 29 July 2024, during which the Kwun Tong Line section between Yau Ma Tei and Ho Man Tin stations was closed. On the day of construction, the EMSD, along with several other government departments, supervised the works full-time and deployed multiple professional teams on-site to monitor the quality of the works and inspect the relevant E&M equipment, ensuring operational during and after the works. After completion of the renewal works, the MTRCL submitted test reports to the EMSD to demonstrate compliance with relevant safety requirements. The Kwun Tong Line resumed full service smoothly on the morning of 29 July 2024, continuing to serve the public.

除了更換列車和主要車站硬件外，港鐵公司亦有系統地升級市區線的信號系統。為確保新信號系統安全可靠，港鐵公司建立「綜合測試平台」，模擬及測試大量不同情景。新信號系統在車廠環境中成功進行靜態和動態列車測試，符合實地測試要求。港鐵公司於2024年6月6日在荃灣線展開新信號系統的初步實地測試，為日後正式啓用作好準備。新系統的實地測試進展順利，預計於2026年年初在荃灣線全面投入使用。

Apart from replacing trains and major station hardware, the MTRCL is systematically upgrading the signalling system of the urban lines. To ensure the safety and reliability of the new signalling system, the MTRCL has set up an Integrated Testing Platform to simulate and test a wide range of scenarios. The new signalling system has successfully undergone both static and dynamic train tests in a depot environment, meeting the requirements for field tests. On 6 June 2024, the MTRCL commenced preliminary field tests for the new signalling system on the Tsuen Wan Line in preparation for its future launch. With smooth progress of the field tests, the new system is expected to be fully operational on the Tsuen Wan Line in early 2026.

應用創科 打造「智慧鐵路」

機電署一直積極探索利用創科解決方案，提升鐵路安全和可靠程度，並向鐵路營運者推廣創新文化。年內，機電署與鐵路營運者、學術界和業界合作推行多個先導創科項目，並憑藉兩項創新發明榮獲日內瓦國際發明展金獎。

機電署推出的「人工智能鐵路規管巡查規劃系統」，獲得第四十九屆日內瓦國際發明展金獎。系統應用人工智能和演算法分析數據，識別可能對鐵路安全運作構成較高風險的地方，優先安排安全巡查。系統自動編排巡查優先次序，有效提高巡查效率，保障鐵路安全。另外，我們與山頂纜車有限公司合作開發的「拖纜狀況人工智能監測系統」，奪得第五十屆日內瓦國際發明展金獎。系統運用人工智能技術實時監察山頂纜車拖纜的狀態，持續評估其健康狀況，並會在發現異常情況時及早發出預警報提示。此項發明有助緩解人手檢測壓力，大大提高效率和監測準確度，進以降低拖纜相關事故的風險。

Applying I&T to Build a "Smart Railway"

The EMSD has been actively exploring the use of I&T solutions to enhance railway safety and reliability, while promoting a culture of innovation to railway operators. Over the past year, the EMSD collaborated with railway operators, academia and the trade to implement various pilot I&T projects and won gold medals at the International Exhibition of Inventions of Geneva for two innovative inventions.

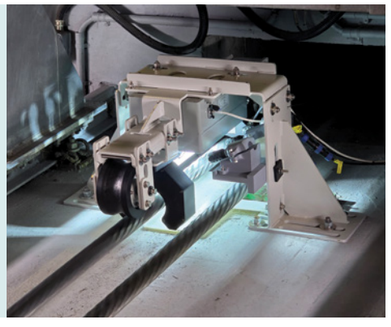
The AI-driven Railway Regulator Inspection Planning System, launched by the EMSD, was awarded a gold medal at the 49th International Exhibition of Inventions of Geneva. The system uses AI and algorithms to analyse data and identify areas that may pose higher risks to railway safety operations for prioritised safety inspections. By automatically scheduling inspection priorities, the system effectively increases inspection efficiency and safeguards railway safety. In addition, our collaboration with the Peak Tramways Company Limited on the Hauling Rope AI Condition Monitoring System received a gold medal at the 50th International Exhibition of Inventions of Geneva. Employing AI technology, the system monitors the condition of the haulage rope in real time and continuously assesses its health, and will issue early warnings upon detecting anomalies. This invention alleviates the pressure of manual inspections, significantly improving efficiency and monitoring accuracy, thereby reducing the risk of rope-related incidents.

為持續提升鐵路系統的安全水平，機電署推出「人工智能鐵路規管巡查規劃系統」。該系統應用人工智能和演算法分析數據，自動編排巡查優先次序，大幅提升規管工作的效率。

To continuously enhance the safety of the railway system, the EMSD launched the AI-driven Railway Regulator Inspection Planning System. The system uses AI and algorithms to analyse data, automatically prioritising inspection schedules, thereby significantly improving regulatory efficiency.

為確保山頂纜車安全，機電署聯同山頂纜車有限公司開發「拖纜狀況人工智能監測系統」，運用人工智能技術評估拖纜的健康狀況。這項發明榮獲第五十屆日內瓦國際發明展金獎。

To ensure the safety of the Peak Tram, the EMSD developed the Hauling Rope AI Condition Monitoring System in collaboration with the Peak Tramways Company Limited, employing AI technology to assess the haulage rope's health. The invention won a gold medal at the 50th International Exhibition of Inventions of Geneva.



保障公眾安全
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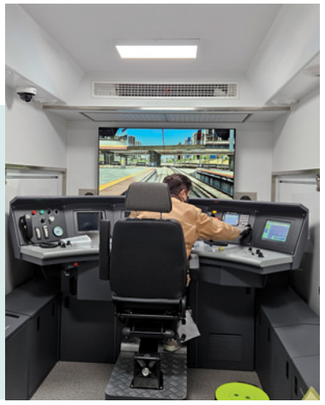
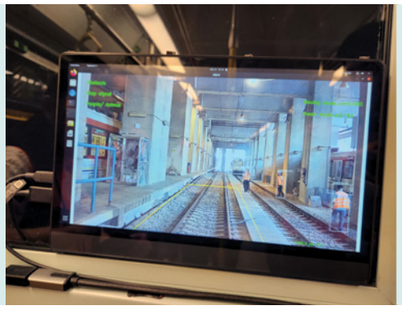
因應近期輕鐵列車因路軌障礙物導致出軌的事故，機電署敦促港鐵公司運用創科，防止類似事件重演。就此，港鐵公司在兩列輕鐵列車安裝影像分析系統，透過安裝在車頭的鏡頭實時記錄前方影像，識別路軌上的障礙物。系統如偵測到障礙物，便會向駕駛員發出警報，讓其能及時採取行動。我們正敦促港鐵公司在所有輕鐵列車應用該系統，以提升輕鐵安全水平。我們亦聯同港鐵公司開發高速鐵路（高鐵）模擬器，透過模擬真實駕駛情境，包括信號燈變化和不同時段的運行環境，加強高鐵駕駛員應對各種情況的能力，有效提升高鐵的運作安全。高鐵模擬器現已在石崗列車停放處全面投入運作。

In response to a recent incident where a Light Rail vehicle (LRV) derailed due to obstacles on the tracks, the EMSD urged the MTRCL to apply I&T to prevent similar incidents from happening again. In this regard, the MTRCL deployed on two LRVs a video analytics system to capture real-time footage ahead through a front-mounted camera and identify obstacles on the tracks. If an obstacle is detected, the system will send an alert to the driver, allowing timely action to be taken. We are urging the MTRCL to implement this system across all LRVs to improve the safety of the Light Rail. We also collaborated with the MTRCL to develop a High Speed Rail (HSR) simulator. By simulating real driving conditions, including signal light changes and operational environments at different time periods, the simulator enhances the capability of HSR drivers in responding to various situations, effectively improving HSR operational safety. The HSR simulator is now fully functional at the Shek Kong Stabling Sidings.



機電署與港鐵公司合作開發高鐵模擬器，專門模擬各種駕駛情境，以加強駕駛員的應變能力。

The EMSD collaborated with the MTRCL to develop an HSR simulator specifically designed to simulate various driving conditions, so as to enhance drivers' response capabilities.



機電署積極推動業界創新，持續提升鐵路系統的安全水平。其中，港鐵公司在輕鐵列車安裝影像分析系統，該系統可實時識別障礙物，並向駕駛員發出警報，大幅提升輕鐵安全水平。

The EMSD actively promotes innovation in the industry to continuously enhance the safety of the railway system. For example, the MTRCL installed on LRVs a video analytics system. The system can detect obstacles and send alerts to drivers in real time, significantly improving the safety of the Light Rail.

深化與內地及國際交流

國際鐵路安全理事會年度會議是一個匯集全球鐵路安全專業人士的論壇，旨在交流資訊和分享經驗，以提升鐵路安全。機電署會聯同國家鐵路局和港鐵公司，於2025年11月25日至30日舉辦2025年國際鐵路安全理事會年度會議，探討新能源應用、風險管控、創新技術等議題。我們亦會在會議期間安排技術考察活動，讓參加者參觀港鐵青衣車務控制中心及黃竹坑車廠、港鐵高鐵石崗列車停放處、山頂纜車，以及乘坐高鐵由香港西九龍站前往內地，參觀廣州南站和其他設施。

此外，我們亦派員出席多個國際會議，包括在北京舉行的2025年世界高速鐵路大會，在曼谷舉行的2025年亞太鐵路大會，以及在西班牙舉行的2024年國際鐵路展覽會。我們更派員外訪新加坡，就鐵路安全等議題進行交流。

減少自動梯事故

港鐵公司在2024年首九個月共錄得430宗港鐵車站的自動梯事故，機電署對此高度關注，並已採取積極措施，減低自動梯事故發生的機會。我們於2025年與港鐵公司成立工作小組，監督港鐵公司落實改善措施和評估其成效。港鐵公司其後加強在安全使用自動梯的教育工作，包括在事故頻發的自動梯部署「扶手電梯安全大使」，以及加強宣傳「緊握扶手、左右企穩、安全要緊」的信息，提高市民的安全意識。

經我們與港鐵公司緊密溝通後，港鐵公司決定調低部分自動梯的速度。在實施降速措施後，涉及嚴重受傷的自動梯事故宗數顯著下降。有見成效理想，我們正敦促港鐵公司研究調低全部自動梯速度的可行性。

推動氫能發展

港鐵公司在2024年年中引入氫能源有軌電車，並以非載客形式在屯門測試該有軌電車，為期六個月，由機電署負責監管並提供專業意見。測試於12月21日完成，期間收集氫能列車在不同情況下的運行數據，包括續航力、行駛速度和能耗，供日後評估和參考。

Deepening Mainland and International Exchange

The annual conference of the International Railway Safety Council (IRSC) is a forum that brings together railway safety professionals from around the world to exchange information and share experiences for enhancing railway safety. In collaboration with the National Railway Administration and the MTRCL, the EMSD will host the annual conference of IRSC 2025 from 25 to 30 November 2025 to explore topics such as new energy applications, risk management and innovative technologies. During the conference, technical visits will also be arranged for participants to tour the MTR Tsing Yi Operations Control Centre and Wong Chuk Hang Depot, the MTR Shek Kong Stabling Sidings for HSR, the Peak Tram, and make a journey via the HSR from Hong Kong West Kowloon Station to the Mainland to visit the Guangzhounan Station and other facilities.

We also sent representatives to attend various international conferences, including the World Congress on High-Speed Rail 2025 in Beijing, the Asia Pacific Rail 2025 in Bangkok, and the Rail Live 2024 in Spain. Furthermore, a duty visit to Singapore was made to exchange views on issues such as railway safety.

Reducing Escalator Incidents

In the first nine months of 2024, the MTRCL recorded a total of 430 escalator incidents at MTR stations. The EMSD had great concern on this and adopted proactive measures to reduce the occurrence of such incidents. In 2025, we formed a working group with the MTRCL to oversee the MTRCL's implementation of improvement measures and evaluate their effectiveness. The MTRCL has since enhanced its educational efforts on escalator safety, including deploying "escalator safety ambassadors" at escalators with a higher frequency of incidents and strengthening the promotion of the message "Hold the Handrail, Stand Firm on Either Side", to raise public awareness of the safety.

Following close communication with the MTRCL, the MTRCL decided to reduce the speed of some escalators. Upon implementation of the speed reduction measure, the number of escalator incidents involving severe injuries saw a significant drop within the year. Given the positive results, we are urging the MTRCL to study the feasibility of reducing the speed of all escalators.

Promoting Hydrogen Development

The MTRCL introduced a hydrogen fuelled LRV in mid-2024 and conducted a six-month trial of the LRV as a non-revenue train in Tuen Mun. The EMSD oversaw the trial and provided professional advice. The trial concluded on 21 December. During the trial period, operational data on the LRV under various conditions, including range, running speed and energy consumption, were collected for future evaluation and reference.

保障公眾安全
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未來工作重點 / Future Work Focuses

重點一：推動跨境鐵路建設 / Focus 1: Promoting Cross-boundary Railway Construction

「推動港深跨界軌道基礎設施建設專班」已於2024年11月審議港深西部鐵路（洪水橋至前海）次階段研究報告和北環線支線初步推展安排。機電署會擔當跨境聯絡角色，與跨境鐵路相關部門保持緊密溝通，確保兩條跨境鐵路的建設工程順利進行。我們亦會參與制定未來鐵路策略的討論，包括設立緊急救援機制，以提升整體應變能力。

The Task Force for Hong Kong-Shenzhen Co-operation on Cross-Boundary Railway Infrastructure reviewed the second-stage study report for the Hong Kong-Shenzhen Western Rail Link (Hung Shui Kiu to Qianhai) and the initial implementation arrangements for the Northern Link Spur Line in November 2024. Serving as the cross-boundary liaison point, the EMSD will maintain close communication with departments related to cross-boundary railways to ensure the smooth construction of the two cross-boundary railways. We will also contribute to discussions on the formulation of future railway strategies, including the establishment of emergency rescue mechanisms, so as to enhance overall response capabilities.

重點二： 智慧綠色集體運輸系統 / Focus 2: Smart and Green Mass Transit System

《2023年施政報告》宣布在東九龍、啟德及洪水橋/厦村引入三個智慧綠色集體運輸系統，屬香港首次建設及營運此類系統，其設計涉及新興的集體運輸技術。機電署會在推動項目落實的過程中，與各政府部門緊密合作，並在整個項目規劃、設計和興建周期中，主導安全和規管工作。我們亦會就系統的應用提供技術支援，確保項目安全推行。

The 2023 Policy Address announced the introduction of three Smart and Green Mass Transit Systems (SGMTSs) in East Kowloon, Kai Tak and Hung Shui Kiu/Ha Tsuen. The SGMTS is the first of its kind to be built and operated in Hong Kong, with its design involving emerging mass transit technologies. In driving the implementation of the projects, the EMSD will work closely with various government departments and take the lead in safety and regulation throughout the project planning, design and construction phases. We will also provide technical support for system application to ensure safe project implementation.

舉行大型壓力測試 迎接體育園開幕
ORGANISING LARGE-SCALE STRESS TESTS TO PREPARE FOR THE SPORTS PARK'S OPENING

為迎接啟德體育園開幕，機電署與港鐵公司全力配合特區政府在開幕前進行四次大型演練，確保鐵路系統在人羣管理、設施應變、人員調配和應急部署方面均運作順暢，為乘客安全保駕護航。

In preparation for the opening of the Kai Tak Sports Park, the EMSD and the MTRCL fully supported the HKSAR Government in conducting four large-scale drills prior to the opening to ensure the smooth operation of the railway system in crowd management, facility contingency, manpower deployment and emergency arrangements, safeguarding passenger safety.

啟德體育園作為香港盛事的新地標，預計帶來的龐大人流會對鐵路系統構成挑戰。鐵路科總工程師葉偉良先生指出：「演練成功的背後，有賴多方緊密合作和溝通，才能讓每一個細節都無縫對接。」首場演練於2024年12月8日舉行，模擬散場人流高峯時段的情況，我們發現宋皇臺站大堂出現人流瓶頸，便即時要求港鐵公司增派人手協助人羣管理，以及優化出口標示。這些經驗亦應用於後續的演練。

As a new landmark for major events in Hong Kong, the Kai Tak Sports Park is expected to bring significant passenger flow, posing challenges to the railway system. Mr Yip Wai-leung, Chief Engineer of the Railways Branch, pointed out, "The success of the drills relied on close co-operation and communication among multiple parties, which enabled a seamless connection of every detail." The first drill was held on 8 December 2024, simulating a peak crowd dispersal scenario. When a bottleneck was identified in the concourse of Sung Wong Toi Station, we immediately requested the MTRCL to deploy additional staff to assist in crowd management and to optimise exit signage. These experiences were then applied in the subsequent drills.

演練規模逐步擴大，參與人數更由一萬人逐步增至六萬人，地點涵蓋啟德主場館、啟德體藝館和啟德青年運動場，同時讓屯馬線兩大車站高負荷運作。在演練過程中，我們駐守月台和閘口，實時監察分流安排，包括使用臨時導軌、加密列車班次和設立「緩衝區」，以免出現月台擁擠的情況。散場時，港鐵公司採用潮水式人流措施，配合廣播指示，安全有序地疏導數萬人。

The scale of the drills gradually expanded, with the number of participants increasing progressively from 10 000 to 60 000. The drills covered the Kai Tak Stadium, Kai Tak Arena and Kai Tak Youth Sports Ground, while also putting a high load on two major stations of the Tuen Ma Line. During the drills, we stationed our staff on platforms and at gates to monitor the diversion work of passenger flow in real time, including the use of temporary guide rails, increase in train frequency and establishment of "buffer zones" to prevent platform congestion. During crowd dispersal, a tidal-flow arrangement was implemented, coupled with broadcast instructions, to disperse tens of thousands of people safely and orderly.

為應對極端天氣，儘管演練於冬季進行，我們仍預先部署，制訂雨天應急方案，包括設立「指定等候區」，以免出現人流擠塞的情況，並加設風機和鋪設防滑帶，確保乘客安全。考慮到公眾在活動期間頻繁使用扶手電梯，我們亦要求港鐵公司安排維修承辦商現場候命，確保設備如有故障時可即時搶修，減少對人流的影響。

In response to extreme weather, we made advance preparations and developed a rainy-day contingency plan, even though the drills were conducted in winter. This included setting up "designated waiting areas" to prevent passenger congestion, and installing fans and laying anti-slip strips to ensure passenger safety. Given the frequent use of escalators during events, we also requested the MTRCL to have maintenance contractors stand by on site to ensure immediate repairs in case of any equipment failures, minimising disruption to passenger flow.

這一系列的演練不僅旨在檢驗鐵路系統日常運作是否順暢，更着重識別潛在風險，以及提升鐵路系統的應急能力。經過多輪模擬演練，我們累積了豐富經驗。機電署秉持「未雨綢繆」的精神，致力提升香港的鐵路安全，使市民出行更便利，為迎接更多大型盛事所帶來的挑戰做好準備。

This series of drills not only aimed to test the smooth operation of the railway system under normal conditions, but also focused on identifying potential risks and enhancing the system's emergency response capabilities. Through multiple rounds of simulation drills, we have accumulated rich experience. With a "be well-prepared in advance" mindset, we are committed to enhancing Hong Kong's railway safety and public travel convenience, ready to meet the challenges to be brought by more major events.

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

智慧科技推動區域供冷系統新發展

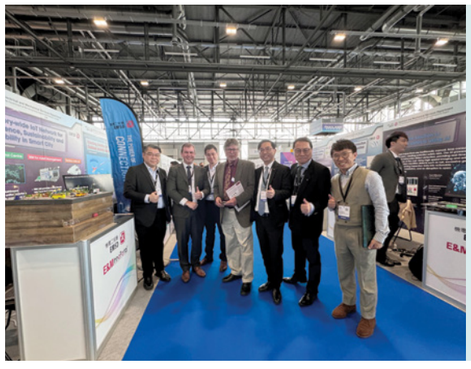
為支持香港實現碳中和目標，機電工程署(機電署)正積極推進啟德發展區、東涌新市鎮擴展區和古洞北新發展區的區域供冷系統建設，致力為市民締造可持續發展的優質生活環境。其中，啟德體育園的區域供冷系統於2025年3月1日正式啓用，其製冷量相當於十座商業大廈的總和。我們不僅確保為體育園供應冷水的三號廠房如期於2024年投入運作，還在營運初期投放大量資源，推行多項系統優化措施，包括危機應變演練和機電設備負載測試，以及積極參與體育園開幕前的壓力測試和模擬演練。有關措施大幅提升系統的整體可靠程度，確保體育園得享穩定優質的供冷服務，令各項國際盛事能夠順利舉行。項目團隊因此獲署長頒發嘉許信，表揚他們勇於面對挑戰、迎難而上的精神。

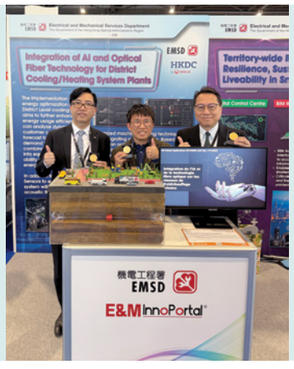
SMART TECHNOLOGY DRIVES NEW DEVELOPMENTS IN DISTRICT COOLING SYSTEMS

To support Hong Kong in achieving its carbon neutrality goals, the Electrical and Mechanical Services Department (EMSD) is actively advancing the construction of district cooling systems (DCSs) in the Kai Tak Development Area, Tung Chung New Town Extension and Kwu Tung North New Development Area, striving to create a sustainable and quality living environment for the public. Among them, the DCS at the Kai Tak Sports Park officially commenced operations on 1 March 2025, with a cooling capacity equivalent to that of a total of ten commercial buildings. We not only ensured the timely commissioning of Plant No. 3, which supplies cooling water to the sports park, as scheduled in 2024, but also allocated substantial resources in the initial operational phase to implement multiple system optimisation measures. These included crisis response drills, diverse electrical and mechanical systems load tests, as well as active participation in pre-opening stress tests and simulation exercises for the sports park. These efforts significantly enhanced the system's overall reliability and ensured uninterrupted and quality cooling services for the sports park, facilitating the smooth hosting of various international events. As a result, the project team received a commendation letter from our Director in recognition of their courage to take on challenges and overcome difficulties.

機電署進行壓力測試和危機應變演練，確保啟德區域供冷系統第三號廠房維持穩定供冷能力，以有效滿足啟德體育園未來各類大型活動的供冷需求。

The EMSD conducted stress tests and crisis response drills to ensure the stable cooling capacity of Kai Tak DCS Plant No. 3, thereby effectively meeting the future cooling demand of various mega events at the Kai Tak Sports Park.





機電署研發的「DCSmart」人工智能系統在第五十屆日內瓦國際發明展中脫穎而出，榮獲評審團嘉許金獎。

The DCSmart artificial intelligence system, developed by the EMSD, distinguished itself at the 50th International Exhibition of Inventions of Geneva by securing a gold medal with congratulations of the jury.

除了確保區域供冷系統穩定運作外，機電署持續引入創新方案，以提升系統的能源效益，推動建設綠色香港。我們於年內研發了「DCSmart」人工智能系統，運用機器學習技術分析用戶的製冷需求，並結合天氣數據預測未來的製冷負荷。系統能平衡能源效益和各項運行條件，從而制定最佳供冷策略。此外，我們採用光纖傳感系統，結合人工智能技術，即時監測及分析地下管道的溫度和聲波振動等關鍵參數，確保系統穩定可靠。這個創新項目在2025年第五十屆日內瓦國際發明展榮獲評審團嘉許金獎。

為確保管道完好無缺，機電署應用曾在2024年第四十九屆日內瓦國際發明展榮獲銀獎的「全球衛星導航系統」技術。該系統以太陽能供電，結合物聯網傳感器，全天候實時監測區域供冷系統的地下管道，並透過數據分析識別潛在風險，確保管道結構長期穩定可靠。

Apart from ensuring the stable operation of the DCS, the EMSD continuously introduces innovative solutions to improve energy efficiency of the systems and contribute to building a greener Hong Kong. We developed the DCSmart artificial intelligence (AI) system during the year, which utilises machine learning to analyse users' cooling demand and integrates weather data to forecast future cooling loads. The system formulates the optimal cooling strategies by balancing energy efficiency against various operational conditions. Additionally, we have implemented an optical fibre sensing system that employs AI technologies to monitor and analyse key parameters in real time, such as temperature and acoustic vibrations in underground pipelines, ensuring stability and reliability of the systems. This innovation received a gold medal with congratulations of the jury at the 50th International Exhibition of Inventions of Geneva in 2025.

To maintain integrity of the pipelines, the EMSD adopted the Global Navigation Satellite System technology, which won a silver medal at the 49th International Exhibition of Inventions of Geneva in 2024. Combined with Internet-of-Things sensors, this solar-powered system enables real-time monitoring of underground pipelines of DCS around the clock, and uses data analytics to identify potential risks, ensuring long-term structural stability and reliability of the pipelines.

為精確監測區域供冷系統地下管道的結構穩定性，機電署研發出結合全球衛星導航系統與物聯網傳感器的專門技術。這項創新監測技術效能卓越，在第四十九屆日內瓦國際發明展榮獲銀獎。

To precisely monitor the structural stability of the DCS underground pipelines, the EMSD developed a specialised technology integrating the Global Navigation Satellite System with Internet-of-Things sensors. With its exceptional performance, this innovative monitoring technology received a silver medal at the 49th International Exhibition of Inventions of Geneva.

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

機電署在所有區域供冷系統項目採用「安全智慧工地系統」，並參與建造業議會的「安全智慧工地系統標籤計劃」。我們通過整合智能裝備與人工智能系統，顯著提升工地的安全標準和整體安全系數。

The EMSD adopted the Smart Site Safety System in all DCS projects and participated in the Construction Industry Council's Smart Site Safety System Labelling Scheme. By integrating smart equipment with AI systems, we have significantly enhanced the safety standards and the overall safety factor of sites.

同時，機電署在所有區域供冷系統項目採用「安全智慧工地系統」，整合多項尖端技術，以提升工地安全水平。作為建造業議會「安全智慧工地系統標籤計劃」的首批參與者，我們運用中央管理平台、智慧安全帽與手帶、數碼工作許可系統、電子鎖定裝置、危險區域智能警示、人工智能安全監察系統，以及密閉空間監測系統，全方位強化工地安全管理。此外，我們利用無人機實時監控及錄影工地的施工進度和活動，協助工程人員遙距視察高風險區域（例如建築物外牆和屋頂），讓他們在安全環境下掌握工作進展，及時識別可能導致延誤的因素，適時跟進問題。

Meanwhile, the EMSD has adopted the Smart Site Safety System in all DCS projects, integrating a suite of cutting-edge technologies to improve site safety. As one of the first participants in the Construction Industry Council's Smart Site Safety System Labelling Scheme, we have comprehensively strengthened site safety management by employing a central management platform, smart helmets and wristbands, a digital work permit system, electronic lockout devices, smart hazard zone alerts, an AI-powered safety monitoring system and confined space monitoring systems. Moreover, drones were deployed for real-time surveillance and video-recording of project progress and activities on site, allowing engineering staff to remotely inspect high-risk areas (such as building facades and rooftops), so that they could grasp the work progress in a safe environment, promptly identify potential causes of delay and timely follow up the issues.

承辦商引進多項創新施工方法，包括以焊接機器人取代高風險的人手焊接工序，並使用自動噴霧系統抑制塵埃。在基礎設施巡查方面，我們運用無人機監察地下管道，以及潛水機械人檢查水管和水缸，既大幅降低前線人員面對的工作風險，又提升整體效率，減少事故發生機會。上述措施確保區域供冷系統安全運作，屢獲業界肯定。其中，啟德區域供冷系統三號廠房項目於2024年榮獲「香港顧問工程師協會年度獎項」，系統的一號和二號廠房項目則於同年獲國際設施管理協會頒發「國際設施管理協會亞太區卓越大獎2024」，彰顯我們在風險管理方面的卓越表現。

Contractors introduced multiple innovative construction methods, including replacing high-risk manual welding procedures with welding robots and employing automated misting systems to suppress dust. For infrastructure inspections, drones were used to monitor underground pipelines and diving robots were deployed to examine water pipes and tanks, significantly reducing risks to frontline workers while improving overall efficiency and lessening the chance of incidents. Such practices ensured the safe operation of the DCS and earned repeated industry recognition. Among them, the Kai Tak DCS Plant No. 3 project received the Association of Consulting Engineers of Hong Kong Annual Awards in 2024, while Plants No. 1 and No. 2 projects were awarded the IFMA Asia Pacific Awards of Excellence 2024 by the International Facility Management Association, highlighting our exceptional performance in risk management.

啟德區域供冷系統的三座廠房項目憑藉高水準的規劃和設施管理，獲業界高度認可，分別獲得「香港顧問工程師協會年度大獎2024」和「國際設施管理協會亞太區風險管理卓越獎優勝者」。

The three Kai Tak DCS plants received high recognition from the industry for their high-standard planning and facility management, and were separately honoured at the "Association of Consulting Engineers of Hong Kong (ACEHK) Annual Awards 2024" and the "IFMA Asia Pacific Awards of Excellence in Risk Management".

淡水冷卻塔計劃的發展

DEVELOPMENT OF THE FRESHWATER COOLING TOWERS SCHEME

與氣冷式空調系統相比，水冷式空調系統具有更顯著的環境、經濟和財務效益。為促進節能減排，機電署自2000年起聯同其他政府部門推行「淡水冷卻塔計劃」，鼓勵廣泛採用淡水冷卻式空調系統，以提升能源效益並減少碳排放。

Compared to air-cooled air conditioning systems, water-cooled systems offer greater environmental, economic and financial benefits. To promote energy conservation and emissions reduction, the EMSD has implemented the Freshwater Cooling Towers (FWCTs) Scheme since 2000 in collaboration with other government departments to encourage the widespread adoption of freshwater-cooled air conditioning systems, thereby enhancing energy efficiency while reducing carbon emissions.

機電署於2024年和2025年進行外展計劃，接觸全港18區未註冊淡水冷卻塔的擁有人/使用者，以提高他們定期清洗及妥善維護淡水冷卻塔的意識。機電署亦持續抽查淡水冷卻塔檢測水質，以確保其安全運作。去年，機電署與發展局和水務署合作，為計劃下九個選定區域解決供水問題。未來「淡水冷卻塔計劃」的申請會按個別情況審批，以平衡淡水供應量和發展需求。

To raise awareness of regular cleaning and proper maintenance of FWCTs, the EMSD conducted outreach programmes in 2024 and 2025, engaging owners/users of unregistered FWCTs across all 18 districts of Hong Kong. The EMSD also continued to carry out random inspections of FWCTs to test the water quality, ensuring their safe operation. Last year, the EMSD collaborated with the Development Bureau and the Water Supplies Department (WSD) to address water supply issues in nine selected areas under the scheme. Future applications for the FWCT Scheme will be reviewed on a case-by-case basis to balance freshwater supply with development needs.

為尋求可持續的供水方案，機電署與水務署合作，在上水保榮路體育館展開試點項目，利用逆滲透技術和加氯處理的循環再用水補給淡水冷卻系統。項目所收集的數據會用作評估技術可行性，為未來擴大應用奠定基礎。

In pursuit of sustainable water supply solutions, the EMSD partnered with the WSD to launch a pilot project at the Po Wing Road Sports Centre in Sheung Shui, utilising reverse osmosis technology and chlorinated recycled water to supplement the freshwater cooling system. Data collected from this initiative will be used to assess technical feasibility, laying the groundwork for broader implementation in the future.

為平衡淡水供需，機電署與水務署合作推出試點項目，以循環再用水補給淡水冷卻系統。該項目已於上水保榮路體育館展開，以評估未來廣泛應用此方案的可行性。

To balance freshwater supply and demand, the EMSD collaborated with the WSD on a pilot project to replenish its freshwater cooling systems with recycled water. The project was launched at the Po Wing Road Sports Centre in Sheung Shui to assess the feasibility of wider application of this solution in the future.

此外，「淡水冷卻塔計劃」引入創新科技，透過「資料管理系統」整合電子表格、數碼工作流程和自動化數據處理，提升申請、審批和監管效率。該系統能夠實現流程數碼化、簡化行政流程和大幅減少人手工作量。系統亦提供實時數據記錄，並自動生成報告，以提高監測準確度和運作效率。機電署致力推動創新技術，優化「淡水冷卻塔計劃」，並探索更多可持續方案，以支持香港的碳中和目標，建設更綠色的都市環境。

Furthermore, the FWCT Scheme has incorporated innovative technologies, integrating electronic forms, digital workflow and automated data processing through a Data Management System to increase application, approval and regulatory efficiency. This system enables process digitisation, streamlines administrative procedures and significantly reduces manual workloads. In addition, it provides real-time data logging and automatically generates reports to improve monitoring accuracy and operational efficiency. The EMSD remains committed to advancing technological innovation, optimising the FWCT Scheme and exploring more sustainable solutions to support Hong Kong's carbon neutrality goals and build a greener urban environment.

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

促進太陽能發電發展

香港特區政府於2021年公布《香港氣候行動藍圖2050》，把「淨零發電」列為關鍵減碳策略之一。為促進可再生能源發展，政府於2022年4月推出一系列便利措施，協助私營機構在室外停車場安裝太陽能發電系統。有關措施包括加快圖則審批流程和提供總樓面面積寬免等。在室外停車場安裝太陽能發電系統，私營機構不僅可應用綠色可再生能源技術，為泊車位提供遮蔭，還可參與上網電價計劃，以高於標準電費的價格把所產生的電力售予電力公司，從而抵銷可再生能源和發電系統的投資成本。

香港迪士尼樂園度假區演藝人員停車場為首個採用有關措施的太陽能停車場上蓋項目。項目分為兩階段，首階段已於2025年2月正式落成，安裝了近200塊雙面太陽能板，為40個泊車位提供遮蔭並同時發電。第二階段現正施工，增設另外200塊雙面太陽能板，為另外40個泊車位提供服務。所有雙面太陽能板投入運作後，總發電量達200千瓦，每年可生產超過20萬度電。

與此同時，機電署配合環境及生態局「太陽能發電建築先導計劃」，在總部大樓部分玻璃幕牆應用太陽能發電建築技術，以供應可再生能源。政府成立由機電署、屋宇署、建築署和消防處組成的跨部門專業小組，旨在提升先導計劃的成效和效率。其中，屋宇署在2024年9月放寬對太陽能發電建築的不可燃性要求。先導計劃的顧問研究亦於2024年12月完成，建議在機電署總部大樓地下大堂、三樓和六至七樓的選定垂直玻璃幕牆，安裝太陽能發電建築系統。作為政府首個符合新不可燃性要求的項目，先導計劃會收集數據，從多方面全面評估太陽能發電建築的成效和可行性，以支持政府「淨零發電」的減碳策略，助力香港邁向碳中和。

PROMOTING SOLAR POWER DEVELOPMENT

The HKSAR Government announced the Hong Kong's Climate Action Plan 2050 in 2021, identifying "net-zero electricity generation" as one of the key decarbonisation strategies. To promote renewable energy development, the Government implemented a series of facilitation measures in April 2022 supporting the private sector in installing photovoltaic (PV) systems at outdoor car parks. These measures encompassed streamlining the plan approval process and granting gross floor area (GFA) exemptions. By installing PV systems at outdoor car parks, the private sector not only can employ green renewable energy technologies and provide shading for parking spaces, but also can participate in the Feed-in Tariff Scheme by selling the generated electricity to power companies at a rate higher than standard tariffs to offset the investment costs of renewable energy and power generation systems.

The cast members car park of Hong Kong Disneyland Resort is the first solar car park canopy project adopting these measures. The project is divided into two phases. The first phase was officially completed in February 2025, with nearly 200 bifacial solar panels installed to provide shading for 40 parking spaces while generating electricity. The second phase currently under construction will feature another 200 bifacial solar panels, serving another 40 parking spaces. Once all bifacial solar panels are fully operational, they will have a total capacity of 200 kW, producing over 200 000 kilowatt-hours (kWh) of electricity annually.

Concurrently, under the Environment and Ecology Bureau's Pilot Scheme on Building-Integrated Photovoltaics (BIPV), the EMSD would employ the BIPV technology at some curtain walls of the EMSD headquarters to supply renewable energy. The Government established an inter-departmental professional team comprising this Department (EMSD), Buildings Department, Architectural Services Department and Fire Services Department, with aim to enhancing the effectiveness and efficiency of the Pilot Scheme. The Buildings Department relaxed the non-combustibility requirements for BIPV in September 2024. In the consultancy study under the Pilot Scheme completed in December 2024, it was recommended installing BIPV systems on selected vertical curtain walls on the ground floor lobby, third floor and sixth to seventh floors of the EMSD Headquarters. As the Government's first project fulfilling the new non-combustibility requirements, data of the Pilot Scheme would be collected to comprehensively assess BIPV's effectiveness and feasibility from various perspectives to support the Government's "net-zero electricity generation" decarbonisation strategy and Hong Kong's path to carbon neutrality.

修訂《建築物能源效益條例》的諮詢工作

為落實《香港氣候行動藍圖2050》提出的發展策略，《行政長官2023年施政報告》建議修訂《建築物能源效益條例》。修訂旨在擴大規管範圍，涵蓋更多類別的建築物，並縮短能源審核周期，從而全面提升建築物的能源效益。

為此，機電署進行廣泛的公眾諮詢和營商環境評估，深入了解業界對能源審核成本效益的看法。為平衡經濟考量和能源效益，我們建議豁免總樓面面積少於7 000平方米的小型建築物進行強制能源審核。此項調整雖令受規管建築物數量減少60%，但仍涵蓋全港90%的建築物總用電量，既確保規管成效，又大幅減輕持份者的合規負擔，因而獲得社會各界廣泛支持。機電署會繼續與持份者保持溝通，確保修例工作順利推進，以提供適切的規管框架，提升本港建築物的能源效益。

CONSULTATION ON AMENDMENTS TO THE BUILDINGS ENERGY EFFICIENCY ORDINANCE

To implement the strategic objectives outlined in the Hong Kong's Climate Action Plan 2050, the Chief Executive's Policy Address 2023 proposed amendments to the Buildings Energy Efficiency Ordinance. The revisions aim to expand the regulatory scope to include more types of buildings and shorten energy audit cycles, thereby holistically improving the energy efficiency of buildings.

To this end, the EMSD conducted extensive public consultations and business impact assessments to gain a deeper understanding of the trade's perspectives on the cost-effectiveness of energy audits. To strike a balance between economic considerations and energy efficiency, we proposed exempting small buildings with a GFA below 7 000 square metres from mandatory energy audits. While this adjustment reduced the number of regulated buildings by 60%, it still covered 90% of Hong Kong's total building electricity consumption. This approach maintained regulatory effectiveness while significantly easing compliance burdens for stakeholders, thus garnering broad support from various sectors of the society. The EMSD will continue engaging with stakeholders to ensure smooth progress of the legislative amendments, so as to establish an appropriate regulatory framework to enhance energy efficiency of buildings in Hong Kong.

機電署就《建築物能源效益條例》的修訂工作進行深入的業界與公眾諮詢，務求在推動持續提升建築物能源效益與維持經濟可持續性之間取得最佳平衡。

The EMSD conducted in-depth industry and public consultations on the amendments to the Buildings Energy Efficiency Ordinance, with the aim of achieving the optimal balance between driving continuous improvement in building energy efficiency and maintaining economic sustainability.

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

提升建築物能源效益標準

此外，機電署於2024年11月22日刊憲經修訂的《屋宇裝備裝置能源效益實務守則》和《建築物能源審核實務守則》，以進一步提升屋宇裝備裝置的能源效益，推動建築物減少碳排放。新守則於2025年8月23日全面實施，與2015年版本相比，整體能源效益標準提高20%，預計到2035年，每年可節省54億度電（與2015年的用電量相比）。這標誌着本港建築物能源效益標準的一個重要里程碑，並為實現《香港氣候行動藍圖2050》提出的碳中和目標作出重大貢獻。

經修訂的守則規定，大型中央空調系統必須配置能源優化控制系統，同時放寬新一代環保雪種的使用限制。為減輕業界的行政負擔，機電署同年推出能源審核的精簡報告範本，把強制提交的表格數量減少60%，大大簡化合規程序和提高管理效率。

ENHANCING BUILDINGS ENERGY EFFICIENCY STANDARDS

Besides, the EMSD gazetted the revised editions of the Code of Practice for Energy Efficiency of Building Services Installation and the Code of Practice for Building Energy Audit on 22 November 2024 to further improve the energy efficiency of building services installations and promote carbon emissions reduction in buildings. The updated codes were fully implemented on 23 August 2025, raising overall energy efficiency standards by 20% as compared to the 2015 editions. With an estimated annual saving of 5.4 billion kWh of electricity by 2035 (compared to the electricity consumption in 2015), it marks a significant milestone in Hong Kong's buildings energy efficiency standards and will make substantial contributions towards the carbon neutrality goals outlined in the Hong Kong's Climate Action Plan 2050.

The revised codes mandate that large-scale central air-conditioning systems be equipped with energy optimisation control systems, while relaxing restrictions on the use of new-generation environmentally-friendly refrigerants. To alleviate administrative burdens on the trade, the EMSD launched streamlined energy audit report templates in the same year, reducing the number of mandatory forms to be submitted by 60%. This significantly simplified compliance procedures and enhanced management efficiency.

持續推進「強制性能源效益標籤計劃」

為進一步提升能源效益，機電署於年內就「強制性能源效益標籤計劃」（強制性標籤計劃）推出多項重要更新，包括第三次能源效益級別標準提升和實施第四階段計劃。相關舉措旨在提升公眾的節能意識，幫助消費者挑選更具能源效益的產品，共同實現減少碳排放的目標。

CONTINUOUS ADVANCEMENT OF THE MANDATORY ENERGY EFFICIENCY LABELLING SCHEME

To further enhance energy efficiency, the EMSD rolled out several key updates to the Mandatory Energy Efficiency Labelling Scheme (MEELS) during the year, including the third upgrading of the energy efficiency grading standards and the implementation of Phase IV of MEELS. These initiatives aim to raising public awareness of energy conservation and enabling consumers to select more energy-efficient products, collectively contributing to our carbon emissions reduction objectives.

第三次能源效益級別標準提升的工作已在2024年完成。為確保新標準全面有效實施，機電署於同年3月發布《產品能源標籤實務守則2024》，並舉辦多場研討會，向業界闡明新標準的實施細節。

The third upgrading of the energy efficiency grading standards was completed in 2024. To ensure full and effective implementation of the new standards, the EMSD published the Code of Practice on Product Energy Labelling of Products 2024 in March of the same year and organised multiple seminars to clarify the implementation details of the new standards to the industry.

第三次能源效益級別標準提升於2024年6月30日生效，並設有15個月的過渡期。新標準涵蓋冷凍器具、洗衣機和儲水式電熱水器，預計每年可節省約2.7億度電。為配合新標準於2025年9月30日前全面實施，機電署於2024年3月發布《產品能源標籤實務守則2024》，並舉辦多場業界研討會，詳細講解新標準的時間表、技術要求和實施細節。

The third upgrading of the energy efficiency standards took effect on 30 June 2024, with a 15-month transition period. The revised standards cover refrigerating appliances, washing machines and storage type electric water heaters, and were expected to save about 270 million kWh of electricity annually. To facilitate full implementation of the new standards by 30 September 2025, the EMSD published the Code of Practice on Energy Labelling of Products 2024 in March 2024 and held multiple industry seminars to explain the timelines, technical requirements and implementation details of the new standards.

此外，強制性標籤計劃第四階段於2024年12月1日全面實施，涵蓋範圍大幅擴展至11類產品。新增產品包括發光二極管燈、氣體煮食爐和即熱式氣體熱水爐。消費者可借助強制性標籤，輕鬆識別及選購更具能源效益的產品，共同為環保盡一分力。在第四階段實施後，強制性標籤計劃所涵蓋的產品佔住宅總能源消耗量八成，預計每年可額外節省約570太焦耳（約1.6億度電）的能源，為實現碳中和目標奠定堅實基礎。

Furthermore, Phase IV of MEELS was fully implemented on 1 December 2024, significantly broadening the scheme's coverage to 11 types of products. New additions include LED lamps, gas cookers and gas instantaneous water heaters. Consumers can now easily identify and purchase more energy-efficient products with the aid of the mandatory labels, together contributing to environmental protection efforts. Following the implementation of Phase IV, MEELS-covered products now account for 80% of the total energy consumption in the residential sector, with estimated additional annual energy savings of 570 terajoules (approximately 160 million kWh), establishing a solid foundation for achieving carbon neutrality targets.

提升能源效益　推動綠色建築

「綠色校園2.0 — 智能慳電」計劃已於2025年3月圓滿結束。計劃推行期間成功資助和協助300間學校把現有冷氣機更換為變頻式冷氣機，並把現有照明更換為發光二極管燈，每年節省的電力相當於12 000個三人家庭一年的用電量。除了有效降低學校整體用電量外，計劃還協助學校安裝實時能源監察系統，以即時監察能源消耗情況。一旦發現用電量異常，學校可立即檢查並修正問題，避免浪費能源。此外，學校可利用系統生成用電圖表，教導學生了解課室用電情況，從而培養他們的節能意識。未來，機電署會繼續推行另一項節能計劃 —「綠色社福機構」，為社福機構進行節能改善工程。

ENHANCING ENERGY EFFICIENCY AND PROMOTING GREEN BUILDINGS

The "Green Schools 2.0 – Energy Smart" initiative concluded successfully in March 2025. During its implementation, the initiative provided subsidies and support to 300 schools for replacing existing air conditioners with variable-speed models and existing lighting with LED lighting. The annual electricity savings achieved are equivalent to the consumption of 12 000 three-person households in a year. Apart from effectively reducing the overall electricity consumption of schools, the initiative also facilitated the installation of real-time energy monitoring systems in schools to monitor energy consumption instantly. If abnormal consumption is detected, schools can promptly carry out inspections and rectify the issues to prevent energy wastage. Furthermore, schools can utilise the electricity consumption charts generated by the system to educate students about classroom energy consumption, thereby fostering their awareness of energy conservation. In the future, the EMSD will continue to implement another energy-saving scheme, "Green Welfare NGOs (non-governmental organisations)", to carry out energy saving improvement works for social welfare organisations.

「綠色校園2.0 — 智能慳電」計劃於2025年圓滿結束。計劃資助了300間學校更換高效節能設備，每年節省的能源相當於約12 000個三人家庭一年的用電量，有效促進學校的可持續發展。

The "Green Schools 2.0 – Energy Smart" initiative concluded successfully in 2025. By subsidising 300 schools to replace high-efficiency and energy-saving equipment, the initiative achieved annual energy savings equivalent to the yearly electricity consumption of approximately 12 000 three-person households, effectively promoting sustainable development of schools.

為推動社會福利界的可持續發展，機電署會繼續推行「綠色社福機構」計劃，為安老院等社福機構提供專業支援，協助進行節能改善工程。

To promote sustainable development within the social welfare sector, the EMSD will continue to implement the "Green Welfare NGOs", offering professional support to social welfare organisations, such as residential care homes for the elderly, to assist with energy-saving improvement works.

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

為支持香港綠色建築的發展，我們持續以身作則。繼機電署總部大樓於2023年榮獲香港綠色建築議會「綠建環評既有建築2.0版綜合評估計劃」的「最終鉑金級」評級後，我們參與「綠建環評既有建築3.0版(測試版)綜合評估計劃」，推動部門進一步提升總部大樓的環保表現。此外，為持續降低機電署總部大樓的能源消耗，我們已實施多項節能措施及設備升級，包括優化照明系統、提升空調效率等，目標是來年在「零碳就緒建築認證計劃」中，取得較去年「特低能耗」評級更高的「超低能耗」評級。

To support the development of green buildings in Hong Kong, we continue to lead by example. Following the EMSD Headquarters Building's attainment of the Final Platinum rating of BEAM Plus Existing Buildings V2.0 Comprehensive Scheme from the Hong Kong Green Building Council in 2023, we participated in the BEAM Plus Existing Buildings V3.0 (Beta Version) Comprehensive Scheme to drive further improvements in the environmental performance of our Headquarters Building. In addition, to continuously reduce the energy consumption of the EMSD Headquarters Building, multiple energy-saving measures and equipment upgrades were implemented, including optimising lighting systems and enhancing air-conditioning efficiency. Our target is to achieve the Super Low rating under the Zero-Carbon-Ready Building Certification Scheme next year, surpassing the Extra Low rating attained last year.

機電署總部大樓去年在「零碳就緒建築認證計劃」中獲得「特低能耗」評級。我們會在這項成就的基礎上，持續進行設備升級和優化管理措施，力求不斷突破，進一步降低總部大樓的能源消耗。

The EMSD Headquarters Building achieved the Extra Low rating under the Zero-Carbon-Ready Building Certification Scheme last year. Building upon this achievement, we will continue to implement equipment upgrades and optimise management measures, striving for continuous breakthroughs to further reduce the energy consumption of the Headquarters Building.

部門致力不斷提高環保標準。繼機電署總部大樓於2023年獲頒「綠建環評既有建築2.0版綜合評估計劃」的「最終鉑金級」評級後，我們參與「綠建環評既有建築3.0版（測試版）綜合評估計劃」，進一步提升總部大樓的環保表現。

The Department is committed to continuously improving environmental standards. Following the EMSD Headquarters Building's attainment of the Final Platinum rating under the BEAM Plus Existing Buildings V2.0 Comprehensive Scheme in 2023, we participated in the BEAM Plus Existing Buildings V3.0 (Beta Version) Comprehensive Scheme to further enhance the green performance of the Headquarters Building.

出版《香港能源最終用途數據》

為協助市民、學術界與業界了解本地能源的使用模式和用途，並提高社會對香港能源發展的認識，機電署每年都會出版《香港能源最終用途數據》。數據每年更新，涵蓋各類能源的使用量及用途，例如空氣調節、照明及煮食等，為各界提供具參考價值的資料，以便推行各項節約能源和善用再生能源的措施。《香港能源最終用途數據2024》已於2024年9月上載至機電署網站，供市民免費查閱及下載。

PUBLICATION OF THE HONG KONG ENERGY END-USE DATA

To assist the public, academia and the trade in understanding local energy consumption patterns and applications, and raise the community's awareness of energy development in Hong Kong, the EMSD publishes the Hong Kong Energy End-use Data annually. Updated yearly, the data encompasses the consumption shares and applications, such as air-conditioning, lighting and cooking, of various energy sources, providing a valuable point of reference for various sectors to facilitate the implementation of measures relating to energy conservation and renewable energy utilisation. The Hong Kong Energy End-use Data 2024 was made available on the EMSD's website in September 2024 for free public access and download.

機電署成功舉辦首次亞太區經濟合作組織（亞太經合組織）能源工作組四個專家小組聯合會議。會議匯聚18個亞太經合組織成員經濟體及四個國際組織的代表，就能源領域的重要挑戰進行專業分組研討和交流意見。

The EMSD successfully hosted the first-ever joint meeting of four expert groups of the Asia-Pacific Economic Cooperation (APEC) Energy Working Group. The meeting gathered representatives from 18 APEC member economies and four international organisations to conduct professional breakout sessions and exchange views on key challenges in the energy sector.

區域及國際合作

機電署於2025年4月8日至11日舉辦首次亞太區經濟合作組織（亞太經合組織）能源工作組四個專家小組聯合會議，並同時舉辦「亞太經合組織提升發電能源效率工作坊」和「第八屆油氣安全網論壇」。這項重點活動雲集逾百位來自18個亞太經合組織成員經濟體和四個國際組織的代表，就能源安全、清潔能源、可再生能源、能源效益、能源數據分析和可持續發展等議題分享經驗。我們亦在活動期間向國際社會展示香港在綠色能源方面的成就。

這次活動成功舉行，令機電署在籌辦大型國際會議方面的能力獲得國際肯定，亞太能源研究中心亦因此計劃於2026年機電署協助於香港舉辦首屆「亞太經合組織潔淨與低碳氫能年度大會」，開拓更廣闊的區域能源合作平台。中國將於2026年主辦亞太經合組織會議，第三次擔任東道主，而香港會繼續發揮「超級聯繫人」和「超級增值人」的重要角色，成為連接內地與世界的橋樑，為人才、資金和發展創造機遇。

REGIONAL AND INTERNATIONAL CO-OPERATION

The EMSD hosted the first-ever joint meeting of four Expert Groups under the Asia-Pacific Economic Cooperation (APEC) Energy Working Group (EWG) from 8 to 11 April 2025, in conjunction with the APEC Workshop on Promoting Energy Efficiency Enhancement in Electricity Generation and the 8th Oil and Gas Security Network Forum. This flagship event brought together over 100 delegates from 18 APEC member economies and four international organisations to exchange insights on topics such as energy security, clean energy, renewable energy, energy efficiency, energy data analytics and sustainable development. We also showcased Hong Kong's achievements in green energy to the international community during the event.

The successful hosting of this event earned the EMSD international recognition for its capability in organising major international conferences. As a result, the Asia Pacific Energy Research Centre plans to organise with EMSD's assistance the first APEC Clean and Low-Carbon Hydrogen Annual Convention in Hong Kong in 2026, establishing a broader platform for regional energy co-operation. China will host the APEC meeting in 2026, acting as the host for the third time, while Hong Kong will continue to play its vital role as "Super Connector" and "Super value-adder", serving as a bridge linking the Mainland and the world and creating opportunities for talent, capital and development.

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此外，機電署於2025年2月27日至28日舉辦「東南亞國家聯盟（東盟）數碼太陽能資源地圖及管理技術能力培訓工作坊」，匯聚30位來自六個東盟成員國的專家和代表，就數碼太陽能資源地圖和管理技術進行深入交流。香港金融管理局代表亦在工作坊上展示可持續金融項目，強調香港作為綠色金融樞紐的優勢。

In addition, from 27 to 28 February 2025, the EMSD organised the Capacity Building Workshop on Promoting Digital Solar Resource Maps and Management Technologies of the Association of Southeast Asian Nations (ASEAN), engaging 30 experts and representatives from six ASEAN member states for in-depth discussions on digital solar resource mapping and management technologies. Representatives from the Hong Kong Monetary Authority showcased sustainable finance projects and highlighted the city's strength as a green finance hub at the workshop.

機電署於2025年舉辦「東南亞國家聯盟數碼太陽能資源地圖及管理技術能力培訓工作坊」。活動聚焦數碼太陽能資源地圖與相關管理技術，為多位專家提供了實務交流和技術轉移的平台。

The EMSD organised the Capacity Building Workshop on Promoting Digital Solar Resource Maps and Management Technologies of the Association of Southeast Asian Nations in 2025. The event focused on digital solar resource mapping and related management technologies, providing a platform for experts to engage in practical exchange and technology transfer.

為深化大灣區技術交流，機電署於2024年11月5日參與在深圳舉行的「粵港澳大灣區高效空調系統及區域供冷國際論壇」，分享香港在建設和營運區域供冷系統的經驗。同年11月28日，我們到訪前海的區域供冷系統廠房，實地考察5號和6號供冷站，並就系統設計和營運管理作專業技術交流。2025年3月7日，我們更考察珠江新城和廣州大學城的區域供冷項目，深入了解內地營運大型區域供冷系統的情況，為香港未來發展相關項目提供重要參考。這些國際和區域合作體現香港在推動綠色能源轉型中扮演積極角色。我們通過分享最佳實踐和創新技術，為構建可持續能源的未來作出貢獻。

To deepen technical exchanges in the Greater Bay Area (GBA), the EMSD participated in the "Guangdong-Hong Kong-Macao Greater Bay Area International Forum on High-Efficiency Air Conditioning Systems and District Cooling" held in Shenzhen on 5 November 2024, sharing Hong Kong's experience in constructing and operating DCSs. On 28 November 2024, we went on a tour to the DCS plant in Qianhai, conducting site visits to chiller plant nos. 5 and 6 and engaging in professional technical exchanges on system design and operational management. On 7 March 2025, we also visited the DCS projects in Zhujiang New Town and Guangzhou Higher Education Mega Centre to gain deeper insights into the operation of large-scale DCSs in the Mainland, serving as valuable references for the future development of relevant projects in Hong Kong. These international and regional collaborations demonstrate Hong Kong's proactive role in driving green energy transition. By sharing best practices and innovative technologies, we contribute to building a sustainable energy future.

機電署派代表到深圳出席「粵港澳大灣區高效空調系統及區域供冷國際論壇」，分享香港在建設和營運區域供冷系統的經驗，藉此促進香港與大灣區的區域供冷技術交流。

The EMSD sent representatives to attend the "Guangdong-Hong Kong-Macao Greater Bay Area International Forum on High-Efficiency Air Conditioning Systems and District Cooling" in Shenzhen, sharing Hong Kong's experience in constructing and operating DCSs, thereby promoting technical exchange on district cooling between Hong Kong and the GBA.

為加深對區域供冷技術的實務了解，機電署派員實地考察前海區域供冷系統5號和6號供冷站，並與當地技術人員進行專業而深入的技術交流。

To deepen the practical understanding of district cooling technology, the EMSD dispatched personnel to conduct site visits to DCS chiller plant Nos. 5 and 6 in Qianhai, engaging in in-depth professional technical exchange with local technical staff.

機電署派員實地考察珠江新城和廣州大學城的區域供冷設施，深入了解內地區域供冷系統的營運模式，以汲取經驗，為香港未來相關項目提供參考。

The EMSD dispatched personnel to conduct site visits to the DCS facilities in Zhujiang New Town and Guangzhou Higher Education Mega Centre to gain a deeper understanding of the operational models of DCSs in the Mainland, drawing upon such experience for reference in future relevant projects in Hong Kong.

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

未來工作重點 Future Work Focuses

重點一：推動私營機構發展區域供冷系統

Focus 1: Promoting the Development of District Cooling Systems by Private Enterprises

財政司司長在2025年發表的《財政預算案》中表示，政府正檢視在新發展區提供區域供冷系統的規模和推進模式，務求提升成本效益，以配合區域發展需要。相關的政策檢討已於2025年4月28日提交立法會環境事務委員會審議，並獲得委員會支持。

針對北部都會區的大型發展項目，包括新田科技城和牛潭尾等新發展區的項目，政府會採取創新模式，推出具吸引力的鼓勵措施，推動非政府機構和私人發展商根據建築物的實際供冷需求，自行建設區域供冷系統，確保與整體發展進度一致。機電署會提供技術支援，例如更詳細的設計和作業指引等。

目前，政府正深入研究具體實施方案，涵蓋稅務優惠政策的落實細節、總樓面面積寬免的計算方式與適用條件等多個關鍵範疇。為此，我們計劃在2025年12月舉辦「區域供冷創新領域研討會」，分享本地和海外私營區域供冷系統的經驗，促進不同持份者交流知識，以推動本港私營區域供冷系統和集中式多建築供冷系統的發展。

In the Budget presented in 2025, the Financial Secretary stated that the Government was reviewing the scale and mode of delivery of DCSs in new development areas (NDAs), with the aim of enhancing cost-effectiveness while meeting regional development needs. The relevant policy review was submitted to the Legislative Council Panel on Environmental Affairs for consideration on 28 April 2025 and was supported by the Panel.

For major development projects in the Northern Metropolis, including those in NDAs such as San Tin Technopole and Ngau Tam Mei, the Government will adopt an innovative approach by introducing appealing incentive measures to encourage NGOs and private developers to independently construct DCSs based on the actual cooling demand of buildings, ensuring alignment with the overall development progress. The EMSD will offer technical support, including more detailed design and operation guidelines.

Currently, the Government is conducting in-depth studies on a concrete implementation plan covering multiple key areas, including the implementation details of the tax incentive policy and the calculation methods and applicable conditions for GFA exemptions. In this regard, we plan to host a "District Cooling Innovation Seminar" in December 2025 to share local and overseas experience in private-operated DCSs and facilitate knowledge exchange among various stakeholders, thereby promoting the development of private-operated DCSs and centralised multi-building cooling systems in Hong Kong.

重點二：善用「組裝合成」建築法和「機電裝備合成法」

Focus 2: Utilisation of Modular Integrated Construction and Multi-trade Integrated Mechanical, Electrical and Plumbing Technologies

我們積極推動在古洞北和東涌新發展區的區域供冷系統項目應用「組裝合成」建築法和「機電裝備合成法」，結合建築信息模擬與人工智能等先進技術，減少現場施工程序，並提升工程質素與施工效率。為協助業界採用上述創新建築方法，機電署正制訂全面技術指引，涵蓋技術規格和作業標準，務求為業界提供清晰可行的技術框架。我們預計於2025年內完成制訂相關指引。

The EMSD actively promotes the adoption of Modular Integrated Construction and Multi-trade Integrated Mechanical, Electrical and Plumbing methods in DCS projects in the Kwu Tung North and Tung Chung NDAs. This approach integrates cutting-edge technologies such as Building Information Modelling and AI to reduce on-site construction procedures and enhance project quality and construction efficiency. To support the adoption of these innovative construction methods by the trade, the EMSD is developing comprehensive technical guidelines covering technical specifications and operational standards, with the aim of providing the trade with clear and actionable technical frameworks. The relevant guidelines are expected to be completed within 2025.

重點三：善用創科優化水冷方案

Focus 3: Optimising Water-Cooled Solutions through Innovation and Technology

為應對新發展區水資源有限的挑戰，我們正與水務署緊密合作，研究在淡水冷卻塔系統採用替代水源(例如經逆滲透處理的水)的可行性。這項合作有助優化水資源配置，同時確保區域供冷系統在資源有限的情況下仍能高效運作，從而促進香港的可持續發展。

To address the challenge of limited water resources in NDAs, the EMSD is, in close collaboration with the WSD, exploring the feasibility of using alternative water sources, such as reverse osmosis treated water, in FWCT systems. This collaboration will help optimise water resource allocation while ensuring the efficient operation of DCSs under resource constraints, thereby contributing to the sustainable development of Hong Kong.

重點四：持續完善「強制性能源效益標籤計劃」

Focus 4: Continuous Enhancement of the Mandatory Energy Efficiency Labelling Scheme

《香港氣候行動藍圖2050》訂立了明確減排目標，包括以2015年水平為基準，於2050年前減少住宅樓宇的用電量20%至30%，並於2035年前達到以上目標的一半。

為配合有關減排目標，機電署正進行強制性標籤計劃第三次能源效益級別標準提升的工作。是次提升有效重新分布本地市場上冷凍器具、洗衣機和儲水式電熱水器的五個能源效益級別，並提高能源效益評級標準，不僅有助市民選購更高能效的產品，還可提升業界推出高能效產品的競爭力。為配合新能源效益級別標準於2025年9月30日全面實施，機電署會在此之前舉辦多場業界研討會，協助業界順利推行新能源效益級別標準，並鼓勵業界積極與生產商合作，推出更高能效的新產品，讓市民能節省用電和電力開支，為環保減排出一分力。

強制性標籤計劃是推動住宅節能的關鍵策略之一，我們會持續檢討計劃的成效，並與業界研究進一步擴大計劃的產品涵蓋範圍和提升現有產品能效標準。此外，我們正積極探討把強制性標籤計劃擴展至非住宅產品的可行性，務求全面提升本港各類產品的能源效益表現，為實現《香港氣候行動藍圖2050》的減排目標提供更強大的支援。

The Hong Kong's Climate Action Plan 2050 sets out clear emissions reduction targets, including reducing the electricity consumption of residential buildings by 20% to 30% from 2015 levels by 2050, with half of the above target to be achieved by 2035.

In alignment with the relevant emissions reduction targets, the EMSD is undertaking the third upgrading of the energy efficiency grading standards under MEELS. The upgrading effectively redistributes the five energy efficiency grades for refrigerating appliances, washing machines and storage type electric water heaters in the local market, while elevating the energy efficiency grading standards. It not only assists the public in selecting more energy-efficient products but also enhances the competitiveness of the trade in launching high-efficiency products. In support of the full implementation of the new energy efficiency grading standards on 30 September 2025, the EMSD would organise several trade seminars prior to the full rollout, aiming to help the trade smoothly implement the new energy efficiency grading standards and encourage the trade to actively collaborate with manufacturers in launching new products with higher energy efficiency. This will enable the public to save energy and cut power expenses while contributing to environmental protection and emissions reduction.

MEELS is one of the key strategies for promoting residential energy conservation. We would continue to review the effectiveness of MEELS and work with the trade to explore further expansion of product coverage under MEELS and the elevation of the existing energy efficiency standards of products. Furthermore, the EMSD is proactively exploring the feasibility of extending MEELS to non-residential products, with the aim of comprehensively enhancing the energy efficiency performance of various products in Hong Kong, thereby providing robust support for achieving the emissions reduction targets outlined in the Hong Kong's Climate Action Plan 2050.

重點五：全面實施經修訂的《建築物能源效益條例》

Focus 5: Full Implementation of the Amended Buildings Energy Efficiency Ordinance

新修訂的《建築物能源效益條例》將於2026年9月全面實施，修訂內容包括擴大規管範圍至更多類型的建築物，把能源審核周期由十年縮短至五年，以及強制公開能源審核報告內的技術資料，藉此鼓勵業界發展節能技術，推動綠色經濟。

The newly amended Buildings Energy Efficiency Ordinance is scheduled for full implementation in September 2026. The amendments include extending the regulatory scope to cover more types of buildings, shortening the intervals of energy audits from ten years to five years, and mandating the disclosure of technical information in energy audit reports, thereby encouraging the trade to develop energy-saving technologies and promoting a green economy.

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重點六：深化國際合作

「綠色創科日」將於2025年6月與「機電創科日」一同舉行，主題為「綠色生產力：智綠賦能新機電，驅動高效新發展」。活動會邀請大灣區專家分享應用創科減碳和優化機電服務的經驗，以促進技術創新，推動智慧城市、低碳轉型、新質生產力發展，並展示大灣區的創科成果。

機電署將於2025年9月舉辦「亞太經合組織氫能陸地運輸研討會」，並於2026年籌辦有關區域供冷供暖系統的亞太經合組織工作坊。在亞太經合組織能源工作組的區域合作框架下，我們將於2026年協助亞太能源研究中心在香港舉辦首屆「亞太經合組織潔淨與低碳氫能年度大會」。展望未來，繼2001年和2014年後，中國將於2026年第三次主辦亞太經合組織會議。香港在國家大力支持下會繼續發揮與世界緊密聯繫的獨特優勢，而機電署亦會善用香港作為內地企業「走出去」和把海外企業「引進來」的雙向跳板角色，致力吸引各國把目光投向香港這個活力澎湃、機遇無限的國際都會。

Focus 6: Strengthening International Collaboration

The Green I&T Day and the E&M I&T Day would be combined and held in June 2025, under the theme "Green Productive Forces: Empowering Smart and Green E&M, Driving New Quality Development". Experts from the GBA would be invited to the event to share insight on applying I&T in carbon reduction and E&M service optimisation, so as to promote technological innovation, advance smart city development, facilitate low-carbon transformation, and advance new productivity development, while showcasing the GBA's I&T achievements.

The EMSD would host the APEC Workshop on Hydrogen for Land Transport in September 2025 and organise an APEC workshop on district cooling and heating systems in 2026. Under the regional co-operation framework of the APEC EWG, we would assist in the 1st APEC Clean and Low-Carbon Hydrogen Annual Convention to be organised by the Asia Pacific Energy Research Centre in Hong Kong in 2026. Looking ahead, China would host the APEC meeting for the third time in 2026, following its previous hosting in 2001 and 2014. With strong support from our country, Hong Kong would continue to leverage its unique advantage as a global connector, while the EMSD would harness Hong Kong's role as a two-way springboard for Mainland enterprises to "go global" and for attracting overseas enterprises, striving to attract international attention to Hong Kong as a vibrant international metropolis brimming with unlimited opportunities.

重點七：推動太陽能發電

政府在機電署總部大樓推行「太陽能發電建築先導計劃」，在部分玻璃幕牆應用太陽能發電建築技術，以供應可再生能源。隨着顧問研究於2024年12月完成，先導計劃的系統安裝工程將於2025年5月展開，預計7月完成，並於同月進入系統調試階段。我們會根據先導計劃收集所得的相關數據，多方面評估太陽能發電建築的成效及可行性，例如實際發電效能、減少室內能耗表現、維修保養的要求及開支，以及薄膜太陽能發電板玻璃與傳統玻璃應用在幕牆的建築及維修成本等，以評估未來會否把計劃推展至其他公私營機構。

Focus 7: Promoting Solar Power Generation

The Government launched the Pilot Scheme on Building-Integrated Photovoltaics at the EMSD Headquarters by employing the BIPV technology on some curtain walls to supply renewable energy. Following the completion of the consultancy study in December 2024, the system installation works for this pilot scheme would commence in May 2025, with expected completion/commissioning in July 2025 . We would assess the effectiveness and feasibility of BIPV from various aspects having regard to the relevant data collected under the Pilot Scheme, such as the actual power generation efficiency, performance in reducing indoor energy consumption, repair and maintenance requirements and costs, and the construction and maintenance costs of thin-film photovoltaic glass panels and those of traditional glass for application on the facades, etc., so as to evaluate whether to extend the scheme to other public and private organisations in the future.

按實況修例 建立更高效的規管制度
DEVELOPING A MORE EFFECTIVE REGULATORY REGIME THROUGH LEGISLATIVE AMENDMENTS BASED ON THE ACTUAL SITUATION

《行政長官2023年施政報告》提出修訂《建築物能源效益條例》，旨在擴大規管範圍、公開能源審核報告資料和縮短能源審核周期。機電署於2023年展開公眾諮詢，並於2025年3月提交條例修訂草案，供立法會審議。

The Chief Executive's 2023 Policy Address proposed amending the Buildings Energy Efficiency Ordinance, with an aim to expand the regulatory scope, disclose information in energy audit reports and shorten energy audit intervals. The EMSD initiated a public consultation in 2023 and submitted the amendment bill to the Legislative Council for consideration in March 2025.

負責是次修例工作的高級工程師歐士廉先生根據《香港氣候行動藍圖2050》擬定修訂框架，並在此框架下展開後續工作。歐先生表示：「由於修例牽涉眾多持份者，諮詢所得的意見不一，最大的挑戰在於如何有效整合不同觀點，制定出既適切又可行的政策。」

是次修例目標是把更多建築物類別納入規管範圍，包括數據中心，以及作社區或教育用途的建築物等。透過深入走訪各界，我們收集了大量意見。歐先生指出，修例工作如同聆聽一首社會交響樂，唯有親身體驗，細心聆聽，方能觸及問題核心。

在走訪和諮詢期間，我們發現部分建築物的樓面面積相對較小，若強制要求此類建築物進行能源審核，或不符合經濟效益。為此，機電署透過諮詢廣納各界意見，同時委聘第三方顧問進行營商環境影響評估，客觀分析強制要求各類建築物進行能源審核是否適合。綜合業界反饋和顧問專業意見後，我們逐步拼湊出政策全貌，這正是修例工作的真正價值所在。

基於上述考量，加上團隊發現總樓面面積不超過7 000平方米的建築物的用電量，僅佔相關建築物類型總用電量一成，因此，我們建議豁免這類小型建築物的強制能源審核要求。此舉雖令受規管建築物數目減少六成，但仍涵蓋全港近九成的總用電量。預計修訂生效後，在2035年或之前每年可節省五億度電，為香港在2050年或之前邁向碳中和目標作出重大貢獻。

Mr Au Sze-lim, Sidney, Senior Engineer responsible for this legislative amendment exercise, drafted the amendment framework based on Hong Kong's Climate Action Plan 2050 and proceeded with subsequent work under this framework. Mr Au said, "As legislative amendments involve a wide range of stakeholders, the opinions gathered through the consultation are very diverse. The biggest challenge lies on effective consolidation of different views to formulate policies that are both appropriate and feasible."

The proposed amendments seek to bring more types of buildings under regulation, including data centres and buildings for community or education purposes. Through extensive reach-out to various sectors, we collected a wide array of opinions. Mr Au likened the legislative amendment exercise to listening to a symphony of the society. Only through direct experience and attentive listening can we get into the core of the issues.

During the reach-out and consultation process, we found that the floor areas of some buildings were relatively small. Mandating such buildings to undergo energy audits might not be economically efficient. For this, the EMSD not only gathered opinions from various sectors through consultation, but also commissioned a third-party consultant to conduct a business impact assessment, objectively analysing the suitability of mandating energy audits for various types of buildings. By consolidating feedback from the industry and professional advice from the consultant, we gradually assembled the full policy picture, and this is where the true value of the legislative amendment exercise lies.

Based on the above considerations, together with the team's findings that the electricity consumption of buildings with a gross floor area not exceeding 7 000 square metres only comprised 10% of the total electricity consumption for the corresponding building types, we proposed the exemption of such small-sized buildings from the mandatory energy audit requirement. This move reduces the number of regulated buildings by 60%, while still covers nearly 90% of the city's total electricity consumption. It is estimated that after the amendments come into effect, 500 million kilowatt-hours of electricity can be saved annually by 2035, making a significant contribution towards achieving carbon neutrality goals for Hong Kong by 2050.

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聯通世界　綠色能源新時代
CONNECTING THE WORLD FOR NEW ERA OF GREEN ENERGY

機電署一直積極參與國際會議，以推動潔淨能源發展，並透過國際合作促進區域能源轉型。年內，機電署在香港成功舉辦意義深遠的活動，首次匯聚亞太區經濟合作組織（亞太經合組織）能源工作組轄下四個專家小組舉行聯合會議，進一步深化國際能源協作。

The EMSD has been actively participating in international conferences to promote the development of clean energy and facilitate regional energy transition through international co-operation. This year, the EMSD successfully hosted a significant event in Hong Kong, convening the first-ever joint meeting of four Expert Groups under the Asia-Pacific Economic Cooperation (APEC) Energy Working Group (EWG), which further deepened international energy collaboration.

自1990年起，亞太經合組織能源工作組轄下專家小組一直透過定期會議，推動區域能源合作。高級工程師郭明露女士表示：「我們很榮幸主辦這項具歷史意義的活動，這是亞太經合組織能源工作組成立35年來，首次匯聚全部四個專家小組召開聯合會議，並同步舉行提升發電能源效率工作坊，吸引來自18個成員經濟體和四個國際組織逾百位專家，就能源安全、潔淨能源轉型等議題進行深入交流。工作坊參與人數更較預期目標超出一倍，成果令人鼓舞。」

活動成功有賴團隊實踐「加、減、乘、除」策略。工程師李俊賢先生表示，團隊「加強」香港與國際的聯繫，展示本地的氫能項目。工程師方錦惟先生指出，面對面會議有助「減少」紙上談兵，促進更高效對接。工程師葉惠玲女士表示，四個專家小組聚首一堂，構建了全面知識交流平台，讓我們向世界說好中國與香港的綠色能源故事，產生「倍乘」協同效應。工程師武智宏先生認為，活動成功「消除」交流隔膜，縮窄文化和資訊的差距。郭女士和葉女士亦特別感謝俄羅斯、智利和秘魯的專家遠道而來，參與這場深具歷史意義的能源盛會。

活動獲得各參與成員經濟體一致肯定，團隊深受鼓舞。郭女士認為，這次活動充分展現機電署致力發揮「超級聯繫人」和「超級增值人」的角色。憑藉活動的成功，機電署舉辦大型國際會議的能力備受國際認同。亞太能源研究中心正計劃於2026年在機電署協助下於香港舉辦首屆「亞太經合組織潔淨與低碳氫能年度大會」，為區域能源合作開拓更廣闊的平台。

Since 1990, the expert groups under the APEC EWG have consistently fostered regional energy co-operation through regular meetings. Senior Engineer Ms Kwok Ming-lo, Ming, said, “We are honoured to host this historic milestone event, which featured the first-ever joint meeting of all four expert groups of the APEC EWG in its 35-year history, and a concurrent workshop on optimising energy efficiency in power generation, attracting more than 100 experts from 18 member economies and four international organisations to engage in in-depth discussions on energy security, clean energy transition and other topics. The workshop participation rate exceeded our expected target by twofold, which was truly encouraging.”

The success of the event was attributed to the team’s multi-pronged strategy. Engineer Mr Li Chun-yin stated that the team strengthened global connectivity of Hong Kong while showcasing local hydrogen projects. Engineer Mr Fong Kam-wai, Kelvin, pointed out that face-to-face meetings helped reduced theoretical discussions, facilitating more effective interfacing. Engineer Ms Yip Wai-ling indicated that the joint meeting of all four expert groups established an all-round knowledge exchange platform to showcase China and Hong Kong’s green energy stories to the world, thereby creating an exponential synergy effect. Engineer Mr Mo Chi-wang, Jasper, believed that the event successfully bridged communication barriers and reduced cultural and information gaps. Both Ms Kwok and Ms Yip specially thanked the experts from Russia, Chile and Peru for their long journeys to Hong Kong to participate in this historically significant energy event.

The team was very heartened to see the event received unanimous recognition from all the participating member economies. Ms Kwok believed that the event fully demonstrated the EMSD’s commitment to serving as a “Super Connector” and a “Super Value-adder”. Thanks to this successful event; the EMSD’s capability in organising mega international conferences has been internationally recognised. The Asia-Pacific Energy Research Centre is now planning with EMSD’s assistance to organise the 1st APEC Clean and Low-Carbon Hydrogen Annual Convention in Hong Kong in 2026, in order to establish a broader platform for regional energy co-operation.

逆流而上　啟德區域供冷系統團隊奪金之路
KAI TAK DISTRICT COOLING SYSTEM TEAM'S JOURNEY TO VICTORY AGAINST ALL ODDS

在備戰日內瓦國際發明展的時間僅剩三周之際，啟德區域供冷系統團隊得知其展覽模型因意外損毀而無法修復。面對極為緊迫的時限與物流挑戰，團隊憑藉堅持與創意力挽狂瀾，最終勇奪評審團嘉許金獎。

With only three weeks left to prepare for the International Exhibition of Inventions of Geneva, the Kai Tak District Cooling System (DCS) team learned that the display model had been accidentally damaged beyond repair. Facing the extreme deadline and logistical challenges, the team turned the situation around with perseverance and creativity, ultimately winning a gold medal with the congratulations of jury.

作為區域供冷系統創新發展的先鋒，機電署原計劃以「人工智能與光纖技術在區域供冷/供暖系統的應用」項目參展。然而，就在團隊出發前三周，承辦商通知團隊模型因意外嚴重損毀而無法修復，這突如其來的打擊令團隊陷入前所未有的危機。

高級工程師馬靜華女士表示：「面對緊迫時限，團隊毫不氣餒，立即開會制訂補救方案，並分工合作，各自搜尋和訂購所需材料，確保能在一周內送達。同時，大家積極在辦公室內尋找可重用的樣品和配件進行加工。」團隊集思廣益，日夜奮戰，終在不足兩周內成功設計和重建全新模型。

挑戰並未就此結束。當新模型準備付運時，承辦商再度傳來壞消息。工程師王冠平先生憶述：「我們按承辦商訂定的期限交付模型安排付運，卻獲快遞公司告知模型無法準時送達日內瓦，整個計劃被打亂，令我們非常焦慮。」面對挫折，團隊沒有放棄，積極聯絡航空公司查詢能否把模型作為易碎品隨行運送。航空公司表示只能在航班起飛前一天確認載貨艙位，團隊一邊焦急地等待回覆，一邊尋找其他運送方案。

出發前夕，團隊終於確認模型可隨行直飛日內瓦。歷經一連串危機，模型如期抵達展場，順利展示在評審團眼前。最終，團隊的創新成果獲評審團高度肯定，更勇奪評審團嘉許金獎，突顯了團隊的協作精神和應變能力。啟德區域供冷系統團隊堅持不懈、永不言敗，證明凝聚力與決心是每個創新項目不可或缺的一環。

As a pioneer in the innovative development of DCSs, the EMSD planned to participate in the International Exhibition of Inventions of Geneva with the project named Integration of AI and Optical Fiber Technology for District Cooling/Heating System Plants. However, three weeks before the departure, the team were informed by the contractor that the model had been severely damaged beyond repair in an accident. This unexpected blow plunged the team into an unprecedented crisis.

Senior Engineer Miss Ma Ching-wah, Midco, said, “Facing the tight deadline, our team did not lose heart. We immediately held a meeting to make a remedial plan and divided tasks among members. Each of us sourced and ordered the necessary materials, ensuring delivery within a week. At the same time, we actively searched for reusable samples and parts in our office for modification.” By drawing on collective wisdom and tireless effort, the team managed to design and rebuild a brand-new model in less than two weeks.

Challenges did not end there. As the new model was being prepared for shipment, the contractor brought them more bad news. Engineer Mr Wong Kwun-ping recalled, “We handed over the new model by the contractor’s deadline for shipping, but the courier company informed us that it could not be delivered to Geneva in time. This completely disrupted our plan, and the situation was extremely worrying.” Facing this setback, the team did not give up and proactively contacted airlines to explore the possibility of transporting the model as a fragile item. The airlines responded that cargo space could only be confirmed one day before departure. The team anxiously awaited replies while looking for other shipping options.

On the eve of the departure, the team finally confirmed that the model could travel with them to Geneva direct. After a series of crises, the model arrived at the exhibition venue on time and was successfully presented to the jury. In the end, the team's innovative achievement was highly praised by the jury, winning the gold medal with the congratulations of jury and highlighting their teamwork and adaptability. The Kai Tak DCS team has demonstrated unwavering perseverance and an indomitable spirit, proving that cohesion and determination are essential to every innovation journey.

提升公眾機電安全及節能意識
RAISING PUBLIC AWARENESS OF E&M SAFETY AND ENERGY CONSERVATION

作為香港機電安全的規管機構，機電工程署（機電署）一直秉持「安全為先」和「善用創新科技（創科）」的雙軌發展策略方針，在嚴格監管業界的同時，積極引進不同創科方案，以提升機電安全和能源效益，推動智慧城市建設。過去一年，我們以「利民為本」為核心信念，透過形形色色的業界交流和公眾教育活動，成功加深社會對機電安全與節能重要性的認識，為香港邁向碳中和奠定堅實基礎。

As the regulator of E&M safety in Hong Kong, the Electrical and Mechanical Services Department (EMSD) consistently adheres to a dual-track development approach of "putting safety first" and "leveraging innovation and technology (I&T)". While strictly regulating the industry, we proactively introduce various I&T solutions to enhance E&M safety and energy efficiency, thereby promoting smart city development. Over the past year, with a core belief of "bringing benefits to the public", we have successfully deepened public understanding of the importance of E&M safety and energy conservation through a variety of industry exchanges and public education activities, laying a solid foundation for Hong Kong's quest for carbon neutrality.

全面提升業界的安全及節能意識

COMPREHENSIVELY ENHANCING AWARENESS OF SAFETY AND ENERGY CONSERVATION OF THE INDUSTRY

機電署除了嚴格履行機電安全和能源效益的規管職責，亦採取多管齊下的策略，透過多元化的渠道向業界宣傳安全守則，共享創新技術與資源，務求全方位提升業界對機電安全和節能的意識。

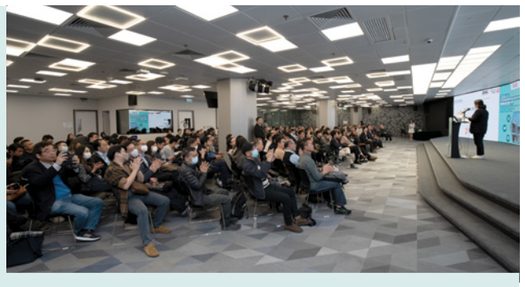
In addition to strictly fulfilling our regulatory responsibilities for E&M safety and energy efficiency, the EMSD adopts a multi-pronged strategy to promote safety codes to the industry through diversified channels while sharing innovative technologies and resources, aiming to holistically enhance the industry's awareness of E&M safety and energy conservation.

策略一：積極聯繫業界

Strategy 1: Proactively Engaging the Industry

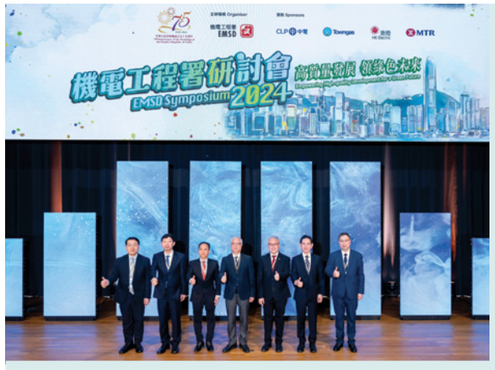
過去一年，機電署與業界保持緊密聯繫，透過舉辦不同研討會促進更深入的技術交流。為推廣淡水冷卻塔計劃和探索高效節能技術，我們於2025年2月14日舉辦「淡水冷卻塔和建築物能源效益的規管及實務技術研討會」，匯聚來自水務署、香港中華煤氣有限公司（煤氣公司）、香港空調及冷凍商會，以及水處理技術公司等業界代表，分享最新技術發展與節能方案，鼓勵業界共同提升能源效益，助力香港邁向碳中和。

Over the past year, the EMSD has maintained close contact with the industry, facilitating deeper technical exchanges by organising various seminars. To promote the Fresh Water Cooling Towers (FWCTs) Scheme and explore highly-efficient energy-saving technologies, we held the Technical Forum on Control and Practice of Fresh Water Cooling Towers and Buildings Energy Efficiency on 14 February 2025. The event brought together industry representatives from the Water Supplies Department, the Hong Kong and China Gas Company Limited (Towngas), the Hong Kong Air Conditioning and Refrigeration Association (ACRA), and water treatment technology companies to share the latest technological developments and energy-saving solutions, encouraging the industry to work together to improve energy efficiency and help Hong Kong move towards carbon neutrality.



機電署於2025年2月14日成功舉辦「淡水冷卻塔和建築物能源效益的規管及實務技術研討會」。我們與水務署、煤氣公司、香港空調及冷凍商會，以及水處理技術公司等多個界別的代表進行深入技術交流，重點探討最新技術發展和節能方案。

The EMSD successfully organised the Technical Forum on Control and Practice of Fresh Water Cooling Towers and Buildings Energy Efficiency on 14 February 2025. We had in-depth technical exchanges with representatives of various sectors, including the Water Supplies Department, the Towngas, the Hong Kong Air Conditioning and Refrigeration Association, and water treatment technology companies, focusing on the latest technological developments and energy-saving solutions.



「機電工程署研討會2024」以「高質量發展 領綠色未來」為題，成功吸引超過400名來自香港、內地和海外的學者，以及政府部門、公營機構、機電及創科業界和專業機構代表參與。參加者就新能源、智能機電、綠色交通、高效建築等多個關鍵範疇，進行深入的專業技術交流。

The EMSD Symposium 2024, themed "Empowering High-quality Development for a Green Future", successfully attracted over 400 scholars from Hong Kong, the Mainland and overseas regions, together with representatives of government departments, public organisations, the E&M and I&T sectors, and professional institutions. Participants engaged in in-depth professional and technical exchanges in key areas such as new energy, smart E&M, green transportation and efficient buildings.

「機電工程署研討會2024」於2024年12月圓滿舉行，為慶祝中華人民共和國成立75周年的活動之一。研討會以「高質量發展　領綠色未來」為主題，由國家能源局和國家鐵路局官員、清華大學學者擔任主題演講嘉賓，吸引超過400名來自本地、內地及海外的學者，以及政府部門、公營機構、機電及創科業界和專業機構代表參與，分享新能源、智能機電、綠色交通、高效建築等創新方案和研發成果。政府物聯通比賽和氫能洗街車命名及繪畫比賽的頒獎典禮亦在活動中同時舉行。機電署與廣州市科學技術協會更在研討會上簽署合作備忘錄，加強兩地交流合作，為共同推動科技創新奠定基礎。為提供更多元化的渠道與公眾溝通聯繫，推廣中港協作，機電署亦開設微信官方帳號，並在研討會上舉行帳號啓動儀式。

The EMSD Symposium 2024 was successfully held in December 2024 as part of the celebrations marking the 75th anniversary of the founding of the People's Republic of China. Themed "Empowering High-quality Development for a Green Future", the symposium featured keynote speeches by officials from the National Energy Administration and the National Railway Administration, along with scholars from Tsinghua University. The event attracted over 400 scholars and representatives from local, Mainland and overseas government departments, public organisations, E&M and I&T sectors and professional institutions. They shared innovative solutions and research and development achievements in new energy, smart E&M, green transport and high productivity construction. Prize presentations for winners of the GWIN (Government-Wide IoT Network) 2024 Smart City E&M IoT (Internet of Things) Application Challenge and the Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest were held at the event concurrently. Besides, the EMSD signed a Memorandum of Co-operation with the Guangzhou Association for Science and Technology at the symposium to strengthen bilateral exchanges and co-operation while laying a foundation for joint promotion of technological innovation. To diversify our public communication channels and promote Hong Kong-mainland collaboration, the EMSD launched its official WeChat account, with an activation ceremony held at the symposium.

為推動業界培養創新和安全文化，加強電力安全，我們於2025年1月13日舉辦以「活用科技『創』新安全」為主題的電力規例研討會，邀請來自港九電器工程電業器材職工會、香港電燈有限公司和中華電力有限公司等業界代表，分享如何在電業界應用創科和討論其他電力安全議題，藉此加強與業界的溝通交流。

To foster a culture of innovation and safety in the industry and to enhance electrical safety, we organised the Annual Technical Seminar themed "Leveraging Technology to Innovate Safety" on 13 January 2025, bringing together industry representatives from the Hong Kong and Kowloon Electrical Engineering and Appliances Trade Workers Union, the Hongkong Electric Company Limited and the CLP Power Hong Kong Limited to share their views on how innovative technologies were applied in the electrical industry and discuss other electrical safety issues, thereby strengthening communication and exchanges with industry members.

提升公眾機電安全及節能意識
RAISING PUBLIC AWARENESS OF E&M SAFETY AND ENERGY CONSERVATION

為確保規管措施與業界實務緊密結合，我們致力建立完善的溝通機制，定期舉辦業界簡報會。除了在會上說明最新規管政策，我們更重視收集業界意見。在氣體安全方面，我們一直與業界保持緊密溝通，並為第一類和第二類勝任人士、註冊氣體裝置技工和氣體工程承辦商舉辦專題簡報會，分享最新氣體安全規管資訊，並聽取業界建議，以鞏固與業界的互信基礎。

To ensure that regulatory measures are closely aligned with industry practices, we are committed to establishing a robust communication mechanism by regularly holding industry briefing sessions. In addition to explaining the latest regulatory policies, we place strong emphasis on gathering industry feedback. In the area of gas safety, we have been maintaining close communication with the industry, organising dedicated briefing sessions for Class 1 and Class 2 Competent Persons and Registered Gas Installers and Gas Contractors to share the latest information on gas safety regulation and solicit their suggestions, thereby strengthening mutual trust with and the industry.

年內，我們與煤氣公司合作推行特別推廣計劃，針對超過十年未有安排定期安全檢查的私人住宅用戶，發出逾16 000封提醒信函，以提升用戶的安全意識。我們更突破傳統，聯同業界同向公眾宣傳氣體安全，特別邀請香港工程師學會燃氣及能源分部主席等專業人士參與多個電視節目，透過大眾傳媒以專業且貼近民生的方式宣傳氣體安全知識。

During the year, we collaborated with Towngas on a special promotion scheme targeting private residential users who had not arranged for a periodic safety inspection for over ten years, with more than 16 000 reminder letters issued to raise users' safety awareness. Breaking from tradition, we also engaged the industry to jointly promote gas safety to the public, specially inviting professionals such as the Chairman of the Gas and Energy Division of the Hong Kong Institution of Engineers (HKIE) to participate in multiple television programmes. Through mass media, we promoted gas safety knowledge in a professional yet relatable manner.

為有效提高公眾的氣體安全意識，機電署積極邀請業界專業人士，透過大眾傳媒宣揚氣體安全的重要資訊。其中，我們邀請了香港工程師學會燃氣及能源分部主席在電視節目《東張西望》中進行專業分享。

To effectively raise public awareness of gas safety, the EMSD actively invited industry professionals to disseminate vital gas safety information through mass media. Notably, the Chairman of the Gas and Energy Division of the HKIE was invited to share his professional insights on the television programme "Scoop".

為配合政府修訂《保護臭氧層條例》和制定相關附屬法例，我們於2024年9月主動成立臨時製冷劑技術諮詢委員會。除政府部門代表外，我們亦委任空調和冷凍業界相關機構的主要代表（包括來自香港空調及冷凍商會、香港機電工程商聯會、港九電器商聯會有限公司、香港工程師學會、香港地產建設商會、職業訓練局和香港空調製冷業職工總會）為委員，提前與業界商議未來製冷劑安全規管的準備工作，包括製冷劑的管理和使用要求，以及技術員培訓安排。至今，委員會已認可七間機構的培訓課程，確保市場上具備充足學額以應付需求。

To align with the Government's amendment of the Ozone Layer Protection Ordinance and the formulation of subsidiary legislation, we proactively established the Provisional Refrigerant Technical Advisory Committee (P-RTAC) in September 2024. In addition to representatives from government departments, we appointed key representatives from relevant organisations in the air-conditioning and refrigeration industry, including the ACRA, the Hong Kong Federation of Electrical and Mechanical Contractors Limited, the Hong Kong and Kowloon Electrical Appliances Merchants Association Limited, the HKIE, the Real Estate Developers Association of Hong Kong, the Vocational Training Council (VTC) and the Hong Kong Air-Conditioning and Refrigerating Trade Workers General Union, to engage in early discussions with the industry on the preparation for future requirements for refrigerant safety regulation, including the requirements for management and use of refrigerants and technician training arrangements. To date, the P-RTAC has endorsed training courses from seven providers, ensuring sufficient training capacity in the market to meet demand.

策略二：推展持續專業進修和認可安排

除加強與業界聯繫外，機電署亦積極鼓勵前線從業人員持續進修，並推行資歷認可計劃，以確保業界的服務質素和安全標準。為提升車輛維修業的專業水平，我們於年內成為「QFIA Achiever」，運用資歷架構下的「過往資歷認可」機制，開闢嶄新的註冊途徑。此舉讓具備豐富實務經驗的車輛維修技工，可憑工作經驗取得「職業資歷階梯」第三級認證，從而符合註冊要求。該計劃是首個應用「過往資歷認可」機制的政府註冊計劃，我們因此於2025年1月3日獲資歷架構秘書處邀請分享經驗，作為其他政府註冊計劃的參考範例。

Strategy 2: Promoting Continuing Professional Development and Recognition Arrangements

In addition to strengthening engagement with the trade, the EMSD actively encourages frontline practitioners to pursue continuing professional development (CPD), and implements a qualifications recognition scheme to ensure service quality and safety standards of the trade. To further enhance the professionalism of the vehicle maintenance industry, we became a "QFIA Achiever" during the year, leveraging the Recognition of Prior Learning (RPL) Mechanism under the Qualifications Framework to create a new registration pathway. This allows vehicle mechanics with substantial practical experience to obtain a Level 3 qualification under the Vocational Qualifications Pathway based on their work experience, thereby meeting registration requirements. This initiative was the first government registration scheme applying the RPL mechanism. Therefore, we were invited by the Qualifications Framework Secretariat on 3 January 2025 to share our experience as a reference model for other government registration schemes.

首屆「優秀註冊氣體裝置技工比賽」於2023年舉行，業界反應熱烈。有見及此，機電署於2025年第三季舉辦第二屆比賽，旨在提升註冊氣體裝置技工的安全意識和技術水平，同時表揚傑出註冊技工以樹立行業楷模，從而鼓勵從業人員持續專業進修。第二屆比賽除延續表彰從業人員對維護香港氣體安全的卓越貢獻外，更吸納業界意見，進一步優化參賽資格和評審標準，以鼓勵更多業界人士參與持續專業進修活動。

In view of the trade's enthusiastic response to the first RGI Award Scheme held in 2023, the EMSD ran the second competition in the third quarter of 2025, with the aim of enhancing the safety awareness and technical skills of registered gas installers (RGIs), while honouring outstanding RGIs to set role models for the trade, thereby encouraging CPD within the profession. In addition to continuously commending practitioners for their exceptional contributions to upholding gas safety in Hong Kong, the second competition incorporated feedback from the trade to further refine its eligibility and assessment criteria, encouraging greater participation in CPD activities among practitioners.

策略三：為業界吸納新血

為確保香港長遠的機電安全，業界必須建立完善的人才培育體系，以傳承實務經驗，避免出現人才斷層。為此，機電署聯同香港專業教育學院、港九電器工程電業器材職工會，以及香港電器工程商會，為香港專業教育學院學生合辦「『實踐未來』先導計劃」，讓他們掌握電力安全知識，提早接觸未來的工作環境和行業發展前景。我們希望藉此加深學生對電業界的了解，為投身電氣工程行業作好準備。

Strategy 3: Bringing in New Blood to the Trade

To ensure Hong Kong's long-term E&M safety, the trade must establish a robust talent development system to transfer practical experience and prevent a talent gap. To this end, the EMSD, in collaboration with the Hong Kong Institute of Vocational Education (IVE), the Hong Kong and Kowloon Electrical Engineering & Appliances Trade Workers Union, and the Hong Kong Electrical Contractor Association, jointly organised the "Practicing for Future" Pilot Scheme for IVE students, enabling them to acquire electrical safety knowledge and gain early exposure to future work environments and career prospects of the trade. We hope this scheme will strengthen students' understanding of the electrical industry and better prepare them for careers in the electrical engineering field.

為建立完善的人才培育體系，避免行業出現人才短缺，機電署與香港專業教育學院、港九電器工程電業器材職工會，以及香港電器工程商會攜手合作，為香港專業教育學院學生推出「『實踐未來』先導計劃」。此計劃旨在讓學生及早掌握必要的安全知識，熟悉未來的工作環境，為投身電力工程行業作好準備。

To establish a robust talent development system and prevent a talent shortage in the trade, the EMSD collaborated with the IVE, the Hong Kong and Kowloon Electrical Engineering & Appliances Trade Workers Union, and the Hong Kong Electrical Contractors' Association to launch the "Practising for Future" Pilot Scheme for IVE students. The scheme aims to equip students with essential safety knowledge and familiarise them with future work environments at an early stage, thereby preparing them for careers in the electrical engineering industry.

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年內，我們還參與青少年發展企業聯盟的工作影子計劃，讓青年學子近距離觀察我們的日常工作。這種沉浸式職場體驗，有助他們規劃職業生涯，並激發他們投身機電行業的興趣。此外，我們計劃聯同職訓局學徒事務署和氣體業界舉辦宣傳推廣活動，招攬優秀人才加入電氣和氣體業界，為行業持續注入新動力。

During the year, we also participated in the job shadowing programme of the Child Development Initiative Alliance, which allowed young students to closely observe our daily work. This immersive workplace experience can help them plan their career paths and arouse their interest in joining the E&M industry. Furthermore, we plan to collaborate with the Office of the Director of Apprenticeship of the VTC and the gas industry to organise promotional activities, so as to attract outstanding talent to the electrical and gas sectors, continuously injecting new momentum into the trades.

加強公眾教育和宣傳

STEPPING UP PUBLIC EDUCATION AND PROMOTION

為達成「零意外」和碳中和的雙重目標，提升公眾的機電安全意識和節能觀念是不二法門。機電署致力透過多元化的宣傳活動，持續深化市民對機電安全和能源效益的認識。我們期望與市民同心協力，穩步推進香港的低碳轉型，共建更安全、更環保的宜居都市。

To achieve the dual goals of "zero accidents" and carbon neutrality, it is essential to raise public awareness of E&M safety and energy conservation. The EMSD is committed to deepening public understanding of E&M safety and energy efficiency through diverse promotional campaigns. We look forward to working together with citizens to steadily advance Hong Kong's low-carbon transition and jointly build a safer, greener and more liveable city.

策略一：舉辦大型比賽和公眾活動

Strategy 1: Organising Large-scale Competitions and Public Events

年內，環境及生態局與機電署合辦「全民節能減碳2024」運動，透過《節能約章2024》和《4T約章》兩項活動，鼓勵社會各界攜手節能減碳，加快香港的低碳轉型。

During the year, the Environment and Ecology Bureau and the EMSD co-organised the Energy Saving and Decarbonisation for All 2024 Campaign. Through two activities, the Energy Saving Charter 2024 and the 4T Charter, the campaign encouraged all sectors of society to work together on energy conservation and carbon reduction, accelerating Hong Kong's low-carbon transition.

為加快香港的低碳轉型，機電署與環境及生態局合辦「全民節能減碳2024」運動。該運動以《節能約章2024》和《4T約章》動員社會各界積極參與，攜手達成節能減碳目標。

To accelerate Hong Kong's low-carbon transition, the EMSD co-organised the Energy Saving and Decarbonisation for All 2024 Campaign with the Environment and Ecology Bureau. With the Energy Saving Charter 2024 and the 4T Charter, the campaign mobilised all sectors of society to actively participate and join hands to achieve energy conservation and carbon reduction targets.

《節能約章2024》與「強制性能源效益標籤計劃」相輔相成，鼓勵市民在日常生活中節約能源。截至2024年年底，已有逾3 300個場所簽署參與，承諾於6月至9月的夏季期間，把平均室溫維持在攝氏24至26度。參與場所同時承諾落實多項節能措施，包括關掉不使用的電器和系統、採購具能源效益的產品、提升能源數據透明度、分享節能措施和成果，以及加快現有建築物的節能改造工程。

The Energy Saving Charter 2024 complements the Mandatory Energy Efficiency Labelling Scheme (MEELS) by encouraging the public to save energy in daily life. By the end of 2024, over 3 300 premises had signed up, committing to maintain an average indoor temperature between 24°C and 26°C during summer from June to September. Participating premises also pledged to implement various energy-saving measures, including switching off unused electrical appliances and systems, purchasing energy-efficient products, enhancing the transparency of energy data, sharing energy-saving measures and achievements, and speeding up building energy saving retrofit.

另一重點減碳計劃《4T約章》以鼓勵全民節能為目標，亦深受業界歡迎。參與機構承諾訂立節能目標和時間表，確保節能成效和建築物能源數據的透明度。截至2024年年底，逾780個場所已簽署《4T約章》，而約章亦為參與機構帶來多項裨益，包括建立綠色、低碳和可持續發展的形象，彰顯社會企業責任，同時減少用電、節省開支，從而推動環保和可持續發展。

The 4T Charter, another key decarbonisation initiative with the aim of encouraging energy conservation across the community, has also been well received by the trade. Participating organisations pledged to set energy-saving targets and timelines, ensuring transparency of both energy performance and building energy data. By the end of 2024, over 780 premises had signed the 4T Charter, bringing numerous benefits to participating organisations. These include establishing a green, low-carbon and sustainable image that demonstrates corporate social responsibility, while reducing electricity consumption and cutting costs, thereby promoting environmental protection and sustainable development.

為推動氫能發展，機電署聯同教育局和建造業零碳天地於2025年2月22日至23日舉辦「氫能零碳STEAM嘉年華」。活動融合STEAM（科學、科技、工程、藝術和數學）教育元素，全面展示氫能技術的應用和前景，成功吸引逾15 000名參加者。作為機電署首個以氫能為主題的公眾活動，嘉年華提供豐富互動體驗，包括氫能主題STEAM工作坊、建造業零碳天地STEAM互動空間導賞團、氫燃料電池洗街車和氫燃料電池發電機實物展示，以及16個精心設計的攤位遊戲。這些活動加深了參加者對氫能在減碳作用方面的認識，並激發他們對綠色科技的興趣。

To promote the development of hydrogen energy, the EMSD, in collaboration with the Education Bureau and the CIC - Zero Carbon Park (CIC-ZCP), organised the Hydrogen Zero Carbon STEAM Carnival from 22 to 23 February 2025. The carnival integrated elements of STEAM (Science, Technology, Engineering, Art and Mathematics) education to comprehensively showcase the applications and prospects of hydrogen technology, successfully attracting over 15 000 participants. As the EMSD's first public event centred on hydrogen energy, the carnival offered rich interactive experiences, including hydrogen-energy themed STEAM workshops, guided tours of the CIC-ZCP's STEAM interactive space, physical displays of a hydrogen fuel cell (HFC) street washing vehicle and an HFC generator, as well as 16 thoughtfully-designed game booths. These activities deepened participants' understanding of the role of hydrogen energy in carbon reduction and aroused their interest in green technology.

為加深公眾對香港氫能發展的了解，並激發對綠色科技的興趣，機電署與教育局和建造業零碳天地共同舉辦「氫能零碳STEAM嘉年華」。該嘉年華成功融合 STEAM（科學、科技、工程、藝術和數學）教育元素，吸引超過15 000名參加者。

To deepen public understanding of Hong Kong's hydrogen energy development and stimulate their interest in green technology, the EMSD jointly organised the Hydrogen Zero Carbon STEAM Carnival with the Education Bureau and the CIC – ZCP. The carnival successfully integrated elements of STEAM (Science, Technology, Engineering, Art and Mathematics) education, attracting over 15 000 participants.

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機電署在啟德區域供冷系統第三號廠房順利舉辦「區域供冷系統開放日」。參與者實地參觀廠房，並親身觀摩創新技術演示，深入了解區域供冷系統的運作。

The EMSD successfully organised the District Cooling System (DCS) Open Day at Kai Tak DCS Plant No. 3. Participants visited the plant on site and witnessed demonstrations of innovative technologies, gaining an in-depth understanding of the DCS' operation.

除宣傳氫能發展外，我們亦於2024年12月17日在啟德區域供冷系統第三號廠房順利舉辦「區域供冷系統開放日」。活動以「營造智慧區域供冷　邁向永續香港未來」為主題，吸引內地和本港的政府部門代表、機電業界專業人士，以及一羣對科技充滿好奇的小學生，共同探索區域供冷系統的應用和未來發展。參加者不但有機會實地參觀區域供冷系統廠房，還可觀摩多項創新技術演示，例如智能監測系統、節能管理方案和優化維修技術。透過互動展示和專業講解，參加者深入了解區域供冷系統的運作，以及其在推動可持續發展方面的重要作用。

In addition to promoting the development of hydrogen energy, we successfully organised the District Cooling System (DCS) Open Day at Kai Tak District Cooling System Plant No. 3 (KTDCS-P3) on 17 December 2024. With the theme of "Unlocking a Sustainable Future by Smart Construction of Intelligent District Cooling System in Hong Kong", the event attracted representatives of Mainland and local government departments, professionals from the E&M industry, and a group of primary school students curious about technology, together exploring the DCS' applications and future development. Participants not only had the opportunity to visit the DCS plant in person, but also witnessed demonstrations of various innovative technologies, such as a smart monitoring system, energy-saving management solutions and optimised maintenance technologies. Through interactive displays and professional explanations, attendees gained a deeper understanding of the DCS' operation and its important role in advancing sustainable development.

我們持續與民政事務總署和消防處合作，在各區舉辦嘉年華會，宣傳電力安全。2024年，機電署參與消防處主辦的「港島防災應急準備日2024」和「消防及救護學院開放日」，透過設置攤位遊戲，以寓教於樂的方式提升市民的電力安全意識。

We continued our collaboration with the Home Affairs Department and Fire Services Department (FSD) to organise carnivals in various districts to promote electrical safety. In 2024, the EMSD participated in the Hong Kong Island Disaster and Emergency Preparedness Day 2024 as well as the Fire and Ambulance Services Academy Open Day hosted by the FSD, setting up game booths to raise public awareness of electrical safety in an entertaining and educational manner.

機電署聯同民政事務總署和消防處，在各區舉辦嘉年華會，透過攤位遊戲等活動，以寓教於樂的方式，提升市民的電力安全意識。

The EMSD, in collaboration with the Home Affairs Department and the Fire Services Department, organised carnivals in various districts to raise public awareness of electrical safety through activities like game booths in an entertaining and educational manner.

策略二：加強校本宣傳和青少年教育

Strategy 2: Strengthening School-based Promotion and Youth Education

為支持香港實現碳中和目標，並提升青少年對零碳能源的認知，機電署於2024年年底舉辦以「碳中和」為主題的氫能洗街車命名及繪畫比賽，邀請學生展現創意和想像力，為洗街車設計新外觀。比賽旨在提高學生對碳中和與氫能發展的認識，並鼓勵他們在日常生活中減少碳排放。我們共收到超過3 500份來自全港中小學生的作品，而三輛氫能洗街車已分別換上各組別冠軍設計的新裝，自2025年6月起在北區和元朗區一帶試行。

To support Hong Kong's carbon neutrality goals and enhance young people's understanding of zero-carbon energy, the EMSD organised the Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest themed "carbon neutrality" at the end of 2024. Students were invited to showcase their creativity and imagination by designing a new look for the street washing vehicles. The contest aimed to raise students' awareness of carbon neutrality and development of hydrogen energy, while encouraging them to reduce carbon emissions in daily life. We received over 3500 entries from primary and secondary school students across Hong Kong. The three hydrogen fuelled street washing vehicles have since been adorned with the winning designs and began trial operations in the North and Yuen Long districts starting from June 2025.

在過去一年，機電署透過「機電青少年大使計劃」舉辦多項活動，並與「香港海關青年發展計劃」等倡議合作，向青少年提供機電安全、能源效益和機電業知識，讓他們以機電青少年大使的身分，向社區傳播正確訊息和優良習慣。繼2023/24學年推出「校園先導計劃」後，我們於2024/25學年續行「機電青少年大使2.0校園計劃」，透過STEAM工作坊、職業分享會和工作體驗活動，讓來自六十多所中小學的學生，以互動形式認識機電工程行業與我們日常生活的密切關係。同時，我們與灣仔民政事務處和教育局合作，在「機電青少年大使2.0校園計劃」下舉辦多項比賽，藉此提升學生對機電工程的認識和興趣。

Over the past year, the EMSD has organised a variety of activities under the E&M Young Ambassador (EMYA) Programme, and collaborated with initiatives such as the Customs YES to equip young people with knowledge of E&M safety, energy efficiency and the E&M industry, empowering them to spread proper messages and best practices throughout the community as E&M Young Ambassadors. Following the launch of the School Pilot Programme in the 2023/24 academic year, we continued with the EMYA2.0 School Programme in the 2024/25 academic year. Through STEAM workshops, career sharing sessions and job-tasting activities, students from more than 60 primary and secondary schools gained interactive insights into the close connection between the E&M engineering industry and everyday life. Concurrently, we collaborated with the Wan Chai District Office and the Education Bureau (EDB) to run various competitions under the EMYA2.0 School Programme, aiming to enhance students' understanding of and interest in E&M engineering.

為提升青少年對氫能發展和零碳能源的認知，機電署舉辦以「碳中和」為主題的氫能洗街車命名及繪畫比賽。氫能洗街車已換上得獎設計的新裝，並開始試行，把創意轉化為實際成果。

To enhance young people's understanding of hydrogen energy development and zero-carbon energy, the EMSD organised the Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest themed "Carbon Neutrality". The hydrogen fuelled street washing vehicles have been adorned with the winning designs and begun trial operations, transforming creativity into tangible achievements.

在過去一年，機電署透過「機電青少年大使計劃」舉辦多項重要活動，向青少年傳授機電安全、能源效益和機電行業的專業知識。同時，讓他們以機電青少年大使的身分，主動向社區傳播正確訊息和優良習慣。

Over the past year, the EMSD has organised various key activities under the EMYA Programme, imparting professional knowledge of E&M safety, energy efficiency and the E&M industry to young people. Concurrently, this initiative empowers them to proactively spread proper messages and best practices throughout the community as EMYAs.

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2024年年末，機電署與灣仔民政事務處合作展開「建『機』灣仔－青少年社區設施優化計劃」，旨在提升學生對機電安全的認識，並鼓勵他們運用機電知識，為灣仔區的社區設施提供創新構思。灣仔區、中西區和東區共12所學校的學生獲邀參加，重點活動包括大灣區創科考察團、設計比賽暨頒獎典禮，以及於2025年年初在灣仔海濱舉行的得獎作品展覽。

In late 2024, the EMSD collaborated with the Wan Chai District Office to launch the Engineering Opportunities for Wan Chai - Youth Community Facilities Enhancement Programme. The programme was aimed at enhancing students' understanding of E&M safety and encouraging them to apply E&M knowledge to propose innovative ideas for community facilities in Wan Chai District. Students from 12 schools in Wan Chai, Central and Western, and Eastern Districts were invited to participate in the programme. Key activities included an I&T study tour to the Greater Bay Area, a design competition cum awards ceremony, and an exhibition of winning entries at the Wan Chai Waterfront in early 2025.

繼「氫能零碳STEAM嘉年華」後，機電署與教育局於2025年3月15日合辦「氫能車競賽大挑戰2025」，吸引全港67所中學組隊參加。參賽者須應用課堂所學的科學理論，以大會提供的材料組裝氫燃料電池四驅車，在多條賽道上角逐殊榮。展望未來，我們會繼續舉辦更多融合新能源和教育元素的青少年活動，積極推廣綠色科技，為香港培育更多新世代人才。

Following the Hydrogen Zero Carbon STEAM Carnival, the EMSD and the EDB co-organised the HydroRace Challenge 2025 on 15 March 2025, attracting teams from 67 secondary schools across Hong Kong. Contestants had to apply scientific theories learned in class to assemble HFC four-wheel-drive model cars using materials provided by the organisers to compete for top honours on multiple tracks. Looking ahead, we will continue to organise more youth activities that integrate new energy and educational elements, actively promoting green technology and nurturing more new-generation talent for Hong Kong.

為持續深化青少年對氫能發展的認知，機電署與教育局合辦「氫能車競賽大挑戰2025」，成功吸引全港67所中學組隊參與。學生在比賽中活用所學知識，以大會提供的材料組裝氫燃料電池四驅車，體現知行合一的精神。

To continuously deepen young people's understanding of hydrogen energy development, the EMSD jointly organised the HydroRace Challenge 2025 with the Education Bureau, successfully attracting teams from 67 secondary schools across Hong Kong. During the competition, students applied their acquired knowledge to assemble HFC four-wheel-drive model cars using materials provided by the organisers, embodying the spirit of integrating knowledge with action.

為加深公眾對區域供冷系統的認識，機電署在啟德區域供冷系統第三號廠房設置教育中心，展示區域供冷系統在節能減碳和碳中和方面的貢獻。同時，我們舉辦「區域供冷STEM-AI能源效益設計比賽2024-25」，向中學生闡述區域供冷系統的運作原理，激發年輕一代的創新思維，並鼓勵他們運用STEM（科學、科技、工程和數學）與人工智能知識，提出改善區域供冷系統能源效益的方案，從而培養其節能減排的環保意識。

To enhance public understanding of the DCS, the EMSD set up an education centre at KTDCS-P3, showcasing the DCS' contributions to energy conservation, carbon reduction and carbon neutrality. We also held the District Cooling STEM-AI Energy Efficiency Design Competition 2024-25 to explain the operating principles of the DCS to secondary school students, inspire innovative thinking among the younger generation and encourage them to apply STEM (Science, Technology, Engineering and Mathematics) and AI (Artificial Intelligence) knowledge to propose solutions for improving the DCS' energy efficiency, thereby cultivating environmental awareness in energy conservation and carbon reduction.

機電署成功舉辦「區域供冷STEM-AI能源效益設計比賽2024-25」。活動期間，我們與參賽的中學生分享區域供冷系統的運作原理，激發他們的創新思維，並鼓勵他們把所學知識應用於實際的能源效益設計中。

The EMSD successfully organised the District Cooling STEM-AI Energy Efficiency Design Competition 2024-25. During the event, we shared the operating principles of the DCS with the participating secondary students, stimulating their innovative thinking and encouraging them to apply their acquired knowledge to practical energy efficiency designs.

機電署於2024年推出全新修訂版的《能源效益教材套》。教材套共分三冊，內容涵蓋能源標籤計劃、節能措施、可再生能源、轉廢為能技術、建築物能源效益和能源審核等六大範疇，旨在向香港社會的未來主人翁灌輸全面的環保和能源效益意識。

The EMSD launched a newly revised edition of the Energy Efficiency Education Kit in 2024. The education kit comprises three volumes and covers six major areas, including energy labelling schemes, energy-saving measures, renewable energy, waste-to-energy technologies, buildings energy efficiency and energy audits. Its aim is to instil comprehensive awareness of environmental protection and energy efficiency into future generations of Hong Kong society.

為協助香港於2050年前實現碳中和，機電署於2024年12月推出全新版本的《能源效益教材套》，目標是透過教育向未來主人翁灌輸環保意識，讓節能減碳的理念植根於年輕一代心中。教材套共分三冊，內容精心編撰，包括能源標籤計劃、節能措施、可再生能源、轉廢為能技術、建築物能源效益和能源審核，幫助師生在教學互動中深入了解相關資訊和最新發展，達致教學相長。教材套已上載至機電署網站的「能源資訊園地」內，供市民免費使用及下載。

To support Hong Kong in achieving carbon neutrality by 2050, the EMSD launched a new version of the Energy Efficiency Education Kit in December 2024, with the aim of cultivating environmental awareness among future generations through education and embedding the concept of energy conservation and carbon reduction in young minds. Comprising three meticulously-compiled volumes, the education kit covers energy labelling schemes, energy-saving measures, renewable energy, waste-to-energy technologies, building energy efficiency and energy audits. These materials help teachers and students gain deeper insights into relevant information and latest developments through interactive learning, fostering mutual learning and growth. The education kit has been uploaded to the Energyland on the EMSD's website for free public access and download.

我們秉持「電力安全從小做起」的宗旨，於年內為幼稚園、小學和中學學生舉辦逾百場講座，除向青少年宣傳電力安全信息外，亦希望他們能把相關資訊傳遞給家人。

In line with our principle of "learning habits of electrical safety at young age", we held over a hundred seminars for kindergarten, primary and secondary school students during the year. Beyond promoting electrical safety messages among young people, we hope that they will share the messages with their families.

此外，我們應教育局邀請，為「2024/25邁向碳中和學生校園大使培訓計劃」主辦兩場專題研討會。研討會聚焦能源效益和節約，向出席師生講解氣候變化的挑戰和應對策略，以及實踐節能減碳的方法。首場線上研討會於2025年2月7日舉行，內容涵蓋氫能技術發展、強制性能源效益標籤計劃和實用節能技巧等主題，吸引逾80名學生代表參加。

Furthermore, at the invitation of the EDB, we hosted two thematic seminars under the Achieving Carbon Neutrality Student Ambassador Training Scheme 2024/25. The seminars focused on energy efficiency and conservation, providing attending teachers and students with insights into the challenges of climate change, mitigation strategies, and practical approaches to energy conservation and carbon reduction. The first online seminar, held on 7 February 2025, covered topics such as the development of hydrogen technology, the MEELS and practical energy-saving tips, attracting over 80 student representatives.

我們為「2024/25邁向碳中和學生校園大使培訓計劃」主辦兩場專題研討會。研討會聚焦能源效益，向師生闡述應對氣候變化的策略，以及實踐節能減碳的方法。

We hosted two thematic seminars under the Achieving Carbon Neutrality Student Ambassador Training Scheme 2024/25. The seminars focused on energy efficiency, providing teachers and students with an in-depth explanation of strategies for addressing climate change and ways to implement energy conservation and carbon reduction.

提升公眾機電安全及節能意識
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其後，在同一計劃下專為教師而設的碳中和研討會於2025年2月17日舉行，超過90名教師出席。機電署代表與教師深入探討各項節能減排議題，鼓勵他們在日常教學中以簡單易明的方式向學生傳遞相關知識。我們還詳細介紹最新的《能源效益教材套》，並示範如何運用教材套教授節能課題，以提升下一代對能源效益和節約的認知，讓他們在日常生活中實踐節能理念。

Subsequently, a seminar on carbon neutrality under the same scheme was held specifically for teachers on 17 February 2025, with an attendance of over 90 teachers. Representatives of the EMSD had in-depth discussions with the teachers about various energy conservation and emissions reduction issues, encouraging them to convey the knowledge to students in a simple and easy-to-understand manner during daily lessons. We also introduced the latest Energy Efficiency Educational Kit in detail and demonstrated how to use it for teaching energy conservation topics. This initiative helps enhance the next generation's understanding of energy efficiency and conservation, allowing them to put energy-saving concepts into practice in daily life.

為促進師生把所學知識和技能應用在日常生活中，我們積極與教育局合作，開發更多氫燃料教材，並舉辦一系列工作坊和活動，包括安排物理科教師參觀全港首個公眾加氫站—凹頭加氫站，讓教師親身體驗氫能設施，把知識帶回課堂，與學生分享氫能的最新發展。

To encourage practical application of acquired knowledge and skills in daily life among teachers and students, we have actively collaborated with the EDB to develop more teaching materials about hydrogen fuel, and organised a series of workshops and activities. These included arranging for physics teachers to visit Hong Kong's first public hydrogen refuelling station, the Au Tau Hydrogen Refuelling Station, where they gained firsthand experience of hydrogen facilities, enabling them to bring the knowledge back to the classroom and share the latest developments of hydrogen energy with their students.

策略三：強化社區宣傳

機電署一直致力在社區推廣能源效益和節能減碳，透過多元化方式聯繫社區各界，並定期舉辦不同類型的活動，以推廣節能減碳和可再生能源。年內，我們派員前往學校、社區中心和長者中心等場所，舉辦超過130場講座與展覽，向逾16 000人傳遞有關能源效益、節能減碳的最新知識和資訊。

Strategy 3: Strengthening Community Promotion

The EMSD has remained committed to promoting energy efficiency, energy conservation and carbon reduction within the community. We adopt diverse approaches to engage all sectors of society, regularly organising different types of activities to promote energy conservation, carbon reduction and renewable energy. During the year, we dispatched staff to venues such as schools, community centres and elderly centres to hold over 130 seminars and exhibitions, delivering the latest knowledge and information on energy efficiency, energy conservation and carbon reduction to more than 16 000 participants.

機電署致力於社區外展服務，與社會各界緊密合作，向市民傳遞機電安全知識與節約能源訊息。其中，我們聯同地區服務及關愛隊伍（關愛隊），在大窩口邨舉辦氣體安全講座，教導居民正確使用氣體用具，以防一氧化碳中毒。

The EMSD is committed to community outreach services, working closely with various sectors of society to disseminate E&M safety knowledge and energy conservation messages to the public. Notably, we partnered with the District Services & Community Care Teams (Care Teams) to organise a gas safety seminar at Tai Wo Hau Estate, educating residents on the proper use of gas appliances to prevent carbon monoxide poisoning.

為提升社區電力安全，機電署接觸關愛隊和非牟利組織，為義工提供專門的電力安全培訓，讓義工在進行家訪時能夠識別電力安全隱患。

To enhance electrical safety in the community, the EMSD contacted Care Teams and non-profit organisations to provide specialised electrical safety training for volunteers, enabling them to identify potential electrical hazards during home visits.

自2024年起，機電署與香港社會服務聯會（社聯）合作推廣電力安全。社聯的會員機構及合作伙伴可透過會員通訊，獲取最新的電力安全資訊。此外，會員機構亦可參與「電氣安全推廣計劃」，透過趣味故事、小組遊戲和示範活動獲取更多相關知識。另一方面，我們亦接觸地區服務及關愛隊伍（關愛隊）及其他非牟利組織，為其義工提供專門的電力安全培訓，讓義工在家訪時能識別處所的電力隱患，以便相關住戶作適當跟進。

Since 2024, the EMSD has collaborated with the Hong Kong Council of Social Service (HKCSS) to promote electrical safety. Through member newsletters, the HKCSS' member organisations and partners can access the latest information about electrical safety. In addition, member organisations can participate in the Electrical Safety Promotion Programme to acquire more information through interesting stories, group games and demonstrations. Separately, we have reached out to District Services & Community Care Teams (Care Teams) and other non-profit organisations to provide specialised electrical safety training for their volunteers. This enables the volunteers to identify potential electrical hazards during home visits, so that the households concerned can take appropriate follow-up actions.

為加強社區節能宣傳和教育工作，機電署於2024年7月在香港中央圖書館和香港科學館演講廳舉辦兩場能源效益公眾講座，邀請業界、學術界和其他政府部門的代表擔任講者，講解節能政策最新發展，並分享創科應用實例。講座採用線上線下混合模式進行，吸引約700名來自物業管理、工程顧問和學術研究等不同領域的公眾人士參加，有助在社區推廣碳中和理念。

To step up publicity and education on energy conservation in the community, the EMSD held two public seminars on energy efficiency in July 2024 at the Hong Kong Central Library and the Hong Kong Science Museum Lecture Hall. Representatives of the trade, academia and other government departments were invited to serve as speakers to explain the latest developments of energy-conservation policies and share practical examples of I&T applications. The seminars were conducted in a hybrid mode, both online and in-person, attracting around 700 members of the public from different fields such as property management, engineering consultancy and academic research, which contributed to promoting the concept of carbon neutrality within the community.

提升公眾機電安全及節能意識
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為確保少數族裔社羣能獲取必要的機電安全知識，機電署已把家用燃氣安全、R32家用冷氣機和電力安全的重要宣傳資料，翻譯成八種少數族裔語言，從而擴大信息覆蓋面。

To ensure that ethnic minority communities have access to essential E&M safety knowledge, the EMSD has translated important promotional materials on household gas safety, R32 household air conditioners and electrical safety into eight ethnic minority languages, thereby broadening the coverage of information.

除廣泛的社區宣傳外，機電署還為不同族羣制定宣傳策略。年內，我們特別把家用燃氣安全、R32家用冷氣機和電力安全的宣傳資料，翻譯成八種少數族裔語言，包括印尼語、印地語、尼泊爾語、旁遮普語、他加祿語、泰語、烏爾都語和越南語，確保不同文化背景的居民都能接收重要的安全資訊。

年內，機電署採用創新的合作模式，與香港中華煤氣有限公司、區議員辦事處和關愛隊等地區組織攜手舉辦氣體安全講座，旨在提升地區層面的公眾氣體安全意識，特別針對較少使用社交媒體的長者。透過「政府－市民－企業」三方協作，有效運用各合作伙伴的專業知識和社區網絡，向有需要的居民傳遞重要的氣體安全訊息。此舉不僅拓展了我們的地區協作網絡，也增進了合作伙伴對氣體安全的認識和理解，讓他們能協助居民處理相關事宜。此外，我們與房屋署建立緊密合作關係，自2025年第一季起透過公共屋邨的電子公告板和「房屋資訊」頻道，播放氣體安全宣傳信息。該計劃目前在慈正邨試行，未來會推廣至其他公共屋邨。

In addition to extensive community publicity, the EMSD has tailored promotional strategies for different ethnic groups. During the year, we specifically translated promotional materials on household gas safety, R32 household air conditioners and electrical safety into eight ethnic minority languages, including Indonesian, Hindi, Nepali, Punjabi, Tagalog, Thai, Urdu and Vietnamese, ensuring that residents from diverse cultural backgrounds can all receive important safety information.

During the year, the EMSD adopted an innovative co-operation approach, partnering with the Hong Kong and China Gas Company Limited, district council members' offices and district organisations such as Care Teams to conduct gas safety seminars. The seminars were aimed at raising public awareness of gas safety at the district level, particularly targeting elderly residents who seldom used social media. Through this "Government-Citizen-Enterprise" tripartite collaborative approach, we effectively leveraged the expertise and community networks of our partners to disseminate important gas safety messages to residents in need. This effort not only expanded our district-level collaborative network, but also enhanced our partners' awareness and understanding of gas safety, empowering them to help the residents deal with relevant issues. Moreover, we have established a close partnership with the Housing Department. Since the first quarter of 2025, we have utilised the electronic notice boards and the Housing Channel in public housing estates to broadcast promotional messages about gas safety. The scheme is currently being piloted in Tsz Ching Estate and will be extended to other public housing estates in the future.

機電署與煤氣公司和區議員辦事處合辦安全講座，分享氣體事故案例，特別是涉及未附有「GU」標誌的氣體用具或舊氣體熱水爐，以及與使用「節能環」相關的一氧化碳中毒個案。

The EMSD, together with the Towngas and District Council Members' offices, organised safety talks to share gas incident cases, particularly those involving gas appliances without the GU mark or aged gas water heaters, as well as carbon monoxide poisoning associated with the use of "energy-saving rings".

為從小培養兒童的氣體安全意識，機電署人員到訪幼稚園進行教育活動。學童積極參與、樂在其中，成功達成早期教育目的。

To cultivate gas safety awareness among children from an early age, EMSD staff visited kindergartens to conduct educational activities. The children enthusiastically participated and had fun in the activities, successfully achieving the objectives of early education.

展望未來，機電署會繼續採用多元化宣傳策略，建立完善的社區安全和節能教育網絡。從實體活動到網上平台、從普羅大眾到特定羣體、從專業講座到基層外展活動，形成多層次、全方位的推廣體系，務求提升市民的機電安全意識，並在社區推廣節能減碳。

Looking ahead, the EMSD will continue to employ diversified publicity strategies to build a comprehensive community safety and energy conservation education network. From physical events to online platforms, from the general public to specific groups, and from professional seminars to grassroots outreach activities, we are developing a multi-layered, all-encompassing promotional system, in a bid to raise public awareness of E&M safety and popularise energy conservation and carbon reduction in the community.

策略四：加強與傳媒聯繫

機電署重視與傳媒的關係，透過多元化的溝通渠道，向公眾傳遞部門的最新發展和重要訊息。年內，我們舉辦傳媒簡介會，介紹機電署的創科成就，包括在日內瓦國際發明展上的獲獎項目，以展現部門的技術實力。此外，我們應多家電視台和電台邀請接受訪問，除闡述部門工作進展外，更積極推廣機電安全和節能減碳，以提高公眾認知，並鼓勵市民參與。為支持青年發展，我們主動聯繫多家傳媒機構，廣泛宣傳「機電青少年大使計劃」，吸引青年認識及投身機電工程領域，為未來人才培育奠定扎實基礎。

Strategy 4: Strengthening Connection with Media

The EMSD values its relationship with the media and leverages diverse communication channels to convey its latest developments and key messages to the public. During the year, we held a media briefing to present the EMSD's I&T achievements, including award-winning projects at the International Exhibition of Inventions of Geneva, highlighting the department's technical capabilities. Moreover, we were invited for interviews by several television and radio stations. Apart from expounding updates on our work, we actively promoted E&M safety, energy conservation and carbon reduction to raise public awareness and encourage community participation. To support youth development, we have proactively reached out to multiple media organisations to widely promote the EMYA Programme, attracting young people to explore and join the E&M engineering field, so as to lay a solid foundation for future talent cultivation.

機電署主動聯絡傳媒，宣傳其創科成果、機電安全和節能減碳措施。

The EMSD actively engaged with the media to promote its I&T achievements, E&M safety, as well as energy conservation and carbon reduction initiatives.

機電工程營運基金報告
ELECTRICAL AND MECHANICAL SERVICES TRADING FUND REPORT

抱負 VISION

致力提供優質機電工程服務，精益求精，以提升市民的生活質素。
To improve the quality of life for our community through continuous enhancement of our electrical and mechanical engineering services.

使命 MISSION

客戶 CUSTOMER
提供優質的工程方案，以滿足客戶的需要。
Providing quality engineering solutions to satisfy our customers' needs.

員工 STAFF
建立一支卓越的員工隊伍，並維持和諧的工作環境。
Developing a competent workforce and maintaining a harmonious environment.

部門 ORGANISATION
擁抱創新及科技提供更佳服務。
Embracing innovation and technology for service enhancement.

信念 VALUES

誠信 INTEGRITY
我們秉持誠信，維持良好道德操守。
We uphold honesty and integrity to embrace an ethical culture.

出色服務 SERVICE EXCELLENCE
我們提供安全可靠、高效率、具成本效益及利惠環保的全面優質服務。
We provide comprehensive quality services that are safe, reliable, efficient, cost-effective and environment-friendly.

關懷 CARING
我們關懷員工、客戶和市民大眾，並重視環保。
We care for our staff, customers, community and the environment.

以客為本 CUSTOMER FOCUS
為滿足客戶的各種需要，我們盡心竭力，積極提供工程方案，以贏取客戶的信任和支持。
We focus on the needs of our customers and provide engineering solutions in a proactive and responsible manner to win their trust and support.

靈活創新 AGILITY AND INNOVATION
我們重視靈活及創新的企業文化。
We treasure our agile and innovative corporate culture.

承擔 COMMITMENT
我們言行一致，信守承諾。
We do what we promise.

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Deputy Secretary for Development (Works) 3

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機電工程營運基金總經理
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General Manager, EMSTF
(Director of Electrical and Mechanical Services)

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韋美珠女士
Ms Wai Mei-chu, Jenny
機電工程署主任秘書
Departmental Secretary, EMSD

* 陳志偉太平紳士出任機電工程署副署長/營運服務至2024年8月6日
Mr Chan Chi-wai, Richard, JP was Deputy Director/Trading Services, EMSD up to 6 August 2024

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（機電工程署署長）
General Manager, EMSTF
(Director of Electrical and Mechanical Services)

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Mr Chow Hau-keung, Vincent, JP
機電工程署副署長 / 營運服務
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04 楊秀權先生
Mr Yeung Sau-kuen, Sammy
機電工程署助理署長 /2
Assistant Director/2, EMSD

05 李志良先生
Mr Lee Chi-leung, Eric
機電工程署助理署長 /3
Assistant Director/3, EMSD

06 黃妍旻女士
Ms Wong Yin-man, Yammy
機電工程署總庫務會計師 / 財政管理
Chief Treasury Accountant/
Financial Management, EMSD

07 鄭元峰先生
Mr Cheng Yuen-fung
署理機電工程署員工關係主任
Staff Relations Officer (Acting), EMSD

08 韋美珠女士
Ms Wai Mei-chu, Jenny
機電工程署主任秘書
Departmental Secretary, EMSD

秘書 SECRETARY

09 王瑩瑩女士
Ms Wong Ying-ying, Regina
機電工程署高級機電工程師 / 技術服務
Senior Engineer/Technical Services, EMSD

* 陳志偉太平紳士出任機電工程署副署長/營運服務至2024年8月6日
Mr Chan Chi-wai, Richard, JP was Deputy Director/Trading Services, EMSD up to 6 August 2024

* 李志良先生出任機電工程署助理署長/1至2024年12月22日
Mr Lee Chi-leung, Eric was Assistant Director/1, EMSD up to 22 December 2024

* 李學賢先生出任機電工程署助理署長/3至2024年12月22日
Mr Lee Hok-yin, Arthur was Assistant Director/3, EMSD up to 22 December 2024

* 劉志偉先生出任機電工程署員工關係主任至2025年4月21日
Mr Lau Chi-wai, Wilfred was Staff Relations Officer, EMSD up to 21 April 2025

業務回顧與前瞻
OPERATIONS REVIEW AND OUTLOOK

周厚強太平紳士
Mr Chow Hau-keung, Vincent, JP
機電工程署副署長/營運服務
Deputy Director/Trading Services, EMSD

穩健增長 策略聚焦

2024/25年度，機電工程營運基金（營運基金）繼續錄得穩健增長，總收入增至98.33億港元，較上年度上升6%。收入回報率微升至2.4%，反映我們繼續努力秉持收回成本的營運原則，讓客戶能保留資金，為公共服務創造最大價值。

2026年是營運基金成立30周年。我們在籌備誌慶活動之際，仍專注推動機構持續發展，以滿足客戶對服務質素和價值的期望。我們所提供的卓越機電工程服務，在經濟不明朗時期尤為重要。我們預期未來業務會保持穩健發展，並會時刻保持警惕，以應對可能出現的挑戰。

STEADY GROWTH AND STRATEGIC FOCUS

In 2024/25, the Electrical and Mechanical Services Trading Fund (EMSTF) experienced another year of steady growth, with total revenue rising to HK$9,833 million, a 6% increase from the previous year. The return on revenue increased slightly to 2.4%, reflecting our continued effort to adhere to the cost-recovery principle while enabling clients to retain funding for their public services.

The year 2026 marks the 30th anniversary of the EMSTF. As we prepare for the celebrations, our focus remains on continuously evolving to meet client expectations for service quality and value. Our excellent engineering services have proven indispensable amid economic uncertainties, and we anticipate stable development while remaining vigilant at all times against potential headwinds.

維繫客戶 拓展服務

我們欣見客戶持續對營運基金的服務抱有信心，年內我們成功續簽所有服務水平協議。值得一提的是，醫院管理局已發出意向書，擬於2027年起簽訂為期十年的服務水平協議，涵蓋電氣、機械和空調服務。此舉會為我們帶來穩定收入，但我們亦需透過非公務員合約僱員計劃、退休後服務合約計劃和其他招聘渠道擴充人手，以提供所需服務。為應對日益增長的服務需求，我們會進一步採用人工智能等創新科技（創科），把操作與維修保養工作自動化，提升效率。

營運基金的2024年客戶意見調查肯定了我們以客為本的服務方針，客戶滿意指數和整體服務競爭力指數分別達7.27分和7.38分（滿分為8分），兩者均創歷史新高，而問卷回應率也高達64%。調查所得的寶貴意見和建議，有助我們持續改進。

CLIENT ENGAGEMENT AND SERVICE EXPANSION

We are delighted to report continued client confidence, with all Service Level Agreements (SLAs) successfully renewed in 2024/25. Notably, the Hospital Authority has issued a letter of intent to enter into a ten-year SLA starting in 2027, covering electrical, mechanical and air-conditioning services. This will enhance revenue stability, but necessitate workforce expansion for service delivery through the Non-Civil Service Contract Staff Scheme, the Post-retirement Service Contract Scheme and other recruitment channels. To meet growing service demands, we will further embrace innovation and technology (I&T), including artificial intelligence (AI), to automate operation and maintenance tasks and improve efficiency.

The EMSTF Customer Opinion Survey (COS) 2024 affirmed our client-focused approach, achieving historic highs with a Customer Satisfaction Index of 7.27 and an Overall Service Competitiveness Index of 7.38 on an eight-point scale, along with a robust response rate of 64%. The COS provides valuable insights and suggestions for our continuous improvement.

創新文化與成果

我們透過「機電創科網上平台」及其他措施推動創科發展，成功培養員工和客戶的創新文化。我們與客戶合作的創科項目屢獲國際認可，其中與民航處共同開發的「高性能電腦工作站兩相浸沒式冷卻系統」，在2025年第五十屆日內瓦國際發明展榮獲日內瓦州特別大獎，屬日內瓦發明展最高榮譽之一。該獎項代表得獎項目獲政府層面的榮譽與認可，亦是首次有香港特別行政區政府部門獲此殊榮。

我們成功培養創新文化，並開展多項創科方案以進行概念驗證。未來數年，我們會聚焦整合已成功驗證的項目，訂立優先次序，並制訂實施計劃，推動在客戶場地大規模應用，以期達到節能或減省人手的目標。

INNOVATION CULTURE AND ACHIEVEMENTS

Our efforts to facilitate I&T development via the E&M InnoPortal and other initiatives have fostered a culture of innovation among our staff and clients alike. Our collaborative I&T projects with clients have garnered international recognition, including the Two-phase Immersion Cooling System for High Performance Computer Workstation, jointly developed with the Civil Aviation Department. The project won the Prize of the Republic and Canton of Geneva, one of the top accolades at the 50th International Exhibition of Inventions of Geneva 2025. The prize represents a great honour and recognition at a government level for the winning project. This is also the first time that departments of the Hong Kong Special Administrative Region Government have received this award.

Building on our success in cultivating an innovation culture and launching various I&T projects for proof of concept, we will, in the coming years, focus on consolidating and prioritising those projects with successfully verified concepts and formulate implementation plans for large-scale deployment in client venues, with a view to achieving energy or manpower savings.

優先發展的技術：機電裝備合成法、開放式建築信息模擬和人工智能

鑑於「機電裝備合成法」、開放式建築信息模擬（open BIM）和人工智能技術對客戶及機電行業具潛在價值，我們會優先發展這三種技術。

「機電裝備合成法」不但適用於新項目，亦有助加快現有建築物的維修、保養、改建和加建項目進度。年內，我們成功開展了多個「機電裝備合成法」先導項目，包括更換瑪嘉烈醫院的空氣處理機組，以及東區尤德夫人那打素醫院和海關總部大樓的製冷機組。根據所得數據，「機電裝備合成法」把工地施工日數平均縮減達六成，同時透過更換老化設備，達致節能和長遠維修保養效益。對醫院來說，縮減施工日數尤其重要，因冬季可供進行維修保養的時間有限，必須迅速完成設備更換，以減少對醫院運作的影響。越來越多維修、保養、改建和加建合約要求採用「機電裝備合成法」，促使中小型機電承辦商學習相關知識並累積實務經驗，從而提升機電行業的整體能力，加強資產管理。

另一項優先發展的技術是**open BIM**。儘管政府多年來一直推動建築信息模擬（BIM）技術發展，但目前尚未能實現跨平台互通。我們會運用BIM方面的專業知識，加快不同BIM軟件與持份者之間的互通，開發open BIM檢視器，並推廣open BIM標準和工作流程，以減少對品牌的依賴，並加強不同工程專業人員之間的BIM技術協作。我們會繼續探索在設計、施工以至資產管理等各個範疇應用open BIM的可能性。

PRIORITY TECHNOLOGIES: MIMEP, OPEN BIM AND AI

We have identified Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP), open Building Information Modelling (open BIM) and AI technologies as top priorities in view of their potential value to clients and the E&M trade.

While **MiMEP** is useful for new projects, it is also valuable in expediting repair, maintenance, alteration and addition (RMAA) projects in existing buildings. During the year, we successfully commenced numerous MiMEP pilot projects, including the replacement of an air-handling unit at Princess Margaret Hospital, and chillers at Pamela Youde Nethersole Eastern Hospital and the Customs Headquarters Building. Based on the data obtained, MiMEP reduced the average number of on-site working days by up to 60%, while delivering energy savings and long-term maintenance benefits from replacement of ageing equipment. The significance of reduced working days is especially pronounced in hospitals, where limited winter maintenance windows demand swift equipment replacement to minimise disruption to hospital operations. More and more RMAA contracts mandating MiMEP usage will also incentivise small- and medium-sized E&M contractors to acquire MiMEP knowledge and hands-on experience, thereby elevating the E&M industry capabilities as a whole and enhancing asset management.

Another priority is **open BIM**. Although the Government has been driving BIM development for years, we are not yet at a stage to achieve interoperability across BIM platforms. We will utilise our BIM expertise to accelerate interoperability between different BIM software and stakeholders, develop an open BIM viewer, and promote open BIM standards and workflows, with a view to reducing the risk of brand dependence and enhancing BIM collaboration among different engineering professionals. We will continue to explore various possibilities of open BIM applications on design, construction and asset management.

人工智能是優先發展技術清單上不可或缺的一環。正如行政長官於2025年4月在香港舉行的世界互聯網大會亞太峰會所言，人工智能「對香港未來至關重要」。繼部門成功舉辦「國際建築機電人工智能大挑戰2025」，以及推出自主研發且屢獲獎項的「ChillStream®」人工智能製冷機組優化系統後，我們會繼續運用人工智能，協助客戶節約能源和提高效率。

我們亦觀察到市場對安全的人工智能數據儲存、人工智能項目實施和人工智能培訓的需求日益殷切。營運基金作為政府的「創新促成者」，致力滿足這些需求，在部門內建立人工智能基礎設施處理數據，並聯繫市場合作伙伴，為客戶推行人工智能項目和提供人工智能培訓服務。這將會是一項極具潛力的重要工作，我們正與相關持份者探討其可行性。

Our list of priority technologies would not be complete without **AI**. As highlighted by the Chief Executive at the World Internet Conference Asia-Pacific Summit in Hong Kong in April 2025, AI is "central to Hong Kong's future". Following our successful organisation of the Global AI Challenge for Building E&M Facilities 2025, and the successful launch of our award-winning in-house-developed ChillStream® AI-based chiller optimisation solution, we will continue to leverage AI to help clients save energy and boost efficiency.

We have also observed a growing market demand for secure AI data storage, AI project facilitation and AI capacity building. As the Innovation Facilitator for the Government, the EMSTF is committed to meeting these needs by establishing an on-premises AI infrastructure for data handling, and connecting market partners to provide clients with AI project facilitation and training services. This would be a major undertaking with exciting potential, and we are exploring the feasibility with relevant stakeholders.

在優先發展的技術方面建立實力

為加快客戶採用實證有效的創科方案，並推動上述三大技術的發展，關鍵在於培養員工重視技術和培訓的思維，包括改革見習工程師訓練計劃和技術員訓練計劃。我們也會為各級在職員工提供適切的創科培訓，包括安排專業和技術職系人員前往大灣區的「機電裝備合成法」工廠進行技術考察，擴闊視野。相關措施還包括透過現代化工作方式，與時並進，從而提升員工的工作滿足感。

CAPACITY BUILDING IN PRIORITY TECHNOLOGIES

To accelerate client adoption of proven I&T solutions and advance the development of the above three priority technologies, a key to success will be fostering a technology- and training-driven mindset among our staff, including reforming our Engineering Graduate and Technician Training Schemes. We will also provide suitable I&T training for our in-service staff at all ranks, including arranging technical visits for our professional and technical grade colleagues to MiMEP plants in the Greater Bay Area to broaden their exposure. A related initiative is to boost staff job satisfaction by modernising their work to keep up with the times.

內地與國際協作

近年來，各種協作大大加快了我們在創科發展和培訓方面的步伐。我們與廣州市人力資源和社會保障局簽署兩份合作備忘錄，以推動機電培訓，正正是有效協作的典範。廣州多家機構為我們的同事提供高質素機電課程，包括為世界技能大賽作參賽準備的機電署見習技術員。隨着電動車在政府車隊中日益普及，我們會繼續擴展員工在電動車維修保養等領域的培訓機會。

MAINLAND AND INTERNATIONAL COLLABORATION

Collaboration has expedited our I&T development and training efforts in recent years. The signing of two Memoranda of Co-operation with the Guangzhou Municipal Human Resources and Social Security Bureau to promote E&M training serves as an example of effective collaboration. Various institutes in Guangzhou have provided high-quality E&M courses for our colleagues, including Technician Trainees preparing for the WorldSkills Competition. As electric vehicles (EVs) have become increasingly prevalent in the government fleet, we will continue expanding training opportunities for our staff in areas such as EV maintenance.

2025年，我們在第五十屆日內瓦國際發明展再創高峯，參展的十個發明項目共奪得12個獎項，包括日內瓦州特別大獎、兩個評審團嘉許金獎、四個金獎、一個銀獎、三個銅獎和一個最佳國際發明及創新獎。多個獲獎項目都是我們與客戶攜手研發的成果，突顯我們在創新協作方面的實力。

同年，我們亦與廣東省科學技術協會合辦大型國際賽事「國際建築機電人工智能大挑戰2025」，延續2021/22年度首屆比賽的成功經驗。2025年的賽事吸引來自全球26個地區逾200支隊伍參賽，現場參加者近500人，全球直播觀眾達三萬人次，反映全球對建築和機電行業應用人工智能的興趣與日俱增。

In 2025, we reached new heights at the 50th International Exhibition of Inventions of Geneva by winning a total of 12 awards for ten invention projects. These accolades include the Prize of the Republic and Canton of Geneva, two gold medals with the congratulations of jury, four gold medals, one silver medal, three bronze medals and the Best International Invention and Innovation prize. Many of the award-winning projects were co-developed inventions with our clients, underscoring the strength of our collaborative innovation.

We also organised a large-scale international event, the Global AI Challenge for Building E&M Facilities, in collaboration with the Guangdong Association for Science and Technology in 2025, building on the success of the inaugural competition in 2021/22. The 2025 event attracted over 200 teams of contestants from 26 regions across the globe, with approximately 500 in-person participants and 30 000 livestream viewers worldwide, showing the burgeoning global interest in AI applications for the construction and E&M sectors.

策略計劃、環境管理與機構管治

營運基金第三個五年策略計劃取得良好進展，接下來我們會專注推廣應用實證有效的創科方案。我們亦會鼓勵客戶把研發成果轉化為實際應用，整體目標是協助客戶採用已驗證的創科方案，提高營運效率，降低能源與人力成本。

在環保方面，我們持續支援客戶推行節能項目，協助更換老化照明和製冷系統至超節能型號，並利用人工智能和其他大數據方案提升能源效益。醫院管理局和香港警務處等擁有大量場地的部門，將受益於顯著的節能成效。

為推動新能源車輛以實現減碳，我們繼續向食物環境衛生署提供技術意見，協助該署試驗三輛零碳氫燃料電池洗街車。此外，我們正於機電署總部大樓外牆進行「太陽能發電建築」先導項目，收集數據以評估在公私營建築物廣泛應用這項技術的可行性。

誠信是我們機構管治的核心。我們一直透過定期向新入職和現職員工安排誠信簡報會，確保所有員工和承辦商都恪守法律與道德標準，維護誠信文化。

STRATEGIC PLAN, ENVIRONMENTAL STEWARDSHIP AND GOVERNANCE

With good progress already made, the remainder of our third Five-year Strategic Plan will focus on scaling proven I&T solutions. We will incentivise clients to translate research and development outcomes into practical applications. Our overarching goal is to help clients optimise operational efficiency and reduce energy and manpower costs by adopting proven I&T solutions.

On the environmental front, we continued to support clients' energy-saving projects, help them replace aged lighting and chiller systems with ultra-energy-efficient models and optimise energy performance using AI and other big data solutions. Client departments such as the Hospital Authority and the Hong Kong Police Force, with extensive venue portfolios, stand to benefit from substantial energy savings.

To support decarbonisation through promoting new energy vehicles, we continued to provide technical advice to the Food and Environmental Hygiene Department for its pilot trial of three carbon-neutral hydrogen fuel cell street washing vehicles. In addition, we are conducting a pilot project to install Building-Integrated Photovoltaics system on the facades of the EMSD Headquarters, with data collection in progress to assess the feasibility of broader adoption in public and private buildings.

When it comes to governance, integrity is at our core. We have been upholding integrity by providing regular integrity briefings to both new and existing staff, so as to ensure all staff and contractors adhere to laws and ethical standards.

支援2025/26年度大型活動

本港即將迎來兩項大型活動，分別是2025年11月的第十五屆全國運動會（全運會），以及2025年12月的立法會換屆選舉。

全運會由粵港澳三地聯合承辦，標誌着香港首次成為全國體育盛事的協辦城市。香港會承辦八個競賽項目和一個羣眾賽事活動。營運基金十分榮幸能協助康樂及文化事務署與其他客戶部門升級場地和監察機電設施運作，以確保各項賽事順利進行。

一如以往選舉年度，我們會為2025年12月初舉行的立法會換屆選舉提供技術支援。屆時，數以千計的員工和承辦商人員會分派至全港各個投票站和點票站，負責安裝所需的照明和機電設備，並於選舉日在現場待命，隨時提供支援。

SUPPORTING MAJOR EVENTS IN 2025/26

Two upcoming major events are the 15th National Games of the People's Republic of China in November 2025 and the Legislative Council (LegCo) General Election in December 2025.

The National Games, co-hosted by Guangdong, Hong Kong and Macao, mark Hong Kong's debut as a co-host of a national sports event. Hong Kong will stage eight sports competitions and one mass participation event. The EMSTF is honoured to support the Leisure and Cultural Services Department and other clients in upgrading their venues and monitoring the operation of E&M facilities to ensure smooth running of all competitions.

As in previous election years, we will provide technical support for the 2025 LegCo General Election scheduled for early December. Thousands of our staff and contractors will be deployed to polling and counting stations throughout Hong Kong to set up the necessary lighting and E&M facilities, and to provide on-site standby support on the election day.

衷心謝忱

自2024年年中出任副署長/營運服務以來，我深感榮幸能協助帶領這個靈活進取的機構，致力不斷變革，追求卓越，服務香港。謹代表全體團隊，衷心感謝常務委員會和各決策局的指導、客戶的信任、同事的無私奉獻和出色表現，以及香港、內地和海外眾多合作伙伴，包括商會、業界組織、學術界、專業團體、培訓和科研機構等的鼎力支持。

憑藉持續創新與協作，我們深信營運基金將穩步前行，並在創科發展領域開創嶄新局面。

APPRECIATION AND THANKFULNESS

Since assuming the deputy role at the EMSTF in mid-2024, I have been privileged to help steer this agile organisation, which is committed to continuous transformation and excellence in serving Hong Kong. On behalf of the entire team, I would like to extend heartfelt thanks to the Executive Board and the policy bureaux for their guidance, to our clients for their trust, to our colleagues for their dedication and great work, and to our many collaborative partners across Hong Kong, the Mainland and overseas, including trade associations, industry bodies, academia, professional bodies, training and research institutions, and more for their staunch support.

With continued innovation and collaboration, we are confident that the EMSTF will maintain steady performance while breaking new ground in I&T development.

周厚強
機電工程署副署長 / 營運服務

Vincent Chow
Deputy Director/Trading Services, EMSD

營運服務
TRADING SERVICES

創科闖新天

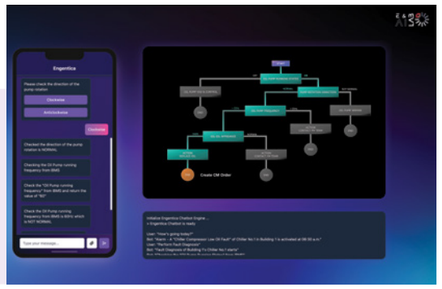
營運基金在2024/25年度積極推動創新科技(創科)發展，重點聚焦人工智能、「機電裝備合成法」和開放式建築信息模擬(open BIM)技術。各個策略業務單位繼續開拓尖端科技應用的新領域，致力為客戶和市民提供更優質的機電服務，以實現營運基金第三個五年策略計劃提出的「機電3.0－智能機電」願景，並支持香港持續改革轉型。

繼部門成功自主研發屢獲殊榮的「ChillStream®」人工智能製冷機組優化系統後，我們再創新猷，於2025年3月舉行的機電人工智能實驗室科技講座上，推出建築機電設施人工智能代理「E&M Agent」。「E&M Agent」由機電人工智能實驗室研發，運用人工智能代理技術，推動智慧建築管理、減碳和自動化。參與科技講座的大業主、物業管理專業人士、顧問和學者，均對「E&M Agent」在提升物業維修保養效率方面的潛力大感興趣。我們下一步是進行測試並收集意見，以改善系統。此外，我們在科技講座上發布了兩份人工智能就緒建築資訊實務指南，分別針對人工智能語義模型和數據品質，協助業界實現標準化。

PUSHING NEW FRONTIERS IN INNOVATION AND TECHNOLOGY

In 2024/25, the EMSTF actively advanced its innovation and technology (I&T) initiatives, with a focus on artificial intelligence (AI), Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP) and open Building Information Modelling (open BIM) technologies. Our Strategic Business Units (SBUs) continued to push new frontiers in the application of cutting-edge technologies to enhance E&M services for clients and the public, aiming to achieve the vision of "E&M 3.0 – Intelligent E&M" outlined in our third Five-year Strategic Plan and support the city's ongoing reform and transformation.

Building on the success of our award-winning, in-house-developed ChillStream® AI-based chiller optimisation solution, we introduced the E&M Agent, an AI assistant for building E&M facilities, at the E&M AI Lab Tech Talk held in March 2025. Developed under the E&M AI Lab, our E&M Agent leverages agentic AI technology to promote smart building management, decarbonisation and automation. The Tech Talk audience, including major landlords, property management professionals, consultants and academics, expressed strong interest in its potential to boost property maintenance efficiency. Our next step is to conduct trials and gather feedback for system refinement. Moreover, at the Tech Talk, two Practice Notes for AI-ready Building Informatics, respectively focus on AI semantic modelling and data quality, were released to support industry standardisation.

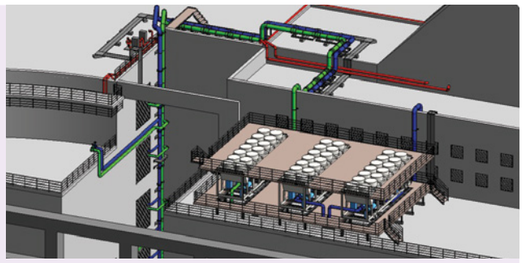


在機電人工智能實驗室科技講座上，機電署推出全新的建築機電設施人工智能代理「E&M Agent」。「E&M Agent」透過故障診斷和比較不同製冷機組數據等功能，提升維修保養效率。

At the E&M AI Lab Tech Talk, the EMSD introduced the E&M Agent, a new AI assistant for building E&M facilities. The E&M Agent enhances maintenance efficiency through features such as fault diagnosis and data comparison of various chillers.

機電署於2025年3月舉辦機電人工智能實驗室科技講座，與業界人士分享語義人工智能的發展和人工智能代理的應用。

The EMSD hosted the E&M AI Lab Tech Talk in March 2025 to share the development of semantic AI and application of AI assistant with the trade.



(左)機電署採用「機電裝備合成法」，協助東區尤德夫人那打素醫院更換氣冷式製冷機組，並將全新的冷水喉管系統接駁至現有手術室樓層。除了配合現場直升機坪進行熱工序的限制外，亦縮短了工地施工時間，以減少對醫院運作的影響。

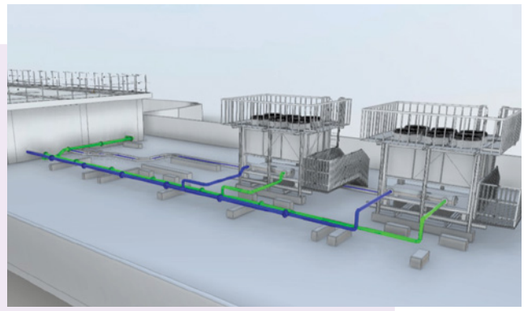
(右)我們採用建築信息模擬技術製作製冷系統模型，有效提升工程品質。

(Left) By adopting the MiMEP approach, the EMSD assisted the Pamela Youde Nethersole Eastern Hospital in replacing the air-cooled chillers and connecting a new chilled water piping system to the existing operating theatre floors. This approach not only accommodated the site constraint of prohibited hot work on the existing helipad but also shortened the on-site construction time, thereby mitigating the impact on hospital operations.

(Right) Building Information Modelling (BIM) technology was adopted to develop the model of chiller system, effectively enhancing works quality.

年內，我們全面推進「機電裝備合成法」的應用。我們利用該技術，協助香港海關更換海關總部大樓老化的水冷式製冷機組，成功把安裝時間縮短30%。我們亦運用該技術為政府產業署更換深水埗宏昌大廈的製冷機組和泵房設施，不但減少施工日數約40%，更為日後的維修保養工作帶來長遠效益。此外，瑪嘉烈醫院的空氣處理機組更換工程和東區尤德夫人那打素醫院的氣冷式製冷機組更換工程也採用了「機電裝備合成法」，分別縮短施工期達40%及60%，並提升工程品質。

MiMEP deployment was in full swing during the year. Using the MiMEP technology, we assisted the Customs and Excise Department in replacing an aged, water-cooled chiller at the Customs Headquarters Building, achieving a 30% reduction in installation time. The technology was also applied to the chiller and pump room replacement at Wang Cheong Building in Sham Shui Po for the Government Property Agency, reducing the number of working days by about 40% and delivering long-term benefits for future maintenance. In addition, MiMEP method was also adopted for the replacement of the air-handling unit at Princess Margaret Hospital and the air-cooled chillers at Pamela Youde Nethersole Eastern Hospital, effectively shortening construction time by 40% and 60% respectively and enhancing works quality.



機電署運用建築信息模擬技術及「機電裝備合成法」為宏昌大廈安裝先進的新型製冷機組。這些技術簡化了施工程序，並縮減施工日數，提升工程效率。與傳統型號相比，新型製冷機組的能源效益較高。

(右上)製冷機組的建築信息模擬模型。

The EMSD installed an advanced new chiller at Wang Cheong Building using BIM and the MiMEP technologies. This approach streamlined the construction process, reducing the number of working days and enhancing work efficiency. The new chiller has higher energy efficiency as compared with the traditional model.

(Top right) The BIM model of chiller.

機電署去年6月在「2024年香港開放式建築信息模擬/開放式地理信息系統比賽」奪得「技術解決方案組別」大獎，並於10月再獲「openBIM Awards 2024」的「項目交付組別」大獎，印證部門在發展及應用open BIM技術方面的努力和貢獻。

The EMSD won the Grand Award in the Technology Solution Category of the Hong Kong openBIM/openGIS Awards 2024 in June, and further received the Grand Award in the Handover Category of the openBIM Awards 2024 in October last year. These awards demonstrate the Department's efforts and contributions to the development and application of open BIM technologies.

另外，我們持續推動open BIM技術的廣泛應用，避免出現品牌依賴與壟斷情況。我們就操作和維修服務項目交付工作應用open BIM技術進行可行性研究，相關方案去年10月在buildingSMART International於摩洛哥舉辦的全球「openBIM Awards 2024」比賽中榮獲「項目交付組別」大獎，並在「2024年香港開放式建築信息模擬/開放式地理信息系統比賽」奪得「技術解決方案組別」大獎。這兩項殊榮充分印證我們在推動open BIM技術發展方面的重大貢獻。

Furthermore, we continued to promote wider adoption of open BIM to avoid brand dependence and monopolies. Our solution from the feasibility study on applying open BIM to project handover in operation and maintenance services won the Grand Award in the Handover Category of the global openBIM Awards 2024 hosted by buildingSMART International in Morocco last October, and the Grand Award in the Technology Solution Category of the Hong Kong openBIM/openGIS Awards 2024. Both awards testify to our significant contribution to open BIM development.

新機遇

營運基金的創科實力，讓我們得以支持香港進一步發展和轉型。為促進在《行政長官2024年施政報告》中強調的低空經濟，我們協助消防處修改其地面數碼集群無線電系統的微波連接網絡，改用通訊事務管理局辦公室編配的新頻帶。現時系統在全港山頂網絡站點所使用的頻帶，會重新分配給低空經濟活動和具潛力的應用項目，例如無人機緊急救援、基建設施巡查、包裹派遞和空中的士等。這些新興機遇讓我們能與內地及海外企業進一步合作，推動創新和發展。

New Opportunities

The EMSTF's I&T capabilities position us to support Hong Kong's further development and transformation. To boost the low-altitude economy highlighted in the Chief Executive's 2024 Policy Address, we helped the Fire Services Department modify the microwave link network of its Terrestrial Trunked Radio System to operate on a new frequency band assigned by the Office of the Communications Authority. The current frequency band, used by the system's network stations on hilltop sites across Hong Kong, will be reallocated to support low-altitude economic activities and potential applications such as drone emergency rescue, infrastructure inspection, parcel delivery and air taxis. These emerging opportunities enable us to deepen collaboration with Mainland and overseas entities to drive innovation and growth.

主要創科獎項

我們的創科項目在2024/25年度榮獲多個獎項，最近在第五十屆日內瓦國際發明展(日內瓦發明展)上，十個項目奪得共12個獎項。其中，我們與民航處合作研發的「高性能電腦工作站兩相浸沒式冷卻系統」，更榮獲日內瓦州政府頒發日內瓦州特別大獎，是首次有香港特別行政區政府部門獲得該項殊榮。

Major I&T Awards

Our I&T projects garnered multiple international awards in 2024/25, with ten projects winning 12 awards at the 50th International Exhibition of Inventions of Geneva (Geneva Exhibition) most recently. Among these, our Two-phase Immersion Cooling System for High Performance Computer Workstation, a joint project with the Civil Aviation Department (CAD), received the Prize of the Republic and Canton of Geneva from the Government of the Canton of Geneva. This marked the first time Hong Kong Special Administrative Region Government departments receiving such an honour.

在第五十屆日內瓦國際發明展上，機電署再創佳績，十個創科項目共獲12項殊榮，包括日內瓦州特別大獎、兩個評審團嘉許金獎、四個金獎、一個銀獎、三個銅獎和最佳國際發明及創新獎。

At the 50th International Exhibition of Inventions of Geneva, the EMSD reached new heights, winning 12 awards for ten I&T projects. The prestigious accolades included the Prize of the Republic and Canton of Geneva, two gold medals with the congratulations of jury, four gold medals, one silver medal, three bronze medals and the Best International Invention & Innovation prize.

其餘11個獎項為兩個評審團嘉許金獎、四個金獎、一個銀獎、三個銅獎，以及由泰國國家研究評議會頒發的最佳國際發明及創新獎。

The other 11 awards included two gold medals with the congratulations of jury, four gold medals, one silver medal and three bronze medals, and the Best International Invention & Innovation awarded by the National Research Council of Thailand (NRCT).

在日內瓦發明展上獲獎的客戶項目，包括我們支援發展局研發、用於遙控監督和管理工地的「智眼」，贏得泰國國家研究評議會獎項及銀獎。我們與民航處共同開發的「用於戶外活動的安全定位系統」，有助找出在偏遠地區遇險的滑翔傘運動員的位置以進行救援，榮獲評審團嘉許金獎。此外，我們與香港警務處(警務處)合作研發的「無人機智能眼鏡系統」獲頒銅獎。這些獎項延續了我們在2024年第四十九屆日內瓦發明展獲得七個金獎、十個銀獎和四個銅獎的佳績。

Client projects laurelled at the Geneva Exhibition included SmartEye developed by the Development Bureau with our support for remote site supervision and management, which received the award from the NRCT and a silver medal. The Tracking Solution for Outdoor Activity Safety, jointly developed with the CAD to help locate and rescue paragliders in distress in remote areas, won a gold medal with the congratulations of jury. Additionally, the AI Visual Intelligence-enabled Glasses for Drone Operations, jointly developed with the Hong Kong Police Force (HKPF), got a bronze medal. These accolades carried on our success at the 49th Geneva Exhibition in 2024, where we secured seven gold, ten silver and four bronze medals.

機電署與民航處合作研發的「高性能電腦工作站兩相浸沒式冷卻系統」，能提高設備的散熱效率並延長其使用壽命，項目獲得日內瓦州特別大獎殊榮。

Jointly developed by the EMSD and the CAD, the Two-phase Immersion Cooling System for High Performance Computer Workstation enhances the heat dissipation efficiency and extends the lifespan of equipment. This project received the distinguished Prize of the Republic and Canton of Geneva.

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在區域層面，我們的「ChillStream®」項目在文萊舉行的2024亞太資訊及通訊科技大獎的人工智能類別中榮獲亞軍；「協助視察及救援工作的球型機器人」則在公營機構及政府類別中獲得季軍。

同樣在亞洲，我們的「監控現場設備的無線連接系統」和在公眾洗手間的「AI智節能抽風系統」項目於2024年第四屆亞洲創新發明展覽會－香港上各贏得一項金獎。「ChillStream®」項目和垃圾收集設施監察系統都榮獲銀獎；哺乳室預約系統則奪得銅獎。

本地方面，「ChillStream®」項目在2024香港資訊及通訊科技獎勇奪最佳人工智能應用獎和商業方案(新興技術)組別金獎；「智能電容器醫生」和「協助視察及救援工作的球型機器人」均贏得銀獎。

Regionally, our ChillStream® project was First Runner-up in the AI category of the Asia Pacific Information and Communications Technology Alliance (APICTA) Awards 2024 held in Brunei, while our Ball Type Rolling Robot for Inspection and Rescue was Second Runner-up in the Public Sector and Government category.

Also in Asia, our projects of Wireless Connection to Field Equipment for Control and Monitoring and AI-Control System for Ventilation System at Public Toilet each won a gold medal at the 4th Asia Exhibition of Innovations and Inventions Hong Kong in 2024. The ChillStream® project and the Refuse Bin Monitoring System both earned silver medals, while the Mama-room Booking System received a bronze medal.

Locally, the ChillStream® project won the Best Use of AI and the Gold Award in the Smart Business (Emerging Technologies) category at the Hong Kong Information and Communications Technology (HKICT) Awards 2024. Our Smart Capacitor Bank Health Doctor and the Ball Type Rolling Robot for Inspection and Rescue each won a silver award.

「ChillStream®」和「球型機器人」項目在2024亞太資訊及通訊科技大獎中分別獲得亞軍(人工智能類別)和季軍(公營機構及政府類別 — 政府及市民服務)。

The ChillStream® and the Ball Type Rolling Robot were First Runner-up in the AI category and Second Runner-up in the Public Sector and Government category – Government & Citizen Services respectively at the APICTA Awards 2024.

推動成熟方案落地

我們的策略業務單位正積極在更多政府場地推展經實證有效的創科方案，造福市民。

其中一個例子是智能意外感應系統，已在康樂及文化事務署(康文署)轄下的暢通易達洗手間成功試用。該系統運用光學雷達傳感器偵測跌倒情況，並能即時發出警報，目前已安裝於29個康文署場地，並計劃於2025/26年度擴展至全港另外30多個康文署場地，以提升場地管理和緊急應變能力。

Wider Deployment of Trialled Projects

Our SBUs are proactively expanding the deployment of proven I&T projects across more government venues to benefit the public.

A case in point is the Intelligent Fall Detection System successfully trialled in accessible toilets under the Leisure and Cultural Services Department (LCSD). Using Light Detection and Ranging (LiDAR) sensors to detect falls and trigger immediate alerts, the system has already been installed at 29 LCSD venues, with plans to extend to 30 additional venues throughout Hong Kong in 2025/26 to enhance venue management and emergency response capabilities.

(左)今年，我們陸續為康文署轄下多個康體場地安裝智能意外感應系統，並加設語音辨識求助功能及顯示屏，有助偵測可能發生的意外，並在出現異常情況時即時通知值班人員。

(右)康文署助理署長(康樂事務)1 馮妙玲女士(後排左三)與機電署代表到訪長沙灣體育館。

(Left) We continued to install the Intelligent Fall Detection System in multiple LCSD recreation and sports venues this year. Enhanced with voice recognition and display screens, the system helps detect potential accidents, and promptly alerts duty personnel in case of anomalies.

(Right) Ms Fung Miu-ling, Assistant Director (Leisure Services)1 of the LCSD (3rd left, back row), visited Cheung Sha Wan Sports Centre with EMSD representatives.

另一項方案是無線射頻辨識舞台燈光管理系統，運用物聯網技術，更有效管理、盤點和維修保養舞台燈光。該系統已在香港文化中心和油麻地戲院投入使用。

在公眾洗手間的「AI智節能抽風系統」曾獲多個獎項，目前正於食物環境衛生署(食環署)轄下五個公眾洗手間進行測試，並將擴展至更多場地。系統結合人工智能和物聯網傳感器，監測室內空氣質素、人流和地面積水情況，自動調節風扇速度，以改善室內空氣質素並提升能源效益。系統還可應用於其他配備機械通風的場所(例如停車場)，具有廣泛的應用潛力。

Another initiative is the Radio Frequency Identification Stage Lighting Management System, which leverages Internet of Things (IoT) technology for more effective management, stocktaking and maintenance of stage lighting. It has been implemented at the Hong Kong Cultural Centre and the Yau Ma Tei Theatre.

The award-winning AI-Control System for Ventilation System at Public Toilet, currently under trial in five public toilets managed by the Food and Environmental Hygiene Department (FEHD), is also set for wider rollout. By integrating AI with IoT sensors, the system monitors indoor air quality (IAQ), visitor flow and wet floor conditions, automatically adjusting fan speed to improve IAQ and optimise energy efficiency. Its design is adaptable to other mechanically ventilated spaces such as car parks, broadening its potential applications.

在第四屆亞洲創新發明展覽會—香港上，機電署以在公眾洗手間的「AI智節能抽風系統」和「監控現場設備的無線連接系統」奪得兩項金獎，並以其他項目取得兩項銀獎和一項銅獎。

At the 4th Asia Exhibition of Innovations and Inventions Hong Kong, the EMSD took two gold medals for its AI-Control System for Ventilation System at Public Toilet and Wireless Connection to Field Equipment for Control and Monitoring, and two silver medals and one bronze medal for other projects.

同時，我們將會協助食環署在所有政府火葬場全面推行火化流程智能管理系統。這個數碼化和無紙化的工作流程系統，能實時監察、有效編排和管理火化爐的使用情況。

Meanwhile, we are going to support the FEHD in implementing the Cremation Queue and Smart Management System across all its government crematoria. This digitalised, paperless workflow system enables real-time monitoring, efficient scheduling and optimal cremator utilisation.

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解決人力問題

人手短缺仍是許多客戶面臨的挑戰，特別是在巡邏與檢查工作方面，促使我們積極開發更多技術解決方案，以減輕客戶負擔。例如，我們為警務處開發智慧圍網保護系統，運用人工智能執行邊境安全任務，節省巡邏人手，讓警務人員可專注處理優先事件。此外，我們正與香港中文大學合作，在和合石墳場試用無人機配備人工智能偵測非法墓地工程。無人機能自動巡察墓地，識別現場工人並核實其身上的工作許可證。

Proactive Solutions for Manpower Issues

Manpower shortages, particularly in patrolling and inspection duties, remain a challenge to many clients, prompting us to develop more technical solutions to ease the burden. For example, the Smart Fence Protection System developed for the HKPF leverages AI to perform border security tasks, reducing patrolling manpower and allowing officers to focus on priority incidents. In collaboration with the Chinese University of Hong Kong, we are trialling AI-enabled drones to detect unlawful cemetery works at Wo Hop Shek Cemetery. These drones autonomously patrol the area, identify on-site workers and verify their work permits.

機電署為警務處引入智慧圍網保護系統，以鞏固邊境安全。我們把現有的閉路電視和震動警報系統全面升級，並增設車牌識別、數據分析和緊急求助的功能。系統以人工智能進行入侵偵測，有助提高警務處運作效率。

The EMSD has introduced the Smart Fence Protection System for the HKPF to strengthen border security. The existing CCTV and vibration alert systems have been comprehensively upgraded, with new features such as licence plate recognition, data analysis and emergency assistance. Using AI for intrusion detection, the system has enhanced the operational efficiency of the HKPF.

我們與香港中文大學合作，在食環署轄下的和合石墳場試行無人機實時巡查系統，取代人手巡邏。場地職員可透過該系統進行360度全景巡查，以加強墳場保安。

In collaboration with the Chinese University of Hong Kong, we piloted the real-time drone surveillance system at the Wo Hop Shek Cemetery under the FEHD, as a replacement for manual patrols. The system enables site staff to conduct 360-degree panoramic inspections, so as to enhance the security of the premises.

為提升地底工作安全，機電署為渠務署引入四足機械人執行巡邏工作。機械人能在崎嶇不平的地形上行走，並配備攝影機和傳感器，提供實時影像、傳感器數據和有害氣體水平資料。

To enhance underground work safety, the EMSD introduced quadruped robots to assist the Drainage Services Department in patrol duties. Equipped with cameras and sensors, the robots can traverse uneven and rugged terrains while providing real-time videos, sensor data and information on hazardous gas levels.

為減輕前線街道清潔人員的體力負擔，機電署為食環署引進自動清掃機械人。機械人可透過預設路線或人手遙距操作，目前正在馬料水海濱附近試行。

To ease the physical burden on frontline street cleaning staff, the EMSD has introduced a cleaning robot for the FEHD. The robot, which can be operated via programmed routes or manual remote control, is now on trial near the Ma Liu Shui Waterfront.

工人安全同樣備受關注。我們已在小西灣運動場部署配備高壓水槍的無人機，用於清洗高空閉路電視系統的攝錄鏡頭。該無人機亦適用於清潔表演場地的舞台設施，有助減低高空作業風險。此外，我們引入四足機械人，支援渠務署轄下密閉空間設施的工程巡查工作，既可節省人手，又能提升工人安全。

與此同時，我們為食環署在沙田吐露港公路沿線行人路試用自動清掃機械人，取代人手清潔街道，節省人力。我們亦研發了戶外光度測量機械人，用於評估和分析戶外公共場地的照明水平，包括行人天橋和地下行人通道，以便在必要時能夠迅速安排維修。

儘管這些技術方案尚在研發階段，我們期望未來能廣泛應用，把本港的生產力和工人安全水平提升至新高點。

Worker safety is another critical concern. We have deployed a drone equipped with a water jet for cleaning closed-circuit television (CCTV) camera lenses at height at the Siu Sai Wan Sports Ground. The drone is also ideal for cleaning stage installations in performance venues, reducing the risks associated with working at height. Likewise, quadruped robots have been introduced to support works inspection in confined spaces at Drainage Services Department facilities, enhancing both manpower efficiency and worker safety.

Meanwhile, street cleaning robots for the FEHD have been trialled along the footpath of Tolo Highway in Sha Tin to replace manual street cleaning and save manpower. We also developed an Outdoor illuminance Measuring Robot to assess and analyse illuminance level of the outdoor public lightings at pedestrian bridges and underground walkways, allowing prompt maintenance arrangements when necessary.

Although these solutions are still in development, we hope that their extensive deployment in the future will take our city to new levels of productivity and worker safety.

引領open BIM發展 突破界限

LEADING OPEN BIM DEVELOPMENT TO BREAK BOUNDARIES

建築信息模擬(BIM)技術近年迅速發展，為進一步降低BIM的使用門檻，總工程師陳賀賢先生(右三)帶領數碼科技部深入研究開放式建築信息模擬(open BIM)的應用，開發工具簡化open BIM模型轉換程序，成果獲得國際認可。

Building Information Modelling (BIM) technology has advanced rapidly in recent years. To further lower the barriers to BIM adoption, the Digitalisation and Technology Division (DTD), led by Mr Chan Hor-yin, Steve, a chief engineer (3rd right), has taken deep dives into the application of open BIM, developing tools to streamline the open BIM model conversion process. Their achievements have garnered international recognition.

本港越來越多工程項目採用BIM技術，但市面上BIM軟件五花八門，系統間的資料互通存在困難，中小企可能需要負擔多套軟件和相關培訓成本，成為BIM普及的主要障礙。電子工程師袁彪洪先生(右二)指出：「若業界能採用軟件中立的開放格式，以統一語言溝通，將有助降低BIM的使用門檻。」

An increasing number of works projects in Hong Kong are adopting BIM technology. However, the wide array of BIM software available in the market poses challenges for data sharing between systems. Small and medium-sized enterprises may need to cover multiple software licence and related training costs, which has become a major obstacle to wider BIM adoption. Mr Yuen Piu-hung, Francis, an electronics engineer (2nd right), noted, "If the industry can use a software-neutral open format and communicate in a unified language, the entry barrier for using BIM will be lowered."

open BIM採用開放數據格式，無論工程團隊使用哪款軟件，都可參與協作。然而，在open BIM模型轉換過程中，往往出現數據流失，導致模型未能符合驗收標準，而以人工檢查錯誤亦耗時甚多。數碼科技部研發了一系列工具，專門簡化機電系統的open BIM模型轉換程序。電子工程師程元琬女士(左一)表示，團隊總結機電署多年的交付經驗，把不同機電資產的屬性要求上載至公開的buildingSMART數據詞典(本港首個且規模最大的數據詞典)，供業界參考。團隊亦編製轉換指引和開發外掛程式，協助使用者轉換open BIM模型，減少數據流失；又設計了自動核查工具，較以人手檢查open BIM模型節省九成時間。

Utilising open data formats, open BIM enables collaboration across engineering teams regardless of the software they use. Yet, during the conversion of open BIM models, data loss often occurs, causing the models to fail acceptance standards. Manual error checking is also very time-consuming. The DTD developed a collection of tools specifically designed to streamline the open BIM model conversion process for E&M systems. Ms Ching Yuen-yuen, an electronics engineer (1st left), explained that the team consolidated EMSD's years of handover experience and uploaded the requirements for various E&M asset attributes to the public buildingSMART Data Dictionary - the first and largest of its kind in Hong Kong - for industry reference. Moreover, the team developed conversion guidelines and plugins to assist users in converting open BIM models while minimising data loss. They also designed automated validation tools that save 90% of the time compared to manual checking of open BIM models.

團隊先後於本地和國際賽事獲得大獎。團隊相信，open BIM有助推動BIM軟件多元化，包括促進國產軟件的應用。團隊現正研發open BIM模型網頁檢視器和支援open BIM的「建築信息模擬－資產管理」平台，未來亦可供其他工務部門使用。

The team won grand awards at local and international competitions. The team believes that open BIM can facilitate the diversification of BIM software, including promoting the application of Mainland-made software. The team is currently developing an open BIM model web viewer and an open BIM-enabled BIM-AM (Building Information Modelling – Asset Management) Portal, which can also be used by other works departments in the future.

機電署正在開發高效能open BIM線上檢視器，無需安裝軟件即可快速檢視BIM模型，提供流暢優質的用戶體驗。

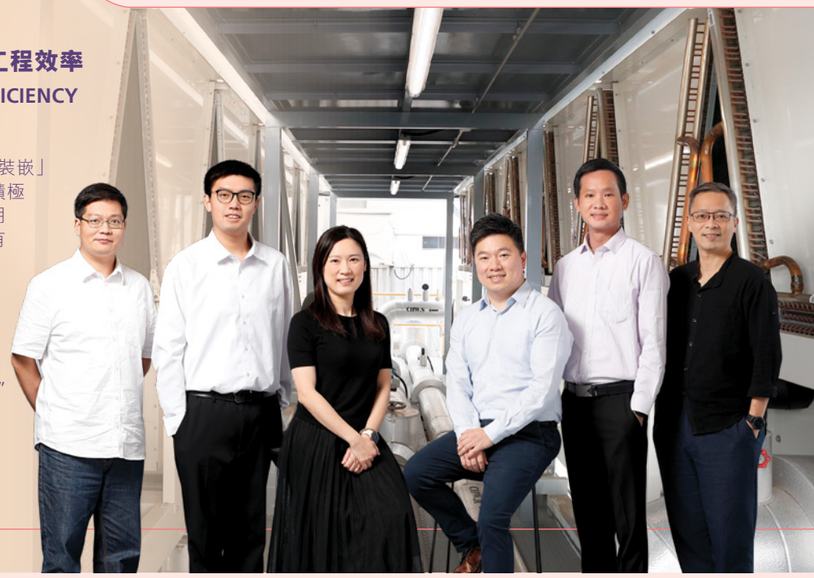
The EMSD is now developing a high-performance open BIM web viewer, providing a smooth and nice user experience with quick loading and rendering of BIM models. It is accessible directly without requiring any software installation.

採用機電裝備合成法 提升醫院工程效率

ENHANCING HOSPITAL PROJECT EFFICIENCY WITH MIMEP

「機電裝備合成法」採用「場外預製、場內裝嵌」模式，能顯著提升工程效率，是近年政府積極推動的重要技術之一。衞生工程部首次應用此技術，為兩家公立醫院更換空調系統，有效減低對醫院運作的影響。

The Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP) method, one of the key technologies actively promoted by the Government in recent years, adopts an "off-site prefabrication and on-site assembly" approach that significantly enhances project efficiency. The Health Sector Division applied this method for the first time to replace the air-conditioning systems in two public hospitals, effectively reducing disruptions to hospital operations.



首項工程是為瑪嘉烈醫院傳染病中心更換空氣處理機組及相關設備。工程師羅卓賢先生(右二)指，空氣處理機組是隔離病房負壓系統關鍵部分。為縮短病房停運時間並提高質量控制，團隊決定採用「機電裝備合成法」。他們先對空氣處理機組所在的機房進行三維點雲掃描，建立建築信息模擬模型，在工廠預製模組化機組和喉管，再運送到工地安裝。整項工程為期約一個月，較傳統模式節省約四成時間。

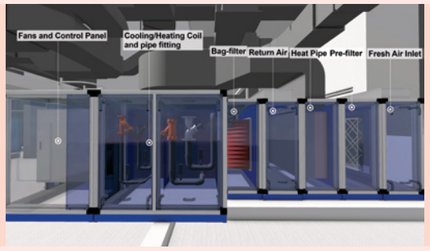
The first project involved replacing the air-handling unit (AHU) and associated equipment at the Infectious Disease Centre of Princess Margaret Hospital. Mr Law Cheuk-yin, an engineer (2nd right), explained that the AHU is an essential component of the negative pressure system in isolation wards. To reduce ward downtime and improve quality control, the team adopted the MiMEP method. They first conducted a three-dimensional (3D) point cloud scan of the plant room housing the AHU to create a Building Information Modelling (BIM) model. The modularised AHU and pipework were prefabricated in the factory and then delivered to the site for installation. The entire project took about one month, saving approximately 40% of the time compared to conventional methods.

施工環境的要求越高，「機電裝備合成法」的優勢越為明顯。更換東區尤德夫人那打素醫院主座手術室製冷機組先導項目，正好印證了這一點。工程師雲永傑先生(左二)指，項目特別之處在於先安裝新機、再拆除舊機，以減少對醫院運作的影響。原有機組位於主座C座天台，團隊視察後發現鄰近的A座天台有合適空間安裝新機組。不過，要接駁新的冷水喉管系統至手術室樓層，需跨越直升機停機坪和垂直天井，喉管路徑長逾100米，且停機坪每日的施工時數有規限，工程難度可見一斑。雲先生指，所有切割和焊接工序均在工廠完成，現場只需進行螺絲固定，不僅縮短工地施工時間，更減少高空作業，提升工作安全。

The advantages of the MiMEP technology become especially apparent in construction environments with stringent requirements, as demonstrated by the pilot project involving the replacement of chillers for the operating theatres in the Main Block of Pamela Youde Nethersole Eastern Hospital. Mr Wan Wing-kit, Victor, an engineer (2nd left), highlighted the project's unique approach of installing new units before removing the old ones to minimise the impact on hospital operations. The original chillers were located on the rooftop of Block C of the Main Block. After inspection, the team identified suitable space for the new chillers on the rooftop of the adjacent Block A. However, connecting the new chilled water pipework system to the operating theatre floors required traversing the helipad and the vertical light well, with a pipe run exceeding 100 metres. Limited daily construction hours on the helipad also added complexity to the task. Mr Wan said all cutting and welding processes were completed in the factory, requiring only screw fastening on site. This approach not only shortened on-site construction time but also reduced high-altitude work, thereby enhancing work safety.

我們採用「機電裝備合成法」為瑪嘉烈醫院更換空氣處理機組，透過把機組模組化，大幅節省現場安裝時間。

We adopted the MiMEP technology to replace the AHU at the Princess Margaret Hospital. By modularising the units, we significantly reduced the on-site installation time.



營運服務
TRADING SERVICES

抓緊機遇 積極求變

我們秉持以客為本的企業文化，致力為客戶和公眾帶來改變。過去一年，不論是翻新老化設施、協助新場地交接，或是為大型活動提升機電設施，我們都全力以赴，優先滿足客戶的需要。我們在過程中成功解決許多存在已久的問題，提升客戶設施的操作和維修保養效率。

以香港體育館為例，我們協助康樂及文化事務署(康文署)安裝全新的大型全彩色發光二極管顯示屏系統，場館四邊各設一面顯示屏，取代原有設備。這個項目有效解決客戶面對的多項長期問題，包括維修保養困難，以及舊系統過重所帶來的挑戰。新顯示屏不僅重量較輕，易於維修保養，更是康文署所有場地中像素密度最高的顯示屏，能為觀眾帶來更卓越的視覺體驗。

SEIZING OPPORTUNITIES TO MAKE A DIFFERENCE

Striving to make a difference for clients and the public is the foundation of our customer-focused culture. During the year, we seized every opportunity to satisfy clients' priority needs, whether on renovating ageing facilities, facilitating the handover of new venues, or enhancing electrical and mechanical (E&M) facilities for major events. In the process, we also resolved many long-standing barriers to the optimal operation and maintenance (O&M) of client facilities.

A case in point was the Hong Kong Coliseum, where we helped the Leisure and Cultural Services Department (LCSD) install a new large, four-sided full-colour light emitting diode (LED) display system, with one screen on each side of the arena, replacing the old display. The project addressed several persistent issues for the client, including maintenance difficulties and challenges arising from the heavy weight of the previous system. Lighter and easier to maintain, the new display features the highest pixel density among all LCSD venue displays – much to the delight of spectators.

儘管香港體育館檔期緊湊，機電署仍成功完成全新發光二極管顯示屏系統的安裝工程，為即將舉行的全運會賽事做好準備。新系統不僅解決了天花板承重限制的安全問題，更提供高解析度影像，全面提升觀眾的現場觀賽體驗。

Despite a tight venue schedule, the EMSD successfully completed the installation of a new LED display system at the Hong Kong Coliseum, in preparation for the upcoming National Games events. The new system not only addresses safety concerns related to ceiling load limits, but also delivers high-resolution images that significantly enhance the on-site spectators' viewing experience.

嶄新服務協議 加強伙伴關係

在2024/25年度，營運基金與多個客戶簽訂或續簽服務水平協議，包括與香港郵政簽訂四年服務水平協議、與醫務衞生局(醫衞局)就香港中醫醫院(中醫醫院)簽訂五年服務水平協議，以及與香港警務處(警務處)簽訂六年服務水平協議。我們亦獲醫院管理局(醫管局)發出意向書，計劃簽訂為期十年的服務水平協議，涵蓋機電、空調和屋宇裝備設施的操作和維修保養服務。

New SLAs and Stronger Partnerships

2024/25 saw the EMSTF enter into several new and renewed Service Level Agreements (SLAs), including a four-year SLA with Hongkong Post, a five-year SLA with the Health Bureau (HHB) for the Chinese Medicine Hospital of Hong Kong (CMHHK), and a six-year SLA with the Hong Kong Police Force (HKPF). We also secured a Letter of Intent from the Hospital Authority (HA) for a ten-year SLA on O&M services for electrical, mechanical, air-conditioning and building services (EMABS) facilities.

2025年1月3日，營運基金與醫衞局簽訂為期五年的服務水平協議，為香港首間中醫醫院提供專業的機電服務和創科方案。

On 3 January 2025, the EMSTF signed a five-year SLA with the HHB to deliver professional E&M services and I&T solutions for Hong Kong's first Chinese medicine hospital.

根據與醫衞局簽訂的服務水平協議，我們會在中醫醫院於2025年12月分階段啟用時提供機電服務，並為該醫院和鄰近的政府中藥檢測中心提供創新科技(創科)項目服務。

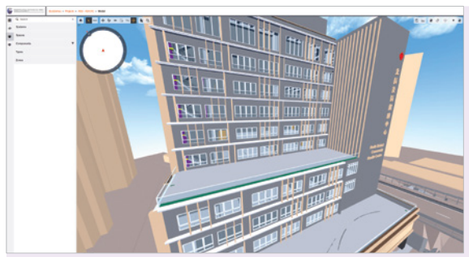
至於現行與醫管局的機電、空調和屋宇裝備設施維修保養合約，我們會進一步為政府第一個十年醫院發展計劃下的新建醫院和重建醫院，提供機電、空調和屋宇裝備系統的操作和維修保養服務。此外，我們會擔任所有新建醫院(包括部分附表2醫院)的技術顧問，由醫院初期設計階段開始進行獨立技術審核，預先規劃醫院機電設施的整個生命周期管理，涵蓋採購、維修保養和設施更換，務求從系統層面更有效地預防事故發生。

年內，多項醫管局新設施已交由我們負責操作和維修保養，包括北區社區健康中心和醫院管理局支援服務中心。啟德新急症醫院和瑪麗醫院新大樓則預計於2025年稍後投入服務。

Under the SLA with the HHB, we will provide E&M services for the CMHHK when it opens in phases starting December 2025, and deliver innovation and technology (I&T) project services to both the hospital and the nearby Government Chinese Medicines Testing Institute.

Regarding the existing maintenance contract for the EMABS facilities with the HA, we will further provide O&M services for the EMABS systems at both new and redeveloped hospitals under the Government's first Ten-year Hospital Development Plan. Additionally, we are expected to assume the role of technical advisor and conduct independent technical audits at all new hospitals, including selected Schedule 2 hospitals, starting as early as the hospital design stage. The aim is to envisage and plan for the life-cycle management of E&M facilities, from procurement to maintenance and replacement, which will better prevent incidents on a systemic level.

During the year, multiple new HA facilities were handed over to us for O&M services, including the North District Community Health Centre and the Hospital Authority Supporting Services Centre. The New Acute Hospital in Kai Tak and the Queen Mary Hospital New Block are scheduled to commence services later in 2025.



機電署在北區社區健康中心大樓採用建築信息模擬技術，把各種機電設備的數據進行數碼化，在單一平台上集中管理，從而提高維修及保養效率，並支援日常運作。

The EMSD has adopted Building Information Modelling technology at the North District Community Health Centre Building. This involves digitising and centrally managing the data of various E&M equipment on a single platform, enhancing repair and maintenance efficiency while supporting daily operations.

為促進醫管局與營運基金相互了解，鞏固工作伙伴關係，我們於2025年3月展開高級工程師人員交流計劃，雙方各派一名人員互換工作崗位，為期年半至兩年。這是我們與醫管局的首個交流計劃，有助加強雙方合作。

To enhance mutual understanding and forge stronger working-level partnerships, we launched in March 2025 an exchange programme for senior-engineer-level staff between the HA and EMSTF, one from each side, for reciprocal on-the-job attachment lasting about one and a half to two years. This is our first exchange initiative with the HA to strengthen our collaboration.

營運服務
TRADING SERVICES

了解客戶所需 促進融洽互信

我們時刻銘記要從客戶角度了解其需求，因此在年內舉辦多場研討會，與客戶深入交流。例如我們於7月聯同機場管理局(機管局)，在香港國際機場行政大樓舉辦2024年機管局創新與科技交流會，逾百名機管局人員和持份者參與討論，分享項目經驗。我們聆聽他們日常工作中的「痛點」，並提供精準到位的解決方案。同樣地，我們在香港科學園舉辦四場為期半天的團隊構建工作坊，其中一場與食物環境衛生署(食環署)合作，另外三場則與康文署合作，藉此加深彼此了解，建立融洽互信的工作伙伴關係。

Understanding Clients' Needs and Building Rapport

Always mindful of understanding clients' needs from their perspective, we held several seminars to have in-depth exchanges with them during the year. For instance, we partnered with the Airport Authority Hong Kong (AAHK) to hold the AAHK Innovation and Technology Seminar 2024 at the Hong Kong International Airport (HKIA) Tower in July, engaging over 100 AAHK staff and stakeholders in discussions and sharing of project experience. We listened to the "sore points" in their daily work and offered precise and targeted solutions. By the same token, we organised four half-day team building workshops at the Hong Kong Science Park, one with the Food and Environmental Hygiene Department (FEHD) and the other three with the LCSD, to enhance mutual understanding and build harmonious working partnerships.

為加強與客戶部門的溝通，我們在香港科學園為食環署和康文署舉辦四個半天的團隊建立工作坊。

To enhance communication with client departments, we organised four half-day team building workshops at the Hong Kong Science Park for the FEHD and the LCSD.

粵港澳三地將於2025年11月聯合承辦第十五屆全國運動會(全運會)，多項賽事將於康文署場地舉行。我們自2024年5月展開籌備工作，並與全國運動會統籌辦公室、康文署、數字政策辦公室、香港電台和警務處等多方協調。我們的職責是按需要和賽事要求，更換及提升康文署場地的設備和技術系統；評估各政府場地電力供應的可靠度，並改善其照明設施；以及參與康文署場地及其他場館(例如將舉辦全運會賽事的啟德體育園)的綵排和測試賽。

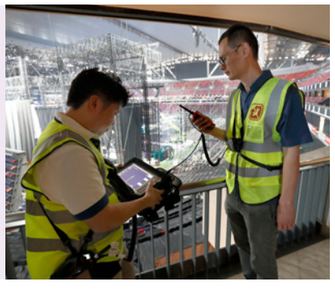
The forthcoming 15th National Games, to be co-hosted by Guangdong, Hong Kong and Macao in November 2025, will feature multiple events at LCSD venues. We began preparations in May 2024, liaising with the National Games Coordination Office and various parties, including the LCSD, the Digital Policy Office, Radio Television Hong Kong and the HKPF. Our responsibilities are to replace and upgrade equipment and technical systems at LCSD venues as necessary to meet event requirements; assess the reliability of power supply at various government venues and enhance their lighting facilities; and participate in rehearsals and event simulations at LCSD venues and other locations, such as the Kai Tak Sports Park where National Games events will be held.

我們成功為消防處在啟德主場館安裝全新的數碼集群無線電基站，大大提升消防處在場館內的無線電覆蓋範圍和救援應急能力，為全運會等世界級盛事提供更強支援。

We successfully installed a new Terrestrial Trunked Radio (TETRA) base station at Kai Tak Stadium for the Fire Services Department (FSD), significantly enhanced the FSD's radio coverage and its rescue and emergency capabilities at the venue to provide stronger support for world-class events like the National Games.

全新的體育及表演場地啟德主場館，設有新的數碼集群無線電基站，由機電署負責項目管理。基站全面數碼化，具優化頻譜使用率、語音加密、緊急呼叫通話等功能，覆蓋範圍廣泛，符合消防署的通訊要求。

The Kai Tak Stadium, a brand-new sports and performance venue, is equipped with a new TETRA base station, with project management undertaken by the EMSD. The fully digitalised TETRA base station features optimised spectrum utilisation, voice encryption, emergency call, with wide coverage meeting the FSD's communication requirements.



全運會亦為營運基金與大灣區同業機構舉辦首次交流活動提供良機，重點探討在體育及表演場地應用先進科技。本署助理署長/2帶領六名專業職系人員和17名督察人員組成代表團，於2024年11月前往深圳和廣州進行為期三天考察訪問。他們參觀多個表演和體育場地，包括數個指定用作舉行全運會賽事的運動場，並與內地官員座談，深入了解各場地的最新科技應用。是次交流不但拓展了參與人員的知識和視野，對我們籌備全運會及後續工作亦大有裨益。

The National Games also provided an opportunity for the EMSTF to organise the first exchange activity with its counterparts in the Greater Bay Area, focusing on the application of advanced technologies in sports and performance venues. Led by our Assistant Director/2, a delegation of six professional and 17 inspectorate staff went on a three-day study mission to Shenzhen and Guangzhou in November 2024. They visited various performance and sports venues, including several sports grounds designated for staging National Games events, and held discussions with Mainland officials to gain a deeper understanding of the latest technological applications in the venues. The mission broadened participants' knowledge and horizons, greatly benefitting our preparation for the National Games and beyond.

機電署代表團在2024年11月到訪大灣區，實地考察全國運動會的比賽場地及其他表演場地，並與內地官員就最新科技應用進行交流。

During the visit to the Greater Bay Area in November 2024, the EMSD delegation conducted on-site visits to venues for the National Games and other performance venues, and exchanged views on the latest technological applications with Mainland officials.

為現有活動和設施進行創新

憑藉在農曆年宵市場處理臨時供電和設置遙距監察系統的豐富經驗，我們內部研發了升級網頁版農曆年宵市場監察系統，協助食環署確保2025年1月底在全港多區舉行的15個農曆年宵市場運作暢順。

該系統利用物聯網技術和傳感器，監察年宵市場的前期場地籌備工作，包括攤位檔主的活動，確保臨時供電系統運作正常，並按既定用途使用。監控快餐攤位的用電量尤為重要，能確保用電量維持在許可範圍內，避免電力超負荷。當監察系統偵測到攤位用電量過大，或臨時供電系統出現異常，會即時提醒負責的技術人員。有了這個預警機制，就能及早知會食環署人員和攤位檔主，以便即時跟進。這升級版系統不但確保電力供應和攤檔其他電力裝置運作正常，還能進行智能人流監控和分析，從而提升食環署對這項年度節慶活動的管理效能。

Innovating for Existing Events and Facilities

With rich experience in handling temporary power supply and setting up remote monitoring systems at Lunar New Year (LNY) fairs, we developed in-house an upgraded web-based LNY Fairs Monitoring System, to help the FEHD ensure smooth operation of the 15 LNY fairs held in various districts across Hong Kong in late January 2025.

The system uses Internet of Things (IoT) technology and sensors to monitor pre-fair preparatory site work, including stall operator activities, to ensure that the temporary power supply system is functioning properly and used for its intended purposes. Monitoring power consumption by fast food stalls is particularly important to ensure it stays within permitted limits, helping to avoid electrical overloads. When the monitoring system detects excessive power consumption at a stall or an anomaly in the temporary power supply system, it will promptly alert the responsible technical personnel. With this pre-alarm mechanism, both the FEHD and stall operators will be informed as soon as possible for immediate follow-up. The enhanced system not only guarantees the proper operation of the power supply and other electrical installations at the stalls, but also provides intelligent footfall monitoring and analysis to optimise the FEHD's management of this annual festive event.

營運服務
TRADING SERVICES

操作和維修保養業務持續增長

年內，多個新場地交由營運基金提供操作和維修保養服務，進一步擴大了我們的核心業務。

香港國際機場三跑道系統於2024年11月正式啟用，標誌着香港的航空發展邁向新里程，並為營運基金在機場操作和維修保養服務創新方面帶來新機遇。

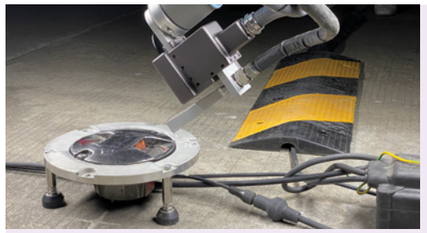
例子之一是獲獎的機場跑道助航燈自動維護機械人。這是我們與廣東省科學院和機管局合作研發的項目，目前正在廣州廠房進行試驗。該機械人配備各種通訊和協作的子系統，能循着以往維修保養記錄的路線，為跑道燈進行無人檢查並以乾冰清潔。機械人還能自動導航到跑道上的指定位置，清潔跑道燈和檢查螺栓鬆緊度，大大提高檢查和清潔數以千計跑道燈的效率，並減少有關工作的人力需求。該系統已獲批予香港短期專利。

An Expanding O&M Portfolio

During the year, various new venues were handed over to the EMSTF for O&M services, further enriching our core business.

The Three-runway System (3RS) at the HKIA, officially launched in November 2024, marks a new milestone in the city's aviation development and opens up new opportunities for the EMSTF to innovate in airport O&M services.

An example is the award-winning Autonomous Airfield Ground Lighting (AGL) Cleaning and Inspection Robot, a joint project with the Guangdong Academy of Sciences and the AAHK, with ongoing trials at a workshop in Guangzhou. With subsystems that communicate and collaborate, the robot can perform unmanned inspection and cleaning of airfield ground lights using dry ice, following routes based on historical maintenance records. It can also autonomously navigate to designated runway positions to clean airfield ground lights and inspect bolt tightness, making the inspection and cleaning of thousands of airfield ground lights much more efficient and less labour-intensive. Hong Kong short-term patents have been granted for the system.



（左）機場跑道助航燈自動維護機械人可自動偵測和清潔跑道燈，騰出人手處理其他工作。該創新方案大幅提升維修效率，同時確保跑道安全。

（右）去年11月，立法會議員到訪機電署總部，透過現場示範了解機場跑道助航燈自動維護機械人的應用情況。

(Left) The Autonomous AGL Cleaning and Inspection Robot can automatically detect and clean the airfield ground lights, freeing up manpower for other tasks. This innovative solution significantly enhances maintenance efficiency while ensuring runway safety.

(Right) In November last year, Legislative Council members visited the EMSD Headquarters and learned about the application of the Autonomous AGL Cleaning and Inspection Robot through an on-site demonstration.

機電署在民航處新航空交通指揮塔安裝六套無間斷電源系統，確保電力供應穩定可靠。系統使用鋰電池，以提高效能和延長使用期限，並結合流動網絡和無線物聯網技術，以作持續監察。

The six uninterruptible power supply systems installed by the EMSD at the CAD's new Air Traffic Control Tower ensure a stable and reliable power supply. These systems, using lithium batteries for enhanced performance and extended lifespan, employ mobile networks and wireless IoT technology for continuous monitoring.

為確保香港國際機場的新航空交通管制指揮塔和三跑道系統能順利啟用，我們持續為民航處和香港天文台提供專業支援以及操作和維修保養服務，並與機管局合作為各個關鍵系統進行驗收測試和檢查。我們亦協助消防處擴充其關鍵飛機救援及滅火車隊，以配合三跑道系統全面運作的救援及滅火需要。

To ensure smooth commissioning of the new Air Traffic Control Tower and the 3RS at the HKIA, we have been providing professional support and O&M services to the Civil Aviation Department (CAD) and the Hong Kong Observatory, while co-operating with the AAHK in various acceptance tests and inspections of different critical systems. We also assisted the FSD in expanding its critical fleet of Aircraft Rescue and Firefighting Vehicles to meet the rescue and firefighting requirements for the full-fledged 3RS operation.

隨着三跑道系統於2024年11月啟用，機電署協助消防署採購和驗收新的飛機救援及滅火車隊，確保車輛符合所有安全標準和規格，配合三跑道系統的運作需要。

With the launch of the 3RS in November 2024, the EMSD assisted the FSD in the procurement and acceptance tests of the new fleet of Aircraft Rescue and Firefighting Vehicles, ensuring full compliance with the safety standards and specifications to support the operational needs of the 3RS.

年內交由我們操作和維修保養的其他場地包括：自2024年10月起分階段啟用的東九文化中心，是推動本港藝術與科技融合的旗艦表演場地；於2024年11月啟用的動物管理及動物福利綜合大樓；以及已完成擴建且同樣於2024年11月啟用的立法會綜合大樓，工程涉及在原有十層高大樓加建四層，以容納全體90位立法會議員。

Other venues handed over for O&M during the year included the East Kowloon Cultural Centre, positioned as a flagship performance venue for the convergence of arts and technology in Hong Kong, opened in phases since October 2024; the Animal Management and Animal Welfare Building Complex opened in November 2024; and the expanded Legislative Council (LegCo) Complex, also opened in November 2024, with four additional floors on top of the original ten-floor building to accommodate all 90 LegCo members.

東九文化中心作為表演場地的先驅，融合創新藝術與先進科技。機電署為場地的機電設施和舞台設備（例如舞台燈光系統）提供專業維修保養服務，為觀眾締造嶄新的劇院體驗。

As a pioneer performance venue that integrates innovative arts and advanced technology, the East Kowloon Cultural Centre is supported by the EMSD's professional maintenance of E&M facilities and stage equipment, such as stage lighting systems, to deliver an exceptional theatre experience to audiences.

此外，北區警察學院綜合訓練中心（缸瓦甫）的第一期工程將於2025年7月竣工，以支援警務處提供現代化的高效訓練。位於粉嶺芬園的警察駕駛及交通訓練中心和槍械及戰術訓練設施，會遷至新訓練中心。第二期工程預計於2026年竣工，屆時馬草壟靶場以及羅湖靶場和場內直升機停機坪，亦會遷往新訓練中心。

興建中的項目還有將軍澳聯用綜合大樓，這座「一地多用」的原型建築設有公眾街市、醫療衞生服務、社會福利設施和政府辦公室，專為滿足將軍澳社區的需要而設，預計於2025年第三季完工。

In addition, phase one of the Police College Integrated Training Centre (Kong Nga Po) in the North District will be completed in July 2025 to support modern and effective training for the HKPF. The Police Driving and Traffic Training Centre, and the Weapon and Tactics Training Facilities at Fan Garden, Fanling will be relocated to the new training centre. Phase two is expected to be completed in 2026. The Ma Tso Lung firing range, together with the Lo Wu firing range and the helipad therein will also be relocated to the new training centre by then.

Also under construction is the Joint-user Complex in Tseung Kwan O, a "single site, multiple use" prototype building which accommodates a public market, medical and health services, social welfare facilities, and government offices. Designed to cater to the needs of the Tseung Kwan O community, the Complex is scheduled for completion in the third quarter of 2025.

營運服務
TRADING SERVICES

翻新客戶的老舊場地對優化設施和改善外觀至關重要。以西灣河文娛中心為例，中心自2022年4月起暫時關閉，以進行翻新與改善工程，預計將於2025年6月以嶄新面貌重新開放，並配備先進設施，包括全新的劇場吊杆系統和其他升級舞台設備。皇后街熟食市場亦已進行改善工程，美化用餐區和攤檔外觀，同時重新配置廚房排氣系統，加強控制攤檔的煮食油煙和氣味排放。工程於2024年2月展開，而該場地已於同年9月全面恢復營運，為食客營造舒適寫意的用餐環境。

Renovation of clients' ageing venues is important for modernising the facilities and enhancing their aesthetic appeal. The Sai Wan Ho Civic Centre, for example, has been temporarily closed since April 2022 for renovation and improvement. It is expected to reopen in June 2025 with a brand-new look and state-of-the-art facilities, including a new theatre fly system and other upgraded stage equipment. The Queen Street Cooked Food Market also underwent enhancement works to elevate the aesthetic appeal of its dining area and stalls, alongside reconfiguring the kitchen exhaust system to improve the control of cooking fume and odour emissions at the stalls. The works began in February 2024, and the venue resumed full operation in September 2024, fostering a warm and comfortable dining environment for patrons.

(左)西灣河文娛中心正進行翻新及改善工程至2025年6月。是次工程為劇院引入自動化吊杆系統，並首次在港島區中小型表演場地採用發光二極管舞台燈及追光燈，可大大減少高達80%的耗電量。

(右)機電署為食環署在皇后街熟食市場推行優化工程，包括打造全新廚房排氣系統，以及全面更換升降機和自動扶梯，致力提升安全與舒適度，從而改善市場環境和使用體驗。

(Left) Sai Wan Ho Civic Centre is undergoing renovation and enhancement works until June 2025. The upgrades will feature an automated fly system in the theatre and introduce Hong Kong Island's first LED stage lighting and spotlights for a small and medium-sized performance venue. These enhancements can reduce energy consumption by up to 80%.

(Right) The EMSD carried out an enhancement project for the FEHD at the Queen Street Cooked Food Market, which included the installation of a brand-new kitchen exhaust system and the complete replacement of lifts and escalators. The project was dedicated to improve safety and comfort, thereby enhancing the market environment and user experience.

超過一百個燈控路口已安裝輔助裝置，加強行人過路處安全。該輔助裝置在「紅色人像」燈號亮起時照亮行人等候區，提醒光照範圍內的行人在過馬路前暫停使用手機或其他分心行為，留意交通燈號。此外，我們在2025年第一季開始更換現有俗稱「黃波燈」的斑馬線信號燈(另稱「卑利沙燈」)。優化的黃波燈配備可發出黃色閃光的光環，支柱部分亦會發出白色閃光，提醒駕駛者留意斑馬線。

Over 100 signalised junctions have been implemented with auxiliary devices to enhance pedestrians' safety at road crossings by illuminating the pedestrian waiting area during "red man" signal. The illumination serves as a visual cue prompting pedestrians within the lit area to stop looking at their mobile phones or other distractions and heed the traffic signals before crossing the road. In the first quarter of 2025, we began replacing existing zebra crossing lights, also known as "Belisha Beacons", with enhanced ones consisting of a halo of flashing yellow light and a post with flashing white bands to effectively draw motorists' attention to the presence of zebra crossings.

機電署自2025年第一季起開始為運輸署更換俗稱「黃波燈」(又稱「卑利沙燈」)的舊式斑馬綫燈，提升道路安全意識。新燈標會發出黃色閃光光環，而燈柱會發出白色閃光，以提醒駕駛者禮讓斑馬綫上的行人。

Since the first quarter of 2025, the EMSD has begun replacing aged zebra crossing lights, also known as "Belisha Beacons", with enhanced ones for the Transport Department to enhance road safety awareness. The new beacons emit flashing yellow light halo, while the posts emit flashing white bands, reminding drivers to give way to pedestrians at zebra crossings.

現有公共屋邨完成鋪設物聯網基礎設施後，將具備廣泛應用創科的潛力。我們至今已在房屋署數個屋邨設置超過一百個「政府物聯通」基站，為在大門、升降機、公眾洗手間和停車場應用創科奠定穩固基礎。

Existing public housing estates present strong potential for I&T applications once equipped with IoT infrastructure. To date, we have set up more than 100 Government-Wide IoT Network (GWIN) gateways in multiple housing estates of the Housing Department, providing a backbone for I&T applications in doors, lifts, public toilets and car parks.

機電署在公共屋邨安裝「政府物聯通」基站和傳感器，以監察各項設施和機電設備。系統把水浸、回收箱容量、違例泊車等多項參數數碼化，實現實時監察，便利屋邨管理。

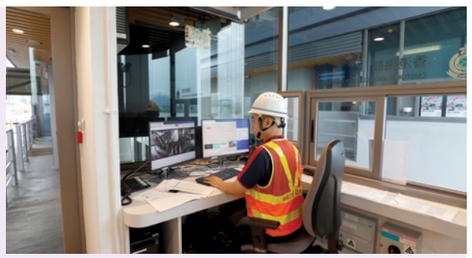
The EMSD has installed GWIN gateways and sensors in public housing estates to monitor various facilities and E&M equipment. By digitising parameters such as water immersion, recycling bin capacity and illegal parking, the system enables real-time monitoring and facilitates estate management.

我們持續在連接香港與內地的邊境管制站推出創科項目。以深圳灣管制站為例，我們為香港海關(海關)試行一套人工智能閉路電視系統，實時監察從貨車掉落的物品。該系統能監察前往檢查大樓的貨車，如發現車輛在途中掉落疑似違禁物品，人工智能閉路電視監控系統會立即觸發警報，通知海關人員進行調查，有效提升貨車檢查的效率。系統目前正處於測試和調整階段，預計於2026年投入服務。

I&T initiatives have continued at the boundary control points connecting Hong Kong and the Mainland. At the Shenzhen Bay Control Point, for instance, we conducted a trial of an AI-enhanced closed-circuit television (CCTV) system for the Customs and Excise Department (C&ED) for real-time surveillance of fallen objects from vehicles. The AI CCTV system monitors the dedicated goods vehicle which is instructed to the examination area for further inspection. If there is any suspicious contraband object falling from the vehicle while approaching the examination building, the AI CCTV system will promptly trigger an alarm to alert C&ED officers to look into the matter, thereby enabling more efficient inspection of goods vehicle. The system is being tested and refined and will be operational in 2026.

與此同時，我們全力支援駐守港珠澳大橋香港口岸及其他過境設施的客戶部門，為將於2025年年底前分階段實行的「粵車南下」計劃做好準備。

At the same time, we have been providing support to clients stationed at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port and other boundary-crossing facilities to prepare for the Southbound Travel for Guangdong Vehicles, to be launched in phases by the end of 2025.



為配合「粵車南下」計劃，機電署為港珠澳大橋香港口岸的車輛自動清關支援系統進行升級，系統可快速辨識粵港澳三地車牌，優化通關流程。

To support the Southbound Travel for Guangdong Vehicles, the EMSD has upgraded the Automatic Vehicle Clearance Support System at the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port. The system enables rapid identification of licence plates from Guangdong, Hong Kong and Macao, optimising the clearance processes.

迅速處理跑道事故 保障航空安全

SWIFT RESPONSE TO RUNWAY INCIDENT TO ENSURE AVIATION SAFETY

2024年6月17日，一架由香港國際機場起飛的貨機緊急折返，降落時輪胎爆裂，導致多盞跑道燈損毀。邊境及運輸工程部高級工程師梁栢堅先生(右四)率領團隊迅速修復受損設施，協助機場恢復正常運作，保障航班升降安全。

On 17 June 2024, a cargo aircraft departing from the Hong Kong International Airport (HKIA) made an emergency return and landed with burst tyres, causing damage to multiple airfield ground lights. Mr Leung Pak-kin, a senior engineer of the Boundary Crossing Facilities and Transport Services Division (4th right), led his team to swiftly repair the damaged facilities, helping restore normal airport operations and ensuring safe flight movements.

當日清晨，跑道燈分組接獲通知，一架貨機在機場南跑道起飛時遺下輪胎碎片，飛機需改用北跑道升降。分組人員隨即前往南跑道進行檢查，並更換受損跑道燈，確保跑道安全。

然而，該貨機起飛後不足兩小時即緊急折返。上午7時12分，貨機在北跑道降落時輪胎爆裂，令多盞跑道燈受損。由於當時機場三跑道系統尚未啟用，僅餘南跑道可供飛機升降，航班運作嚴重受阻。梁先生立即統籌維修工作，他表示：「跑道燈對飛機安全升降十分重要，如有損毀，客運和貨運都會大受影響。因此，我們必須迅速完成修復，讓機場恢復正常運作。」

高級電氣督察劉德輝先生(左四)立即動員跑道燈分組，安排夜更人員留守，與日更人員合力處理事件。他指出：「最大挑戰在於與時間競賽。我們迅速採取行動，從倉庫調配所需燈具，展開更換工作。」

當日約40名人員參與搶修，高峯時期分成七組同步作業，務求在最短時間內完成任務。助理電氣督察岑惠峯先生(左二)在機場服務逾20年，他表示：「這是我職業生涯中處理過的最大型事故，真的很難忘。全靠團隊的合作和默契，我們成功完成任務，感到非常滿足。」

事故過後，團隊與客戶商討增加燈具庫存量，確保未來遇到突發事故時能有足夠物料應對，加強處理能力。

機場管理局(機管局)其後向團隊發出嘉許信，表揚他們的出色表現。梁先生總結道：「我們的使命是透過專業服務維護航空安全，成為客戶值得信賴的伙伴。我們會繼續與機管局攜手合作，協助捍衛和鞏固香港作為國際航空樞紐的地位。」

Early that morning, the Airfield Ground Lighting (AGL) Sub-section was alerted that a cargo aircraft had left tyre fragments on the South Runway during take-off, prompting the flights to switch to the North Runway for take-offs and landings. AGL staff immediately proceeded to inspect the South Runway and replaced the damaged airfield ground lights to ensure operational safety.

However, less than two hours after take-off, the cargo aircraft made an emergency return. At 7:12 am, it landed on the North Runway with burst tyres, causing damage to multiple airfield lights. Since the HKIA's Three-runway System had not yet been commissioned at that time, only the South Runway was available for aircraft movements, resulting in severe disruption to flight operations. Mr Leung immediately co-ordinated the repair efforts. He remarked, "Airfield lights are crucial to safe take-offs and landings of aircrafts. If they are damaged, both passenger and cargo transport will be greatly affected. Therefore, we had to complete the repairs quickly to restore normal airport operations."

Mr Lao Tak-fai, a senior electrical inspector (4th left), mobilised the AGL team at once, arranging for the night shift staff to remain on duty and work alongside the day shift staff to handle the incident. He noted, "The biggest challenge was the race against time. We acted quickly to retrieve the required lighting equipment from the warehouse and commenced the replacement works."

Approximately 40 staff members participated in the emergency repair that day. At peak times, they were split into seven teams working simultaneously to complete the task in the shortest possible time. Mr Shum Wai-fung, an assistant electrical inspector (2nd left), who has served at the HKIA for over 20 years, shared, "This is the largest incident I have ever handled in my career. It was truly unforgettable. Thanks to our teamwork and tacit understanding, we successfully completed the task and felt very satisfied."

Following the incident, the team had discussions with the client about increasing the inventory of lighting equipment to ensure sufficient materials were available to handle future emergencies and strengthen response capabilities.

The Airport Authority Hong Kong (AAHK) later issued a commendation letter to the team, recognising their exceptional performance. "Our mission is to uphold aviation safety through professional services and become a trusted partner to our client. We will continue to work closely with the AAHK to help safeguard and strengthen Hong Kong's role as an international aviation hub," Mr Leung concluded.

上下一心 協助客戶恢復公共服務

UNITED IN PURPOSE SUPPORTING CLIENTS IN RESTORING PUBLIC SERVICES

綜合工程部香港區維修分部1負責中環、灣仔和金鐘多個政府場地的機電設備維修保養，在應對突發事件方面經驗豐富。去年夏季，灣仔入境事務大樓發生電力故障，高級工程師丁邦佑女士(右三)率領團隊迅速應對，成功協助客戶恢復公共服務。

The Hong Kong Maintenance Sub-division 1 of the General Engineering Services Division, responsible for maintaining electrical and mechanical equipment at various government venues in Central, Wan Chai and Admiralty, has extensive experience in responding to emergencies. Last summer, when a power failure occurred at the Immigration Tower in Wan Chai, Ms Ting Pong-yau, Fanny, a senior engineer (3rd right), led her team in a swift response and successfully helped clients to restore public services.

2024年6月28日凌晨約3時，維修團隊接獲緊急通知，指入境事務大樓出現電力故障。團隊旋即趕赴現場，發現地下電掣房的空氣斷路器「跳掣」。經徹底檢查後，懷疑主線槽外殼滲水導致短路，令大樓北翼38樓至48樓停電，波及多個政府部門，包括位於42樓、24小時運作的水務署客戶電話諮詢中心。

由於入境事務大樓樓齡逾30年，且歷經多個政府部門遷入遷出，尋找合適的備用電源是一大挑戰。時任區域經理佘國榮先生果斷調動另一組人員，聯同承辦商共約40人到場支援。憑藉豐富經驗，他們迅速確定臨時供電接駁位置。高級督察劉振康先生(中)負責協調各組工作：「我們分成兩組，同步進行臨時供電接駁。我全程在場監察進度，遇有人手或物資短缺便即時處理；另一組人員則借調近50台風扇供客戶使用。」

帶領團隊的丁女士指，由於水務署熱線服務受影響，客戶及部門高層非常關注事件。團隊爭分奪秒搶修，於早上約8時完成臨時供電接駁，恢復電話諮詢中心供電；下午2時，空調恢復運作。團隊持續監察電力供應情況，以策安全。丁女士形容，當日情況如同「救火」般緊急，同時亦需安撫客戶情緒：「空調剛恢復時，室內仍很悶熱。我們耐心向客戶解釋，因空調耗電量大，必須以安全為首，逐層重新啟動，以免電力負荷過重。」

儘管整個過程充滿挑戰，但機電署人員所展現的團隊精神，令人難忘。劉先生說：「不同部別的人員，包括之前較少合作的，也第一時間趕來支援，無分彼此，令人非常感動。」

At around 3 am on 28 June 2024, the maintenance team received an urgent notification of a power failure at the Immigration Tower. The team shortly rushed to the scene, and found that an air circuit breaker in the switch room on ground floor had tripped off. After a thorough inspection, they suspected that water had penetrated the casing of the bus duct, causing a short circuit that triggered a power outage affecting the 38th to the 48th floors of the building's north wing. Among the affected departments was the Water Supplies Department's (WSD) 24-hour Customer Telephone Enquiry Centre on the 42nd floor.

Given that the Immigration Tower was over 30 years old and had undergone frequent relocations of various government departments, identifying a suitable backup power source was a major challenge. The then regional manager, Mr Shee Kwok-wing, decisively mobilised another team of staff, along with contractors totalling around 40 people, to provide on-site support. Leveraging their extensive experience, they quickly identified a location for a temporary power connection. Mr Lau Chun-hong, a senior inspector (centre), was responsible for co-ordinating the work between teams, "We split into two teams, working concurrently to establish the temporary power supply. I closely monitored the entire progress on site and immediately dealt with any shortages in manpower or materials. Another team arranged for nearly 50 fans for our clients' use."

Ms Ting, who led the team, pointed out that as the WSD's hotline service was affected, both the clients and the EMSD management were highly concerned about the incident. The team raced against the time to do the urgent repairs. By around 8 am, the temporary power connection was completed, restoring electricity to the telephone enquiry centre. Air-conditioning resumed at 2 pm, with the team continuously monitoring the power supply to ensure safety. Ms Ting described the day as feeling like a firefighting mission, and meanwhile they needed to reassure the clients. "When the air-conditioning just resumed, the room was still hot and stuffy. We patiently explained to our clients that air-conditioning consumed a lot of power, so we had to prioritise safety and restart the system floor by floor to avoid electrical overload."

Despite the many challenges throughout the process, the team spirit demonstrated by EMSD staff was impressive. Mr Lau remarked, "Staff from different divisions, including those who had rarely worked together before, rushed to help us at a moment's notice without hesitation. It was truly touching."

以病人福祉為首 全力支援醫院發展
COMMITMENT TO PATIENT WELFARE FULL SUPPORT FOR HOSPITAL DEVELOPMENT

醫院發展計劃等大型工程項目，在落成啟用初期往往面臨各種挑戰。以廣華醫院的電力事故為例，儘管該院並非機電署負責保養的場地，衞生工程部作為醫院管理局(醫管局)的長期合作伙伴，仍竭盡所能，運用專業知識協助醫管局化解危機，保障病人安全。

Large-scale engineering projects such as hospital development plans inevitably encounter various challenges during the initial commissioning stage. Take the power incidents that occurred at Kwong Wah Hospital (KWH) as an example. Although KWH did not fall under the maintenance responsibility of the EMSD, the Health Sector Division, as a longstanding partner of the Hospital Authority (HA), did its utmost and leveraged its expertise to help the HA resolve the crisis and safeguard patient safety.

2024年6月，廣華醫院重建計劃第一期大樓的無間斷電源系統發生故障，導致電力供應中斷，影響手術室運作。院方為安全起見，安排二十多宗非緊急手術改期，以便進行全面檢查。工程師潘曉晴女士(右)憶述，當時她與團隊密切關注事態發展，迅速檢視其他醫院的同類設施，並調配資源，隨時準備提供技術支援。

潘女士和其團隊在維修公立醫院手術室無間斷電源系統方面經驗豐富。他們聯同醫管局的專家和代表，連夜進行緊急測試和檢查，務求盡快恢復系統運作。潘女士特別指出，團隊審視測試計劃和程序，確保測試方法合適，能在短時間內準確評估系統表現。她表示：「雖然廣華醫院不在部門的保養範圍，但我們非常珍惜醫管局的信任。能夠發揮所長，運用專業知識和經驗協助處理事故，回饋社會，對我們而言是莫大的成就。」

高級工程師葉煒堂先生(中)和工程師陳偉雄先生(左)分別在2024年和2025年協助廣華醫院處理兩宗由繼電器「跳掣」引起的電力事故。葉先生與醫管局專家合作，深入檢視供電系統結構，向院方管理層解釋潛在成因，並提出改進建議，促進後續調查。他建議院方就處理電力故障制訂緊急電力切換流程，以提升整體應變效率。

在2025年的事故中，陳先生與團隊通宵提供技術支援，迅速檢視電力系統設計、監控設備和相關數據，並建議重新分配電纜負荷，進行電力質量評估，務求長遠提升供電韌性。陳先生更牽頭協調醫管局、大學學者、顧問公司、本地承辦商和海外設備製造商進行測試，成功找出事故起因。陳先生總結道：「我們與醫管局一直緊密合作，並肩作戰，攜手共渡不少難關，因此我們願意多走一步，除了提供專業支援，亦主動檢視其他負責場地的可改善之處。」

In June 2024, a power interruption caused by the malfunction in the uninterruptible power supply (UPS) system affected the operation of operating theatres in the Phase 1 Building of KWH's Redevelopment Project. Prioritising safety, the hospital rescheduled more than 20 elective surgeries to allow for comprehensive inspections. Ms Poon Hiu-ching, an engineer (right), recalled that she and her team closely monitored the situation, promptly reviewed similar facilities in other hospitals and mobilised resources to prepare for any necessary technical support.

With extensive experience in maintaining UPS systems for operating theatres at public hospitals, Ms Poon and her team, along with experts and representatives from the HA, conducted urgent testing and inspections overnight, aiming to restore system operation as quickly as possible. Ms Poon emphasised her team's contribution in reviewing the test plan and procedures to ensure the testing methods were appropriate to accurately assess system performance within a short timeframe. "Although KWH is not within our maintenance scope, we deeply value the trust from the HA. Being able to use our expertise and experience to help manage the incident and contribute to the community brought us a great sense of accomplishment," she said.

Mr Yip Wai-tong, a senior engineer (centre), and Mr Chan Wai-hung, an engineer (left), assisted KWH in addressing two power incidents caused by tripped relays in 2024 and 2025 respectively. In collaboration with the HA's experts, Mr Yip conducted a thorough review on the architecture of the power supply system, explained the potential causes to hospital management and proposed improvement recommendations to facilitate further investigation. He recommended the hospital to establish emergency changeover procedures for handling power failures to improve overall response efficiency.

In the incident in 2025, Mr Chan and his team provided overnight technical support by swiftly reviewing the power system design, monitoring devices and data collected. They then recommended redistributing the power load across cables and conducting a power quality assessment to enhance long-term supply resilience. Mr Chan also led co-ordination efforts with the HA, university scholars, consultants, local contractors and overseas equipment manufacturer to carry out testing, ultimately identifying the root cause of the incident. "We have been working closely with the HA, standing side by side through many challenges. That is why we are willing to go the extra mile, not only by providing professional support, but also by proactively identifying areas for improvement at other venues under our purview," Mr Chan concluded.

香港體育館設備大升級 展現專業創新精神
MAJOR UPGRADE OF HONG KONG COLISEUM'S EQUIPMENT SHOWCASES PROFESSIONAL INNOVATION

香港體育館(紅館)中央的四面投影屏幕，承載無數觀眾的集體回憶。然而，經過多年使用，這些屏幕逐漸老化。為迎接2025全國運動會，市政工程部去年年底為紅館展開大型更新工程，安裝全新顯示系統，以提升觀眾的視覺體驗。

The four-sided projection screens at the centre of the Hong Kong Coliseum (HKC) hold the collective memories of countless audiences. However, after years of use, these screens have gradually aged. In preparation for the 2025 National Games, the Municipal Sector Division launched a major renovation project for the HKC at the end of last year, installing a new display system to enhance the audience's visual experience.

工程師甘玉君女士(右)表示，是次工程充滿挑戰：團隊不僅要配合康樂及文化事務署(康文署)的運作需要，還要顧及紅館近40年樓齡建築的結構限制。為此，他們拆卸四部投影器和屏幕，以及場館頂部四個角落的部分座位；然後搭建地台和鋼架，以安裝新的發光二極管顯示屏。

在設計階段，團隊首先面對承重的難題。新顯示屏每塊尺寸為7米乘4米，連支架重約1.5噸。甘女士解釋說：「鑑於紅館已有幾十年歷史，要在原本設計為觀眾席的區域加裝大型設備，其結構要求與新建築的截然不同。我們運用跨學科專業知識，提出了可行方案。」除了設備本身的重量，他們還要考慮日後維修人員的額外重量，故此需要多次修改設計。高級電子督察張振豪先生(左)補充道：「我們想辦法減輕鋼架重量，包括減少支架數目，並把固定式維修平台改為流動式工作台。」

由於紅館節目繁忙，團隊僅有29天時間完成拆卸和安裝工程。可是在安裝過程中，團隊發現地台和鋼架無法依照原訂圖則安裝，甘女士於是立即與負責搭建地台的建築署商討應急方案。甘女士憶述說：「我們提出修改安裝方法，雙方在一天內就達成共識。我們隨即從內地訂製零件，以便追趕進度。」團隊安排兩更人員通宵工作，最終成功如期完成工程。新系統經過徹底測試，趕及在全國運動會測試賽順利啟用。

新顯示屏像素密度高，且外殼散熱快，無需使用散熱風扇；少了風扇噪音的干擾，觀眾便可盡情欣賞節目。新系統亦連接場館頂部和地面多個控制台，以及康文署的場外控制室，讓使用者可靈活操作。團隊期望觀眾再次造訪紅館時，能感受到他們對提升觀眾體驗的重視與用心。

Ms Kam Yuk-kwan, Lily, an engineer (right), said that this project was fraught with challenges. The team not only had to address the operational needs of the Leisure and Cultural Services Department (LCSD) but also consider the structural limitations of the nearly 40-year-old HKC. To this end, they removed the four projectors and projection screens, along with some seats in the four corners at the top of the venue. Supporting platform and steel frames were then constructed for installation of the new light emitting diode display screens.

During the design phase, the first hurdle faced by the team was load-bearing capacity. Each new screen measures 7 by 4 metres and weighs about 1.5 tonnes, including the supporting frame. Ms Kam explained, "Given the HKC's decades-long history, the addition of large equipment to areas originally designed for seating presents structural requirements entirely different from those of a new building. We leveraged interdisciplinary expertise to develop feasible solutions." Apart from the weight of the equipment itself, they had to take into account the additional load of maintenance personnel in the future, which necessitated multiple design revisions. Mr Cheung Chun-ho, Jimmie, a senior electronics inspector (left), added, "We tried to lighten the steel frames, including reducing the number of brackets and replacing the fixed maintenance platform with a mobile one."

Due to the busy schedule at the HKC, the team has only 29 days to complete the dismantling and installation works. Nevertheless, during the installation process, the team discovered that the supporting platform and steel frames could not be installed according to the original drawings. Ms Kam immediately discussed emergency solutions with the Architectural Services Department, which was responsible for constructing the supporting platform. She recalled, "We proposed modifying the installation method, and both parties reached a consensus within a day. We then promptly sourced parts from the Mainland to stay on track." By deploying two shifts of staff to work overnight, the team managed to complete the project on schedule. After thorough testing, the new system was launched smoothly in time for the National Games test events.

The new screens feature high pixel density and heat-dissipating casings, eliminating the need for cooling fans. Without the distraction from fan noises, audiences can fully enjoy the shows. The new system is also connected to multiple control panels at both the venue's upper and ground levels, as well as the LCSD's external control room, allowing for flexible operation. The team hopes that when audiences return to the HKC, they will appreciate the team's commitment and dedication devoted to enhance their experience.

科技融合可持續發展 實現節能減碳

營運基金的服務宗旨，是提供創新和可持續發展的服務，以滿足客戶需求，支援他們服務市民。我們的首要目標是運用科技節約能源、減少危害環境、提升工作安全，以及加快減碳進程。

成功案例「ChillStream®」

由營運基金自主研發的「ChillStream®」方案，運用人工智能技術優化製冷機組表現，屢獲殊榮。該系統已在公共衛生檢測中心成功試用，節省製冷機組每年的耗電量。我們計劃把「ChillStream®」推廣至14個客戶場地，包括將軍澳醫院、伊利沙伯醫院、中山紀念公園體育館、大埔政府合署、宏昌大廈、消防處總部大樓和警察總部，有助節約能源和減少碳排放。

此外，「ChillStream®」在多個重要活動中亮相，例如在日本橫濱舉行的2024年電機暨電子工程師學會世界計算智能大會，以及在西班牙巴塞羅那舉行的世界移動通訊大會2025。今年3月，我們以香港科技館成員身分參與巴塞羅那的活動，向全球訪客展示我們的尖端技術方案。

TECHNOLOGY COUPLED WITH SUSTAINABILITY TO ACHIEVE ENERGY CONSERVATION AND DECARBONISATION

Delivering innovative and sustainable services that satisfy clients' needs and support them in serving the public is the EMSTF's service objective. Our priority is to harness technology to save energy, reduce environmental hazards, enhance safety at work and accelerate decarbonisation.

Success Story: ChillStream®

ChillStream®, an award-winning solution developed in-house by the EMSTF for optimising chiller plant performance using artificial intelligence (AI) technology, saved annual electricity consumption for the chiller plant during a successful trial at the Public Health Laboratory Centre. Subsequently, we plan to extend ChillStream® to 14 client venues, including Tseung Kwan O Hospital (TKOH), Queen Elizabeth Hospital, the Sun Yat Sen Memorial Park Sports Centre, the Tai Po Government Offices Building, Wang Cheong Building, the Fire Services Headquarters Building and the Police Headquarters, contributing to energy savings and carbon emissions reduction.

ChillStream® was also featured at several prominent events, such as the Institute of Electrical and Electronics Engineers (IEEE) World Congress on Computational Intelligence 2024 in Yokohama, Japan, and the Mobile World Congress (MWC) 2025 in Barcelona, Spain. In March, we participated in the MWC Barcelona as a member of the Hong Kong Tech Pavilion, where we showcased our cutting-edge technological solutions to global audience.

我們自行研發的「ChillStream®」目前在將軍澳醫院試行。該系統運用實時天氣預測和歷史數據，優化醫院24小時運作的製冷機組，從而節省能源。

Our self-developed ChillStream® is currently being tested at Tseung Kwan O Hospital. Using real-time weather forecasts and historical data, the system optimises the hospital's chillers, which operate round-the-clock, thereby saving energy.

機電署區域數碼監控中心利用「ChillStream®」人工智能優化系統，實時遙距監察製冷機組的效能，以節省能源。該系統現已在公共衛生檢測中心和將軍澳醫院應用，並會陸續推廣至其他客戶場地，以提升能源效益。

The EMSD's Regional Digital Control Centre uses the ChillStream® AI-based optimisation system to remotely monitor the performance of chillers in real time, thereby saving energy. Currently deployed at the Public Health Laboratory Centre and the Tseung Kwan O Hospital, the system will be progressively introduced to other client venues to enhance energy efficiency.

機電署已在金鐘道政府合署安裝人工智能製冷機組優化系統。與傳統製冷機組相比，該系統能有效維持溫度在所需水平，大幅減低能源消耗。

The EMSD has installed the AI-based chiller optimisation system at the Queensway Government Offices. Compared to conventional chillers, the system effectively maintains the required temperature while significantly reducing energy consumption.

更多人工智能製冷機組和空氣處理機組優化方案

與此同時，我們的策略業務單位在長沙灣政府數據中心大樓和金鐘道政府合署等各政府大樓應用類似的人工智能製冷機組優化系統。2024年，我們亦為海關總部大樓安裝人工智能製冷機組優化系統，成功節省製冷機組耗電量約6%。

「ChillStream®」是我們首個專有人工智能製冷機組優化方案，而我們首個自行研發的人工智能空氣處理機組優化方案，亦已在麥理浩牙科中心成功試用。

優化通風需要根據室內環境的變化來調節空氣處理機組的技術參數，通常需由人手調節，或透過中央控制及監控系統處理。相比之下，我們的人工智能解決方案運用由數據驅動的人工智能決策模型和實時室外天氣指標，預測動態室內環境，相應地調節每個空氣處理機組的技術參數，調節送風機轉速、冷水流量和鮮風流量，能更有效締造舒適的通風環境。

這方案不僅能維持溫度穩定舒適，亦有望節省5%至10%的空氣處理機組耗電量，同時減少人力需求，特別適用於每小時換氣要求中等的場地，例如等候大堂和牙科診所。

More AI Chiller and AHU Optimisation Solutions

Meanwhile, our Strategic Business Units have deployed similar AI-based chiller optimisation systems at various government buildings, such as the Government Data Centre Complex in Cheung Sha Wan and the Queensway Government Offices. In 2024, we also installed an AI-based chiller optimisation system at the Customs Headquarters Building, saving approximately 6% of chiller electricity consumption.

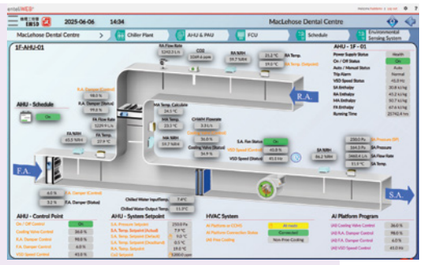
While ChillStream® is our first proprietary AI-based chiller optimisation solution, we have also successfully piloted our first in-house-developed AI-based Air-side Equipment Optimisation solution at the MacLehose Dental Centre.

Ventilation optimisation requires adjusting technical parameters of the air-side equipment, namely air-handling unit (AHU), based on the changes of the indoor environment. This is customarily done either manually or through a central control and monitoring system. In contrast, our AI solution leverages a data-driven decision-making AI model and real-time outdoor weather indicators to predict the dynamic indoor conditions and optimise the technical parameters of each AHU accordingly, adjusting the supply-air fan speed, chilled water flow rate and fresh-air flow rate to deliver comfortable ventilation more effectively.

The solution not only maintains stable thermal comfort, but also has the potential to reduce AHU electricity consumption by 5% to 10% while lowering manpower requirements. It is particularly ideal for venues requiring moderate air changes per hour, such as waiting halls and dental clinics.

由機電署開發的人工智能空氣處理機組優化方案已在麥理浩牙科中心試行。該方案通過分析室內環境變化和室外天氣指標的實時及歷史數據，並利用流動應用程式和網頁介面，實現對空氣處理機組技術參數的遙距監控和優化。

The AI-based Air-side Equipment Optimisation solution, developed by the EMSD, was trialled at the MacLehose Dental Centre. This solution optimises the technical parameters of the AHU by analysing real-time and historical data on indoor environmental changes and outdoor weather indicators, utilising mobile applications and web interfaces for remote monitoring and optimisation.



部署公立醫院首批低全球升温潛能值製冷機組以助應對氣候變化

為配合《香港氣候行動藍圖2050》，我們與醫院管理局（醫管局）合作，推展多個節能減碳項目。其中，屯門醫院主座四台老化的水冷式製冷機組，已更換成採用R1233zd氫氟烯烴環保雪種的高效能水冷式製冷機組。這新雪種毒性低、非易燃，而且全球升温潛能值極低。新製冷機組自2023年投入運作以來，空調製冷機組耗電量大減26%，省電約280萬度，相當於減少1 950公噸碳排放。

《2024年保護臭氧層（修訂）條例草案》旨在逐步淘汰雪種和滅火劑所使用的高全球升温潛能值氫氟碳化物等物質，並禁止其生產、進口和供應。作為本港公立醫院首個採用極低全球升温潛能值製冷機組的項目，屯門醫院項目是支持條例草案的實際舉措。事實上，該項目更可說是香港減碳進程的里程碑，讓機電署和醫管局連續在2024年和2025年獲得美國供暖製冷及空調工程師學會頒發獎項，並在2025年獲得美國能源工程師學會的獎項。

同時，瑪嘉烈醫院的兩台氣冷式製冷機組已更換為採用R1234ze環保雪種的高效能新機組，並於2025年年初投入運作。我們也在2024年展開工程，把警察總部兩台老化的水冷式製冷機組更換為採用低全球升温潛能值雪種的節能製冷機組。更換工程預計在2025年稍後竣工，可節省約35%的製冷機組耗電量。

我們的車輛工程團隊已進行試驗，研究在車輛空調系統維修保養中使用再生雪種（即經過回收、加工至恢復特定性能標準的雪種），從而減少對新雪種的需求，有助保護環境。

Deploying First Batch of Low-GWP Chillers at Public Hospitals to Combat Climate Change

In support of the Hong Kong's Climate Action Plan 2050, we have collaborated with the Hospital Authority (HA) to embark on various energy-saving and carbon reduction projects. For example, we replaced four ageing water-cooled chillers at the Main Block of Tuen Mun Hospital (TMH) with highly-efficient water-cooled chillers using environmentally friendly hydrofluoroolefin (HFO) refrigerants R1233zd. Low in toxicity and non-inflammable, this new refrigerant features extremely low Global Warming Potential (GWP). Since the commissioning of the new chillers in 2023, the chiller plant's electricity consumption has dropped significantly by 26%, saving about 2.8 million kWh of electricity, equivalent to a reduction of 1 950 tonnes of carbon emissions.

As the first deployment of extremely low-GWP chillers in Hong Kong public hospital, the TMH project serves as a practical step to support the Ozone Layer Protection (Amendment) Bill 2024, which aims to phase out substances such as high-GWP hydrofluorocarbons (HFCs) used in refrigerants and fire suppressants and prohibit their manufacture, import and supply. Indeed, the TMH project represent a milestone in Hong Kong's decarbonisation journey, earning the EMSD and the HA awards from the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) in both 2024 and 2025, and the Association of Energy Engineers in 2025.

Meanwhile, two air-cooled chillers at Princess Margaret Hospital (PMH) have been replaced with high efficiency new units using low-GWP refrigerants of R1234ze, operational from early 2025. In addition, we began works to replace two ageing water-cooled chillers at the Police Headquarters with energy-efficient models using low-GWP refrigerants in 2024. The replacement works are expected to be completed later in 2025, with an approximate 35% reduction in the chiller plant's electricity consumption.

Our vehicle engineering team has conducted a trial to explore the use of reclaimed refrigerants, i.e., refrigerants recovered, reprocessed and restored to a specified performance standard, during maintenance of air-conditioning systems in vehicles, thereby reducing the demand for new refrigerants and contributing to environmental protection.

機電署為警察總部更換兩台老化的製冷機組。新機組採用低全球升温潛能值的雪種，能源效益更高。

The EMSD has replaced two ageing chillers at the Police Headquarters. With the use of low-GWP refrigerants, the new chillers offer enhanced energy efficiency.

機電署把瑪嘉烈醫院的氣冷式製冷機組，更換為採用低全球升温潛能值雪種的機組，有效減少温室氣體排放。鑑於該款雪種具輕度易燃特性，項目團隊加裝了雪種監察系統，以確保運作安全。

The EMSD has replaced the air-cooled chillers at Princess Margaret Hospital with units using a low-GWP refrigerant, effectively reducing greenhouse gas emissions. Given the mild flammability characteristics of the refrigerant, a refrigerant monitoring system has been installed to ensure operational safety.

新能源車及其他氣候行動措施

為把握新能源車帶來的減碳機遇，我們為食物環境衛生署（食環署）提供技術支援，試驗三輛氫燃料電池洗街車。我們亦於2024年協助舉辦「小畫家，大改變」碳中和 — 氫能洗街車命名及繪畫比賽，以提高公眾意識。學生的獲獎作品已用作三輛氫燃料電池洗街車的車身塗裝設計。

New Energy Vehicles and Other Climate Action Initiatives

To support decarbonisation opportunities brought about by new energy vehicles, we have been providing technical assistance to the Food and Environmental Hygiene Department (FEHD) for a pilot trial of three hydrogen fuel cell street washing vehicles. We also helped organise the "Little Artists, Big Changes" Carbon Neutrality – Hydrogen Fuelled Street Washing Vehicle Naming and Drawing Contest in 2024 to raise public awareness. The winning entries from the students were adopted as the livery design of the three hydrogen fuel cell street washing vehicles.

為配合《香港氫能發展策略》和推動本港使用氫燃料重型車輛，機電署為食環署引入三輛氫燃料電池洗街車，並於2025年6月起在新界地區試用。

To support the Strategy of Hydrogen Development in Hong Kong and promote the use of hydrogen fuel cell heavy vehicles in Hong Kong, we introduced three hydrogen fuel cell street washing vehicles for the FEHD. The trial of these vehicles commenced in the New Territories starting from June 2025.

機電署運用「政府物聯通」，為食物環境衛生署的太陽能廢物壓縮箱加裝了遙距監察系統。該系統能監測箱內剩餘空間、機件是否出現故障，以及廢物收集的相關數據。

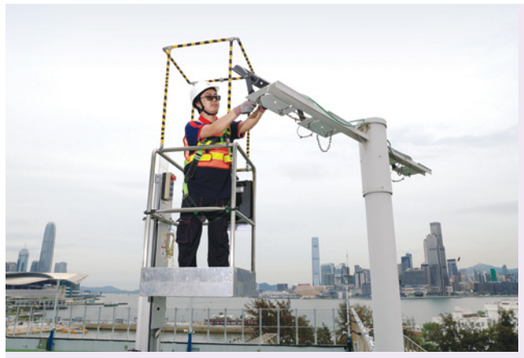
The EMSD has enhanced the solar-powered compacting refuse bins of the Food and Environmental Hygiene Department with a remote monitoring system using GWIN. This system enables tracking of the remaining capacity, mechanical faults, and waste collection data.

我們的團隊也協助食環署在大埔南華莆等鄉郊地點進行太陽能廢物壓縮箱試運作測試，並開發遙距監察系統。該系統能提供垃圾箱狀態和滿溢程度的即時資訊，以便清潔服務承辦商優化收集路線，僅在必要時清空垃圾箱，以減少不必要的工作和成本。

Our team also assisted the FEHD in testing its solar-powered compacting refuse bins in rural areas such as Nam Wa Po in Tai Po and developing a remote monitoring system. This system provides real-time data on bin status and fill levels, enabling cleaning service contractors to optimise collection routes and empty bins only when necessary, thereby reducing unnecessary work and costs.

過去一年，我們不斷發掘能源管理機會，務求滿足客戶對節能方案的持續需求。我們為香港警務處(警務處)推行的主要措施，包括把警官會所逾150盞高強度氣體放電泛光燈更換為超高光效的發光二極管泛光燈。此外，我們亦持續為警務處及其他紀律部隊的各個場地更換機電及照明系統。

During the year, we continued to identify energy management opportunities to satisfy our clients' ongoing demand for energy-saving solutions. Key initiatives for the Hong Kong Police Force (HKPF) included replacing over 150 high intensity discharge (HID) floodlights at the Police Officers' Club with ultra-efficacy light emitting diode (LED) floodlights. This was in addition to the ongoing replacements of E&M and lighting systems at various HKPF and other disciplined services venues.



與傳統高強度氣體放電泛光燈相比，我們在警官會所安裝的超高光效的新發光二極管泛光燈體積更小、重量更輕，可節省約40%的戶外照明耗電量。

Compared to traditional HID floodlights, the new ultra-efficacy LED floodlights installed at the Police Officers' Club are more compact and lightweight, achieving approximately 40% savings in electricity consumption for external lighting.

與此同時，我們與康樂及文化事務署(康文署)共同策劃，逐步把康文署轄下體育場館現有的照明系統更換為具有較高能源效益的發光二極管燈。2024/25年度，我們也協助食環署、康文署和海事處等客戶開展18個節能項目，包括更換空調和發光二極管照明系統，每年可節省超過200萬度電。連同過去五年已完成的55個節能項目，年度總省電量已超過832萬度。

Meanwhile, we have been planning with the Leisure and Cultural Services Department (LCSD) to gradually replace existing lighting in its sports venues with more energy-efficient LED lights. In 2024/25, we also supported 18 energy-saving projects for clients including the FEHD, the LCSD and the Marine Department, covering the replacement of air-conditioning and LED lighting systems with an annual electricity savings of over 2 million kWh. Combined with 55 energy-saving projects completed over the past five years, the total annual electricity savings exceeded 8.32 million kWh.

我們協助路政署實施智能水浸偵測及預警系統，以應對極端天氣。此外，三條主要道路亦將會安裝新閉路電視監察系統，提升水浸偵測和應對能力。路政署亦已委託機電署在行車路上安裝更多閉路電視和傳感器，以更妥善地管理水浸對關鍵道路設施的影響。

We have assisted the Highways Department (HyD) to implement the Smart Flood Detection and Warning System to combat the extreme weather. In addition, new closed-circuit television (CCTV) monitoring system to three critical roads will be provided to enhance flood monitoring and response. Besides, the HyD has engaged the EMSD to install more CCTVs and sensors on at-grade roads to better manage the flooding impact at critical infrastructures.

我們現正為機電署總部大樓天台二千多塊太陽能板進行更換工程，推動綠色能源發展。新太陽能板的效能更高，工程完成後，每塊太陽能板的輸出功率由150瓦增至430瓦，提升可再生能源的產量。

We are currently replacing over 2 000 solar panels on the rooftop of the EMSD Headquarters Building for the development of green energy. The new panels feature enhanced efficiency. Upon the replacement, each panel's power output will increase from 150 watts to 430 watts, boosting renewable energy production.

機電署總部的節能措施升級

我們亦在機電署總部加強節能工作，年內開始升級天台的太陽能板，把這批20年前安裝的設備更換為更高效能的型號。

2024/25年度的財政預算案宣布，政府將推出太陽能發電建築先導計劃，研究在政府建築物幕牆應用太陽能發電技術，並以機電署總部大樓作為初步試點。先導計劃的目的是評估太陽能發電建築技術的成效和可行性，並參考計劃收集到的相關數據，例如實際發電效能、減少室內能耗表現、維修保養的要求和開支等，以評估先導計劃是否可推展至其他公私營機構。我們正籌備相關工作。

Ramping up Energy-Saving Measures at EMSD Headquarters

We also ramped up energy-saving efforts at the EMSD Headquarters. During the year, we began upgrading the rooftop photovoltaic (PV) panels, replacing units installed two decades ago with more efficient ones.

Furthermore, we are preparing to launch the Pilot Scheme on Building-Integrated Photovoltaics (BIPV) to explore PV technology applications on the facades of government buildings, using the EMSD Headquarters Building for initial trials, as announced in the 2024/25 Budget. The objective of the pilot scheme is to assess the effectiveness and feasibility of BIPV, taking into account the relevant data collected under the scheme, such as the actual power generation efficiency, performance in reducing indoor energy consumption as well as repair and maintenance requirements and expenditures, among others, so as to evaluate whether the pilot scheme can be extended to other public and private organisations.

再進一步 變革轉型

為配合香港持續變革轉型，營運基金與內地伙伴加強合作，以提升服務質素。部門致力透過全面培訓和數碼化工作流程，提升運作效率，推動區內智能機電發展。

支持粵港澳大灣區合作

與粵港澳大灣區（大灣區）城市合作是我們的策略重點之一。其中一個重要例子包括為設於河套深港科技創新合作區香港園區的粵港澳大灣區國際臨床試驗所提供技術支援。該試驗所由香港特別行政區政府設立及擁有，負責推動生物醫藥產業發展，其附設於中央援港應急醫院的生物樣本庫，可儲存超過40萬個血液、細胞和去氧核糖核酸樣本。

我們也支援醫院管理局（醫管局），在落馬洲中央援港應急醫院推出新的眼內注射服務。我們協助改裝病房的機電系統，以配合這項新服務。

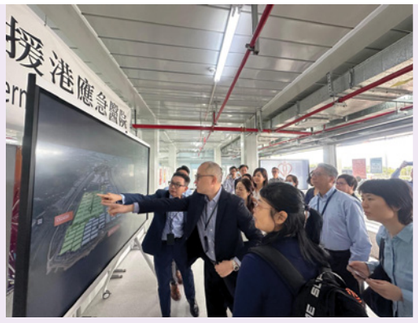
GEARED UP FOR FURTHER TRANSFORMATION

In support of Hong Kong's ongoing transformation, the EMSTF fosters deeper collaboration with Mainland partners to enhance service quality. Through comprehensive training and digitalised workflows, the Department is committed to improving operational efficiency and advancing intelligent E&M across the region.

Supporting Greater Bay Area Collaboration

Collaboration with cities in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) is one of our strategic priorities. A notable example is our support for the GBA International Clinical Trial Institute, established and owned by the Hong Kong Special Administrative Region Government, at the Hong Kong Park of the Hetao Shenzhen-Hong Kong Science and Technology Innovation Co-operation Zone. The Institute, which facilitates the development of the biomedical technologies industry, can store over 400 000 samples of blood, cells and DNA at its affiliated biobank at the Central Government-aided Emergency Hospital (CGAEH) in Lok Ma Chau.

We also provided technical support to the Hospital Authority (HA) in launching a new intravitreal injection services at the CGAEH. We helped convert a ward by modifying the E&M system to accommodate the new service.



（左）機電署改建中央援港應急醫院的病房，以支援醫管局推出的眼內注射服務，紓緩公立醫院的壓力。

（右）中山大學中山醫學院的專家團隊在2024年11月到訪中央援港應急醫院，與醫管局就利用中央援港應急醫院提供眼科服務交流經驗及意見。

(Left) To ease pressure on public hospitals, the EMSD converted a ward at the CGAEH to support intravitreal injection services launched by the HA.

(Right) An expert team from Sun Yat-sen University's Zhongshan School of Medicine visited the CGAEH in November 2024 and exchanged experience for the provision of ophthalmology services at the CGAEH.

粵港澳大灣區國際臨床試驗所為醫藥研發提供一站式臨床試驗平台，由機電署負責為該試驗所的機電設施提供全面維修保養服務。我們為生物樣本庫的液氮樣本貯存室安裝氧氣水平監測系統，確保實驗室安全運作。

The GBA International Clinical Trial Institute provides a one-stop clinical trial platform for pharmaceutical research and development, and the EMSD is responsible for offering comprehensive maintenance services to its E&M facilities. We ensure safe laboratory operations by installing oxygen level monitoring system in the Liquid Nitrogen Storage Room of the Biobank.

憑藉豐富的醫院維修保養服務經驗，我們成功支援東區尤德夫人那打素醫院和威爾斯親王醫院，分別在2024年10月和12月接受深圳市衛健醫院評審評價研究中心的認證評審。兩間醫院成為本港首批獲得《國際醫院評審認證標準（中國）》（2021版）認證的公立醫院。我們的認證知識和普通話能力對認證過程大有助益，備受客戶讚賞。我們期望日後能協助更多醫管局醫院和其他客戶場地取得內地認證。

近年，我們的技術團隊與大灣區機構通力合作，制訂統一標準。《機電設備人工智能數據標準化指南》首個版本已經完成，並於廣州最先進的羊城晚報嶺南數字創意中心興建期間進行試點應用。

新合作備忘錄和交流活動

繼與多個內地機構簽署合作備忘錄後，機電署在去年12月舉行的機電工程署研討會2024上，與廣州市科學技術協會簽訂新合作備忘錄，共同推動政府部門應用創新科技（創科）。與此同時，我們的策略業務單位亦舉辦多項大灣區交流活動，包括於2025年2月到訪廣東順德，與非營利性三級綜合醫院和祐醫院交流經驗。我們也參與2024年11月在浙江杭州舉行的第11屆ACM節能建築、城市與運輸系統國際會議，發表技術論文與分享經驗。

迎接人工智能與智能機電

為使員工具備人工智能與智能機電時代所需的技能和思維，我們根據機電署的《人工智能行動綱領》推出一系列培訓項目，包括為首長級至督察級人員開辦人工智能課程，並計劃為其他職級同事提供相類培訓。

Experienced in providing hospital maintenance services, we successfully supported the Pamela Youde Nethersole Eastern Hospital (PYNEH) and the Prince of Wales Hospital (PWH) in the accreditation surveys conducted by the Shenzhen Hospital Accreditation Research Centre in October and December 2024 respectively. Both PYNEH and PWH have become the first batch of public hospitals in Hong Kong accredited under the China's International Hospital Accreditation Standards (2021 Version). The client appreciated our accreditation knowledge and Putonghua skills, which greatly facilitated the accreditation process. We look forward to supporting more HA hospitals, and other client venues in securing Mainland accreditation in future.

In recent years, our technology team has been working closely with GBA entities to develop harmonised standards. The first version of the E&M AI Data Standardisation Guideline is now complete. It was piloted during the construction of the state-of-the-art Yangcheng Evening News Lingnan Digital Creative Centre in Guangzhou.

New MoC and More Exchanges

Building on existing Memoranda of Co-operation (MoC) with Mainland entities, the EMSD signed a new MoC with the Guangzhou Association for Science and Technology during the EMSD Symposium 2024 in December to jointly support government departments in applying innovation and technology (I&T). Meanwhile, our Strategic Business Units (SBUs) organised several GBA exchange activities, including an experience-sharing visit to Heyou Hospital, a non-profit tertiary general hospital in Shunde, Guangdong, in February 2025. We also took part in the 11th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation held in Hangzhou, Zhejiang, in November 2024 to present technical papers and share experiences.

Getting Ready for AI and Intelligent E&M

To equip staff with the skills and mindset required for the age of artificial intelligence (AI) and intelligent E&M, we launched an array of training initiatives aligned with the EMSD AI Master Action Plan. These included AI courses for staff from Directorate to Inspectorate grade, with similar training planned for other tiers.

在機電工程署研討會2024上，機電署與廣州市科學技術協會簽署合作備忘錄，以加強兩地交流合作，推動科技創新。

At the EMSD Symposium 2024, the EMSD signed an MoC with the Guangzhou Association for Science and Technology to strengthen exchange and co-operation between the two places and promote technological innovation.

營運服務
TRADING SERVICES

鑑於未來數年會有多家新建或重建的醫管局醫院陸續投入服務，我們已開始部署，以應對預期的人力需求高峯。我們透過多渠道加強操作與維修保養人員的招聘工作，包括增聘見習技術員和退休同事，並開設新職級以吸納非公務員合約員工。

為提升我們在衞生工程領域的實力，我們與香港大學專業進修學院合作，於2025年第一季推出兩項文憑課程，分別為生物醫學工程技術員和醫院工程技術員而設。我們也於2025年2月舉辦蒸汽鍋爐安裝培訓，並計劃加入更多創科元素，吸引年輕同事參與。

為進一步提升醫院維修保養服務的質素，我們成功把ISO 13485品質管理系統的認證範圍擴展至手術室和消毒設備。在部門層面，我們取得首項ISO 27701隱私資訊管理系統認證，涵蓋新開發的電子問卷平台，以及部分涉及收集個人資料的工作流程系統。

創科在提升內部工作流程方面潛力龐大。繼2023年成功把所有生物醫學設備的紙本維修保養表格遷移至醫療儀器維修表格電子平台後，我們計劃在2025年試行把手術室和消毒設備的紙本維修保養表格整合至該電子平台，以提升效率並實現報告無紙化。

與此同時，我們正在研發招標評估輔助系統，透過電子平台系統縮短擬備和評估標書時間，從而提升員工生產力。部分策略業務單位已開始應用大型語言模型，協助撰寫簡報、意見書和演講稿，再由人手編輯和修訂。

With multiple new or redeveloped HA hospitals scheduled to open in the coming years, we have begun arrangements to meet the anticipated peak in manpower demand. Recruitment of operation and maintenance staff has ramped up through multiple channels, including hiring more Technician Trainees and retired colleagues and creating new ranks to incentivise Non-Civil Service Contract staff.

To sharpen our health sector capabilities, two diploma courses, one for biomedical engineering technicians and the other for hospital engineering technicians, were launched in partnership with the University of Hong Kong's School of Professional and Continuing Education in the first quarter of 2025. We also conducted training on steam boiler installation in February 2025, with plans to incorporate more I&T elements to attract younger colleagues.

To further enhance the quality of our hospital maintenance services, we successfully extended the certification scope of our ISO 13485 Quality Management System to include operating theatre and sterilisation equipment. At the departmental level, we achieved our first-ever ISO 27701 Privacy Information Management System certification, covering the new eSurvey platform and selected workflow systems involving personal data collection.

I&T offers great potential for internal workflow enhancement. Further to the successful migration of all paper-based biomedical equipment maintenance forms to the Biomedical Engineering Services (BES) e-form platform in 2023, we are now planning to pilot the integration of the paper-based maintenance forms for operating theatre and sterilisation equipment onto the BES e-form platform in 2025 for higher efficiency and paperless reporting.

Meanwhile, we are now developing a Tender Assessment Assistance System, an e-platform system designed to shorten the duration of tender preparation and assessment, thereby boosting staff productivity. Some SBUs have begun using Large Language Models to assist in drafting presentations, submissions and speeches for subsequent manual editing and refinement.

bsi.

Certificate of Registration

QUALITY MANAGEMENT SYSTEM - ISO 13485:2016

This is to certify that: Electrical and Mechanical Services Department, 3 Kai Shing Street, Kowloon Bay, Kowloon, Hong Kong

Holds Certificate Number: MD 735079

and operates a Quality Management System which complies with the requirements of ISO 13485:2016 for the following scope:

Provision of maintenance services of medical electrical equipment/systems for public hospitals delivered by EMSD HSO workshops.

For and on behalf of BSI: Graeme Tunbridge, Senior Vice President Global Regulatory & Quality

Original Registration Date: 2023-01-27 Effective Date: 2024-03-27

Latest Revision Date: 2025-01-23 Expiry Date: 2027-01-26

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...making excellence a habit.™

我們的ISO 13485品質管理系統認證範圍已成功擴展至手術室和消毒設備。此外，我們計劃把這些設備整合至醫療儀器維修表格電子平台，以提供優質的維修保養服務。

The certification scope of our ISO 13485 Quality Management System has been successfully extended to include operating theatre and sterilisation equipment. Also, we plan to integrate the equipment into the BES e-form platform to provide high-quality maintenance services.

Certificate HK25/00000107

SGS

The management system of

The Information Technology Strategic Support Sub Division (ITSSSD) of Electrical and Mechanical Services Department (EMSD)

ITSSSD, 6/F, 3 Kai Shing Street, Kowloon Bay, Kowloon, Hong Kong

has been assessed and certified as meeting the requirements of

ISO/IEC 27701:2019

For the following activities

The Scope of Registration appears on page 2 of this certificate

This certificate is valid from 05 June 2025 until 04 June 2028 and remains valid subject to satisfactory surveillance audits.

Issue 1. Certified since 05 June 2025

L. Moran

Authorised by:

Liz Minier

Business Manager

SGS United Kingdom Ltd

Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK

(+44-0151) 350-6000 – www.sgs.com

IAF

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機電署已取得ISO 27701隱私資訊管理系統認證，涵蓋全新的電子問卷平台和其他工作流程系統，確保個人資料安全，並加強網絡安全防禦能力。

The EMSD has attained ISO 27701 Privacy Information Management System certification, which covers the new eSurvey platform and other workflow systems, ensuring personal data security and strengthening our cybersecurity defence capabilities.

維修政府車輛 肩負使命與責任
MAINTAINING GOVERNMENT VEHICLES SHOULDERING MISSION AND RESPONSIBILITY

保安及車輛工程部為超過九成的政府車輛提供維修服務。要確保行車安全和服務質素，背後少不了一羣技藝純熟的技術人員，其中包括二級技術員謝俊傑(阿傑)。阿傑在為期四年的學徒訓練中默默耕耘，曾在職業訓練局舉辦的「2024最佳汽車學徒比賽」中榮獲「汽車機械 / 電工」組別冠軍。

The Security and Vehicle Services Division provides maintenance services for over 90% of government vehicles. To ensure road safety and service quality, it relies on a team of skilled technicians. Mr Tse Chun-kit (Kit), a technician II, is one of them. Diligently completed the four-year apprenticeship, Kit was the Champion in the Vehicle Mechanic/Electrician Group in the 2024 Best Apprentice Competition organised by the Vocational Training Council.

阿傑在2020年加入機電署，成為汽車見習技術員。他表示，早在中三時已有意投身汽車維修行業，惟未能如願報讀相關課程。直到中六畢業，得知機電署開辦技術員訓練計劃，便決定報名。「機電署訓練計劃最大的吸引力，在於能接觸不同類型的政府車輛，這是一般學徒訓練計劃難以提供的寶貴機會。」

學徒訓練初期，阿傑被派往寶馬汽車(香港)有限公司實習。當時的他猶如一張白紙，面對陌生環境，一度萌生放棄念頭。幸而他堅持下來，細心觀察，並向師傅虛心請教，終於逐步掌握維修汽車的技巧。在師傅指導下，他能獨自完成更換機油和磨損零部件，以及維修引擎和底盤等工作。完成14個月實習後，他回到機電署，專注學習維修救護車。

阿傑認為，雖然救護車配備閃燈，而一般車輛則沒有，但從技術角度來看，兩者在維修方面並無太大差異。真正的分別，在於他對維修救護車多了一份責任感。他說：「救護車是救命工具，運送病人途中若發生故障，後果不堪設想。全港市民都有機會使用救護車，你無法預料你的親人會否登上救護車。」正因如此，機電署為救護車零部件設定使用期限，定期更換，這與私家車在出現故障時才更換零部件的做法截然不同。

阿傑完成機電署的實習後，再獲派往斯堪尼亞(香港)有限公司學習重型貨車維修技術。歷經多方面的汽車維修訓練，他獲機電署提名參加「2024最佳汽車學徒比賽」。備賽期間，他學習處理較複雜的汽車故障情況，進一步提升維修技能。最終成功奪冠，阿傑視此為對其四年來努力的肯定。

雖然學徒訓練已經結束，但學習汽車維修永不止步。阿傑說：「汽車技術發展一日千里，電動車和新能源汽車不斷推陳出新，我們必須時刻更新知識，提升技能，才能跟上行業步伐。」

Kit joined the EMSD in 2020 as a vehicle technician trainee. He shared that he intended to enter the vehicle maintenance industry since Secondary three, but was unable to enrol in a relevant course at that time. After completing Secondary six, he learned about the EMSD's Technician Training Scheme and decided to apply. "The biggest appeal of EMSD's training scheme is the opportunity to work on various types of government vehicles, a valuable experience normally not available in other apprenticeship schemes."

At the beginning of his apprenticeship, Kit was assigned to the BMW Concessionaires (Hong Kong) Limited for practical training. He was like a blank slate, and the unfamiliar environment once made him consider giving up. Yet, he persevered. By observing carefully and humbly seeking guidance from his mentor, he gradually mastered the skills of vehicle maintenance and repair. Under the guidance of his mentor, he was able to independently perform tasks such as engine oil changing, replacing worn parts and repairing engines and chassis. After 14 months of training, he returned to the EMSD, where he specialised in ambulance maintenance.

Kit noted that although ambulances are equipped with flashing lights while general purpose vehicles are not, there is not much difference in their maintenance from a technical perspective. The real difference lies in his sense of responsibility when working on ambulance maintenance. He said, "Ambulances are life-saving tools. If a malfunction occurs while transporting a patient, the consequences could be dire. Every citizen in Hong Kong may need an ambulance, you never know if your loved ones may be on board one day." For this reason, the EMSD sets a limit on the service life of the parts of ambulances and replaces them regularly, unlike the practice for private cars of which the parts are usually replaced only when they are faulty.

Upon completion of his internship at the EMSD, Kit was rotated to Scania (Hong Kong) Limited to acquire the skills of maintaining heavy goods vehicles. Having received various training in vehicle maintenance, he was nominated by the Department to participate in the 2024 Best Apprentice Competition. When preparing for the competition, he studied how to handle more complicated vehicle faults, further honing his skills in vehicle maintenance. Ultimately, he won the Champion in the competition, which he saw as a recognition of his efforts over the past four years.

Though his apprenticeship has concluded, learning vehicle repair is a lifelong journey. "Automobile technology is evolving rapidly. With the constantly emerging electric and new energy vehicles, we must continuously update our knowledge and skills to keep pace with the industry," said Kit.

企業管理
CORPORATE STEWARDSHIP

2024/25年度對機電署來說是成果豐碩的一年。我們在運用人工智能等創新科技(創科)提升工作效率方面取得長足進展，同時也堅守原則，盡心盡力提供公共服務。這一年亦是我們推行營運基金第三個五年策略計劃(第三個計劃)的第二個年頭。我們朝着「機電3.0 — 智能機電」的願景和「加強多方協作，運用創新科技，創造公眾價值，同心建社惠民」的企業目標邁進，進展良多。

營運基金自1996年成立以來，發展成績有目共睹。從早期掙扎求存，到轉型蛻變為以客為本的機構，營運基金現已成為政府的「創新促成者」，並在推動創科與連繫各持份者方面發揮先導作用。我們期待明年與所有客戶和持份者一同慶祝營運基金成立30周年。

The year 2024/25 was fruitful for the EMSD as we made major strides in leveraging innovation and technology (I&T), such as artificial intelligence (AI), to advance our work while staying principled in our commitment to public service. It also marked the second year of the EMSTF's third Five-year Strategic Plan (the third Plan), during which we made solid progress towards the vision of "E&M 3.0 – Intelligent E&M" and the corporate goal of "creating public value for community betterment together through strengthening collaboration between various parties and leveraging innovation and technology".

Since its establishment in 1996, the EMSTF has come a long way. From struggling for survival in the early years to undergoing a phase of customer-focused transformation and growth, it has now emerged as an Innovation Facilitator for the Government and a pioneer in I&T initiatives and stakeholder engagement. We look forward to celebrating the 30th anniversary of the EMSTF together with all our clients and stakeholders next year.

客戶服務更臻卓越

營運基金年內一項重要成就是客戶滿意度續創佳績，在2024年年底進行的兩年一度客戶意見調查顯示，以8分為滿分計，客戶滿意指數達7.27分，整體服務競爭力指數達7.38分，雙雙創下歷來新高。是次調查回覆率高達64%，我們正積極跟進調查識別出需予改善的地方，以進一步提升服務質素。

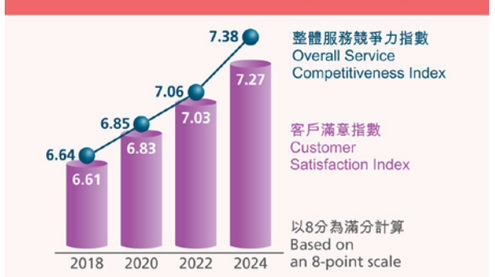
我們應用各項創科方案持續提升服務效率。舉例來說，我們於2024年10月推出「幫緊你維修」流動應用程式，方便客戶網上提交維修保養要求和查詢進度，標誌着客戶服務數碼化的里程碑。未來我們計劃引入人工智能語音機械人系統，自動回應公眾查詢和客戶故障報告。

ENHANCING CUSTOMER SERVICE EXCELLENCE

A key achievement of the EMSTF during the year was record-high customer satisfaction. The biennial Customer Opinion Survey (COS) conducted in late 2024 showed a Customer Satisfaction Index of 7.27 and an Overall Service Competitiveness Index of 7.38 on an 8-point scale, both marking historic highs. With an impressive 64% response rate, the COS identified areas for continuous improvement, which we are actively addressing to further enhance service quality.

We have applied an array of I&T solutions to continuously improve our service efficiency. For example, in October 2024, we launched the EMSD Client Portal, a mobile application (app) for convenient online submission of maintenance requests and progress tracking by clients. It marks a milestone in the digitalisation of our customer service capabilities. Future plans include incorporating an AI-powered voicebot system to address public enquiries and clients' fault reports automatically.

2024年客戶意見調查 Customer Opinion Survey 2024



2024年客戶意見調查顯示，客戶滿意指數、整體服務競爭力指數和回覆率均創歷年新高，成績令人鼓舞。

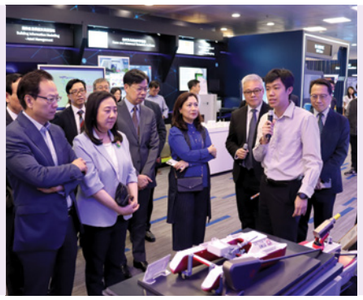
The Customer Opinion Survey 2024 yielded impressive results, with the Customer Satisfaction Index, Overall Service Competitiveness Index, and response rate all hitting record highs.

我們在2024年10月舉行第三個計劃策略工作坊，探討如何應用新質生產力的概念，加快推展計劃下的策略行動。

We held the third Plan Strategic Workshop in October 2024 to explore how the concept of new quality productive forces could be applied to accelerate the implementation of various strategic tasks under the Plan.

我們推出「創科之旅」活動，讓有興趣的學校和機構組團參觀機電署總部大樓的「機電創科專區」，了解本署的創科成果。年內我們為客戶部門舉辦14次「創科之旅」，超過250人參與。

We launched the InnoTours programme for visiting groups from interested schools and organisations to tour around the InnoZone at the EMSD Headquarters Building, where they could learn about our I&T achievements. During the year, 14 InnoTours were organised for client departments, with over 250 participants.



為協助客戶應用更多創科方案，我們舉辦了14次「創科之旅」，邀請超過250名客戶部門代表參觀機電署總部大樓的「機電創科專區」，向他們展示機電署與學術及科研機構合作成功開發的多個創科項目。

我們更主動接觸客戶，並舉辦專題研討會，以深入了解客戶的創科需要和日常營運遇到的問題。例如，我們於7月與香港機場管理局(機管局)在機場行政大樓合辦2024年機管局創新與科技交流會。機電署代表在會上與百多位機管局員工和持份者分享署方獲獎的創科項目和實踐經驗。

此外，「機電創科網上平台」新增的「機電創科彙集」已於2024年7月正式推出，詳細介紹機電署成功試驗且具產業化潛力的創科項目，為有意推行數碼化的客戶提供實用參考。

To support clients' adoption of more I&T solutions, we organised 14 InnoTours to our E&M InnoZone at the EMSD Headquarters for more than 250 participants from client departments, and showcased various successful I&T projects developed in collaboration with academic and research institutions.

Besides, we actively engaged with clients and held in-depth seminars to better understand their I&T needs and pain points in daily operations. For instance, we co-organised with the Airport Authority Hong Kong (AAHK) the AAHK Innovation and Technology Seminar 2024 in July at the Hong Kong International Airport Tower, where EMSD representatives shared our award-winning I&T projects and implementation experiences with over 100 AAHK staff members and stakeholders.

Moreover, the E&M InnoCatalogue, a new feature on our E&M InnoPortal, was officially launched in July 2024. It provides detailed information on EMSD-piloted I&T projects with commercialisation potential, serving as a practical reference for clients in their digitalisation initiatives.

2024年，我們舉辦三場創新技術應用研討會暨工作坊，向客戶推廣人工智能、機械人、無人機和「機電裝備合成法」等不同創科應用方案。

In 2024, we organised three seminars cum workshops on the application of innovative technologies to promote various I&T solutions to our clients, such as AI, robotics, drones and MiMEP.

獎項與嘉許

年內，我們的策略業務單位憑藉創科項目的卓越成果，榮獲多個本地和國際獎項。此外，機電署員工和企業支援單位在公共服務、專業成就、創科發展和知識管理方面也屢獲殊榮。

Awards and Accolades

During the year, our Strategic Business Units (SBUs) won numerous local and international awards for their outstanding I&T project achievements. EMSD staff and corporate support units also garnered multiple awards in public service, professional achievement, I&T development and knowledge management.

前機電署署長彭耀雄先生獲頒授銀紫荊星章，以表揚他多年來盡心竭力為政府和香港市民服務，表現傑出。此外，署內三位人員獲頒2024年公務員事務局局長嘉許狀，以表揚他們對部門的卓越貢獻；一位前總工程師獲頒2024年行政長官公共服務獎狀，以嘉許其傑出表現；另有兩位人員榮獲2024年申訴專員嘉許獎公職人員獎，以表彰其在客戶服務方面的優秀表現。

Mr Pang Yiu-hung, former Director of Electrical and Mechanical Services, was awarded the Silver Bauhinia Star in recognition of his dedicated service to the Government and Hong Kong community over the years. Additionally, three EMSD officers were honoured with the Secretary for the Civil Service's Commendation Award 2024 for their excellent contributions to the Department, while one former Chief Engineer was awarded the Chief Executive's Commendation for Government/Public Service 2024 for his outstanding performance. Two colleagues received the Ombudsman's Awards 2024 for Officers of Public Organisations in recognition of their excellent customer service.

部門多位年輕員工也因其專業成就而獲獎。一位見習技術員在職業訓練局（職訓局）舉辦的2024年傑出菁英練習生獎勵計劃榮獲傑出菁英練習生獎，另有兩位見習技術員獲得優異菁英練習生獎。此外，一位見習工程師奪得香港工程師學會的2024年傑出見習工程師獎第三名，而另一位工程師則憑藉在「ChillStream®」項目的貢獻，在工程及科技學會香港分會的2024年青年科技專才展覽及比賽中贏得公開組亞軍。

Younger colleagues also won awards for their professional achievements. One EMSD Technician Trainee (TT) received the Outstanding Apprentice Award and two TTs received the Merit Apprentice Award in the Outstanding Apprentice Award Scheme 2024 organised by the Vocational Training Council (VTC). One of our Engineering Graduates won the Third Prize of the Trainee of the Year Award 2024 organised by the Hong Kong Institution of Engineers, while one engineer was the First Runner-up in the Open Section of the Young Professionals Exhibition and Competition 2024 organised by the Institution of Engineering and Technology Hong Kong for her contribution to the ChillStream® project.

其中一個企業支援單位負責的「革新機電項目交付方法」可行性研究項目，旨在探討建築資產生命周期中應用開放式建築信息模擬（open BIM）技術。該項目在2024年6月率先奪得「2024年香港開放式建築信息模擬/開放式地理信息系統比賽」的「技術解決方案組別」大獎，繼而在幾個試驗場地獲進一步證明相關方法和自動化工具屬切實可行後，便以「改變機械、電氣和管道項目交付方法」為題發表研究成果，並於10月在摩洛哥榮獲buildingSMART International的「openBIM Awards 2024」「項目交付組別」大獎。這是香港特別行政區政府（特區政府）在該項國際賽事贏得的首個大獎，彰顯我們在機電資產管理和交付工作流程應用open BIM技術的實力。

A feasibility study project titled "Revolutionising Handover Practices for E&M Projects" undertaken by one of our corporate units, exploring the use of open BIM (Building Information Modelling) in the built asset life cycle, first won the Grand Award in the Technology Solution Category of the Hong Kong openBIM/openGIS Awards 2024 in June 2024. Followed by further validation of the methodology and automation tools at trial venues, its findings were presented under the title "Transforming MEP Project Handover Practices". The project then received the Grand Award in the Handover Category of the openBIM Awards 2024 organised by buildingSMART International in October in Morocco. This marks the first grand award won by the Hong Kong Special Administrative Region Government (HKSAR Government) in this international competition, recognising our open BIM capabilities in E&M asset management and handover workflow.

在傑出菁英練習生獎勵計劃頒獎典禮上，本署時任見習二級技術員（空氣調節）陳彥霖女士（右二）獲頒發傑出菁英練習生獎，並分享其受訓經歷。

At the Outstanding Apprentice Award Presentation Ceremony, Miss Chan Yin-lam (2nd right), then Technician Trainee II (Air-conditioning), received the Outstanding Apprentice Award and shared her training experience.

生物醫學工程師葉子慇女士（左）憑藉「ChillStream®」項目在2024年青年科技專才展覽及比賽中獲得公開組亞軍。

Ms Ip Tsz-yan, Jenny (left), a biomedical engineer, won the 1st Runner-up in the Open Section of the Young Professionals Exhibition and Competition 2024 with the ChillStream® project.

知識管理是第三個計劃的策略行動之一。我們很榮幸於2024年10月獲得2024年香港最具創新力知識型機構大獎，再於2025年1月獲頒2024年全球最具創新力知識型機構大獎。這些獎項肯定了我們運用企業知識管理開發創新方案和提供優質服務方面的成就。

Knowledge management is one of the strategic tasks in the third Plan. We were honoured as the Winner of the Hong Kong Most Innovative Knowledge Enterprise (MIKE) Award 2024 in October 2024, followed by the Global MIKE Award 2024 in January 2025. Both awards highlighted our achievements in leveraging enterprise knowledge management to develop innovative solutions and deliver superior services.

機電署連續三年榮獲香港最具創新力知識型機構大獎和全球最具創新力知識型機構大獎，充分印證部門在推動創新文化和知識管理方面的努力與成果，備受本地和國際肯定。

The EMSD has received the Hong Kong MIKE Award and the Global MIKE Award for three consecutive years, a testament to our effort and achievements in fostering innovation culture and knowledge management, gaining recognition both locally and internationally.

優化內部程序和工作流程

此外，我們一直善用創科以簡化和改善主要辦公室職能的工作流程。年內的一個例子，是我們繼在2021/22年度成功為專業職系推出電子評核系統後，把該系統擴展至督察和技術主任職系。另一例子是我們全面採用電子方式招聘合約工程師（機電），以配合電子政府政策，推行服務數碼化。這項安排可縮短處理職位申請的時間，並提高資料保存的準確度，從而提升整體招聘效率。與此同時，我們已全面改革現有的工程監督系統，推出機電署數碼工程監督系統，以減少人手錯誤，杜絕紙本流程所引致的延誤。新系統具備實時數據追蹤功能，實現工程監督數碼化，並簡化工作流程，協助員工迅速作出明智的決定。

OPTIMISING INTERNAL PROCESSES AND WORKFLOWS

We have also been leveraging I&T to streamline and improve the workflows of major office functions. An example this year was the extension of the e-appraisal system to Inspectorate and Technical Officer grades, building on its successful implementation for Professional grades in 2021/22. Another example was the full adoption of e-application for the recruitment of Contract Engineers (Electrical and Mechanical) in support of service digitalisation under the e-Government initiatives. This arrangement has shortened the processing time for job applications and improved accuracy in data maintenance, leading to greater recruitment efficiency. Meanwhile, we have overhauled the existing works supervision system with the launch of the EMSD's Digital Works Supervision System to minimise manual errors and eliminate delays caused by paper-based processes. Featuring real-time data tracking, the new system digitalises supervision and streamlines workflows for faster and better decision-making.

高效的採購和物料管理等後勤支援服務，有助策略業務單位為客戶提供更佳服務。我們持續革新物料管理工作流程，並於2025年3月推出全新的常用物料管理系統。此外，我們計劃在2025年第三季實施經改良的採購訂單和物料流動程序，優化現有工作流程和避免重複作業。我們亦正設計新的採購流程系統，能自動輪流邀請相關供應商並進行數碼化審批，預計於2025/26年度推出。

Effective procurement and stores management in logistics support can facilitate our SBUs in serving clients better. We have been innovating the stores management workflow, culminating in the launch of a new Working Stores Management System in March 2025. Besides, an enhanced set of purchase order and goods movement processes aiming to optimise the existing workflow and eliminate repetition is scheduled to be operational in the third quarter of 2025. We are also designing a new Procurement Workflow System for automatic supplier selection by rotation and digital approvals, scheduled for launch in 2025/26.

堅守原則

儘管我們借助創科取得良好進展，並掌握眾多機遇，但我們一如既往恪守安全、誠信和承擔等公共服務重要原則，其中，我們高度重視數據安全和保障私隱。

數據安全

為符合特區政府最新的資訊保安要求，我們迅速研發並推出替代工具和系統，以加強員工、客戶和承辦商之間的溝通安全，例子包括「EMSD Messenger」和「顧客為本電子平台留言版」，兩者提供了安全的渠道，分別用於部門內部溝通和與承辦商溝通，數據均儲存在機電署的內部伺服器。另一例子是「大型檔案共享平台」，這個安全平台用作與外部人士分享檔案，並具備嚴密的保安功能，例如數據加密、雙重身分驗證和自動刪除數據功能，確保符合相關的資料保存政策。

我們也推出了電子問卷平台，讓機電署員工透過部門的內聯網，安全地建立專業的電子表格和問卷，然後發布到互聯網上收集數據。這個安全平台無需使用公共雲端服務來儲存敏感資料，並具備靈活問卷設計、即時數據收集、實時數據存取和自動分析工具等功能，不但符合政府的保安規約，用途亦非常廣泛，由籌辦活動以至管理巡查記錄等都能大派用場。

誠信至上

本署不遺餘力向員工推廣誠信，提高他們對貪污風險的警覺。政府於2024年6月頒布更新版《公務員守則》後，我們為員工安排多場簡介會，廣泛宣傳該守則。部門除了經常透過員工通訊和電郵向全體人員強調誠信和防貪原則外，還定期為員工和承辦商舉辦有關防貪的入職課程、研討會和培訓。我們還實行每五年的誠信培訓周期，為負責採購物料、服務及選擇承辦商的人員，以及負責監督和管理顧問公司、承辦商和供應商的人員，提供誠信複修課程。

STAYING PRINCIPLED

While we have made good progress and seized numerous opportunities with the aid of I&T, we stay true as always to important principles of public services such as security, integrity and commitment. A case in point is data security and privacy protection, which we take very seriously.

Data Security

To comply with the HKSAR Government's latest information security requirements, we have promptly developed and launched alternative tools and systems to strengthen secure communication among staff, clients and contractors. Examples include the EMSD Messenger and the Customer Centric e-Platform Message Board, both of which provided a secure means for internal communication and interactions with contractors, with data stored on the EMSD on-premise servers. Another example is the Easy Sharing System, a secure platform for file sharing with external parties built with robust security features such as data encryption, two-factor authentication and automated data erasure to ensure compliance with relevant data retention policies.

We have also launched the eSurvey platform for EMSD staff to create professional electronic forms and surveys securely via the Departmental Intranet and then publish them online for data collection. This secure platform, which eliminates reliance on public cloud services for storing sensitive information, features functions like flexible questionnaire design, instant data collection, real-time data access and automated analysis tools, making it ideal for applications ranging from organising events to managing inspection records, all while adhering to government security protocols.

Integrity First

We spare no effort in promoting integrity among staff and raising their awareness of corruption pitfalls. Following the Government's promulgation of the updated Civil Service Code in June 2024, we arranged a number of briefing sessions for staff to ensure the widest dissemination of the Code. In addition to frequent communication with all staff via newsletters and emails emphasising integrity and anti-corruption principles, we regularly conducted induction programmes, seminars and training on corruption prevention for both staff and contractors. We have also adopted a five-year integrity training cycle that offers refresher courses to officers responsible for procurement of stores, services and contractors, as well as those overseeing the supervision and management of consultants, contractors and suppliers.

我們安排員工參觀國家安全展覽廳，提升他們對國家發展和國家安全的認識。

We arranged visits for staff to the National Security Exhibition Gallery to enhance their understanding of national development and national security.

提高國家安全意識

國家安全始終是重中之重。為履行這項承諾，機電署署長於2024年12月率領部門高層管理人員，參觀香港歷史博物館的國家安全展覽廳，以加深對國家安全事宜的了解和認識。此外，我們定期安排參觀活動，確保所有機電署公務員遵守公務員事務局的規定，於2026年年底前至少參觀展覽廳一次。

Raising National Security Awareness

National security remains a top priority. To reinforce this commitment, the Director of Electrical and Mechanical Services led senior management in a visit to the National Security Exhibition Gallery at the Hong Kong Museum of History in December 2024 for a deeper understanding and awareness of national security issues. Furthermore, regular visiting sessions have been scheduled to ensure that all civil servants of the EMSD comply with the requirement of the Civil Service Bureau (CSB) to visit the Gallery at least once by the end of 2026.

人才與青年發展

招聘與培訓

「建構創新卓越團隊」是第三個計劃提出的其中一項策略。有見人力市場競爭激烈，我們加快了見習工程師的整體招聘流程，並於2025年年中有條件錄取優秀求職者。此外，部門於2024年就技工招聘工作推行試驗計劃，容許即將完成正式學徒訓練的申請人在同年的招聘活動中申請相關技工職位。此舉既可擴大人才庫，又能提升員工士氣。

去年，我們在香港和粵港澳大灣區(大灣區)舉辦了多個技術和專業培訓課程。在與大灣區機構聯合培訓方面，例子有2024年4月與廣州市技師學院合辦的低壓電工特種作業培訓班，共有22名機電署技術人員到廣州參與為期13天的培訓課程。

TALENT AND YOUTH DEVELOPMENT

Recruitment and Training

"Building an innovative and excellent work team" is one of the strategies outlined in the third Plan. In view of the competitive manpower market, we have expedited the overall process of the Engineering Graduate recruitment exercise, making conditional offers to top candidates in mid-2025. A trial scheme was also launched for Artisan recruitment in 2024, under which candidates approaching completion of full apprenticeship may apply for relevant Artisan posts in the recruitment exercises of the same year. This initiative has enlarged the talent pool and boosted staff morale.

The past year saw plenty of our technical and professional training programmes in Hong Kong and the Guangdong-Hong Kong-Macao Greater Bay Area (GBA). As for joint training with GBA entities, an example was the Training Course on Special Operation for Low Voltage Electrical Installation, co-organised with the Guangzhou Technician College in April 2024, where 22 EMSD technical officers took part in a 13-day training course held in Guangzhou.

2024年7月至8月，本署訓練組聯同廣州四間技術員培訓學院舉辦有關空調製冷、電氣工程、屋宇裝備和電動車的實操培訓班，內容涵蓋技術課程、參觀企業和文化交流活動。

Between July and August 2024, our Training Unit collaborated with four technician training colleges in Guangzhou to organise practical training courses on refrigeration and air-conditioning, electrical works, building services and electric vehicles. The courses covered technical sessions, company visits and cultural exchange activities.

自機電署在2018年和2020年與廣州市人力資源和社會保障局簽署兩份合作備忘錄，以促進兩地的機電培訓合作以來，本署許多人員已參加廣州各個技術員培訓學院開辦的培訓課程。2024年，共有68名機電署見習技術員在廣州接受培訓，內容涵蓋空調製冷、電氣工程、屋宇裝備和汽車維修等專業。

Since the signing of two Memoranda of Co-operation (MoC) between the EMSD and the Guangzhou Municipal Human Resources and Social Security Bureau in 2018 and 2020, aiming to deepen collaboration on E&M training in both places, many EMSD officers have participated in training courses provided by various technician training colleges in Guangzhou. In 2024, a total of 68 TTs of the EMSD received training covering professional fields like refrigeration and air-conditioning, electrical works, building services and vehicle maintenance in Guangzhou.

我們也舉辦交流活動，例如2024年10月獲廣東省科學技術協會支持的大灣區創科考察團。該活動由機電署與灣仔民政事務處合辦，共有170名來自香港12間學校的學生參加，參觀廣東省東莞市的創科設施，讓學生有機會了解國家的最新發展，並探討應用相關科技提升本地社區生活質素的可行性。

另一亮點是我們於2024年首次與清華大學經濟管理學院合作，在深圳舉辦兩個為期三天的首長級人員管理培訓課程。該課程提供有關創科、碳中和與先進管理策略的寶貴見解，大大增進學員對內地和大灣區新興趨勢的認識。兩個課程共有85名來自機電署及其他工務部門的首長級人員參與，彰顯他們對持續學習和卓越領導的承諾。

青年發展

青年發展對機構的成長和可持續發展至關重要。我們繼續參與一年一度的「機電．啟航」活動，鼓勵年輕人加入本地機電業。「機電．啟航」2024迎新典禮於2024年11月假香港會議展覽中心舉行，約有1 100名青年才俊和業界代表出席，人數創下新高。

Exchange activities were also arranged, including the GBA I&T study tour in October 2024 supported by the Guangdong Association for Science and Technology. Jointly organised by the EMSD and Wan Chai District Office, the tour brought together 170 students from 12 Hong Kong schools to visit I&T facilities in Dongguan, Guangdong Province, from which they gained understanding of the latest developments of our country and explored the feasibility of applying relevant technologies to enhance quality of life in local communities.

Another highlight was our first collaboration with the Tsinghua University's School of Economics and Management to deliver two three-day management training programmes for directorate officers in Shenzhen in 2024. The programme provided valuable insights into I&T, carbon neutrality and advanced management strategies, significantly enriching the participants' understanding of emerging trends in the Mainland and the GBA. A total of 85 directorate officers from the EMSD and other works departments participated, underscoring their commitment to continuous learning and leadership excellence.

Youth Development

Youth development is vital to organisational growth and sustainability. We continued to participate in the annual "E&M GO!" event to encourage young people to join the E&M industry of Hong Kong. The "E&M GO!" orientation ceremony 2024, held in November 2024 at the Hong Kong Convention and Exhibition Centre, drew a record attendance of about 1 100 young talents and trade representatives.

機電署聯同香港機電業推廣工作小組舉辦「機電．啟航」2024迎新典禮，以吸引年輕人投身機電業。

The EMSD, together with the Hong Kong Electrical and Mechanical Trade Promotion Working Group, held the "E&M GO!" orientation ceremony 2024 to attract young people to join the E&M industry.

第47屆世界技能大賽(世賽)於2024年9月在法國里昂舉行，機電署兩名年輕見習技術員分別參加「空調製冷」和「電氣安裝」項目比賽。另有一名年輕見習技術員是世賽香港代表選拔賽「汽車噴漆」項目中三名優勝者之一，我們安排他跟隨代表團觀摩高技術參賽者在世界級賽事中的優秀表現，藉此激勵其他新晉見習技術員努力奮鬥，參與將來的世賽。全賴廣州的合作備忘錄伙伴鼎力支持，與我們緊密合作提供培訓，見習技術員得以大幅提升技能水平，同時拓展國際視野。

Two of our young TTs competed in the Refrigeration and Air Conditioning and Electrical Installations trades respectively at the 47th WorldSkills Competition held in Lyon, France in September 2024. We also arranged for another young TT, one of the three winners of the Car Painting trade in the WorldSkills Hong Kong Competition, to accompany the delegation and observe the outstanding performances of highly skilled candidates in world-class competitions – a gesture of encouraging other new TTs to strive hard and participate in future WorldSkills Competitions. Thanks to our MoC partner in Guangzhou for their close collaboration with us on the provision of training, our TTs have greatly elevated their technical skills while broadening their global perspective.

同樣值得一提的，是我們參與了公務員事務局自2019年起舉辦的非華裔學生政府部門實習計劃。2024年的非華裔實習生來自厄瓜多爾，現於嶺南大學修讀數據科學，她獲安排在營運基金策略業務單位工作，協助開發「ChillStream®」人工智能項目。

Also worth mentioning was our participation in the Internship Programme for Non-ethnic Chinese (NEC) Students organised by the CSB since 2019. In 2024, an NEC intern from Ecuador currently studying data science at the Lingnan University, was assigned to an SBU of the EMSTF where she contributed to the development of the ChillStream® AI project.

與此同時，我們的機電青年發展委員會於2024年7月慶祝成立一周年。委員會繼續透過舉辦青年分享會，探討網絡安全和氣候變化等議題，推動青年發展工作。委員會也提名年輕員工到內地交流，例如參與2024建造業青年大灣區交流計劃。

Meanwhile, our E&M Youth Development Committee celebrated its first anniversary in July 2024 and continued to promote youth development through sharing sessions on topics such as cybersecurity and climate change. The Committee also nominated young staff for Mainland exchange activities, including the Construction Youth Exchange Programme in GBA 2024.

來自厄瓜多爾的非華裔學生(左二)在機電署進行為期八星期的實習，期間到政府化驗所參觀。

An NEC student from Ecuador (2nd left) completed an eight-week internship at the EMSD, and visited the Government Laboratory during her internship.

年青員工在2024年7月至8月參加由建造業議會舉辦的2024建造業青年大灣區交流計劃，到訪五個大灣區城市的建築和科技企業，其後在「青年交流平台」活動與部門同事分享所見所聞。

Young staff members participated in the Construction Youth Exchange Programme in GBA 2024 organised by the CIC from July to August 2024. They visited construction and technology enterprises in five GBA cities and subsequently shared their insights with department colleagues at the Youth Exchange Platform event.

工作環境滿關懷

機電署致力為全體員工提供關愛和健康的工作環境。我們於2024年8月在部門內聯網引入電子賀卡系統，促進員工之間的關懷和讚賞文化。此外，機電署的「E&M Connect」流動應用程式亦提供其他便捷工具，例如個人電腦支援平台、員工食堂電子訂餐，以及讓員工自行重設其機電署電腦開機帳戶密碼的功能。

為提倡自學風氣，我們於2024年12月推出線上學習平台，提供豐富教材，例如課後測驗和課程內容評估。員工可透過「E&M Connect」流動應用程式開設帳戶，登入平台以善用學習資源和技術資訊，以支援日常工作。

A Caring Workplace

The EMSD strives to provide a caring and healthy workplace for all staff. In August 2024, we introduced the e-Card system on our Departmental Intranet to foster a culture of care and appreciation among staff members. Besides, the EMSD mobile app, E&M Connect, also features a suite of convenient tools including personal computer help desk platform, staff canteen electronic ordering, and EMSD staff domain account password self-service reset function.

To encourage continuous self-learning, we launched an online learning platform in December 2024, offering comprehensive materials, such as post-course tests and curriculum assessments. By creating an account on the E&M Connect app, staff can access to these learning resources and technical information on the platform to support their daily work.

另一項新舉措，是我們於2025年3月在「E&M Connect」流動應用程式內推出「數碼員工天地」，方便員工發表意見並獲得回饋，讓員工能快捷、雙向地參與部門事務。這數碼空間與總部大樓地下大堂現有的實體「員工天地」相輔相成。

為了提供更多戶外空間予員工休憩，我們在防水翻新工程期間，改造總部大樓二樓和七樓的戶外區域，並於2025年1月重新開放給員工使用。二樓現配置講台和音響系統，供策略業務單位舉辦活動，並大幅擴大禁煙區範圍，方便員工在戶外進行小型會議和討論，締造舒適的共享工作空間。我們會在2025年6月至7月進一步綠化七樓的戶外空間，添置植物和花卉。

我們持續提供其他員工福利服務和活動，包括員工輔導熱線和不同講座，探討工作與生活平衡的課題，例如家庭生活教育、壓力管理和靜觀練習。我們也舉辦各式各樣的康體活動和比賽，涵蓋遠足、龍舟、足球、乒乓球、羽毛球和樂器等，供有興趣的員工參加。

部門員工也積極參與社區和慈善服務，其中一名服務社區長達25年的義工人員，更於公務員事務局2024年公務員義工嘉許計劃中獲頒卓越義工獎（銅獎）。

Another new initiative is the Digital Staff Corner launched on the E&M Connect app in March 2025, which enables staff to share their views and receive feedback, facilitating speedy, two-way staff engagement in departmental affairs. This digital space complements the existing physical Staff Corner at the Headquarters Building's ground floor lobby.

To provide more outdoor space for staff relaxation, we revamped the second and seventh-floor outdoor areas of the Headquarters Building during the waterproofing overhaul. Both refurbished spaces reopened to staff in January 2025. The second floor is now equipped with a podium and sound system for SBU activities, along with a significantly expanded non-smoking zone. These improvements allow staff to hold small-scale meetings and discussions outdoors, creating an enjoyable co-working space. The outdoor areas on the seventh floor will be further beautified with greenery and flowers between June and July 2025.

We continued to arrange for staff wellbeing services and activities, including a staff counselling hotline, and various seminars on work-life balance topics covering family life education, stress management and mindfulness practices. A wide range of sports and recreational activities and competitions were also held, including hiking, dragon boating, football, table tennis, badminton, musical instrument and others for interested staff to join.

Our staff actively engage in community and charitable services. Notably, one of our long-serving staff volunteers with 25 years of experience in community service was honoured by the CSB with a Bronze Prize in the Excellent Volunteer Award category under the Civil Service Volunteer Commendation Scheme 2024.

我們定期舉辦各種康體活動，例如體育比賽和參觀古蹟，使員工的工餘時間更充實，並增強歸屬感。

We regularly organise a variety of recreational and sports activities, such as sports competitions and heritage site visits, to enrich staff's leisure time and strengthen their sense of belonging.

本署義工隊聯同公務員事務局義工隊和黃大仙東頭小區關愛隊一起探訪邨內的長者住戶，為他們更換環保燈泡，並分享實用節能小貼士。

Our volunteer team, together with the Civil Service Bureau's Volunteer Team and Wong Tai Sin Tung Tau Sub-district Care Team, visited elderly residents in the estate to help replace their light bulbs with eco-friendly ones and to share practical energy-saving tips.

環保措施

機電署一直鼎力支持政府推行的節能和可持續發展措施。

12月舉行的機電工程署研討會2024，是年內一項重要活動。研討會以「高質量發展　領綠色未來」為主題，由國家能源局和國家鐵路局官員、清華大學學者發表主題演講。超過400位各界嘉賓出席，展示有關新能源、智能機電、綠色交通、高效建築等的創新方案。我們也藉此機會，推出機電署微信官方帳號，以加強我們與內地的溝通和合作。

我們自2024年4月起推行新措施，在總部大樓推動節能，目標是在2020/21至2024/25年度的五年期間，把能源表現從2018/19年度水平提高6%。有關措施包括於午飯時間關掉辦公室的照明，以及調低辦公室範圍內空氣處理機組風扇的速度、調整空調運作時間，以及於非辦公時間關掉電腦和升降機等。我們還舉辦了各種宣傳活動和節能比賽，以支持節能工作。

GREEN INITIATIVES

The EMSD is a staunch supporter of the Government's initiatives in energy saving and sustainability.

A major event during the year was the EMSD Symposium 2024 held in December. Officials from the National Energy Administration and the National Railway Administration, along with academics from the Tsinghua University, delivered keynote speeches on the theme "Empowering High-quality Development for a Green Future". More than 400 guests from various sectors attended the symposium, showcasing innovative solutions in new energy, smart E&M, green transport and high productivity construction. We also took the occasion to launch the EMSD WeChat official account, with the aim to enhance our communication and collaboration with the Mainland.

We have taken new measures since April 2024 to promote energy saving in our Headquarters Building, with the target to improve energy performance by 6% from the 2018/19 level, over the five-year period from 2020/21 to 2024/25. These measures include switching off office lighting and lowering the fan speed of air-handling units in office area during lunch hours, adjusting the operation schedule of air-conditioning systems and turning off computers and lifts during non-office hours. Publicity campaigns and an Energy Saving Competition were organised to support these green efforts.

我們亦在機電工程署研討會2024上正式啟動機電署微信官方帳號，不僅讓公眾溝通管道更多元化，更進一步深化中港兩地協作交流。

The EMSD Symposium 2024 also marked the launch of the EMSD WeChat official account, which not only enhances the diversity of communication channels with the public but also deepens collaboration and exchanges between Hong Kong and the Mainland.

我們在2024年4月開展節約能源運動，措施包括調整總部大樓照明和升降機系統的運作時間，並鼓勵員工在下班前關掉辦公室電器，以減少用電量。

In April 2024, we launched an energy-saving campaign that included measures such as adjusting the operating hours of the lighting and lift systems at our Headquarters Building, and encouraging staff to switch off office appliances before leaving work, so as to reduce electricity consumption.

持份者與社區參與

我們主動聯繫業界和社區，以實施第三個計劃中「加強多方創新協作」的策略。

年內，營運基金舉辦了多項業界活動，值得一提的是，我們於11月在香港科學園(科學園)舉辦機電裝備合成法研討會2024，約800名來自政府部門、顧問公司、承辦商、學術和專業機構的代表出席。研討會有項目簡報介紹和展覽攤位，展示「機電裝備合成法」在新舊建築物、基礎設施和區域供冷系統應用優勢。此外，營運基金於2024年10月舉辦為期三天的大灣區考察團，團員參觀了五家企業，深入了解「機電裝備合成法」和「組裝合成」建築法。

一年一度的機電創科日於2024年7月假科學園舉行。活動為期兩天，以「機電人工智能應用方案」為主題，匯聚19個創科伙伴，展示並交流應用於機電業的人工智能方案，吸引約350名來自公私營機構的人士到場參與，網上播放平台亦錄得約15 000人次觀看。

STAKEHOLDER AND COMMUNITY ENGAGEMENT

We proactively liaised with the trade and community to step up our efforts in "strengthening innovative collaboration between stakeholders", one of the strategies under our third Plan.

Multiple trade events were held during the year. Of note was the MiMEP Symposium 2024 in November at the Hong Kong Science Park (HKSP) with about 800 attendees, including representatives from government departments, consultants, contractors, academic and professional institutions. The symposium featured thematic presentations and exhibition booths on the merits of applying Multi-trade integrated Mechanical, Electrical and Plumbing (MiMEP) technology in new and existing buildings, infrastructure and district cooling systems. In addition, a three-day study tour to the GBA was organised in October 2024, in which the participants visited five enterprises to gain insights into MiMEP and Modular Integrated Construction (MiC) technologies.

Our annual E&M I&T Day was held in July 2024 at the HKSP. Themed "AI Application in E&M Industry", the two-day event brought together 19 I&T partners to showcase and exchange AI solutions applicable to the E&M sector, attracting around 350 participants on site from the public and private sectors, and approximately 15 000 views on the online streaming platform.

由建築署和機電署合辦的機電裝備合成法研討會2024，提供平台讓業界伙伴分享應用「機電裝備合成法」的經驗和心得。

Co-organised by the Architectural Services Department and the EMSD, the MiMEP Symposium 2024 provided a platform for industry partners to share their experience and insights on the adoption of MiMEP.

機電創科日2024以「機電人工智能應用方案」為主題，匯聚19個創科伙伴，展示他們的創科成果和多個應用於機電業的人工智能方案。

Themed "AI Application in the E&M Industry", the E&M I&T Day 2024 brought together 19 I&T partners to showcase their I&T achievements and various AI solutions applicable to the E&M sector.

機電署與香港機電業推廣工作小組於2025年3月在青年學院(葵涌)合辦機電業博覽2025，提供有關機電業發展、就業、進修和培訓的資訊，鼓勵年青人才投身機電業。博覽會約有1 100名參加者出席，包括業界人士、職訓局學員、中學生和市民。

一如往年，我們繼續透過不同活動向員工和業界推廣品質與安全的重要，例如於10月聯同職業安全健康局和香港科技園公司合辦安全研討會2024，以及於11月舉辦年度的品質及安全日。

為配合政府推廣安全智慧工地系統，我們於2024年7月推出機電工程署安全智慧工地系統，以實現「零事故」的目標。這個中央管理平台收集不同工地在遵從安全規定方面的實時資訊，識別潛在安全風險，並即時向在場安全管理人員發出警示。我們亦欣見機電署承辦商在發展局和建造業議會合辦的第30屆公德地盤嘉許計劃中取得佳績，機電署六份合約共獲得14個獎項。

We also co-organised the E&M Expo 2025 with the Hong Kong Electrical and Mechanical Trade Promotion Working Group in March 2025 at the Youth College (Kwai Chung) to provide information on the development, career prospects, as well as continuing education and training of the E&M industry, in a bid to encourage young talent to join the trade. The Expo was attended by about 1 100 participants, including trade members, VTC trainees, secondary school students and the public.

As in past years, we continued to promote the importance of quality and safety to our staff and the trade through various initiatives. For example, we jointly hosted the Safety Conference 2024 with the Occupational Safety and Health Council and the Hong Kong Science and Technology Parks Corporation in October, and held the annual Quality and Safety Day in November.

To support the Government in promoting the Smart Site Safety System (4S), we launched in July 2024 the "EMSD 4S" to help achieve the "zero incident" goal. This centralised management platform collects real-time information on safety compliance from different work sites, identifying potential safety risks and promptly alerting on-site safety management staff. We are also delighted that our contractors performed well in the 30th Considerate Contractors Site Award Scheme jointly organised by the Development Bureau and the Construction Industry Council (CIC), with six EMSD contracts winning a total of 14 awards.

部門舉辦多項活動，包括安全研討會2024和2024品質及安全日，促進員工和業界伙伴交流運用創科提升工地安全的經驗。

The Department organised various activities, including the Safety Conference 2024 and the Quality and Safety Day 2024, facilitating experience sharing between our staff and industry partners on leveraging I&T to enhance site safety.

機電署和建造業議會代表於2024年10月至11月前往三個機電署合約工地，了解安全智慧工地系統的推行情況。機電署已建立部門的安全智慧工地系統，以制訂統一的安全標準，減省成本。

Between October and November 2024, representatives of the EMSD and the CIC visited three EMSD contract sites to understand the implementation of 4S there. The EMSD has developed its departmental 4S to establish uniform safety standards and reduce costs.

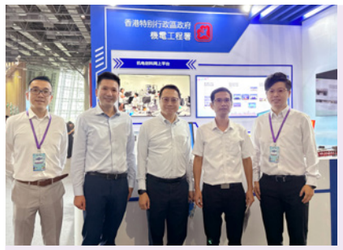
企業管理
CORPORATE STEWARDSHIP

為了向香港和廣州的市民推廣創科文化，我們參加創新科技署於11月在科學園舉辦的創新科技嘉年華2024，以及廣東省科學技術協會於9月在廣州舉辦的第七屆廣東科普嘉年華。

To foster I&T culture to the public in Hong Kong and Guangzhou, we participated in the InnoCarnival 2024 organised by the Innovation and Technology Commission at the HKSP in November and the Seventh Guangdong Science Carnival organised by the Guangdong Association for Science and Technology in Guangzhou in September.

我們在社區外展工作方面取得突破，於2024年10月在大圍圍方舉辦首個大型商場展覽活動「機智啤啤學院」。一連六日的活動吸引超過10 000名市民參與，並以輕鬆有趣的方式向年青人推廣機電安全、能源效益和創科。乘勢而上，我們將於2025年7月在香港書展設置展覽攤位，進一步與公眾聯繫，激發年青一代投身機電業的興趣。

A breakthrough in our community outreach work during the year was the Witty Bear Academy, our first large-scale shopping mall exhibition held at The Wai, Tai Wai in October 2024. The six-day event attracted over 10 000 members of the public and focused on promoting E&M safety, energy efficiency and I&T to youngsters in a fun and lighthearted manner. Building on this success, we will set up an exhibition booth at the Hong Kong Book Fair in July 2025 to further engage with the public and inspire the younger generation to pursue a career in the E&M industry.



為推動香港和大灣區的創科文化，我們積極參與兩地業界伙伴舉辦的活動，包括第七屆廣東科普嘉年華(左)和第三屆大灣區工程師論壇(右)。

To promote I&T culture in Hong Kong and the GBA, we actively participated in events organised by industry partners from both places, including the Seventh Guangdong Science Carnival (left) and the Third Greater Bay Area Engineers Forum (right).

機電署在2024年10月舉辦首個大型商場展覽活動「機智啤啤學院」，設有攤位遊戲和STEAM工作坊，藉此推廣機電安全和能源效益，並向公眾介紹機電行業。

In October 2024, the EMSD hosted the Witty Bear Academy, its first large-scale shopping mall exhibition that featured game booths and STEAM workshops to promote E&M safety and energy efficiency, while introducing the E&M industry to the public.

慶祝營運基金成立30周年

營運基金取得長足進步，目前正籌備2026年的成立30周年慶祝活動。在客戶和持份者的支持下，我們會繼續努力朝目標邁進，為香港創造重大價值。

CELEBRATING THE 30TH ANNIVERSARY OF THE EMSTF

The EMSTF has come a long way, and preparations are underway to celebrate its 30th anniversary in 2026. With the ongoing support of all our clients and stakeholders, we shall continue to strive towards our goals and deliver great value to Hong Kong.

2024/25財政年度關鍵績效指標成績及表現承諾

Key Performance Indicator Results and Performance Pledges in Financial Year 2024/25

目標 Target

成績 Result

根據每月客戶意見調查結果所得的客戶滿意度(%)
Satisfaction Level Based on Monthly Customer Feedback (%)
99 | 99.96

客戶滿意指數 [以8分為滿分計]
Customer Satisfaction Index [on an 8-point scale]
6.8 | 7.27[2]

營運基金員工的訓練日數 (每名員工接受訓練的日數)
Training Days of the EMSTF Staff (no. of training days per staff member)
4.5 | 5.57

違反法例次數 (宗)
Statutory Non-compliance (no.)
0 | 0

員工建議計劃書[1] (份)
Staff Suggestion Proposals[1] (no.)
75 | 107

員工滿意度指數[1] [以10分為滿分計]
Staff Satisfaction Rating[1] [on a 10-point scale]
7.0 | 7.7[3]

新業務及業務增長 (百萬元)
New Business and Growth of Business ($M)
735.1 | 789.1

每千名營運基金員工須呈報的累積意外宗數(以每千名員工計算)
Accumulated Reportable Accidents per 1 000 EMSTF Staff (no. per 1 000 staff)
5.0[4] | 2.83

年內續訂的服務水平協議 (%)
Service Level Agreements (SLAs) Renewed during the Year (%)
95 | 100

達到服務水平協議所訂的表現目標 (%)
SLA Service Performance Target Compliance (%)
99 | 100

收入回報率 (%)
Return on Revenue (%)
1.1 | 2.4

耗電量[1] (千瓦小時) [機電署總部大樓、企業數據中心及所有策略業務單位的主要場地]
Electricity Consumption[1] (kWh) [EMSD Headquarters Building, Corporate Data Centre and all SBUs Major Venues]
7 624 644[5] | 6 907 203

1 此項目適用於機電署整個部門，其他項目只適用於營運基金。
2 數字為2024年的調查結果。下一次調查將於2026年進行。
3 數字為2023年的調查結果。下一次調查將於2025年進行。
4 此為警戒水平，並非目標。
5 經考慮「綠色能源目標」後於2020年10月訂立的目標。

1 This item applies to the EMSD as a whole. Other items apply to the EMSTF only.
2 Results are derived from the survey conducted in 2024. The next survey will be conducted in 2026.
3 Results are derived from the survey conducted in 2023. The next survey will be conducted in 2025.
4 This is an alert level, not a target.
5 The target was set after taking into consideration the Green Energy Target in October 2020.

社會及環保報告
SOCIAL AND ENVIRONMENTAL REPORT

關於本報告
ABOUT THIS REPORT

匯報原則

機電署致力推動社會及環境的可持續發展。我們將可持續的作業模式融入各個營運層面，力求為社區及環境創造長期價值。每年，我們都會發布詳盡的社會及環保報告，以透明方式展示我們的努力與成果。本《社會及環保報告2024/25》(本報告)展示了機電署在匯報期推動可持續發展方面的進展和成效。

本報告根據2021年全球報告倡議組織可持續發展報告標準編寫，並參照環境保護署的《環保報告指引－管制人員適用》和聯合國可持續發展目標。為確保報告質素達致最高水準，我們編寫報告時遵循一系列核心原則，包括準確性、平衡性、清晰度、可比性、完整性、可持續發展背景相關性、時效性和可驗證性。

第220頁的**全球報告倡議組織內容索引**，提供了全球報告倡議組織和聯合國可持續發展目標披露的全面對照，將其與本報告中的特定章節聯繫起來，並包括其他適用的補充資料，以提高報告透明度。為確保本報告的準確性、可靠性和公信力，機電署已委託第三方對本報告的內容和合規性進行獨立保證。詳情請參閱第246-249頁的**獨立保證意見聲明書**。

全球報告倡議組織服務確認本報告按要求清晰表述全球報告倡議組織內容索引，並且索引中的信息清晰，方便持份者查閱。

REPORTING PRINCIPLES

The EMSD remains deeply committed to advancing both social and environmental sustainability. By embedding sustainable practices across all aspects of our operations, we strive to create lasting value for the community and the environment. Each year, we publish a detailed Social and Environmental Report to transparently communicate our efforts and achievements. The Social and Environmental Report 2024/25 (hereafter referred to as the "Report") highlights our ongoing progress, showcasing key milestones and performance outcomes that reflect our dedication to sustainable development throughout the reporting period.

This Report has been prepared in accordance with the 2021 Global Reporting Initiative (GRI) Sustainability Reporting Standards (GRI Standards). It also draws on guidance from the Environmental Protection Department's Guide to Environmental Reporting for Controlling Officers and incorporates references to the United Nations Sustainable Development Goals (UNSDGs). To uphold the highest standards of reporting quality, we have followed a set of core principles throughout the development process. These include accuracy, balance, clarity, comparability, completeness, relevance to sustainability context, timeliness, and verifiability.

The **GRI Content Index** on page 220 offers a detailed cross-reference of disclosures aligned with both the GRI Standards and the UNSDGs, mapping each disclosure to relevant sections of this Report, where appropriate, supplementary details are provided to enhance transparency. To reinforce the accuracy, reliability, and credibility of the Report, we engaged an independent third-party to conduct an assurance review. For further details, please refer to the **Independent Assurance Opinion Statement** on pages 246 to 249.

GRI Services reviewed that the GRI content index has been presented in a way consistent with the requirements for reporting in accordance with the GRI Standards, and that the information in the index is clearly presented and accessible to the stakeholders.

報告範圍

本報告載述機電署在2024/25財政年度(2024年4月1日至2025年3月31日)於可持續發展方面的主要成就，提供可持續發展措施和計劃的詳細描述和關鍵成效指標。除非另有說明，本報告中的數據均為經標準化的實際數字，確保一致性和透明度。財務資料均以港元為單位，除非另有說明。

本報告範圍包括機電署轄下的兩大服務範疇－規管服務和營運服務，後者亦稱為機電工程營運基金。在匯報期內，機電署的權責關係、規模、組織架構或供應鏈均無重大變化。

REPORTING SCOPE

This Report outlines the EMSD's key sustainability accomplishments for the 2024/25 Financial Year (1 April 2024 to 31 March 2025), featuring comprehensive descriptions and key performance metrics of our sustainability initiatives and programmes. Unless otherwise specified, all data presented are standardised and reported in absolute figures to ensure consistency and transparency. Financial figures are presented in Hong Kong dollars unless stated otherwise.

The scope of this Report encompasses both of the EMSD's operational arms – Regulatory Services and Trading Services, also known as the Electrical and Mechanical Services Trading Fund (EMSTF). Throughout the reporting period, there were no significant developments that affected the Department's ownership structure, organisational size or structure, or supply chain operations.

重要性評估

機電署意識到，持份者期望對於制訂有效及適時的可持續發展策略至關重要。因此，我們每年對重要議題進行評估，廣納內外部持份者的意見，確保相關策略與我們不斷變化的優先事項保持一致。

持份者參與流程

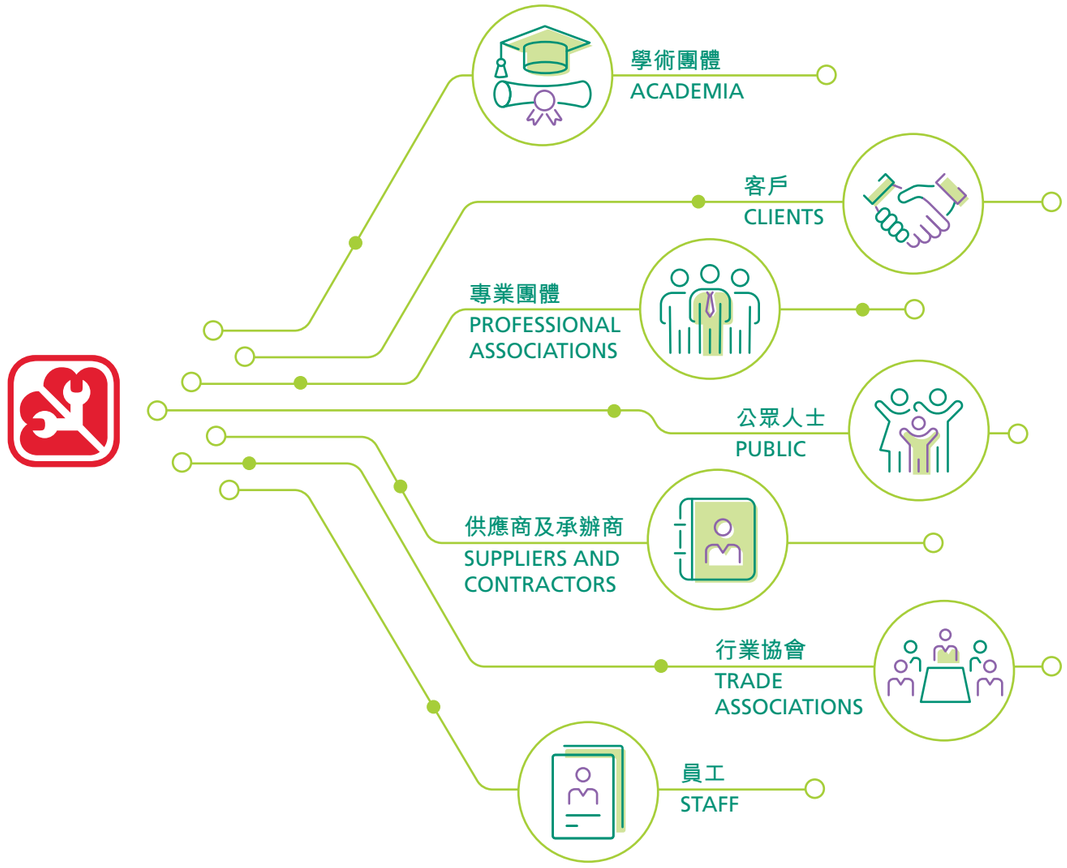
機電署推行全面的持份者參與活動，包括進行問卷調查，對象涵蓋內部員工及外部持份者，例如客戶、供應商、承辦商和分判商、業界、專業團體及行業協會、學術界及公眾人士。此調查旨在收集多元化的意見及觀點。我們十分重視收到的意見，對於確認本報告所載的重要議題具關鍵作用。

MATERIALITY ASSESSMENT

The EMSD recognises the critical role that stakeholder expectations play in shaping an effective and responsive sustainability strategy. Accordingly, an annual assessment of material topics has been undertaken, incorporating insights from both internal and external stakeholders to ensure continued relevance and alignment with our evolving priorities.

Stakeholder Engagement Processes

The EMSD's comprehensive stakeholder engagement exercise encompasses a survey that targets internal staff and external stakeholders such as clients, suppliers, contractors and sub-contractors, trades, professional and trade associations, academia, and the general public. This initiative was designed to capture a broad spectrum of insights and perspectives. We greatly value the feedback received, which was instrumental in validating the material topics presented in this Report.



關於本報告
ABOUT THIS REPORT

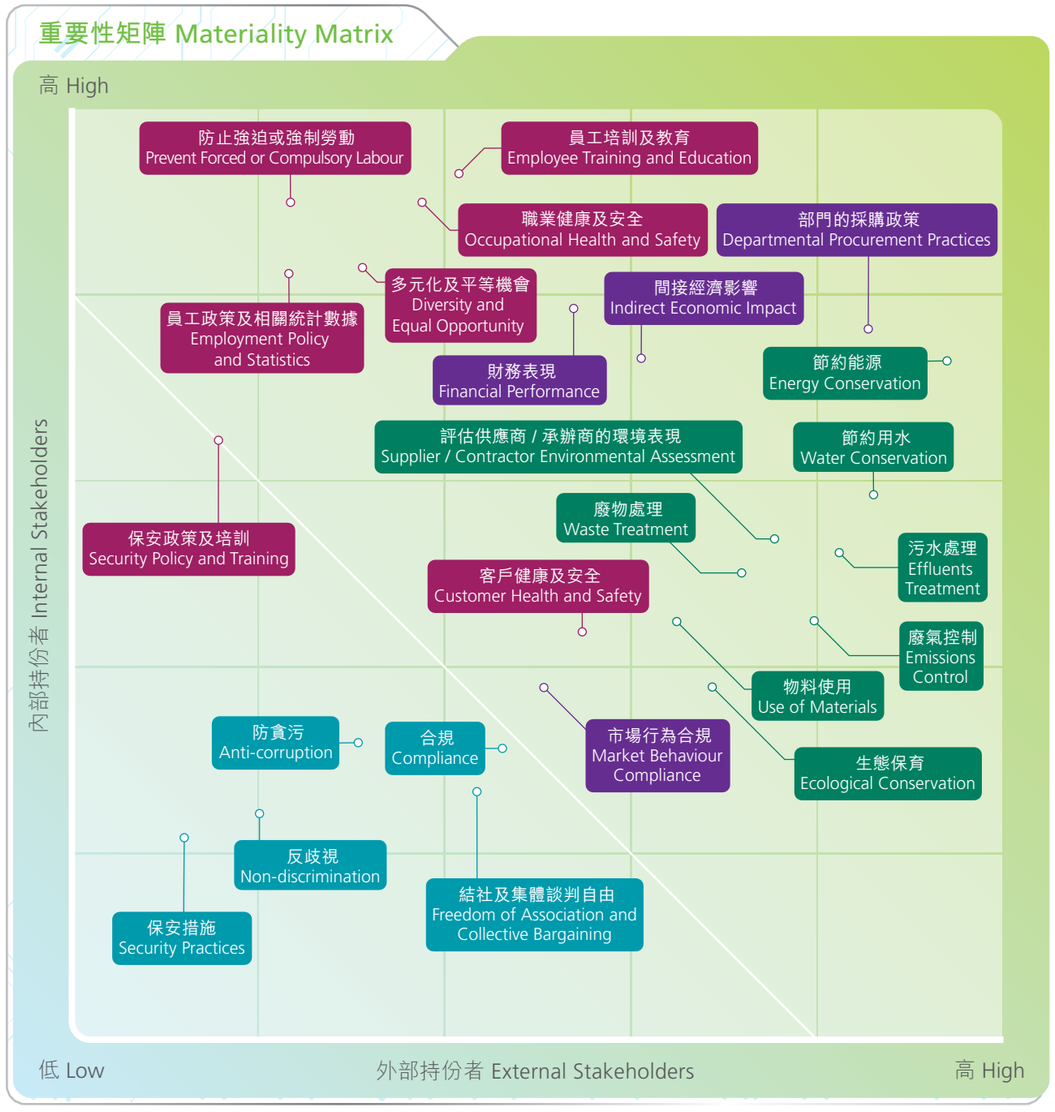
為配合問卷調查，機電署亦與內部持份者舉行焦點小組討論，參與者包括來自不同部別的代表。這個小組討論提供了一個平台，評估內部對機電署環境、社會與管治策略和表現方面的看法，並從機構層面識別重要議題。

我們將持份者參與活動的結果，以重要性矩陣圖呈現。該矩陣圖根據持份者的關注程度，顯示24個可持續發展議題的相對重要性。其中，圖表右上部分、分界線以上的18個議題，被確定為重要議題。詳情載列於右頁的附表。

Further complementing the survey, the EMSD also convened a focus group discussion with its internal stakeholders, including representatives from various divisions. This session provided a platform to assess internal views on the EMSD's environmental, social, and governance (ESG) strategy and performance, and to identify material topics from an organisational standpoint.

The outcomes of these engagements are reflected in the materiality matrix, which illustrates the relative importance of 24 identified sustainability topics based on stakeholder interest. Among these, 18 topics positioned in the upper-right quadrant above the defined threshold have been identified as material. These are detailed in the accompanying table on the right page.

重要性矩陣 Materiality Matrix



重要議題 Material Topics

環境 Environmental

- 生態保育 Ecological Conservation
- 節約能源 Energy Conservation
- 污水處理 Effluents Treatment
- 廢物處理 Waste Treatment
- 廢氣控制 Emissions Control
- 節約用水 Water Conservation
- 物料使用 Use of Materials
- 評估供應商 / 承辦商的環境表現 Supplier / Contractor Environmental Assessment

經濟 Economic

- 財務表現 Financial Performance
- 部門的採購政策 Departmental Procurement Practices
- 間接經濟影響 Indirect Economic Impact
- 市場行為合規 Market Behaviour Compliance

社會 Social

- 員工培訓及教育 Employee Training and Education
- 多元化及平等機會 Diversity and Equal Opportunity
- 員工政策及相關統計數據 Employment Policy and Statistics
- 職業健康及安全 Occupational Health and Safety
- 防止強迫或強制勞動 Prevent Forced or Compulsory Labour
- 客戶健康及安全 Customer Health and Safety

索取報告

我們邀請您在機電署網站上閱覽或下載本報告。您的反饋對我們持續改進營運、可持續發展成效、報告方式都非常重要。如有任何意見或查詢，請隨時透過電郵與我們聯絡：ccsd@emsd.gov.hk。

AVAILABILITY OF THIS REPORT

We invite you to view or download this Report from the EMSD website. Your feedback is highly valued and plays a vital role in helping us continuously enhance our operations, sustainability performance and reporting practices. Should you have any comments or enquiries, please feel free to contact us at ccsd@emsd.gov.hk.

環境及社會概覽
ENVIRONMENTAL AND SOCIAL HIGHLIGHTS

環保成效概覽
Environmental Performance Highlights

設立綠色能源目標，在2020/21至2024/25年度提升能源表現6%（以2018/19年度為基準）
Green Energy Target of improving energy performance from 2020/21 to 2024/25 by 6% (2018/19 as baseline)

2024/25年度機電署建築物及其基礎設施能源表現提升
Improving Energy Performance of EMSD Buildings and Infrastructure Facilities in 2024/25

6.45%

達標 Achieved

機電署建築物於2024/25年度產生的可再生能源
EMSD Buildings Generated Renewable Energy in 2024/25

211 237 千瓦小時 kWh

啟德區域供冷系統截至2024/25年度共節省
Kai Tak District Cooling System Saved

82.4 百萬千瓦小時電力 million kWh of electricity by 2024/25

2024/25年度，機電署共接獲33宗安裝淡水冷卻塔計劃的申請，並有
A Total of 33 Fresh Water Cooling Towers (FWCT) Scheme Applications were Received and

97 個淡水冷卻塔落成 no. of FWCTs were completed in 2024/25

推動綠色採購
Promoting Green Procurement

採購綠色產品佔2024/25年度總採購額
The procurement of green product in 2024/25 accounted for a total value of procurement as

50.54%

增加廢紙回收量
Increasing Waste Paper Recycling

2024/25年度（目標 24 893公斤）
2024/25 (Target 24 893 kg)

實際回收量
Actual **44 258** 公斤 kg

達標 Achieved

減少碳粉及噴墨盒購買和耗用量
Reducing Toner and Inkjet Cartridge Purchases and Consumption

2024/25年度（目標 6 791個）
2024/25 (Target 6 791 no.)

實際用量
Actual **4 325** 個 no.

達標 Achieved

推廣使用綠色車輛
Promoting Green Mobility Initiative

我們的綠色車輛包括
Our green vehicles included

16 輛電動車 no. of electric vehicles

1 輛混合動力車 no. of hybrid vehicle

減少私家車碳足跡
Reducing Private Car Carbon Footprint

2024/25年度（目標1 100噸二氧化碳當量）
2024/25 (Target 1 100 tonnes of carbon dioxide equivalent (CO_2e))

達標 Achieved

實際排放量
Actual **1 028** 噸二氧化碳當量 tonnes of CO_2e

社會成效概覽
Social Performance Highlights

獲得全球與本地的認可
Attaining Global and Local Recognition

連續三年獲頒全球及香港
最具創新力知識型機構大獎
Won for three consecutive years the Global and Hong Kong
Most Innovative Knowledge Enterprise Awards

我們的年報榮獲
Our Annual Report was Bestowed with

美國通訊專業聯盟「2024 Vision Awards」綜合年報比賽鉑金獎及2024/25年度「Spotlight Awards」全球傳訊比賽鉑金獎
Platinum Awards in the 2024 Vision Awards Integrated Report Competition and the 2024/25 Spotlight Awards Global Communications Competition of the League of American Communications Professionals

第31屆年度Communicator Awards「設計特色 – 撰文」組別卓越獎
Excellence award in the Design Features - Copywriting category in the 31st Annual Communicator Awards

第39屆ARC國際年報大獎「撰文：政府機構及辦公室」組別銅獎
Bronze award in the Script/Writing: Government Agencies & Offices category in the 39th International Annual Report Competition (ARC)

重視本地供應商
Prioritising Local Suppliers

物料供應分部採購約
Supplies Sub-division sourced approximately

98.04%

來自本地供應商/承辦商或本地代理商的服務及貨物
services and goods from local suppliers, contractors or local agents

創建安全無憂的工作環境
Creating a Safe Workplace

- 死亡率：0（員工及承辦商）
  Rate of fatalities: 0 (employees & contractors)
- 嚴重工傷率：0.08（員工）；0.05（承辦商）
  Rate of high-consequence work-related injuries: 0.08 (employees), 0.05 (contractors)
- 工傷率：0.41（員工）；0.23（承辦商）
  Rate of recordable work-related injuries: 0.41 (employees), 0.23 (contractors)

備註：比率是按每200 000工時計算
Note: Rate is number per 200 000 man-hours

培養關愛文化
Cultivating a Caring Culture

連續第11年獲得香港社會服務聯會頒發的
「同心展關懷」標誌
Obtained the **Caring Organisation** Logo offered by the Hong Kong Council of Social Service for the 11th consecutive year

參與善行義舉
Engaging in Acts of Kindness

在義工項目合共錄得
Contributed a total of

585

小時義工服務時數
man-hours in volunteering projects

通過培訓提升專業技能
Elevating Expertise Through Training

培訓時數由162 023小時（2023/24年度）增至
Training hours increased from 162 023 hours in 2023/24 to

165 472

小時（2024/25年度）
hours in 2024/25

追求卓越的可持續發展成效

機電署總部於綠建環評既有建築3.0版(測試版)中榮獲最高級別的「鉑金級」評級，足以證明其在能源效益、室內環境質素、節約用水及可持續管理方面的卓越表現。此項殊榮不僅彰顯機電署在綠色建築營運方面的領導地位，亦鞏固其對可持續發展的堅定承諾。透過研發創新產品及服務，機電署持續推動可持續發展及跨界別協作，並作出具影響力的貢獻。這些努力廣獲認同，屢獲本地及國際業界頒發多項具公信力的獎項，進一步鞏固機電署在推動低碳及智慧城市發展方面的角色。

為響應《香港氣候行動藍圖2050》所提出的碳中和目標，機電署與醫院管理局(醫管局)合作推出多項節能減碳改善措施，其中一個重點項目是為屯門醫院主座進行高效能空調製冷機組更換工程。是次升級工程大幅節省空調製冷機的用電量達26%，每年節省約280萬度電。

上述項目的成功落實不僅證明跨領域合作在推動可持續發展的成效，更為機電署和醫管局贏得美國供暖製冷及空調工程師學會(ASHRAE)香港分會2024年科技大獎，及2025年1月的ASHRAE第十三區2024年科技大獎(「醫療設施(現有)」組別)。這些獎項彰顯機電署成功應用創新科技，對於節能減排作出貢獻。

SUSTAINABILITY EXCELLENCE

The EMSD Headquarters has achieved the renowned Platinum rating under the BEAM Plus Existing Buildings Version 3.0 (Pilot Assessment), a testament to its exceptional performance in energy efficiency, indoor environmental quality, water conservation, and sustainable management. This top-tier recognition not only highlights the EMSD's leadership in green building operations but also reinforces its unwavering commitment to sustainability. Through the development of innovative products and services, the EMSD continues to drive impactful contributions to sustainable development and cross-sector collaboration. These efforts have earned widespread recognition, with numerous reputable industry awards both locally and internationally, further solidifying its role in advancing a low-carbon and smart city.

In alignment with the carbon neutrality goals outlined in Hong Kong's Climate Action Plan 2050, the EMSD has partnered with the Hospital Authority (HA) to implement a series of impactful energy efficiency and carbon reduction initiatives. A flagship project under this collaboration involved the replacement of high-efficiency chillers at the Main Block of Tuen Mun Hospital. This upgrade led to a substantial 26% reduction in electricity consumption by the chillers, translating into an annual energy saving of approximately 2.8 million kWh.

The success of this initiative not only underscores the effectiveness of cross-sector collaboration in driving sustainability but also earned the EMSD and HA the prestigious Technology Award 2024 from the Hong Kong Chapter of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), as well as the ASHRAE Region XIII Technology Award 2024 under the category "Health Care Facilities (Existing)" in January 2025. These awards demonstrate the EMSD's contribution to energy-saving and carbon reduction, through the successful application of innovative technology.

機電署和醫管局就屯門醫院主座項目贏得ASHRAE香港分會2024年科技大獎及第十三區2024年科技大獎。
The EMSD and the HA received ASHRAE Hong Kong Chapter Technology Award 2024 and Regional XIII Technology Award 2024 for the Tuen Mun Hospital Main Block project.

機電人工智能實驗室是機電署與政府部門/機構、業界、學術界和研發機構合作發展的計劃，旨在推動人工智能技術於機電系統的應用。實驗室以開放數據、語義人工智能及共創平台為重點，推廣有助提升能源效益及減低環境影響的智慧科技。機電署憑藉其人工智能技術於第四屆亞洲創新發明展覽會－香港中再創佳績，榮獲兩項金獎、兩項銀獎及一項銅獎。金獎項目包括在公眾洗手間的「AI智節能抽風系統」及「監控現場設備的無線連接系統」。

The E&M AI Lab fosters collaboration across government departments/authorities, industry, academia, and research institutes to advance artificial intelligence (AI) applications in E&M systems. Focusing on open data, semantic AI, and co-creation platforms, the lab promotes smart technologies that enhance energy efficiency and reduce environmental impact. The EMSD achieved outstanding and encouraging results at the 4th Asia Exhibition of Innovations and Inventions Hong Kong, winning two gold medals, two silver medals and one bronze medal for its AI technologies. The gold medal projects include the AI-Control System for Ventilation System at Public Toilet and its Wireless Connection to Field Equipment for Control and Monitoring.

第四屆亞洲創新發明展覽會－香港展出超過140項來自亞洲各地的創新項目和發明，機電署憑藉卓越的創新項目，在展覽會上勇奪五個獎項。
The EMSD won five medals for its outstanding innovative projects at the 4th Asia Exhibition of Innovations and Inventions Hong Kong. The exhibition showcased over 140 innovative projects and inventions from across Asia.

除了在可持續發展方面的成就，機電署亦因在企業通訊方面的卓越表現而獲得國際認可。《機電工程署二零二三至二四年年報》獲得多項殊榮，包括在2024/25年度「Spotlight Awards」全球傳訊比賽中入選「百大企業出版物」，並榮獲鉑金獎及金獎。我們的年報更獲得「2024 Vision Awards」綜合年報比賽鉑金獎，在「2025 Galaxy Awards」獲頒銅獎，以及在第31屆年度Communicator Awards中，奪得「設計特色－撰文」組別卓越獎和「年報－政府及市政機構」組別傑出獎。

另外，機電署《二零二三至二四年社會及環保報告》在Communicator Awards中亦勇奪「年報－環保及可持續發展」組別傑出獎，以及在第39屆ARC國際年報大獎中，獲得「撰文：政府機構及辦公室」組別銅獎和「非牟利機構(網上版年報)：政府機構及辦公室」組別榮譽獎。這些獎項彰顯機電署致力提升透明度、促進持份者參與及加強有效溝通，以推動智慧及可持續未來的願景。

Complementing its sustainability achievements, the EMSD has also gained international recognition for excellence in corporate communications. The EMSD Annual Report 2023/24 was honoured with multiple prestigious awards. It was named among the Top 100 Corporate Publications and received both Platinum and Gold awards in the 2024/25 Spotlight Awards Global Communications Competition. The report also earned the Platinum Award in the 2024 Vision Awards Integrated Report Competition and a Bronze award in the 2025 Galaxy Awards. At the 31st Annual Communicator Awards, it won an Excellence award for Design Features – Copywriting and a Distinction award for Annual Report - Government & Municipal.

Furthermore, our Social and Environmental Report 2023/24 received a Distinction award in the Annual Report – Environmental & Sustainability category at the Communicator Awards. It also won a Bronze award in the Script/Writing: Government Agencies & Offices category and an Honours award in the Non-Profit Organisation (Online Annual Report): Government Agencies & Offices category at the 39th International Annual Report Competition (ARC). These awards highlight the EMSD's dedication to transparency, stakeholder engagement, and effective communication in promoting its vision for a smarter and more sustainable future.

可持續發展管理方針
SUSTAINABILITY MANAGEMENT APPROACH

可持續發展是機電署策略重點，貫穿我們的組織與營運各個層面。通過規管服務和營運服務兩大職能，我們取得顯著成果，支援香港的可持續發展策略，同時確保營運卓越、合規及持份者信任。

Sustainability is a strategic priority at the EMSD, embedded across all levels of our organisation and operations. Through our Regulatory Services and Trading Services, we deliver measurable outcomes that support Hong Kong's sustainable development strategies while ensuring operational excellence, compliance, and stakeholder trust.

機電署信念

機電署有系統地將環境及社會因素融入日常營運及策略決策過程，推動可持續發展。我們全面遵守所有適用的環境、社會、健康與安全及管治相關法規。我們的可持續發展管理系統主動識別、評估及降低與可持續發展相關的風險，同時尋求提升表現及穩健性的機遇。我們定期檢視可持續發展策略及政策，確保與政府最新指令及國際最佳實踐方法保持一致。我們透過持續的持份者參與及透明溝通，培養持續改進及共同承擔的文化。

EMSD VALUES

The EMSD advances sustainable development by systematically integrating environmental and social considerations into our operational practices and strategic decision-making. We maintain full compliance with all applicable environmental, social, health and safety, and governance-related regulations. Our sustainability management system proactively identifies, assesses, and mitigates sustainability-related risks, while seeking opportunities to enhance performance and resilience. Our sustainability strategies and policies are regularly reviewed to ensure alignment with evolving government directives and international best practices. Through ongoing engagement and transparent communication with stakeholders, we foster a culture of continuous improvement and shared responsibility.

管治架構

我們的規管服務和營運服務攜手為香港帶來更安全、高能效及可持續的未來。

規管服務團隊堅守機電安全標準並提升香港的能源效益。團隊透過公眾教育活動、技術工作坊、業界論壇、專業研討會等多元化措施，積極推廣創新技術及最佳作業模式。這些工作不僅提升公眾意識，亦促進能源管理及安全領域持續改進的文化。

營運服務團隊則提供高質素的機電工程服務方案，以切合客戶及業界不斷轉變的需求。團隊善用先進技術及可持續工程實踐方法，積極提升公共基礎設施的能源表現。從智能建築系統到節能改造，這些方案大大減少碳排放，提升這個城市的運作效率。

GOVERNANCE STRUCTURE

Our Regulatory Services and Trading Services work in tandem to promote a safer, more energy-efficient, and sustainable future for Hong Kong.

Our Regulatory Services team upholds E&M safety standards and enhances energy efficiency across the city. Through a broad spectrum of initiatives – including public education campaigns, technical workshops, industry forums, and professional seminars – the team actively promotes the adoption of innovative technologies and best practices. These efforts not only raise public awareness but also foster a culture of continuous improvement in energy management and safety.

Complementing this, our Trading Services team delivers high-quality E&M engineering solutions tailored to the evolving needs of clients and the industry. By leveraging advanced technologies and sustainable engineering practices, the team plays a proactive role in improving the energy performance of public infrastructure. From smart building systems to energy-saving retrofits, these solutions contribute significantly to reducing carbon emissions and enhancing operational efficiency across the city.

委員會及治理單位

機電署的可持續發展框架建構於穩健清晰的管治架構，確保所有業務具問責性、策略一致及持續改進。專責委員會包括品質、環境及生產力策導委員會、職業安全及健康策導委員會和環保管理委員會。

Committees and Governance Bodies

Our sustainability framework is supported by a robust and well-defined governance structure that ensures accountability, strategic alignment, and continuous improvement across all operations. Dedicated committees include the Quality, Environmental & Productivity Steering Committee, the Steering Committee on Occupational Safety and Health, and the Green Management Committee.

這些委員會檢視營運成果、訂立可量度的可持續發展目標、推動具前瞻性的計劃，以及促進機構內的知識管理。它們將可持續發展原則轉化為各部門的具體行動，讓我們得以維持機構誠信及卓越營運，並與本地及全球的可持續發展目標保持一致。

These committees review operational outcomes, set measurable sustainability targets, initiate forward-looking programmes, and drive knowledge management across the organisation. They translate sustainability principles into concrete actions across departments, maintaining our organisational integrity and operational excellence, as well as alignment with both local and global sustainability objectives.

決策過程

為確保規管服務和營運服務的長遠可持續性及營運卓越，機電署已採用綜合管理系統，涵蓋環境、社會及管治層面，並符合國際認可標準。兩項服務均已獲得ISO 9001品質管理、ISO 14001環境管理、ISO 37001反賄賂管理認證和ISO 45001職業健康與安全管理認證。我們不同部別還取得不同的ISO認證，包括ISO 13485醫療器材品質管理、ISO 27001資訊安全管理、ISO/IEC 27701隱私資訊管理、ISO 50001能源管理和ISO 55001資產管理，反映我們在可持續發展及品質保證方面採取全面及系統化的管理模式。

Decision-making Processes

To ensure the long-term sustainability and operational excellence of both Regulatory Services and Trading Services, the EMSD has implemented an Integrated Management System (IMS) that addresses environmental, social, and governance aspects in accordance with internationally recognised standards. Both services are certified under ISO 9001 for Quality Management, ISO 14001 for Environmental Management, ISO 37001 for Anti-Bribery Management, and ISO 45001 for Occupational Health and Safety Management. Our various divisions have obtained different ISO certifications, including ISO 13485 for Medical Devices Quality Management, ISO 27001 for Information Security Management, ISO/IEC 27701 for Privacy Information Management, ISO 50001 for Energy Management, and ISO 55001 for Asset Management – demonstrating a comprehensive and systematic approach to sustainability and quality assurance.

員工表現評核

機電署已推行全面的表現評估制度，適用於所有員工，包括高級管理人員，以評估員工表現是否符合營運目標，尤其是社會及環境影響方面的表現。我們的招聘及晉升程序秉持公平、誠信及任人唯賢的最高標準原則。機電署亦維持具競爭力及透明度的薪酬政策，以吸引、挽留及激勵提供優質服務的優秀人才。

在領導層的策略指導下，機電署持續將可持續發展理念融入機構文化，鼓勵員工積極承擔環境保護及社會責任。我們透過持續培訓、創新及持份者參與，致力為員工、客戶、社會及環境創造長遠價值。

Employee Performance Evaluation

The EMSD has implemented a comprehensive performance evaluation system for all staff, including senior management, to assess individual performance against operational objectives, especially in social and environmental areas. Our staff recruitment and promotion processes uphold the highest standards of fairness, integrity, and meritocracy. To attract, retain, and motivate high-calibre professionals committed to service excellence, the EMSD maintains a competitive and transparent remuneration policy.

Under the strategic guidance of our leadership, the EMSD continues to embed sustainability into our organisational culture, empowering our staff to take ownership of environmental stewardship and social responsibility. Through continuous training, innovation, and stakeholder engagement, we strive to create long-term value for our employees, clients, community, and environment.

行為守則及道德

誠信和道德操守是我們服務的基礎。我們的員工嚴格遵守《公務員守則》，包括處理利益衝突和防止貪污的規定。我們與持份者保持開放及透明的溝通渠道，持份者可以透過電話、傳真或電郵聯繫機電署客戶服務中心、公務員事務局和廉政公署，與我們分享意見。在匯報期內，機電署全面遵守相關法律法規，未有遭受大額罰款或非金錢制裁。

CODE OF CONDUCT AND ETHICS

Integrity and ethical conduct are fundamental to our service delivery. Our staff members strictly adhere to the Civil Service Code, including protocols for managing conflicts of interest and preventing corruption. We maintain open and transparent communication channels with our stakeholders, who may share feedback through the EMSD Customer Service Centre, the Civil Service Bureau, or the Independent Commission Against Corruption. Throughout the reporting period, the EMSD remained fully compliant with all applicable laws and regulations, with no significant fines or non-monetary sanctions incurred.

本地及全球可持續發展背景脈絡

為配合全球應對氣候變化的工作，政府承諾在2050年前實現碳中和。為支持這個目標，政府以2018/19年度相若的運作條件為基準，致力在2020/21至2024/25年度的五年期間，將能源表現提升6%。

為實現這個目標，機電署積極強化香港的能源管理規管架構，並協助各界持份者(包括機構和個人)改善能源效益。我們透過促進伙伴關係和協作，鼓勵各方共同努力，優化能源效益並實現減碳目標。

機電署的可持續發展工作與聯合國可持續發展目標相呼應。我們識別了九項與我們營運最相關的目標，以下簡述這九項發展目標的最新工作重點。

LOCAL AND GLOBAL SUSTAINABILITY CONTEXT

The Government has pledged to achieve carbon neutrality by 2050, in line with global efforts to address climate change. In support of this goal, the Government aims to improve its energy performance by 6% over the five-year period from 2020/21 to 2024/25, using 2018/19 as a baseline for comparable operating conditions.

To help realise this target, the EMSD has been actively strengthening Hong Kong's regulatory framework for energy management and supporting a wide range of stakeholders – including organisations and individuals – in enhancing energy efficiency. Through collaboration and partnership, all parties are encouraged to contribute to optimising energy use and reducing carbon emissions.

The EMSD aligns its sustainability efforts with the United Nations Sustainable Development Goals (UNSDGs), identifying nine goals most relevant to our operations. The following is a summary of recent initiatives related to these nine UNSDGs.

相關聯合國可持續發展目標 Relevant UNSDGs	機電署於2024/25年度的貢獻 Contributions by the EMSD in 2024/25
環境層面 **Environmental Aspect**	
7 AFFORDABLE AND CLEAN ENERGY 經濟適用的清潔能源	• 推廣和探索創新解決方案，例如人工智能製冷機組，以減少能源消耗和碳排放量。 Promoted and explored innovative solutions to reduce energy consumption and carbon emissions such as the artificial intelligence (AI)-based chiller plant.
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 負責任消費和生產	• 定期檢討及實施相關法例、政策、計劃和其他措施，支持香港減少碳排放。 Regularly reviewed and implemented relevant legislation, policies, schemes and other initiatives to support carbon reduction in Hong Kong.
13 CLIMATE ACTION 氣候行動	• 達到回收紙張、減少購買碳粉及噴墨盒、減少私家車碳足跡的目標。 Achieved targets for recycling paper, reducing toner and inkjet cartridge purchases and reducing the carbon footprint of private cars.

相關聯合國可持續發展目標 Relevant UNSDGs	機電署於2024/25年度的貢獻 Contributions by the EMSD in 2024/25
社會層面 **Social Aspect**	
3 GOOD HEALTH AND WELL-BEING 良好健康與福祉	• 繼續透過舉辦一系列培訓課程及計劃，包括舉辦安全周，推廣職業安全與健康。 Continued to advance occupational safety and health through various training programmes and initiatives, including the organisation of Safety Week.
4 QUALITY EDUCATION 優質教育	• 為現職及新晉機電專業人才提供培訓，包括線上及線下培訓課程，促進專業發展。 Nurtured professional growth by providing training to current and new E&M professionals in the industry through e-learnings and face-to-face training sessions.
8 DECENT WORK AND ECONOMIC GROWTH 體面工作和經濟增長	• 實踐平等勞工，並透過不同的安全培訓及工作坊，確保安全的工作環境。 Adopted fair labour practices and ensured safe working environments through different safety trainings and workshops.
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 產業、創新和基礎設施	• 持續支援香港在科技、研究及創新方面的發展，提供具前瞻性的設計方案，並於多個會議及比賽中展示創新成果。 Continued to support Hong Kong's progress in technology, research, and innovation by delivering forward-thinking design solutions and showcasing our innovations at various conferences and competitions.
11 SUSTAINABLE CITIES AND COMMUNITIES 可持續城市和社區	• 透過與本地公營機構合作，推行創新機電方案，推動可持續城市化。 Advanced sustainable urbanisation by delivering innovative E&M solutions in collaboration with various local public entities.
17 PARTNERSHIPS FOR THE GOALS 促進目標實現的伙伴關係	• 與其他政府部門合作，透過能源管理支援計劃擴展可持續方案，例如於屯門醫院及深圳灣口岸安裝採用新型環保雪種R1233zd的製冷機組。 Partnered with other government departments to scale sustainable solutions via energy management support schemes. For example, by installing chillers using the new environmentally friendly refrigerant R1233zd at Tuen Mun Hospital and the Shenzhen Bay Port.

詳情請參閱**可持續發展管理方針**、**環境可持續發展成效**和**社會可持續發展成效**章節。
Please refer to our **Sustainability Management Approach**, **Environmental Sustainability Performance**, and **Social Sustainability Performance** sections for details.

與持份者保持聯繫

我們透過多種活動與各界持份者積極保持聯繫，促進開放的交流並邀請他們給予反饋。這些活動提供了寶貴的參考，有助我們有效評估與可持續發展相關的事宜，並收集持份者的寶貴意見，讓我們能夠主動回應新出現的可持續發展挑戰。下表列出了我們常與持份者聯繫的主要渠道。

ENGAGEMENT WITH OUR STAKEHOLDERS

We have maintained active engagement with a diverse range of stakeholders through various initiatives, fostering open dialogue and encouraging feedback. These engagement efforts serve as valuable references, enabling us to assess sustainability-related issues more effectively and gain meaningful insights. This approach helps us respond proactively to emerging sustainability challenges. The table below highlights the key channels we regularly use for stakeholder engagement.

主要持份者 Key Stakeholders	主要聯繫渠道 Key Engagement Channels		
客戶 Clients 政府決策局及部門 Government Bureaux and Departments	客戶意見調查及訪問 Customer Opinion Surveys and Interviews 合作項目 Joint-projects 報告重要議題調查 Report Materiality Survey	電話調查 Telephone Surveys 會議 Meetings 參觀機電署總部 Tours to the EMSD Headquarters (HQs)	客戶通訊 Customer Newsletters 研討會及座談會 Symposiums and Seminars
供應商及承辦商 Suppliers and Contractors	會議 Meetings	報告重要議題調查 Report Materiality Survey	研討會及座談會 Symposiums and Seminars
公眾人士 General Public 學術團體 Academia 非政府組織 Non-governmental Organisations 培訓機構 Training Institutes	機電安全及節能社區推廣活動 Community-wide Promotion of E&M Safety and Energy Efficiency 會議 Meetings 社交媒體平台 Social Media Platforms 公眾調查 Public Surveys	合作項目 Joint-projects 通訊 Newsletters 外展計劃 Outreach Programmes 參觀機電署總部 Tours to the EMSD HQs	研討會及座談會 Symposiums and Seminars YouTube 報告重要議題調查 Report Materiality Survey

主要持份者 Key Stakeholders	主要聯繫渠道 Key Engagement Channels		
傳媒 Media	傳媒聚會 Media Gatherings	就傳媒查詢回應及發表意見 Feedback and Responses to Media Enquiries	
員工 Staff	員工滿意度調查 Staff Satisfaction Surveys 員工通訊 Staff Newsletters 比賽及團隊建立活動 Competitions and Team-building Activities	員工工會及員工協商委員會 Staff Unions and Departmental Consultative Committees 高級管理層親善大使探訪 Ambassador Visits by Senior Management 會議 Meetings	焦點討論小組 Focus Groups 培訓課程 Training Sessions 報告重要議題調查 Report Materiality Survey
專業團體及行業公會 Professional and Trade Associations	業界調查 Trade Surveys 會議 Meetings	研討會及座談會 Symposiums and Seminars 報告重要議題調查 Report Materiality Survey	工作小組 Working Groups

為加強持份者的參與度和確定社會及環保報告的相關性，機電署每年聘請外部的獨立顧問，協助識別及確定報告中需優先處理的重要議題。詳情請參閱**關於本報告**章節。

To reinforce stakeholder engagement and ensure the relevance of our Social and Environmental Reports (SERs), the EMSD engages an external consultant annually to help identify and prioritise material topics to be addressed in the SERs. Further information is available in the **About this Report** section.

與客戶溝通

機電署致力為客戶提供卓越的工程服務方案，同時提升客戶體驗。為支持這項承諾，我們委託獨立的市場研究公司每兩年進行一次客戶意見調查，讓我們了解客戶的看法並進一步改善他們的體驗。最近一次的調查於2024年完成，客戶滿意指數高達7.27分（滿分為8分）。此外，整體服務競爭力指數從7.06分上升至7.38分（滿分為8分），反映了我們不斷提升服務水準的努力。

我們實施「顧客為本電子平台」，旨在加強與客戶的溝通，讓他們實時獲取項目進展的更新，並提高項目追蹤及分工的透明度。我們不斷提升該平台的功能，簡化工作分配及提升用戶體驗。

Communication with Our Clients

At the EMSD, we are committed to delivering high-quality engineering solutions while continuously enhancing the customer experience. To support this commitment, we engage an independent market research firm biennially to conduct a Customer Opinion Survey (COS). This initiative provides valuable insights into client perceptions and helps guide service improvements. The latest COS, completed in 2024, recorded a strong Customer Satisfaction Index of 7.27 out of 8. Additionally, the Overall Service Competitiveness Index demonstrated an improvement, from 7.06 to 7.38 out of 8, reflecting our ongoing efforts to elevate service standards.

To further strengthen client engagement, we have implemented the Customer Centric e-Platform (CCeP), which facilitates real-time project updates and enhances transparency in project tracking and work allocation. We continue to upgrade CCeP's functionalities to streamline operations and improve user experience.

與供應商合作

機電署致力於整個供應鏈中維護最高標準的服務品質、安全及可持續性。我們在挑選及管理承辦商及供應商方面採用嚴格的評估準則，確保其有效支援機電署在機電系統的安裝、營運及維修工作。在2024/25年度，我們共聘用了2 693名承辦商和供應商，涵蓋各類產品和服務，包括人力資源、活動管理、電訊、資訊科技和金融服務。其中，超過98.04%的供應商為香港本地企業，並根據具體營運需求訂立合約條款。

作為環境管理承諾的一部分，機電署在供應商登記流程中融入可持續發展考慮因素。我們於登記階段主動收集供應商所提供的環保產品資料。在匯報期內，我們共新增112間可提供環保產品的供應商，將環保產品供應商名冊擴充至597間。我們歡迎所有供應商登記加入機電署通知名單，不設篩選準則，以確保符合《世界貿易組織政府採購協定》的公開及公平競爭原則，但我們會記錄並識別環保產品的供應商。在適用情況下，我們亦盡量於採購過程中採用環境保護署倡導的綠色規格。

我們與承辦商及供應商的合作過程以透明、公平及問責為原則。我們定期進行表現評估，以確保其符合所有適用的法律規管要求，包括產品質素、職業健康與安全、商業道德及環境管理標準。此外，機電署亦確保所有承辦商及供應商充分了解我們的職業健康與安全政策及期望，從而加強雙方對營運卓越及負責任營商的共同承擔。

Partnership with Our Suppliers

The EMSD is committed to upholding the highest standards of service quality, safety, and sustainability across its supply chain. We apply stringent evaluation criteria in the selection and management of contractors and suppliers who support the EMSD's installation, operation, and maintenance of our E&M systems. In 2024/25, we engaged 2 693 contractors and suppliers across a broad spectrum of product and service categories, including human resources, event management, telecommunications, information technology, and financial services. Notably, over 98.04% of these suppliers are based in Hong Kong and operate under contractual terms tailored to specific operational requirements.

As part of our commitment to environmental stewardship, the EMSD integrates sustainability considerations into our supplier onboarding process. We actively collect information on environmentally friendly product during the registration process. In the reporting year, 112 new suppliers offering green products were added to our registry, increasing the total number of environmentally conscious suppliers to 597. While we welcome all suppliers to register on the EMSD Notification List without applying screening criteria to ensure open and fair competition in line with the World Trade Organisation Government Procurement Agreement, we do record and recognise suppliers whose products are environmentally friendly. Where applicable, we also adopt green specifications recommended by the Environmental Protection Department in our procurement practices.

Our contractor and supplier engagement process are governed by principles of transparency, fairness, and accountability. We conduct regular performance evaluations to ensure compliance with all applicable legal and regulatory requirements, including product quality, occupational health and safety, ethical conduct, and environmental management standards. Furthermore, the EMSD ensures that all contractors and suppliers are well-informed of our occupational health and safety policies and expectations, reinforcing a shared commitment to operational excellence and responsible business practices.

供應鏈管理的環境及社會層面
Environmental and Social Aspects of Supply Chain Management

環境層面
Environmental Aspect

- 規定承辦商和供應商在合約中訂明環保的考慮因素。
  Require contractors and suppliers to outline environmental considerations within contractual agreements.
- 要求承辦商和供應商遵守ISO 14001環境管理系統認證標準所指定的環保規定。
  Request that contractors and suppliers adhere to the environmental requirements set out in the ISO 14001 Environmental Management System standard.
- 鼓勵供應商提供環保產品。
  Encourage suppliers to offer environmentally friendly products.
- 保存環保產品供應商資料在機電署數據庫以供日後採購時評選。
  Retain information on suppliers providing sustainable products in the EMSD database for future procurement reference.
- 納入環保採購指引促進供應商採購環保物料及產品。
  Include green procurement guidelines to assist suppliers in sourcing environmentally responsible materials and products.

社會層面
Social Aspect

- 遵守所有與健康及安全有關的法例規定及合約條款、相關的標準和實務守則，並推動主動積極、風險為本的文化，預防意外發生。
  Comply with all statutory and contractual obligations concerning health and safety, follow relevant standards and codes of practice, and promote a proactive, risk-based culture of accident prevention.
- 監察承辦商的工地健康與安全表現，就表現未如理想的情況，適時採取糾正行動，避免意外發生。
  Monitor the health and safety performance of contractors and take timely corrective action in cases of sub-standard performance or to prevent incidents.
- 致力不斷改進健康與安全的管理及表現，包括尋找及制訂最佳安全健康實務做法，要求承辦商採納或向其推廣。
  Aim for continuous improvement in health and safety management and outcomes, including identifying and developing best practices, and encouraging or requiring their adoption by contractors, wherever appropriate.

環境可持續發展成效
ENVIRONMENTAL SUSTAINABILITY PERFORMANCE

為應對香港日益嚴峻的氣候挑戰，政府發布《香港氣候行動藍圖2050》，闡述環境策略願景。該藍圖以「零碳排放．綠色宜居．持續發展」為願景，概述香港的長遠可持續發展目標。機電署全力支持這些目標，透過規管和營運服務積極作出貢獻，推廣創新技術和可持續的作業方式，例如綠色採購及提升能源表現。這些措施與政府的重點政策一致，包括促進能源效益和可再生能源應用。

In response to the growing climate-related challenges facing Hong Kong, the Government has articulated its strategic environmental vision through the publication of Hong Kong's Climate Action Plan 2050. This plan outlines the city's long-term sustainability goals under the vision of "Zero-carbon Emissions · Liveable City · Sustainable Development". The EMSD fully supports these objectives, actively contributing through its Regulatory Services and Trading Services to promote innovative technologies and the adoption of sustainable workplace practices, such as green procurement and enhanced energy performance. These efforts align with key government initiatives, including the advancement of energy efficiency and the wider application of renewable energy.

機電署已建立穩健的風險管理框架，確保關鍵基礎設施在極端天氣下具應變能力及可持續運作。透過這些積極措施，機電署在推動香港邁向更可持續、具氣候應變力的城市未來方面發揮關鍵作用。今年，機電署進一步兑現承諾，再次參與由香港中華廠商聯合會主辦、香港品牌發展局協辦的「ESG約章」計劃，提升我們在環境、社會及管治(ESG)方面的表現。

The EMSD has established a robust risk management framework to ensure the resilience and operational continuity of critical infrastructure during extreme weather events. Through these proactive measures, the EMSD plays a vital role in supporting Hong Kong's transition towards a more sustainable, climate-resilient urban future. This year, the EMSD bolstered our commitment by renewing our pledge to improve our Environmental, Social and Governance (ESG) performance under the "ESG Pledge" Scheme, organised by the Chinese Manufacturers' Association of Hong Kong in co-operation with Hong Kong Brand Development Council.

支持建築物可持續發展的法規和指引

REGULATIONS AND GUIDELINES FOR SUSTAINABLE BUILDINGS

建築物佔全港用電量約90%，逾50%的碳排放來自建築物耗能相關的電力生產。為此，機電署將提升建築物能源效益作為推動城市低碳轉型的重要策略。為實現這個目標，我們定期檢討相關條例、政策和措施，促進產業及整個社會負責任地使用能源。

In Hong Kong, buildings account for approximately 90% of the city's total electricity consumption and contribute to over 50% of its overall carbon emissions from electricity generation. In response, the EMSD places strategic emphasis on advancing building energy efficiency as a key driver in the city's low-carbon transition. To support this objective, we conduct ongoing reviews of relevant legislation, policies, and initiatives to promote responsible energy use across industries and the wider community.

推動上述工作的主要規管措施之一為《建築物能源效益條例》，該條例於2012年正式生效。去年，機電署根據《建築物能源效益條例》第40條，刊憲頒布《屋宇裝備裝置能源效益實務守則》(《建築物能源效益守則》)及《建築物能源審核實務守則》(《能源審核守則》)2024年版。上述修訂守則旨在進一步提升建築物設施安裝的能源效益，並支援本港的減碳目標。與2015年版本相比，新推出的《建築物能源效益守則》能源效益標準提升逾20%，預計至2035年每年可節省約54億度電。

A key regulatory measure in this effort is the Buildings Energy Efficiency Ordinance (BEEO), which came into effect in 2012. Last year, the EMSD gazetted the 2024 editions of the Code of Practice for Energy Efficiency of Building Services Installation (BEC) and the Code of Practice for Building Energy Audit (EAC), pursuant to Section 40 of the BEEO. These updated codes aim to further improve the energy efficiency of building services installations and support the city's decarbonisation goals. Notably, the revised BEC raises energy efficiency standards by over 20% compared to the 2015 edition, with projected annual energy savings of approximately 5.4 billion kWh by 2035.

根據《建築物能源效益條例》，遵從《建築物能源效益守則》及《能源審核守則》屬強制性要求。《建築物能源效益守則》訂明新建項目及大型翻新工程中屋宇裝備裝置的最低能源效益要求，而《能源審核守則》則規定商業建築物須定期進行能源審核。機電署與主要持份者緊密合作，包括建築物業主、負責人及物業管理公司，提高認知、確保遵從規定，並推動全港建築物能源效益持續改善。

Under the BEEO, compliance with both the BEC and EAC is mandatory. The BEC outlines minimum energy efficiency requirements for building services installations in new developments and major retrofitting projects, while the EAC mandates regular energy audits for commercial buildings. The EMSD works closely with key stakeholders – including building owners, responsible persons, and property management companies – to promote awareness, ensure compliance, and drive continuous improvement in building energy efficiency across the city.

為進一步加強業界參與及促進知識交流，機電署於2024年10月8日舉辦2024年樓宇機電安全及能源效益講座，吸引約100名物業管理界專業人士參與。講座以「善用創新科技 活化物業管理」為主題，邀請專家講解多項重點規管更新，包括《建築物能源效益條例》的最新發展、升降機及自動梯數碼工作日誌的實施，以及電力及氣體安全的最佳作業模式。是次活動為持份者提供策略平台，加深對遵從要求的理解，並探索前瞻性方案，促進更安全、更智能及更具能源效益的物業管理模式。

To further strengthen industry engagement and promote knowledge sharing, the EMSD hosted the Property Management Seminar 2024 on 8 October 2024, attracting approximately 100 professionals from the property management sector. With the theme "Leveraging Innovation and Technology to Revitalise Property Management", the seminar featured expert presentations on key regulatory updates, including the latest developments under the BEEO, the implementation of Digital Log-books for Lifts and Escalators, and best practices in electrical and gas safety. The event served as a strategic platform for stakeholders to deepen their understanding of compliance requirements, and to explore forward-looking solutions that support safer, smarter, and more energy-efficient property management.

機電署於2024年10月8日舉辦2024年樓宇機電安全及能源效益講座。
The EMSD hosted the Property Management Seminar 2024 on 8 October 2024.

向各行各業推廣可持續技術融合

PROMOTING THE INTEGRATION OF SUSTAINABLE TECHNOLOGIES ACROSS INDUSTRY

機電署明白科技在推動本港可持續發展議程中擔當關鍵角色，致力於業界推廣良好作業方法。同時，機電署積極與特定業界持份者共同探討創新及協作解決方案，進一步減少能源消耗及碳排放，從而實現長遠的環境及營運效益。

Recognising the critical role that technology plays in advancing the city's sustainability agenda, we are committed to promoting best practices across the industry. At the same time, the EMSD actively pursues innovative and collaborative solutions with sector-specific stakeholders to further reduce energy consumption and carbon emissions, delivering long-term environmental and operational benefits.

高效供冷

為支援香港的可持續發展目標，機電署積極推廣節能冷卻技術，例如水冷式空調系統。此外，機電署於2023年11月21日出版《淡水冷卻塔計劃》小冊子、《淡水冷卻塔實務守則》和《淡水冷卻塔操作及維修的良好作業》指引2023年版本，並已於2024年5月21日全面落實。這些更新已配合有關的最新科技應用、相關標準及要求，旨在透過良好的系統設計、安裝、操作及保養，確保能源效益、環境保護及公眾健康。

Efficient Cooling

To support Hong Kong's sustainability goals, the EMSD actively promotes energy-efficient cooling technologies such as water-cooled air-conditioning systems. Furthermore, the EMSD released the 2023 Editions of the Fresh Water Cooling Towers (FWCT) Scheme brochure, Code of Practice for Fresh Water Cooling Towers, and the guidebook of Good Operation and Maintenance Practice of Fresh Water Cooling Towers. These were published on 21 November 2023 and fully implemented on 21 May 2024. The updates which coped with the latest technologies, updated standards and requirements for the FWCT Scheme aim to ensure energy efficiency, environmental protection, and public health through proper system design, installation, operation, and maintenance.

環境可持續發展成效
ENVIRONMENTAL SUSTAINABILITY PERFORMANCE

此外，機電署轄下的衞生工程部自行研發了「ChillStream®」人工智能製冷機組優化系統，該系統可高度擴展，提升製冷機組表現。系統透過分析建築物實時用電負荷、運行數據及天氣預報數據，每五分鐘運用人工智能演算法，從數以百萬計的組合中識別最佳控制參數。與傳統規則式控制器相比，該系統可節省約3%至5%的能源。該系統支援「分析即服務」模式，能靈活配合不同製冷機組配置，並已通過全天候無人自動化操作測試，內置安全機制以確保系統穩定運作。

此外，機電署發展區域供冷系統，為整個區域的空調系統提高效能。區域供冷系統是一種高能源效益的系統，透過集中式管網向多座樓宇供應冷凍水。啟德發展區的海水區域供冷系統自2013年啟用以來，累計節省約8 240萬度電，減少約57 680公噸碳排放。

可再生能源

為推動本港可再生能源的應用，機電署發布《可再生能源發電系統與電網接駁的技術指引》及《太陽能光伏系統安裝指南》供公眾參考。這些資源以及有關太陽能光伏系統及太陽能熱水系統的設計、操作及保養教育短片，均上載於「香港可再生能源網」。與此同時，「香港節能網」亦提供多項工具及資訊，推廣節能措施。機電署亦設有專責的「上網電價」熱線，解答公眾查詢，並定期舉辦或聯合舉辦知識分享活動，以提升公眾對可再生能源的認識，並鼓勵更廣泛應用。

創新服務

作為政府的「創新促成者」，機電署致力推動以客戶為本的創新方案。其中一項重點措施為「機電創科網上平台」，該互動網上平台旨在促進政府部門與創科界別的聯繫。平台以用家需要為導向，讓公營機構提交實際營運挑戰，並由初創企業、科研人員及方案供應商提交相應建議，進行配對。此需求主導模式確保所研發的方案既具創新性，亦切合實際應用需要。透過促進跨界別協作及加快新興科技的應用，「機電創科網上平台」在推動智慧城市發展及提升公共服務質素與效率方面，發揮關鍵作用。

In addition, the EMSD's in-house Health Sector Division has developed the ChillStream® Artificial Intelligence (AI) Chiller Plant Optimisation System, a scalable, self-developed AI solution that enhances chiller plant performance. By analysing real-time building load, operational data, and weather forecasts, the system uses an AI algorithm to identify optimal control set-points from millions of combinations every five minutes. This enables energy savings of 3%-5% compared to traditional rule-based controllers. The system supports Analytics-as-a-Service, is adaptable to various plant configurations, and has been tested for 24/7 unmanned automation, with built-in safety protocols to ensure reliable operations.

Furthermore, the EMSD has developed the District Cooling System (DCS) to enhance the efficiency of air-conditioning systems in district level. DCS is a highly energy-efficient system that distributes chilled water to multiple buildings through a centralised network. Notably, the seawater-based DCS in the Kai Tak Development has saved approximately 82.4 million kWh of electricity and reduced 57 680 tonnes of carbon emissions since its launch in 2013.

Renewable Energy

To support the adoption of renewable energy in Hong Kong, the EMSD has issued the Technical Guidelines on Grid Connection of Renewable Energy Power Systems and the Guidance Notes for Solar Photovoltaic (PV) System Installation for public reference. These resources, along with educational videos on the design, operation, and maintenance of solar PV and solar hot water systems, are available on the Hong Kong Renewable Energy Net (HK RE Net). In parallel, the Hong Kong Energy Efficiency Net (HK EE Net) provides additional tools and information to promote energy-saving practices. The EMSD also addresses public enquiries through a dedicated Feed-in Tariff hotline and regularly organises or co-hosts knowledge-sharing activities to raise awareness and encourage the wider application of renewable energy.

Innovative Service

As the Government's Innovation Facilitator, the EMSD is committed to advancing customer-centric, innovative solutions. One of our key initiatives is the InnoPortal, an interactive online platform designed to connect government departments with the innovation and technology (I&T) community. With a strong emphasis on user needs, the platform enables public sector clients to submit real-world operational challenges, which are then matched with proposals from startups, researchers, and solution providers. This demand-led approach ensures that the solutions developed are not only innovative but also practical and directly applicable. By encouraging cross-sector collaboration and accelerating the adoption of emerging technologies, the InnoPortal plays a pivotal role in advancing smart city initiatives and enhancing the quality and efficiency of public services.

機電署的環保作業方法

我們致力透過穩健的環境管理及負責任的營運作業方法，推動可持續發展的未來。下一節將概述我們的環保表現，重點包括環境管理及合規標準、氣候應變、碳減排、能源效益、節約用水、廢物管理及綠色採購。

環境管理和守法合規

我們實施國際認可的ISO 14001:2015環境管理系統，持續改善環保成效。這框架有助我們減少資源消耗及碳足跡，同時確保完全符合環境法規。機電署將可持續作業方式融入日常營運，進一步鞏固我們在守法合規及長遠環境管理方面的承諾。

氣候應變

面對極端天氣事件日益頻繁，機電署透過緊急事故控制中心展現出強大的營運應變能力及策略準備能力。該中心於緊急情況下全天候運作，負責監控及協調全港主要公共機電設施，確保公共安全不受影響及快速恢復服務。在超強颱風「蘇拉」襲港期間，機電署首次引入雙組值班模式，提升應變準備及回應效率。在2023年9月破紀錄的暴雨期間，緊急事故控制中心迅速啟動，與政府部門保持實時溝通協調，即時提供緊急及維修服務。

此外，機電署亦推展多項節能及減碳改善項目，深化與醫院管理局的策略伙伴關係。其中一項重點工程是更換屯門醫院主座的高效能空調製冷機組。自2023年工程完成以來，製冷機組的用電量已顯著降低26%。

ENVIRONMENTAL PRACTICES AT THE EMSD

We are committed to driving a sustainable future through robust environmental stewardship and responsible operational practices. The following section outlines our environmental performance, with a focus on key areas including environmental management and compliance, climate resilience, carbon reduction, energy efficiency, water conservation, waste management, and green procurement.

Environmental Management and Compliance

We have adopted the internationally recognised ISO 14001:2015 Environmental Management System to drive continuous improvement in our environmental performance. This framework enables us to minimise resource consumption and carbon footprint, while ensuring full compliance with all applicable environmental laws and regulations. By embedding sustainable practices into our daily operations, the EMSD reinforces our commitment to regulatory excellence and long-term environmental stewardship.

Climate Resilience

Amid the increasing occurrence of extreme weather events, the EMSD has consistently demonstrated strong operational resilience and strategic readiness through our Emergency Control Centre (EMCC). Operating 24/7 during emergencies, the EMCC plays a critical role in monitoring and co-ordinating major public E&M facilities across Hong Kong, ensuring uninterrupted public safety and rapid service restoration. Notably, during Super Typhoon Saola, the EMSD introduced a dual-team duty model for the first time, enhancing preparedness and response efficiency. Similarly, during the record-breaking rainstorm in September 2023, the EMCC was swiftly activated to maintain real-time co-ordination with government departments, enabling immediate deployment of emergency and repair services.

In addition, the EMSD has also deepened our strategic partnership with the Hospital Authority by developing various energy-saving and carbon reduction improvement projects. One of the key projects is the replacement of high-energy-efficient chillers at the Main Block of Tuen Mun Hospital. Since the completion of the project in 2023, the chillers' electricity consumption has been significantly reduced by 26%.

機電署更換屯門醫院主座的空調製冷機組，顯著降低用電量。
The EMSD replaced the chillers at the Main Block of Tuen Mun Hospital, resulting in a significant reduction in electricity consumption.

機電署的環保表現

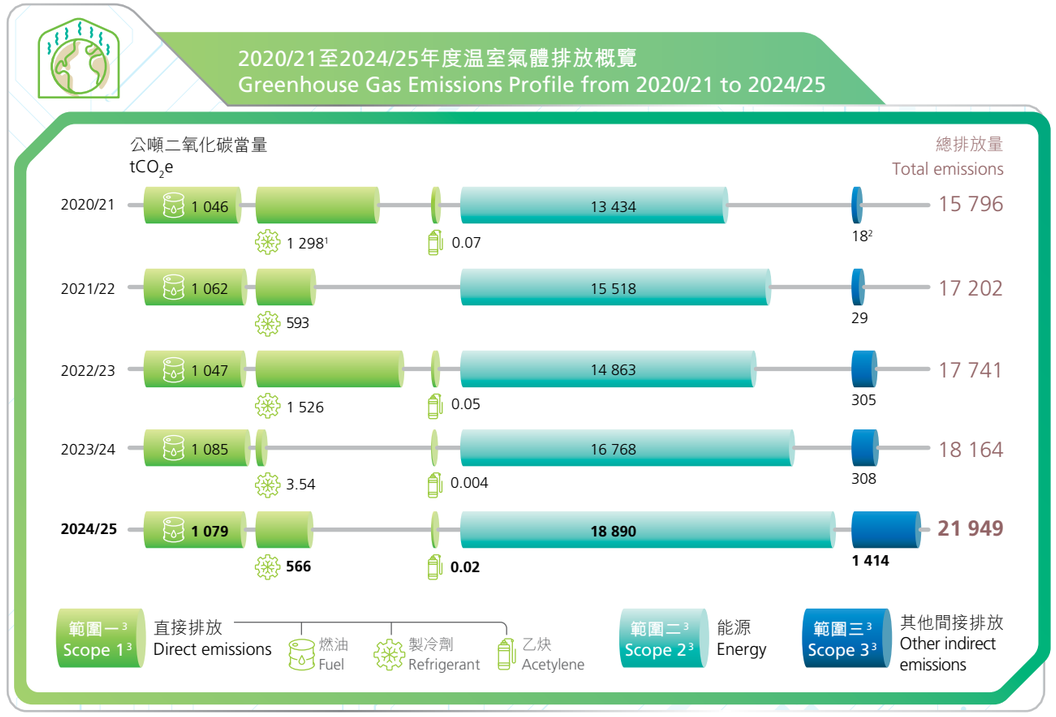
碳排放

機電署在減少碳排放方面取得了重大進展，特別是透過在總部大樓部署區域供冷系統，大幅降低了與製冷相關的能源消耗。我們對可持續發展的承諾亦體現在積極推動可再生能源方案，例如安裝太陽能板，以及嚴密監察及管理主要碳排放源，包括燃料及電力使用、廢物處置及公務旅行等。為配合低碳出行轉型，我們現時車隊包括16輛電動車及1輛混合動力車，體現我們致力採用更潔淨及具能源效益的交通方案。

ENVIRONMENTAL PERFORMANCE AT THE EMSD

Carbon Emissions

We have made significant strides in reducing carbon emissions, notably through the deployment of the DCS at our Headquarters Building, which has substantially decreased cooling-related energy consumption. Our commitment to sustainability is further reflected in the active promotion of renewable energy solutions, such as the installation of solar panels, and the rigorous monitoring and management of key emission sources, including fuel and electricity usage, waste disposal, and business travel. As part of our transition to low-carbon mobility, our current fleet includes 16 electric vehicles and one hybrid model, underscoring our dedication to adopting cleaner, energy-efficient transportation alternatives.



我們的總碳排放年度變化為21%，顯示2024/25年度的總排放量較2023/24年度有所增加。2024/25年度的範圍一、範圍二及範圍三溫室氣體排放分別為1 646公噸、18 890公噸及1 414公噸二氧化碳當量，導致每名員工的排放強度上升至每人3.72公噸二氧化碳當量，較上一年度有所增加。主要變化之一是範圍三溫室氣體排放量上升，範圍二排放亦錄得13%的增幅。這增長與近年趨勢相若，電力使用量上升無疑增加範圍二排放量。儘管排放量呈上升趨勢，機電署仍致力識別和追求減排機會，透過持續監察、提升能源效益及實施低碳策略，減輕對環境的影響。

Our year-on-year percentage change in total emissions is 21%, representing an increase in our total emissions from 2023/24 to 2024/25. Our total scope 1, scope 2 and scope 3 emissions for 2024/25 were 1 646 tCO_2e, 18 890 tCO_2e, and 1 414 tCO_2e respectively, resulting in an increase in emission intensity to 3.72 tCO_2e per employee when compared to the previous year. One of the major changes has been the increase in our scope 3 greenhouse gas (GHG) emissions, along with a 13% increase in our scope 2 GHG emissions. This rise follows a similar trend in recent years, where our increase in electricity consumption is undoubtedly coupled with an increase in our associated scope 2 GHG emissions. Despite this upward trend, the EMSD remains steadfast in identifying and pursuing opportunities to limit and reduce such emissions. Through continuous monitoring, energy efficiency initiatives, and low-carbon strategies, we are committed to mitigating our environmental impact.

能源使用

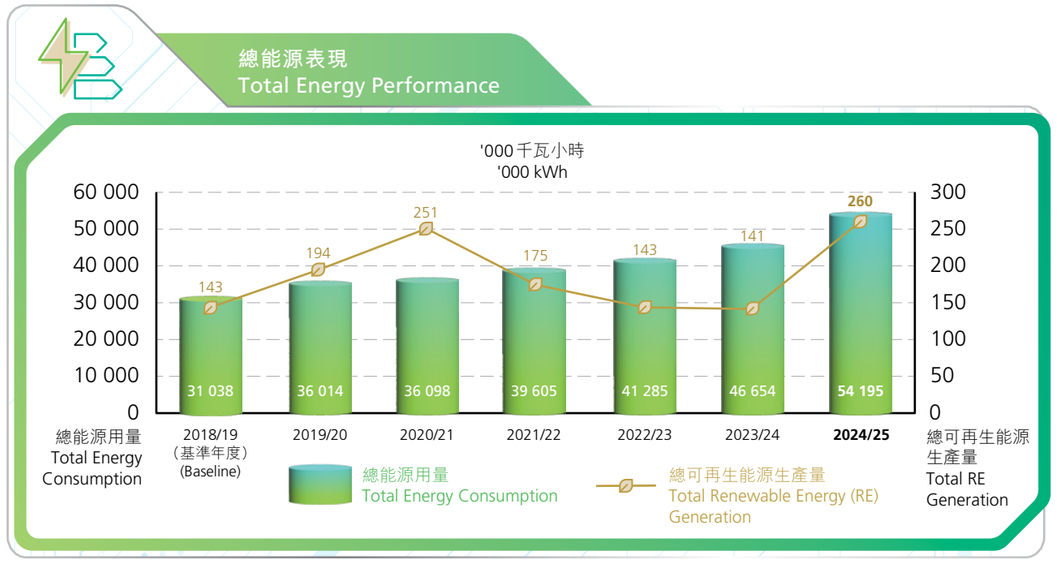
為配合政府訂立的「綠色能源目標」，機電署致力於2020年至2025年間減少整體能源消耗6%。於本匯報期內，我們的總能源消耗較往年有所上升，主要原因是新增兩個場地，分別為啟德區域供冷系統三號廠房及位於宏天廣場的機電署辦公室。區域供冷系統在支援啟德地區持續發展方面發揮積極作用，包括新啟德體育園區的發展。此外，我們其中一個新增場地已安裝太陽能板，進一步提升可再生能源在能源組合中的比例及產量。根據政府定義的相若運作情況下調整後的數據計算，2024/25年度的能源表現較2018/19基準年度改善6.45%。這項重要里程碑與我們整體目標相符，進一步印證我們對政府「綠色能源目標」的支持。

除營運改善外，機電署亦透過資助計劃支援節能項目，當中包括機場區及中西區海濱長廊等重點項目，進一步展示我們對可持續發展及能源效益的承諾。

Energy Use

In support of the Green Energy Target set by the Government, we remain committed to achieving a 6% reduction in total energy consumption between 2020 and 2025. During the reporting year, our total energy consumption increased compared to previous years, primarily due to the addition of two new venues, namely Kai Tak District Cooling System Plant No.3 and the EMSD Office at Skyline Tower. The DCS has played an active role in supporting the ongoing development of the Kai Tak district, including the new Kai Tak Sports Park area. Furthermore, one of our new venues has been equipped with solar panels, further increasing the share and production of renewable energy in our energy mix. After normalisation under the Comparable Operational Conditions as defined by the Government, our energy performance in 2024/25 has improved by 6.45% compared to the baseline year of 2018/19. Achieving this remarkable milestone aligns with our overarching goal and further reinforces our support for the Government's Green Energy Target.

In addition to operational improvements, the EMSD has supported energy-saving initiatives through funding schemes. Signature projects, such as the Airport District and Central & Western District Promenade, further demonstrate our commitment to sustainable development and energy efficiency.

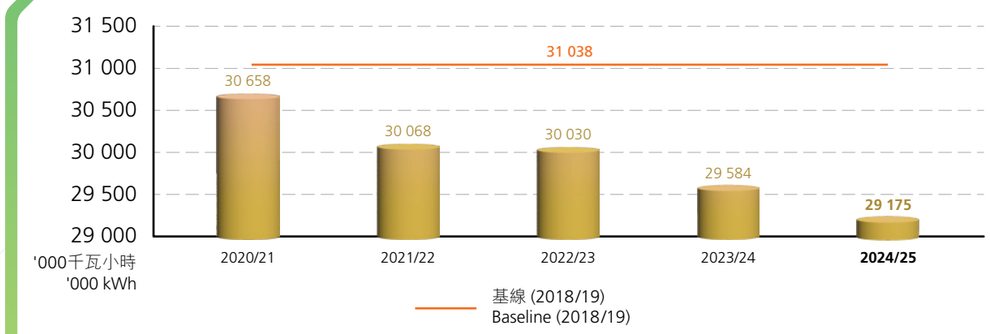


[1] 2020/21年度製冷劑數據經審查後新增其溫室氣體排放。
In 2020/21, refrigerant consumption was available after data review and the associated greenhouse gas (GHG) emission was newly included.

[2] 數據包括2020/21年度處置廢紙及公務旅行。
The figure includes waste paper disposal and business travelling in 2020/21.

[3] 範圍一排放是指由機電署控制的活動所產生的所有直接排放，例如燃氣鍋爐和車輛。範圍二排放是指由機電署從能源供應商購買的能源生產所產生的排放，例如購買的電力和煤氣。範圍三排放是指機電署以外發生的其他間接溫室氣體排放，例如處置廢紙、公務旅行、處理食水和污水時耗用的電力。
Scope 1 emissions refer to all direct emissions generated by activities controlled by the EMSD, such as combustion of fuel in gas boilers and vehicles. Scope 2 emissions refer to emissions resulting from the production of energy purchased by the EMSD from energy suppliers, such as purchased electricity and gas. Scope 3 emissions refer to other indirect GHG emissions outside the EMSD, such as waste paper disposal, business travelling, electricity used for fresh water and sewage processing.

於相若運作情況下的總能源用量
Total Energy Consumption under Comparable Operating Conditions



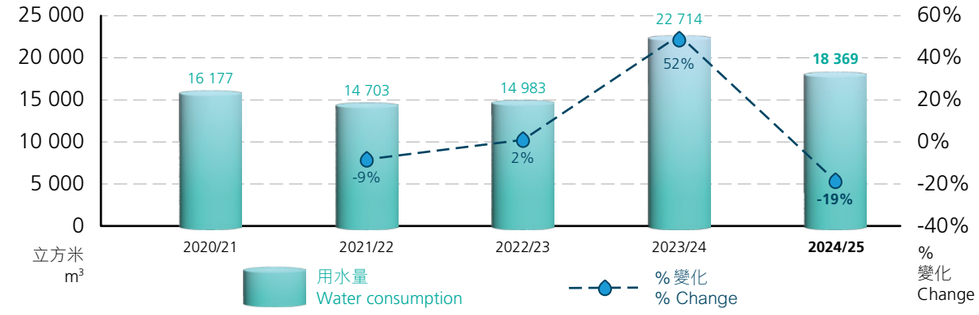
用水效益

為加強水資源管理，我們引入了多項措施，包括雨水回收系統和廁所的感應式水龍頭。我們於2024/25年度的總用水量為18 369立方米，較2023/24年度減少19%，用水表現有所改善。儘管用水量有所下降，該水平仍高於2021/22至2023/24年度的三年平均值。因此，我們將繼續密切監察用水數據，以評估表現及識別可進一步改善的地方。

Water Efficiency

To strengthen our water resource management, we have implemented a range of initiatives, including the installation of a rainwater harvesting system and sensor-activated taps in washrooms. We have improved our total water consumption compared to 2023/24, reducing our year-on-year consumption by 19% and attaining a total water consumption of 18 369 m^3 in 2024/25. Whilst this is an improvement, this level of consumption remains higher than the three-year average from 2021/22 to 2023/24. Hence, we remain committed to closely monitoring usage data to assess performance and identify opportunities for further improvement.

2020/21至2024/25年度用水量
Water Consumption from 2020/21 to 2024/25



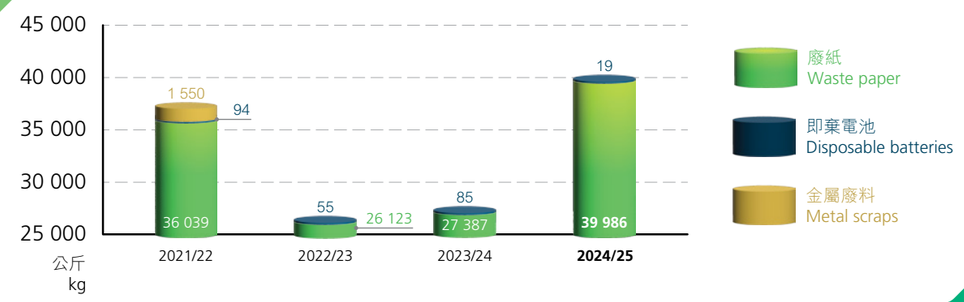
廢物管理

為支持政府減廢和零堆填的願景，我們實施健全的廢物管理措施。在本匯報年度中，我們購買了65 286公斤再造紙供辦公室使用，並確保在辦公室內妥善進行垃圾分類。今年共有40.6噸廢紙、金屬廢料、即棄電池及可充電電池交由持牌承辦商處置，體現我們進行負責任和可持續廢物管理的承諾。

Waste Management

In alignment with the Government's vision for waste reduction and zero waste to landfill, we have implemented robust waste management practices. During the reporting period, we procured 65 286 kg of recycled-content paper and ensured proper waste segregation within office premises. A total of 40.6 tonnes of waste paper, metal scraps, disposable batteries, and rechargeable batteries was handled by licensed contractors this year, highlighting our continued commitment to responsible and sustainable waste management.

由承辦商進行回收的無害廢物
Non-hazardous Waste Handled by Contractors for Recycling



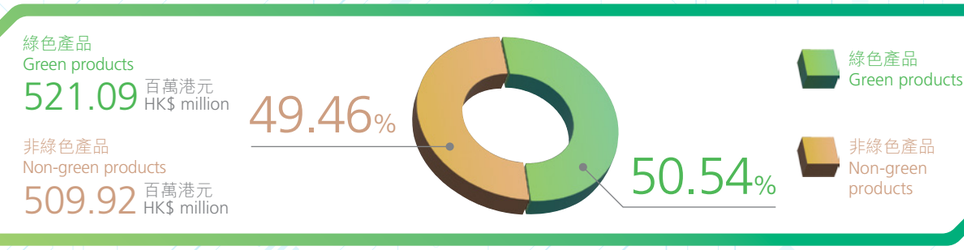
綠色產品和服務

機電署對綠色採購的承諾符合政府的環保採購政策和ISO 14001:2015環境管理系統。如**與供應商合作**章節所述，在本匯報年度內，我們共新增112間提供環保產品的供應商，將供應商名冊擴充至2 693間。於本年度總採購額10.3101億港元中，5.2109億港元用於綠色產品，佔總採購額的50.54%。此舉反映我們持續致力於負責任採購，並將可持續發展理念融入採購實務之中。

Green Products and Services

The EMSD's commitment to sustainable procurement is firmly anchored in compliance with the Government's green procurement policy and the ISO 14001:2015 Environmental Management System. As mentioned in the **Partnership with Our Suppliers** section of this Report, 112 new suppliers offering environmentally friendly products were added to our supplier list during the reporting period, bringing the total to 2 693. Out of a total procurement volume of HK$1,031.01 million, HK$521.09 million was allocated to green products, representing 50.54%. This reflects our ongoing dedication to responsible sourcing and the integration of sustainability into our procurement practices.

2024/25年度總採購額
2024/25 Total Procurement Volume



社會可持續發展成效
SOCIAL SUSTAINABILITY PERFORMANCE

機電署作為政府部門及領先的機電工程服務提供者，肩負雙重角色，秉承服務社會及業界的使命。我們不僅提供服務，更致力推動可持續發展、促進業界卓越表現，以及持續提升專業能力，從而推動有用和持久的變革。

The EMSD proudly upholds its dual role as both a government entity and a leading provider of E&M engineering services, with a clearly defined mandate to serve both the community and the industry. We offer more than just service delivery – we are committed to advancing sustainability, promoting industry excellence, and continuously developing our professional expertise to drive meaningful and lasting change.

為智慧城市提供卓越的機電服務

機電署運用專業知識，提供最先進的機電服務和創新解決方案，推動社會進步。我們致力提升營運效能、推動可持續發展、支援公營部門轉型，並為社會創造長遠價值。

E&M EXCELLENCE FOR A SMART CITY

The EMSD harnesses our technical expertise to drive social advancement by delivering state-of-the-art E&M services and pioneering innovative solutions. We are committed to enhancing operational efficiency, promoting sustainability, supporting public sector transformation, and creating long-term value for the community.

賦能各行各業 推動機電卓越

在醫療方面，機電署持續加強與醫務衞生局的策略伙伴關係，支援香港首個中醫醫院項目。雙方簽訂為期五年的服務水平協議，在2025年4月1日生效，機電署將為香港中醫醫院的關鍵設備提供全天候操作及維修服務，並透過「機電創科網上平台」等渠道引入創科方案。這些方案包括實時環境監控、人工智能驅動的能源優化，全面提升營運韌性，提供可持續及高質素的醫療服務。

Empowering Other Industries with E&M Excellence

In the healthcare sector, the EMSD continues to strengthen its strategic partnership with the Health Bureau through supporting the Chinese Medicine Hospital of Hong Kong – a project that is first of its kind in Hong Kong. Under a five-year Service Level Agreement commencing in April 2025, the EMSD will provide round-the-clock operation and maintenance of critical systems while introducing advanced innovation and technology (I&T) solutions through platforms such as the E&M InnoPortal. These include real-time environmental monitoring and artificial intelligence (AI)-driven energy optimisation, which collectively enhance operational resilience and contribute to the delivery of sustainable, high-quality healthcare services.

此外，機電署亦透過智能、綜合的機電方案，支援其他部門提升公營服務效能。在農曆年宵市場舉行期間，機電署獲食物環境衞生署委託，提供端對端機電支援服務和智能人流統計方案。機電署應用物聯網遙距監察技術及即時數據分析，確保電力供應穩定、優化人流管理措施，並提升整體營運監察能力。現場團隊隨時候命，提供技術支援及應對突發情況，包括在惡劣天氣導致供電中斷後迅速恢復供電。上述措施展示機電署作為各行各業的可靠伙伴，推動具韌性、創新及卓越服務的角色。

The EMSD also empowers other sectors through intelligent, integrated E&M solutions that elevate public service delivery. During the Lunar New Year fairs, the EMSD was commissioned by the Food and Environmental Hygiene Department (FEHD) to provide end-to-end E&M support and deploy smart people-counting technologies. By leveraging Internet of Things (IoT) enabled remote monitoring and real-time data analytics, the EMSD ensured a stable power supply, optimised crowd management controls, and improved overall operational oversight. On-site teams were also mobilised to provide immediate technical support and respond to emergencies, including rapid power restoration following weather-related disruptions. The above initiatives demonstrate the EMSD's role as a trusted enabler of resilience, innovation, and service excellence across industries.

提供智能機電服務

機電署明白機電工程服務與市民日常生活及政府運作息息相關，因此致力透過運用創新技術，提供全面優質的工程方案。

Delivering Intelligent E&M Services

Recognising the integral connection between our services, daily life, and government operations, the EMSD is committed to delivering comprehensive, high-quality engineering solutions powered by innovative technologies.

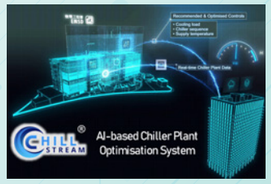
創新機電解決方案亮點
Highlights of Innovative E&M Solutions

使用隨身攝錄機記錄現場情況
Utilise Body Worn Video Cameras (BWVCs) for recording on-site situations

為確保前線人員安全和營運透明度，機電署為食物環境衞生署小販事務隊引入隨身攝錄機，讓各區前線人員可在執行職務時記錄現場情況，減低工作風險。

To enhance frontline safety and operational transparency, the EMSD introduced BWVCs for the Hawker Control Teams of the FEHD, enabling district officers to document on-site situations during their execution of duties and reduce risks at work.

使用「ChillStream®」進行製冷機組優化控制以節省能源
Adopt ChillStream® to optimise chiller plant control for saving energy



機電署自主研發的「ChillStream®」是一套人工智能驅動的製冷機組優化系統，透過人工智能技術提升製冷機組的控制效能，每年可節省約3%至5%的能源。「ChillStream®」已在公共衞生檢測中心臨床實驗室大樓的七台製冷機組進行試驗。初步試運行結果顯示系統具備良好的節能潛力，同時維持穩定的全天候人工智能自動化運作。

Developed in-house by the EMSD, ChillStream® is an AI-based Chiller Plant Optimisation System that leverages AI to enhance chiller plant control, saving 3%-5% of energy annually. ChillStream® underwent pilot operation in a clinical laboratory building (Public Health Laboratory Centre) with seven chillers. Initial trials demonstrated promising energy-saving potential while maintaining a stable 24-hour AI-automated operation.

獲獎項目 Award Winning

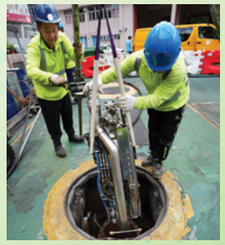
利用智能電容器醫生預測電容器問題
Predict capacitor problems using the Smart Capacitor Bank Health Doctor

智能電容器醫生採用人工智能深度學習神經網絡演算法，實時監察電容器的狀態。該系統能提前預測潛在問題，降低故障風險，提升運作安全。這智能方案有助電容器組更有效地發揮穩定電流、改善功率因數等重要功能，令電力供應更安全可靠。

The Smart Capacitor Bank Health Doctor leverages advanced AI deep learning neural network algorithms to enable real-time monitoring of capacitor bank conditions. By predicting potential issues before they arise, the system proactively mitigates failure risks and enhances operational safety. This intelligent solution ensures capacitor banks perform their critical functions (such as current smoothing and power factor improvement) more effectively, contributing to a safer and reliable power supply.

獲獎項目 Award Winning

引入防爆機械人
Introduce explosion-proof robot



為提升工作安全和運作效率，機電署引入液壓式防爆機械人以應對高危工作，例如為銅鑼灣消防局清洗地下油缸和更換燃油添加系統。

To enhance workplace safety and operational efficiency, the EMSD has deployed hydraulic explosion-proof robots designed for high-risk tasks, such as cleaning underground fuel tanks and replacing the fuel dispensing system at the Tung Lo Wan Fire Station.

引領機電創新

機電署着重實踐資訊科技，透過拓展尖端解決方案及公共服務的範疇，在推動政府實現將香港轉型為智慧城市的願景中發揮關鍵作用。

在營運基金第三個五年策略計劃下，我們秉持「提供以客為本創新服務」及「加強多方創新協作」的服務理念，全力推動創科，成效廣獲認同。正如本報告**追求卓越的可持續發展成效**章節所述，機電署憑藉多項創新方案，於2024香港資訊及通訊科技獎中獲頒一項金獎、兩項銀獎及一項最佳人工智能應用獎。我們的創新項目亦於第四十九屆日內瓦國際發明展、2024亞太資訊及通訊科技大獎及「openBIM Awards 2024」中獲得國際殊榮。

Pioneering E&M Innovations

The EMSD emphasises practical I&T, playing a crucial role in advancing the Government's vision of transforming Hong Kong into a smart city by broadening our range of cutting-edge solutions and public services.

Our strong commitment to I&T, driven by "Providing Customer-oriented Innovative Services" and "Strengthening Innovative Collaboration between Stakeholders" under the third Five-year Strategic Plan of the EMSTF, has earned widespread recognition. As outlined in the **Sustainability Excellence** section of this Report, the EMSD received a Gold Award, two Silver Awards, and the Best Use of AI Award for pioneering solutions at the Hong Kong Information and Communications Technology Awards 2024 (HKICT Awards 2024). Our innovations have also gained international acclaim at the 49th International Exhibition of Inventions of Geneva, Asia Pacific Information and Communications Technology Alliance (APICTA) Awards 2024, and openBIM Awards 2024.

機電署憑創新方案於2024香港資訊及通訊科技獎中獲頒一項金獎、兩項銀獎及一項最佳人工智能應用獎。
The EMSD was honoured with a Gold Award, two Silver Awards, and the Best Use of AI Award for pioneering solutions at the HKICT Awards 2024.

透過嚴格規管 提升機電行業發展

機電署堅守使命，致力透過嚴謹的規管工作及創新措施，提升本港機電業界的安全水平、營運效能及技術發展，詳情載於上文的**提供智能機電服務**章節。

為推動持續改善，並確保業界人員及市民的安全達至最高標準，機電署定期檢討及更新機電業界的相關規例及數據集。在本報告年度內，機電署實施了多項重要的規管修訂，詳情載於下頁。

Empowering the E&M Sector with Robust Regulations

The EMSD remains steadfast in its mission to elevate the safety, operational efficiency, and technological advancement of Hong Kong's E&M sector through a combination of rigorous regulatory oversight and innovative initiatives, as outlined in the **Delivering Intelligent E&M Services** section above.

To drive continuous improvement and uphold the highest safety standards for both industry personnel and the public, the EMSD conducts regular reviews and updates of regulations and datasets within the E&M sector. In this reporting year, several key regulatory revisions were implemented, as shown in the following page.

主要規例或指引修訂
Key Regulatory Revisions or Guideline Revisions

《產品能源標籤實務守則2024》
Code of Practice on Energy Labelling of Products 2024

此更新版本《守則》提供能源效益標籤的技術指引及分級標準。
This updated Code provides technical guidance and grading standards for energy efficiency labelling.

「強制性能源效益標籤計劃」第四階段
Phase IV of Mandatory Energy Efficiency Labelling Scheme

於2023年9月1日開始實施，設有為期15個月的過渡期，並於2024年12月1日全面推行。新增涵蓋的產品包括：
Commenced on 1 September 2023 with a 15-month transitional period; full implementation began on 1 December 2024. Newly covered products include:

- 發光二極管燈
  Light emitting diode lamps
- 氣體煮食爐
  Gas cookers
- 即熱式氣體熱水爐
  Gas instantaneous water heaters

氫燃料安全簡介會
Hydrogen Fuel Safety Briefing

簡介會主題涵蓋加氫站的安全指引和氫能裝置定量風險評估的技術指引。機電署持續與業界持份者進行諮詢以修訂相關指引。
This includes safety guidelines for hydrogen fuel systems and technical guidelines for quantitative risk assessment of refuelling stations. The EMSD is continuously consulting industry stakeholders to refine guidelines.

除定期檢討及更新規管框架外，機電署亦積極提升技術標準，並推廣各行業的安全意識。透過舉辦資訊交流會、業界研討會及持份者參與活動，機電署積極促進電力、氣體、鐵路、升降機及自動梯等行業的知識共享及能力建設。

In addition to regularly reviewing and updating regulatory frameworks, the EMSD is deeply committed to raising technical standards and promoting safety awareness across various sectors. By organising information sessions, industry seminars, and stakeholder engagement activities, the EMSD actively supports knowledge sharing and capacity building within the electrical, gas, railway, lift, and escalator industries.

其中一項重點措施是2001年起與業界伙伴合辦的年度電力規例研討會，推廣最佳作業方式及安全為先的文化。最新一屆研討會以「活用科技『創』新安全」為主題，於2025年1月13日啟德社區會堂舉行，吸引約400名參加者，包括註冊電業工程人員、專業人士及學術界代表。研討會促進積極交流及知識分享，進一步鞏固業界對安全及持續改善的共同承擔。

作為香港氣體安全的監管機構，機電署負責執行《氣體安全條例》，以管制煤氣、石油氣及天然氣的進口、製造、儲存、運輸、供應及使用。機電署透過各種渠道積極推廣氣體安全，包括安全講座、電視節目訪問、媒體廣告、公眾宣傳活動等。同時，機電署根據《氣體安全條例》成立氣體安全諮詢委員會，向氣體安全監督就有關氣體安全法例之事宜提供意見。

機電署亦推行「瓶裝石油氣分銷商安全表現評級計劃」，藉以表揚在處理及儲存石油氣方面持續採用最佳作業方式的分銷商，從而推動業界維持高安全水平。透過定期評估，該計劃促進業界守法、提升安全意識，並培養持續改善的文化。

為提升機電行業的安全水平及透明度，機電署採取積極措施，推動業界參與及監察表現。「升降機及自動梯安全事宜分享會2024」匯聚超過100名業界專業人士，分享最佳作業方式，並加強守法意識。機電署亦修訂升降機及自動梯承辦商的「註冊承辦商表現評級」，涵蓋表現數據、事故紀錄及警告信。評分範圍為50至100分，協助業主及物業管理公司在選擇承辦商時作出知情的決策。上述措施充分體現我們透過穩健規管、資訊透明及持續改善，致力推動機電業界發展的承擔。

A key initiative is our annual "Electricity Regulations Seminar", co-organised since 2001 with industry partners to promote best practices and a safety-first culture. The latest seminar, themed "Innovative Technology for Electrical Safety" was held on, 13 January 2025, at the Kai Tak Community Hall. The seminar attracted around 400 participants, including registered electrical workers, professionals, and academics. It fostered active dialogue and knowledge exchange, reinforcing the industry's shared commitment to safety and continuous improvement.

As Hong Kong's regulator on gas safety, the EMSD is responsible for the enforcement of the Gas Safety Ordinance to control the importation, manufacture, storage, transport, supply, and use of town gas, liquefied petroleum gas (LPG), and natural gas. The EMSD actively promotes gas safety through various channels, including safety talks, interviews on television programmes, media advertisements, and publicity campaigns. Furthermore, the EMSD has established the Gas Safety Advisory Committee under the Gas Safety Ordinance to advise the Gas Authority on matters related to gas safety legislation.

In addition, the EMSD has implemented the LPG Cylinder Distributor Safety Performance Recognition Scheme, which promotes high safety standards by recognising distributors who consistently follow best practices in LPG handling and storage. Through regular assessments, the scheme promotes compliance, raises safety awareness, and fosters a culture of continuous improvement in the industry.

To enhance safety and transparency in the E&M sector, the EMSD has taken proactive steps through both industry engagement and performance monitoring. The Lift and Escalator Safety Matters Sharing Session 2024 brought together over 100 professionals to exchange best practices and reinforce regulatory compliance. Complementing this, the EMSD released the updated Contractors' Performance Rating (CPR) for registered lift and escalator contractors, covering performance data, incident records, and warning letters. With scores ranging from 50 to 100, the CPR enables building owners and management companies to make informed decisions when selecting contractors. These efforts underscore the EMSD's commitment to empowering the E&M sector through robust regulations, transparency, and continuous improvement.

機電署主辦「升降機及自動梯安全事宜分享會2024」，匯聚超過100名業界專業人士。
The EMSD hosted the Lift and Escalator Safety Matters Sharing Session 2024, gathering over 100 professionals in the industry.

推動機電專業的可持續發展

為建立機電業的穩固基礎，我們致力吸引及培育有抱負的人才。機電署透過具針對性的青年發展計劃及大型行業博覽活動，積極啟發及提升新一代機電專才的能力，讓年輕人才掌握推動創新及促進業界可持續發展所需的知識、技能及專業能力。

培養下一代機電業領袖

為吸引及挽留新一代機電業領袖，機電署舉辦職業博覽會，展示機電行業多元化的就業機會，以及舉辦青年交流計劃，鼓勵有志投身業界的年青人互相合作與創新。

DRIVING SUSTAINABILITY THROUGH E&M PROFESSIONAL DEVELOPMENT

To build a strong foundation for the future of the E&M industry, we are dedicated to attracting and cultivating aspiring talent. Through targeted youth development programmes and large-scale industry expos, the EMSD strives to inspire and empower the next generation of E&M professionals. These initiatives are designed to equip young talent with the essential knowledge, skills, and expertise needed to drive innovation and promote sustainability across the industry.

Nurturing the Next Generation of E&M Leaders

To attract and retain the next generation of E&M leaders, the EMSD organised career expos to showcase the diverse range of career opportunities available in the E&M sector, alongside youth exchange programmes that encourage collaboration and innovation among aspiring professionals.

STEM（科學、科技、工程及數學）教育計劃
STEM (Science, Technology, Engineering, and Mathematics) Education Programme

機電署於2025年舉辦區域供冷STEM-AI工作坊及能源效益設計比賽，鼓勵學生運用他們的STEM知識和人工智能技能，應對區域供冷領域的現實挑戰。比賽旨在通過優化和預測，促進創新、協作和開發有助於節能和環境可持續性的實用解決方案。同時培養學生在人工智能和區域供冷系統領域的創造力、批判性思維和解決問題的能力。
In 2025, the EMSD held the District Cooling System (DCS) STEM-AI Workshop and Competition, where students can apply their STEM knowledge and AI skills to address real-world challenges in the field of district cooling. The workshops and competition aim to foster innovation, collaboration, and the development of practical solutions that contribute to energy conservation and environmental sustainability through optimisation and prediction. It also seeks to cultivate students' creativity, critical thinking, and problem-solving abilities in the fields of AI and DCS.

機電青少年大使計劃
E&M Young Ambassador Programme

機電署與教育局合作舉辦「氫能車競賽大挑戰2025」，啟發可持續創新的未來領袖。學生透過參與製作氫能模型車這類STEAM（科學、科技、工程、藝術及數學）活動，探索潔淨能源概念，同時培養批判思維、創意及團隊合作能力。
In partnership with the Education Bureau, the EMSD launched the HydroRace Challenge 2025 to inspire future leaders in sustainable innovation. Through hands-on STEAM (Science, Technology, Engineering, Arts and Mathematics) activities like building hydrogen-powered model cars, students explored clean energy concepts while developing critical thinking, creativity, and teamwork skills.

社會可持續發展成效
SOCIAL SUSTAINABILITY PERFORMANCE

持續促進專業發展

機電署致力提供多元化的發展機會，讓機電專才透過持續學習提升能力，包括實體活動、網上研討會及自學課程。我們設立的電子平台提供有關操作及維修保養的最佳作業指引，廣受機電業界、學術界及物業管理界歡迎。我們亦舉辦「機電創科日」等活動，展示創新成果和促進協作，包括與學術機構建立伙伴關係，以進一步強化業界能力，體現我們對提升業界水平的決心。

Fostering Ongoing Professional Development

We are committed to empowering E&M professionals through continuous learning by offering a variety of development opportunities, including in-person events, online webinars, and self-paced programmes. Our e-platform, which provides access to best practice guides on operation and maintenance, has been well-received across the E&M industry, academia, and property management sectors. Reflecting our dedication to raising industry standards, we also host events such as the E&M I&T Day to showcase innovation and foster collaboration, including partnerships with academic institutions that further strengthen the sector's capabilities.

推動公眾參與可持續發展

提升公眾對機電安全及能源效益的認識是機電署的重點工作之一。我們透過針對性的外展活動，接觸不同社群，特別是青少年及長者，提供度身訂造的計劃，讓技術概念更易於理解。這些工作不僅促進安全操作及節能行為，亦有助實現可持續發展、智慧城市發展及機電服務創新的遠大目標。

第十九屆國際環保博覽在2024年10月30日至11月2日於香港舉行，作為倡議工作實證之一，機電署設置互動展覽攤位，推動公眾參與可持續發展。展覽設有多項互動展品，包括智能電網示範及人工智能驅動的「ChillStream®」系統，並設有專家分享環節及主題展區，讓市民更易理解節能概念，鼓勵社會各界積極參與，共建綠色未來。

Promoting Public Involvement in Sustainable Development

Raising public awareness regarding E&M safety and energy efficiency is a key priority for the EMSD. Through targeted outreach, we engage diverse community groups – especially young people and the elderly – by offering tailored programmes that make technical concepts accessible. These efforts not only promote safe practices and energy-conscious behaviour but also support broader goals in sustainability, smart city development, and innovation in E&M services.

As a testament to our initiatives, the 19th Eco Expo Asia, held in Hong Kong from 30 October to 2 November 2024, featured the EMSD's interactive booth, which promoted public participation in sustainable development. Through interactive exhibits such as smart grid demonstrations and the AI-powered ChillStream® system, along with expert sharing sessions and themed zones, the event made energy-saving concepts more accessible and encouraged the community to take an active role in building a greener future.

機電署於第十九屆國際環保博覽設置的互動展覽攤位。
EMSD's interactive booth at the 19th Eco Expo Asia.

職業安全與健康

機電署重視在各運作層面推行職業安全及健康(職安健)。我們的職安健措施由一套專責管理系統來處理，該系統已整合至營運基金的綜合管理系統並符合ISO 45001:2018職業健康與安全管理系統的國際標準。這確保機電署有系統地規劃、執行及持續改善員工及承辦商的工地安全。職安健策導委員會負責監督相關工作，並由各部別的職安健委員會支援，促進各層級的溝通及安全意識。

OCCUPATIONAL SAFETY AND HEALTH

At the EMSD, we place strong emphasis on occupational safety and health (OSH) across all operations. Our OSH practices are governed by a dedicated management system integrated into the EMSTF's broader Integrated Management System, aligned with the ISO 45001:2018 Occupational Health and Safety Management System international standard. This ensures that the EMSD adopts a structured approach to planning, implementing, and continuously improving workplace safety for both staff and contractors. Oversight is provided by the Steering Committee on OSH, supported by Divisional OSH Committees (DivOSHCs) that promote communication and safety awareness at all levels.

管理職安健風險和事故

為提升工地安全，機電署支持安全智慧工地系統的推行。根據發展局指引，自2023年2月起，所有超過三千萬港元的工務工程合約必須採用安全智慧工地系統。機電署在推動該系統的利用方面擔當重要角色，透過整合智能裝置、集中數據平台及通訊網絡，及早偵測危險並及時應對。發展局及建造業議會亦推出「安全智慧工地系統標籤計劃」，以表揚妥善實施的項目，並推動業界廣泛採用。

除安全智慧工地系統外，機電署亦開發「電子化操作維修系統」及人工智能代理，協助客戶主動管理機電設備相關風險。我們現正進行多項試點項目，並已成功為升降機、光伏系統及水泵進行自動故障偵測。我們正制訂相關故障偵測功能的標準化指引。

機電署透過穩健的職安健框架，重點推行危害預防、風險控制及有效事故應對措施，保障員工及承辦商的安全，減少工傷。

OSH Risk and Incident Management

To strengthen construction site safety, the EMSD has supported the implementation of the Smart Site Safety System (4S) which became mandatory for public works contracts over HK$30 million from February 2023 under the Development Bureau's (DEVB) directive. The EMSD has played a key role in promoting 4S adoption by integrating smart devices, centralised data platforms, and communication networks to enable early hazard detection and timely response. The DEVB and the Construction Industry Council (CIC) have also introduced the 4S Labelling Scheme to recognise proper implementation and drive broader industry adoption.

In addition to the 4S, the EMSD has developed the Digital Operation and Maintenance System and an AI Agent to support clients in proactively managing risks associated with their E&M equipment. Pilot projects are currently underway, with successful deployment of automatic fault detection for lifts, photovoltaic systems, and pumps. Work is ongoing to develop standardised guidelines for these fault detection capabilities.

We prioritise the safety of our staff and contractors through a strong OSH framework focused on hazard prevention, risk control, and effective incident response to reduce workplace injuries.

職安健風險評估和危害預防
OSH Risk Assessment and Hazard Prevention

- 參考《系統程序手冊》、實務守則和指引，識別與工作相關的危害。
  Identify occupational hazards with reference to the System Procedure Manual, codes of practice, and relevant guidelines.
- 每個策略業務單位各自根據其業務性質進行風險評估。
  Conduct individual risk assessments tailored to the specific operations of each Strategic Business Unit.
- 為員工提供必要的個人防護裝備和器材。
  Provide appropriate personal protective equipment to all staff members.
- 密切監察承辦商的健康及安全成效，就不合規的表現及時採取措施，避免意外發生。
  Closely monitor the health and safety performance of contractors, with prompt action taken in cases of inadequate performance or to prevent accidents.

事故報告和調查
Incident Reporting and Investigation

- 設立明確指引，要求員工一旦出現職安健事故，須立即停止執行職務並向上級報告。
  Set clear guidelines requiring staff members to immediately halt duties and promptly report to their respective supervisors in the case of any OSH incidents.
- 委任組別安全督導員或部別安全主任負責調查事故。
  Appoint a Sectional Safety Supervisor or Divisional Safety Officer to conduct investigations of incidents.
- 制訂措施保障員工免受事故相關問題困擾或遭報復。
  Implement measures that safeguard staff from incident-related issues and ensure protection against reprisals.

宣傳職業安全和評估表現
Safety Communication and Performance Evaluation

- 職安健策導委員會和部門職安健委員會定期舉行會議，評估職安健成效並檢討內部措施。
  Host regular meetings between the Steering Committee on OSH and DivOSHCs to evaluate OSH performance and review internal measures.
- 定期進行內部審核，持續優化職安健管理。
  Conduct periodic internal audits to drive continuous improvement of the OSH management.

推廣職安健意識和加強聯繫

為提升安全意識及應變能力，機電署為員工及承辦商提供多元化的培訓活動，包括基本安全課程、安全督導員培訓等強制性課程，以及研討會和比賽。我們亦透過內聯網、內部刊物和電子郵件等數碼平台，定期發放安全資訊。承辦商亦須遵守《職業安全及健康條例》及機電署的特定安全要求，以確保工作場所的安全措施統一全面。

除培訓外，機電署亦舉辦「市政工程部安全論壇」，邀請超過60名承辦商代表、專家及學者參與。論壇提供協作平台，分享良好作業範例，並探討加強安全文化及提升工地職安健管理的策略。透過開放對話及經驗分享，機電署致力營造更安全、更主動積極的工作環境。

OSH Awareness and Active Engagement

To enhance safety awareness and preparedness, the EMSD offers a variety of training initiatives for staff and contractors, including mandatory courses such as Basic Safety and Safety Supervisor Training, along with seminars and competitions. Safety messages are regularly communicated through digital platforms such as our intranet, internal publications, and emails. Contractors are also required to comply with specific OSH standards such as the OSH Ordinance and the EMSD-specific safety requirements to ensure a consistent and comprehensive approach to workplace safety.

In addition to training efforts, the EMSD organised a Municipal Sector Division Safety Forum that brought together over 60 contractor representatives, experts, and scholars. The forum served as a collaborative platform for sharing best practices and exploring strategies to strengthen safety culture and improve OSH management at construction sites. Through open dialogue and experience sharing, the EMSD reinforced our commitment to fostering a safer and more proactive working environment.

機電署舉辦「市政工程部安全論壇」，邀請超過60名承辦商代表、專家及學者參與。
The EMSD conducted a Municipal Sector Division Safety Forum that brought together over 60 contractor representatives, experts, and scholars.

此外，機電署亦支持由建造業議會舉辦的「建造業安全周2024」。該項業界盛事設有研討會、小組討論及知識分享環節，吸引來自不同界別的專業人士參與。透過參與此活動，機電署積極推動安全為先的理念，並鼓勵業界持續改善職安健作業方法。

The EMSD also supported the Construction Safety Week 2024, hosted by the CIC. This industry-wide event featured seminars, panel discussions, and knowledge-sharing sessions that engaged professionals from across the sector. By participating in this initiative, the EMSD contributed to promoting a safety-first mindset and encouraging continuous improvement in OSH practices throughout the construction industry.

機電署參與建造業議會舉辦的「建造業安全周2024」。
The EMSD participated in the Construction Safety Week 2024 hosted by the CIC.

機電署為內部員工及承辦商提供的安全培訓和活動詳情載於下表。

The safety trainings and initiatives provided by the EMSD for our internal staff and contractors are outlined in the table below.

安全培訓及活動
Safety Trainings and Initiatives

內部員工
Internal Staff

- 強制性基本安全培訓
  Mandatory Basic Safety Training
- 一般職安健培訓
  General OSH Training
- 安全督導員培訓
  Safety Supervisor Training
- 研討會
  Seminars
- 比賽
  Competitions

承辦商
Contractors

- **機電署承辦商研討會**
  EMSD Contractors Forum
  為承辦商推廣最新的安全標準和相關措施。
  Promoting information on the latest safety standards and relevant measures to our contractors.
- **政府合約**
  Government Contract
  《工地安全特別規格》訂明承辦商必須為工地工人提供必要的安全培訓。
  Stipulating in Particular Specifications on Site Safety that contractors must provide necessary safety training for their site workers.

關懷員工

機電署高度重視員工的寶貴貢獻。我們明白員工的專業知識、敬業精神及日常努力對推動營運卓越及支持我們長遠可持續發展至為重要。

員工統計

截至2025年3月底，機電署共僱用5 901名員工，包括全職、常任制員工及合約工人，較2023/24年度的5 893人略為上升。年內並無聘用兼職員工。本匯報年度的新入職率為9.5%，離職率為7.9%。

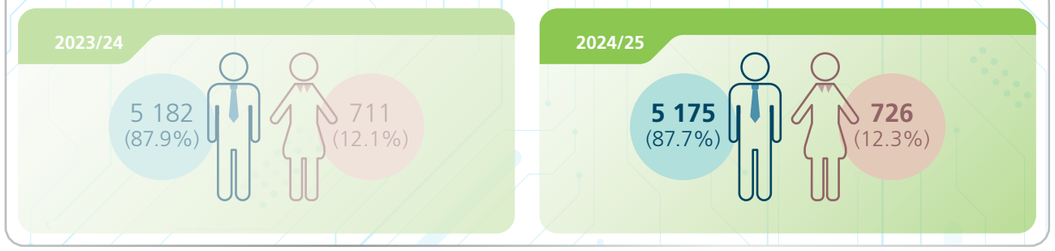
CARING FOR OUR COLLEAGUES

The EMSD places great importance on the valuable contributions of our workforce, recognising that their dedication, expertise, and daily efforts are instrumental in driving operational excellence and supporting our long-term commitment to sustainable development.

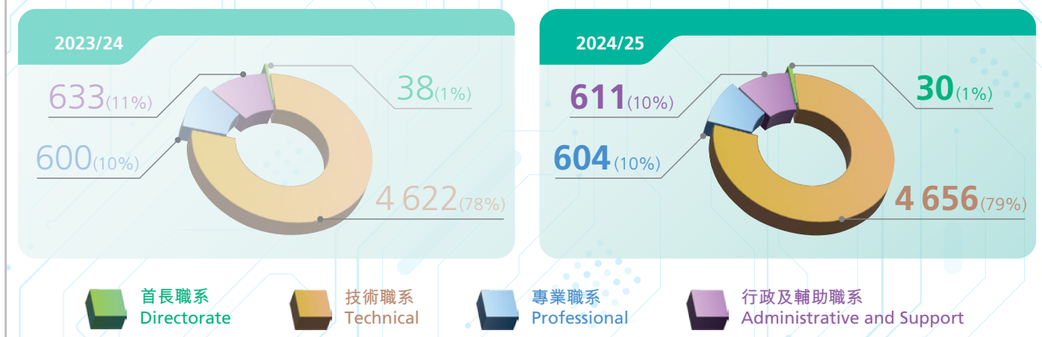
Staff Statistics

As of the end of March 2025, the EMSD employed 5 901 staff members, including both full-time permanent and contract (temporary) employees, representing a slight increase from 5 893 in 2023/24. No part-time staff were employed during this period. The recruitment rate stood at 9.5%, while the turnover rate was 7.9% for the reporting year.

員工按性別劃分
Staff Breakdown by Gender



員工按職系劃分
Staff Breakdown by Grade



員工福利

機電署員工只要符合政府公務員聘用條款及非公務員合約僱員計劃列明的資格，便可享有一系列福利，包括醫療服務和房屋福利。這些福利均按照《公務員事務規例》和公務員事務局發出的通告和通函處理。

機電署支持我們的同事在發展事業和個人責任之間取得平衡。我們提供育嬰假，便利同事照顧家庭同時兼顧事業發展。

此外，機電署堅守維護人權的原則，並致力營造公平公義的工作環境。我們絕不容忍任何形式的強迫或強制勞動。

Staff Welfare

As part of the Government's Civil Service and Non-Civil Service Contract Staff Schemes, eligible staff of the EMSD are entitled to a range of benefits, including medical services and housing allowances. These benefits are administered in accordance with the Civil Service Regulations and the relevant Circulars and Circular Memoranda issued by the Civil Service Bureau.

The EMSD is committed to supporting our staff members in balancing their professional and personal responsibilities. To this end, we provide adequate parental leave provisions to facilitate family care, allowing staff to prioritise family while maintaining career development.

Lastly, the EMSD upholds human rights and prioritises fostering a workplace that is grounded in fairness and justice. This commitment is reflected in our zero-tolerance policy towards all forms of forced or compulsory labour.

多元化與平等機會

機電署致力提供彼此支持和共融的工作環境，讓每位員工都能享有公平和公正的待遇。為履行這個承諾，機電署絕不容許工作場所出現歧視、騷擾和誹謗行為。此外，機電署積極推動平等就業機會，透過參與《有能者．聘之約章》和共融機構嘉許計劃等活動，支持有特殊需要的人士就業。

在本匯報年度內，機電署的營運及供應商網絡均無發現任何涉及歧視，或童工或強迫勞工相關的違規情況，印證機電署持續保持道德操守，並遵守所有相關法例及規定。

Diversity and Equality

The EMSD is committed to cultivating a supportive and inclusive workplace where all employees are treated with fairness and respect. In alignment with this commitment, we maintain a zero-tolerance policy toward workplace discrimination, harassment, and vilification. Furthermore, the EMSD actively promotes equal employment opportunities by supporting individuals with special needs through participation in initiatives such as the Talent-Wise Employment Charter and the Inclusive Organisations Recognition Scheme.

Throughout the reporting year, there were no reported incidents of discrimination or violations related to child or forced labour within the EMSD's operations or supply chain. This outcome underscores our continued efforts to maintain ethical practices and compliance with all relevant laws and regulations.

培訓和發展

為支持專業發展，機電署提供多元化的培訓和發展計劃，提升員工能力，讓他們掌握最新行業技術。這些培訓包括新興科技的能力建設課程，包括數碼化技術、「建築信息模擬－資產管理」、生成式人工智能及第三代互聯網。此外，我們亦提供職安健、管理及行政人員發展、操守與誠信、國情、基本法及國安法等範疇的培訓課程，以及各類職業及通識培訓。

機電署與清華大學經濟管理學院合辦首長級人員管理培訓課程，以加強員工領導及管理能力，共有39位首長級人員參與，學習企業管理及人工智能應用的進階知識。

我們重新設計新僱員的入職培訓課程，以配合政府加強公務員入職培訓的方針。在本匯報年度中，機電署提供總共超過27 500日的培訓，每名員工平均培訓日數為5.59日。按性別和職系劃分的平均培訓時數如下：

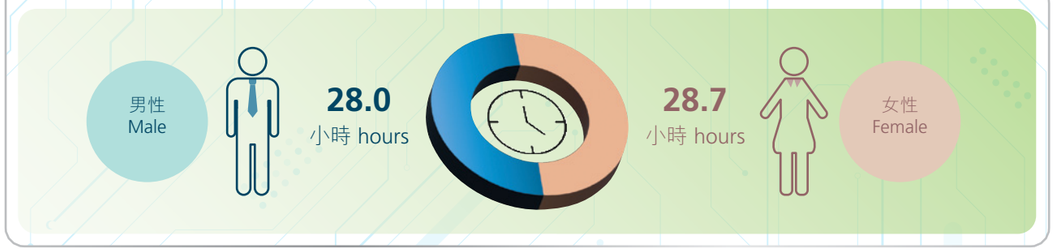
Training and Development

To support continuous professional development, the EMSD offers a comprehensive range of training and development programmes to enhance staff competencies and equip them with the latest industry advancements. These include capacity-building sessions on emerging technologies such as digitalisation, Building Information Modelling – Asset Management, Generative AI, and Web 3.0. In addition, training is provided in areas such as OSH, management and executive development, conduct and integrity, national studies, the Basic Law, and the National Security Law, alongside various vocational and general skills programmes.

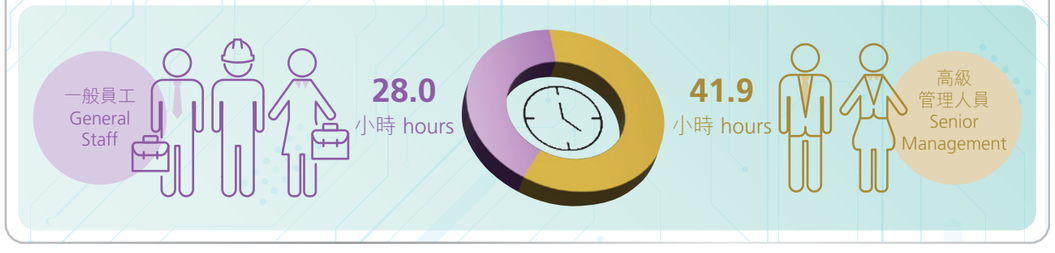
To strengthen leadership and management capabilities, the EMSD co-organised a senior management training course with Tsinghua University's School of Economics and Management, which brought together 39 departmental leaders with advanced knowledge in corporate leadership and AI applications.

Aligning with the Government's efforts in strengthening civil service induction, the EMSD has also revamped its onboarding programmes for new recruits. During the reporting year, the Department delivered over 27 500 training days, averaging 5.59 training days per staff member. The average training hours by gender and grade are detailed below:

2024/25年度按性別劃分的平均培訓時數
Average Training Hours by Gender in 2024/25



2024/25年度按員工職系劃分的平均培訓時數
Average Training Hours by Staff Grade in 2024/25



員工溝通

機電署高度重視員工的意見和建議，深知他們在維持工作質素和效率方面扮演重要的角色。我們設立多種溝通渠道和參與計劃，促進有效的內部溝通。此外，我們設有明確的員工投訴機制，員工可舉報任何不當待遇或表達不滿，並確保他們的投訴獲得妥善和及時的處理。

Staff Communication

The EMSD values the insights and feedback of our staff, recognising their essential role in sustaining work quality and operational efficiency. To promote effective internal communication, a range of communication channels and engagement initiatives have been established. In addition, a clear and structured staff complaint mechanism is in place, enabling employees to report any issues, concerns, or grievances. This framework ensures that all issues raised are handled appropriately and in a timely manner.

主要內部溝通渠道和舉措
Major Channels and Initiatives for Internal Communication

委員會和工會
Committees and Unions

為加強內部溝通，機電署設有四個部門協商委員會和五個部別協商委員會，作為員工與管理層之間開放交流意見的平台。此外，我們的員工可以自由加入機電署11個部門工會或外部的政府員工組織，確保有多種渠道表達自己的意見和關注議題。

To strengthen internal communication, the EMSD has established four departmental and five divisional consultative committees, providing structured platforms for open dialogue between staff and management. In addition, employees are free to join any of the 11 departmental staff unions or external government staff unions, ensuring they have multiple avenues to voice their opinions and concerns effectively.

會議和分享會
Meetings and Sharing Sessions

管理層透過多種渠道與員工互動，包括每年的署長簡報會、親善大使探訪、與協商委員會和工會舉行的會議，力求與員工保持坦誠對話。在情況許可下，我們會在實施新措施之前透過員工關係組、簡報會或工作坊，諮詢員工的建議和意見。這些措施確保員工能掌握最新資訊，並有機會表達意見。

To maintain open communication, our management engages staff through channels such as the annual Director of Electrical and Mechanical Services (DEMS) Briefing, ambassador visits, and meetings with consultative committees and staff unions. Where possible, staff are consulted before new practices are introduced, with input gathered via the Staff Relations Unit, briefings, or workshops. These efforts ensure staff stay informed and have opportunities to share their views.

社會可持續發展成效
SOCIAL SUSTAINABILITY PERFORMANCE

員工福祉

員工的福祉對我們至關重要，尤其是心理健康。我們設立專門熱線，為有需要的員工提供心理支援。我們亦簽署《精神健康職場約章》，承諾致力營造一個互相支持及重視心理健康的工作環境。

為促進員工整體福祉，機電署員工康樂會全年持續舉辦多項康樂及社交活動，包括龍舟比賽、保齡球及乒乓球比賽，以及同樂日。所有員工及家屬都可以參與其中，促進社交聯繫、培養團隊精神，並推廣健康好動的生活模式。

Staff Wellbeing

Staff wellbeing remains a key priority for the EMSD, with particular emphasis on mental health. A dedicated psychological support helpline has been established to assist staff in need. Furthermore, the EMSD is a signatory of the Mental Health Workplace Charter, outlining our commitment to fostering a supportive and mentally healthy work environment.

To support the overall wellbeing of our staff, the EMSD Staff Club continued to organise a variety of recreational and social activities throughout the year. These included events such as dragon boat races, bowling and table tennis competitions, and family fun days. Open to all staff and their families, these activities foster social connection, encourage team spirit, and promote a healthy, active lifestyle.

機電署員工康樂會活動亮點
Highlights of the EMSD Staff Club Activities

體育活動 Sports Events

員工康樂會全年舉辦多項體育活動讓員工及其家屬參與，包括保齡球、羽毛球、長跑及乒乓球比賽，藉此促進健康生活及社交聯繫。

Throughout the year, the Staff Club hosted various sports activities, such as bowling, badminton, long-distance running, and table tennis events for staff and their families, promoting health and social connection.

社區聯繫 Community Engagement

我們亦透過具意義的活動推動社區參與，包括於2024年11月24日舉行的「魔鬼山」清潔郊野活動，以慶祝中華人民共和國成立75周年。活動有20位行山愛好者參與，在這個具歷史價值的地點推廣環保意識及郊野保育。

We also supported community engagement through meaningful activities, including the Devil's Peak Clean-up Event held on 24 November 2024 to mark the 75th anniversary of the founding of the People's Republic of China. Twenty hiking enthusiasts took part in the clean-up, promoting environmental awareness and countryside conservation at this historically significant site.

員工參與 Staff Engagement

我們舉辦了一系列團隊建立活動，包括參與2024年9月的特別賽事，促進部門同事之間的合作。儘管行程緊湊且環境具挑戰性，員工在比賽過程中互相扶持，培養出強烈的團結精神與團隊合作意識。活動推廣身心健康，亦加深同事之間的聯繫，鞏固機電署協作互勉的文化。

We organised a range of team-building activities, including participation in a special race event in September 2024, bringing together colleagues from across the Department. Despite busy schedules and challenging conditions, staff supported one another throughout the race, fostering a strong sense of unity and teamwork. The event not only promoted physical wellness but also deepened connections among colleagues, reinforcing EMSD's culture of collaboration and mutual encouragement.

關懷社區

機電署的責任並非單純的行政工作，還要通過積極參與社區活動創造正向的社會影響力。過去一年，我們透過不同的義工活動回應公眾需求。

CARING FOR THE COMMUNITY

The EMSD is committed to creating a positive social impact beyond administrative duties by actively engaging with the community. Over the year, we have addressed public needs through a range of volunteer initiatives.

2024/25年度義工服務
Voluntary Services in 2024/25

我們的員工完成17個義工項目，共錄得585小時的社會服務時數。

17 volunteer projects were completed by the EMSD staff, contributing a total of 585 man-hours to community service.

2024/25年度義工活動亮點
Highlights of Voluntary Activities in 2024/25

2024香港兒科醫學會聖誕關愛共融活動
2024 Hong Kong Paediatric Society Christmas Caring and Inclusion Event

機電青年發展委員會參與由香港兒科醫學會於瑪嘉烈醫院舉辦的「2024香港兒科醫學會聖誕關愛共融活動」。

逾200名義工，包括機電署員工，透過小丑表演、互動遊戲及自製聖誕卡工作坊等多項活動，為住院兒童送上節日祝福，並推廣社會共融及關愛精神。

The E&M Youth Development Committee participated in the 2024 Christmas Caring and Inclusion Event organised by the Hong Kong Paediatric Society at Princess Margaret Hospital.

Over 200 volunteers, including the EMSD staff, brought festive cheer to hospitalised children through a variety of activities such as clown performances, interactive games, and a do-it-yourself (DIY) Christmas card workshop, promoting social inclusion and care.

東頭邨義工外展計劃
Volunteer Outreach to Tung Tau Estate

作為公務員事務局義工計劃的一部分，機電署於2024年參與外展探訪活動，前往東頭邨探訪長者，為超過40位長者提供健康檢查、家居安全建議及基本家居支援。是次活動突顯跨部門協作精神，並展現機電署對社區關懷的承擔。

As part of the Civil Service Bureau's volunteer initiative, the EMSD joined outreach visits to Tung Tau Estate in 2024, supporting over 40 elderly residents with health checks, home safety tips, and basic household assistance. The effort highlighted cross-departmental teamwork and the EMSD's commitment to community care.

愛跑．將軍澳2024
Lifewire Run 2024

慈善跑於將軍澳海濱公園舉行，旨在透過提升公眾關注及籌募善款來支援罕見病患者。來自不同部門的機電署同事參與活動，他們團結一致，展現團隊精神。

The charity run, held at Tseung Kwan O Waterfront Park, aimed to support rare disease patients by raising awareness and funds. EMSD colleagues from various departments participated, showing strong unity and teamwork throughout the event.

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CONTENT INDEX ESSENTIALS SERVICE 2025

機電工程署根據全球報告倡議組織標準編製本報告，匯報期為2024年4月1日至2025年3月31日期間的內容。全球報告倡議組織透過「內容索引 – 必要服務」確認本報告已按符合其標準的方式清晰表述內容索引，並且索引中的信息清晰可見，便於持份者查閱。本服務是針對報告的英文版本進行。

The Electrical and Mechanical Services Department (EMSD) has reported in accordance with the GRI Standards for the period 1 April 2024 to 31 March 2025. For the Content Index – Essentials Service, GRI Services reviewed that the GRI content index has been presented in a way consistent with the requirements for reporting in accordance with the GRI Standards, and that the information in the index is clearly presented and accessible to the stakeholders. The service was performed on the English version of the report.

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
GRI 1: 基礎 2021 GRI 1: Foundation 2021					
GRI 2: 一般披露 2021 GRI 2: General Disclosures 2021	2-1	組織詳細資訊 Organisational details	部門簡介及架構 Organisational Profile and Structure	封面內頁 Inner Page of Cover	✓
			關於本報告 About this Report	P. 180-183	
	2-2	機構可持續報導包含的單位 Entities included in the organisation's sustainability reporting	關於本報告 About this Report	P. 180-183	✓
			報告範圍 Reporting Scope	P. 180	
	2-3	匯報期、頻率及聯絡點 Reporting period, frequency and contact point	關於本報告 About this Report	P. 180-183	✓
			匯報原則 Reporting Principles	P. 180	
	2-4	重整信息 Restatements of information	於《社會及環保報告》內環保成效概覽章節所載的機電署建築物及其基礎設施的2023/24年度能源表現改善數值，應由5.9%更正為4.7%。此更正僅適用於報告的印刷版本。 The figure for the EMSD's energy performance improvement of EMSD buildings and infrastructure facilities in 2023/24 under the Environmental Performance Highlights section of the Social and Environmental Report should be restated from 5.9% to 4.7%. This restatement is only valid for the printed report copies of the report. 此外，2023/24年度由合資格承辦商收集及處理的廢物總量，應由54公噸更正為28公噸，原因是早前所採用的計算公式出現錯誤。該數值涵蓋廢紙、即棄電池、金屬廢料及可充電電池。 Furthermore, the figure for the waste collected and disposed by qualified contractors in 2023/24 should be restated from 54 tonnes to 28 tonnes, due to an error in the calculation formula used previously. This figure covers waste paper, disposable batteries, metal scraps, and rechargeable batteries. 在總能源表現圖表中，2023/24年度及2019/20年度的機電署總能源用量已由48 788 000千瓦小時及33 617 000千瓦小時更正為46 654 000千瓦小時及36 014 000千瓦小時。此外，統計資料摘要內2023/24年度的購買電力用量亦已由175 129千兆焦耳（48 647 000千瓦小時）更新為167 447千兆焦耳（46 513 000千瓦小時）。 The figure for the EMSD's total energy consumption for 2023/24 and 2019/20 in the total energy performance graph has been restated from 48 788 000 kWh and 33 617 000 kWh to 46 654 000 kWh and 36 014 000 kWh, respectively. Furthermore, the total purchased electricity consumption in the Summary of Statistics table for 2023/24 has been updated from 175 129 GJ (48 647 000 kWh) to 167 447 GJ (46 513 000 kWh).		
	2-5	外部認證 External assurance	關於本報告 About this Report	P. 180-183	✓
			獨立保證意見聲明書 Independent Assurance Opinion Statement	P. 246-249	
	2-6	業務活動、價值鏈和其他業務關係 Activities, value chain and other business relationships	部門簡介及架構 Organisational Profile and Structure	封面內頁 Inner Page of Cover	✓
			可持續發展管理方針 Sustainability Management Approach	P. 188-195	
			管治架構 Governance Structure	P. 188-189	
			與持份者保持聯繫（與供應商合作） Engagement with Our Stakeholders (Partnership with Our Suppliers)	P. 194-195	
			社會可持續發展成效 Social Sustainability Performance	P. 204-219	
			透過嚴格規管 提升機電行業發展 Empowering the E&M Sector with Robust Regulations	P. 206-208	
	2-7	僱員 Employees	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（員工統計） Caring for Our Colleagues (Staff Statistics)	P. 214-215	
	2-8	僱員以外的工作者 Workers who are not employees	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（員工統計） Caring for Our Colleagues (Staff Statistics)	P. 214-215	
			在本報告年度，並無聘用兼職員工，而根據非公務員合約聘用的實習人數為52人。 During this reporting year, there were no part-time employees recorded and 52 interns employed under non-civil service contract.		

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GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	2-9	管治架構及組成 Governance structure and composition	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構 Governance Structure	P. 188-189	
			我們的管治架構及組成載於本署網站： https://www.emsd.gov.hk/tc/about_us/our_organisation/ Our governance structure and composition are listed on our website at: https://www.emsd.gov.hk/en/about_us/our_organisation/		
	2-10	最高治理單位的提名與遴選 Nomination and selection of the highest governance body	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構（員工表現評核） Governance Structure (Employee Performance Evaluation)	P. 189	
			機電署的最高治理單位為部門的高級管理層，作為香港特別行政區的政府部門，機電署秉持香港特別行政區公務員事務局的規例與法規。 The EMSD is a government department of the HKSAR, and its senior management serves as the highest governance body of the department, adhering to the rules and regulations established by the Civil Service Bureau (CSB) of the HKSAR.		
	2-11	最高治理單位的主席 Chair of the highest governance body	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構 Governance Structure	P. 188-189	
			我們的高級管理人員載於： https://www.emsd.gov.hk/tc/about_us/our_organisation/ Our senior management is listed on our website at: https://www.emsd.gov.hk/en/about_us/our_organisation/		
	2-12	最高治理單位於監督影響管理的角色 Role of the highest governance body in overseeing the management of impacts	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構 Governance Structure	P. 188-189	
			高級管理層負責監督內部營運及推行可持續策略和政策。 Senior management oversees the internal operations and implementation of sustainability strategies and policies.		

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	2-13	為管理影響的責任授權 Delegation of responsibility for managing impacts	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構 Governance Structure	P. 188-189	
			我們的高級管理層參與品質、環境及生產力策導委員會及綠色採購內部工作小組。機電署的助理署長負責監察我們的可持續發展議題。 Our senior management staff participates in Quality, Environmental & Productivity Steering Committee and internal working group on green procurement. Assistant Directors of the EMSD are appointed to oversee sustainability issues within the organisation.		
	2-14	最高治理單位於可持續報告的角色 Role of the highest governance body in sustainability reporting	關於本報告 About this Report	P. 180-183	✓
			可持續發展管理方針 Sustainability Management Approach	P. 188-195	
			管治架構 Governance Structure	P. 188-189	
			機電署高級管理層負責檢視及審核《社會及環保報告》的信息。 The senior management of the EMSD is responsible for reviewing and approving the information in Social and Environmental Reports.		
	2-15	利益衝突 Conflicts of interest	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			行為守則及道德 Code of Conduct and Ethics	P. 189	
	2-16	溝通關鍵重大事件 Communication of critical concerns	關於本報告 About this Report	P. 180-183	✓
			重要性評估（持份者參與流程） Materiality Assessment (Stakeholder Engagement Processes)	P. 181-183	
			於2024/25年度，並無識別任何重大關注事項。 There have been no critical concerns identified in 2024/25.		
	2-17	最高治理單位的集體知識 Collective knowledge of the highest governance body	品質、環境及生產力策導委員會及環保管理委員會由包括高級管理層在內的員工參與，帶領關於可持續發展的措施，同時發放及記錄有關的集體知識。 The Quality, Environmental & Productivity Steering Committee and Green Management Committee led the sustainability related activities of EMSD with participation of senior management staff where collective knowledge is shared and recorded.		✓

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GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	2-18	最高治理單位的績效評估 Evaluation of the performance of the highest governance body	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構（員工表現評核） Governance Structure (Employee Performance Evaluation)	P. 189	
			作為政府部門的機電工程署，工作表現管理制度詳情載於：https://www.csb.gov.hk/tc_chi/admin/pm/173.html The EMSD acts as a government department and the details of performance management system are listed on the website at: https://www.csb.gov.hk/english/admin/pm/173.html		
	2-19	薪酬政策 Remuneration policies	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構（員工表現評核） Governance Structure (Employee Performance Evaluation)	P. 189	
			作為政府部門的機電工程署，薪酬政策調整載於：https://www.csb.gov.hk/tc_chi/admin/pay/38.html The EMSD acts as a government department and the pay policy is listed on the website at: https://www.csb.gov.hk/english/admin/pay/38.html		
	2-20	薪酬決定流程 Process to determine remuneration	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構（員工表現評核） Governance Structure (Employee Performance Evaluation)	P. 189	
			作為政府部門的機電工程署，薪酬政策調整載於：https://www.csb.gov.hk/tc_chi/admin/pay/55.html The EMSD acts as a government department and the annual pay adjustment mechanism is listed on the website at: https://www.csb.gov.hk/english/admin/pay/55.html		
	2-21	年度總薪酬比率 Annual total compensation ratio	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			管治架構（員工表現評核） Governance Structure (Employee Performance Evaluation)	P. 189	
			作為政府部門的機電工程署，總薪級表載於：https://www.csb.gov.hk/tc_chi/admin/pay/42.html The EMSD acts as a government department and the master pay scale is listed on the website at: https://www.csb.gov.hk/english/admin/pay/42.html		

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	2-22	可持續發展策略的聲明 Statement on sustainable development strategy	署長的話 Message from the Director	P. 2-11	✓
			規管服務業務概覽 — 服務回顧 Regulatory Services Achievements Overview – Operations Review	P. 18-29	
			機電工程營運基金報告 — 業務回顧與前瞻 EMSTF Report – Operations Review and Outlook	P. 126-131	
			可持續發展管理方針 Sustainability Management Approach	P. 188-195	
			機電署信念 EMSD Values	P. 188	
	2-23	政策承諾 Policy commitments	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			機電署信念 EMSD Values	P. 188	
			我們的企業政策載於： https://www.emsd.gov.hk/tc/about_us/corporate_policies/index.html Our corporate policies are shown on our website at: https://www.emsd.gov.hk/en/about_us/corporate_policies/index.html		
	2-24	融合政策承諾 Embedding policy commitments	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			機電署信念 EMSD Values	P. 188	
			管治架構 Governance Structure	P. 188-189	
	2-25	補救負面影響的程序 Processes to remediate negative impacts	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			機電署信念 EMSD Values	P. 188	
	2-26	尋求建議和提出疑慮的機制 Mechanisms for seeking advice and raising concerns	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			與持份者保持聯繫 Engagement with Our Stakeholders	P. 192-195	
	2-27	遵守法律及法規 Compliance with laws and regulations	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			機電署信念 EMSD Values	P. 188	
			機電署將重大違規事件界定為須繳付罰款或受到非金錢性制裁的情況。於2024/25年度，機電署並無任何違反法例及規例的個案。 The EMSD defines significant instances of non-compliance as those wherein it incurs a fine or non-monetary sanctions. In 2024/25, the EMSD did not have any non-compliance cases with laws and regulations.		

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	2-28	機構參與的協會的會員資格 Membership associations	機電工程署屬於以下協會的成員： 1) 能源工程師學會 2) 香港電子學會 3) 保障資料主任聯會 4) 歐洲標準委員會 5) 綠十字會 6) 香港綠色建築議會 7) 香港職業安全衛生協會 8) 國際纜車監管機構會議 9) 國際鐵路安全議會 10) 英國燃氣專業學會 The EMSD holds membership in the following associations: 1) Association of Energy Engineers 2) CIE Hong Kong 3) Data Protection Officers' Club 4) European Committee for Standardisation 5) Green Cross Group 6) Hong Kong Green Building Council 7) Hong Kong Occupational Safety and Health Association 8) Internationale Tagung der Technischen Aufsichtsbehörden (International Meeting of Technical Authorities for Cableways) 9) International Railway Safety Council 10) Institution of Gas Engineers & Managers (IGEM)		✓
	2-29	持份者參與的方針 Approach to stakeholder engagement	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			與持份者保持聯繫 Engagement with Our Stakeholders	P. 192-195	
	2-30	集體談判協議 Collective bargaining agreements	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（員工溝通） Caring for Our Colleagues (Staff Communication)	P. 217	
			共有 11 個機電工程署工會由員工以自願性質參與，另有九個員工協商委員會代表不同職系及職級的機電工程署員工就員工福利與部門溝通。全體的員工（100%）都受集體談判協議的保障。 There are 11 EMSD staff unions which can be joined on voluntary basis. There are also nine departmental consultative committees who are representatives of all grades and ranks of the EMSD staff to liaise with the Department for the wellbeing of the staff. All our employees (100%) are covered by collective bargaining agreements.		

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
重要議題 Material Topics					
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-1**	重要議題決定的流程 Process to determine material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
	3-2	重要議題清單 List of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
	經濟成效（財務表現） Economic Performance (Financial Performance)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 201: 經濟績效 2016 GRI 201: Economic Performance 2016	**201-1**	機構所產生及分配的直接經濟價值 Direct economic value generated and distributed	機電工程營運基金報告 EMSTF Report	P. 120-177	✓
			機電工程營運基金報告 — 業務回顧與前瞻 EMSTF Report – Operations Review and Outlook	P. 126-131	
	201-2	氣候變遷所產生的財務影響及其他風險與機會 Financial implications and other risks and opportunities due to climate change	由於數據及方法論的限制，目前未能提供有關氣候變化所帶來的財務影響、風險與機遇的資料。然而，隨着數據可得性及評估工具的持續改善，我們或會檢視與機電署營運相關的氣候風險及機遇。 Information on the financial implications, risks, and opportunities related to climate change is currently unavailable due to limitations in data and assessment methodologies. As data availability and methodologies improve, we may look to review climate-related risks and opportunities specific to our operations.		✓
	201-3	固定福利計劃義務與其他退休計劃 Defined benefit plan obligations and other retirement plans	作為政府部門的機電工程署，退休計劃載於：https://www.csb.gov.hk/tc_chi/admin/retirement/185.html As a government department, the retirement policy of the EMSD is listed on: https://www.csb.gov.hk/english/admin/retirement/185.html		✓
	201-4	取自政府之財務補助 Financial assistance received from government	機電署並無適用的政府財務援助。作為政府部門，機電署不會像私人企業那樣獲得財政支持。我們的資金來源於政府的預算分配。 Financial assistance received from government is not applicable to the EMSD. As a government department, the EMSD does not receive financial assistance like private organisations; our funding comes from government budget allocations.		✓

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	間接經濟影響 Indirect Economic Impacts				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 203: 間接經濟影響 2016 GRI 203: Indirect Economic Impacts 2016	**203-1**	基礎設施投資與支援性服務 Infrastructure investments and services supported	規管服務業務概覽 — 服務回顧 Regulatory Services Achievements Overview – Operations Review	P. 18-29	✔
			機電工程營運基金報告 — 業務回顧與前瞻 EMSTF Report – Operations Review and Outlook	P. 126-131	
	203-2	重大間接經濟影響 Significant indirect economic impacts	規管服務業務概覽 — 服務回顧 Regulatory Services Achievements Overview – Operations Review	P. 18-29	✔
			機電工程營運基金報告 — 業務回顧與前瞻 EMSTF Report – Operations Review and Outlook	P. 126-131	
	採購實務（部門的採購政策） Procurement Practices (Departmental Procurement Practices)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 204: 採購實務 2016 GRI 204: Procurement Practices 2016	**204-1**	本地供應商採購的支出比例 Proportion of spending on local suppliers	環境及社會概覽 Environmental and Social Highlights	P. 184-187	✔
			環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	
			機電署的環保表現（綠色產品和服務） Environmental Performance at the EMSD (Green Products and Services)	P. 203	
	市場行為合規（反競爭行為） Market Behaviour Compliance (Anti-competitive Behaviour)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 206: 反競爭行為 2016 GRI 206: Anti-competitive Behaviour 2016	**206-1**	反競爭行為、反壟斷法和壟斷行為的法律行動 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	於本報告期內，機電署並無涉及任何有關反競爭行為、違反反壟斷或壟斷法例的法律訴訟（不論正在進行或已完成）。 There were no instances of legal actions pending or completed relating to anti-competitive behaviour and violations of anti-trust and monopoly legislation during the reporting period.		✔

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	物料（物料使用） Materials (Use of Materials)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 301: 物料 2016 GRI 301: Materials 2016	**301-1**	所用物料的重量或體積 Materials used by weight or volume	統計資料摘要 Summary of Statistics	P. 238-245	✔
	301-2	使用回收再利用的物料 Recycled input materials used	統計資料摘要 Summary of Statistics	P. 238-245	✔
	301-3	回收產品及其包材 Reclaimed products and their packaging materials	不適用。機電署主要負責規管服務及工程方案，並不直接涉及產品的生產，銷售或包裝。 Not applicable. The EMSD primarily focuses on regulatory service and engineering solutions and does not directly engage in the production, sale or packaging of products.		✔
	能源（節約能源） Energy (Energy Conservation)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 302: 能源 2016 GRI 302: Energy 2016	**302-1**	機構內部的能源消耗量 Energy consumption within the organisation	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✔
			機電署的環保表現（能源使用） Environmental Performance at the EMSD (Energy Use)	P. 201-202	
			統計資料摘要 Summary of Statistics	P. 238-245	
	302-2	機構外部的能源消耗量 Energy consumption outside of the organisation	不適用。作為政府部門，機電署擔任機電安全的監管機構以及工程方案的提供者，我們的能源消耗僅限於機構內部。 Not applicable. As a government department, the EMSD serves as a regulatory authority for electrical and mechanical safety and a provider of engineering solutions, our energy consumption is confined to within the organisation.		✔
	302-3	能源強度 Energy intensity	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✔
			機電署的環保表現（能源使用） Environmental Performance at the EMSD (Energy Use)	P. 201-202	

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	302-4	減少能源的消耗 Reduction of energy consumption	統計資料摘要 Summary of Statistics	P. 238-245	✔
			環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	
			向各行各業推廣可持續技術融合 Promoting the Integration of Sustainable Technologies across Industry	P. 197-198	
			機電署的環保作業方法 Environmental Practices at the EMSD	P. 199	
	302-5	降低產品和服務的能源需求 Reductions in energy requirements of products and services	不適用。作為政府部門，機電署支援香港政府的各類政策和活動，包括推廣能源效益，但我們並不直接參與產品或服務的銷售。 Not applicable. As a government department, the EMSD is tasked with supporting government initiatives in Hong Kong, including promoting energy efficiency; however, we do not engage directly in the sales of products or services.		✔
	水與污水（節約用水，污水處理） Water and Effluents (Water Conservation, Effluents Treatment)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 303: 水資源與污水 2018 GRI 303: Water and Effluents 2018	**303-1**	共享水資源之相互影響 Interactions with water as a shared resource	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✔
			機電署的環保表現（用水效益） Environmental Performance at the EMSD (Water Efficiency)	P. 202	
	303-2	管理與排水相關的影響 Management of water discharge-related impacts	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✔
			機電署的環保表現（用水效益） Environmental Performance at the EMSD (Water Efficiency)	P. 202	
	303-3	取水量 Water withdrawal	機電工程署的用水主要來自水務署管理的供水來源。按來源細分用水量的披露方法，例如地表水、地下水等，並不適用。 The water consumed by the EMSD's operations comes from the sources managed by Water Supplies Department. Disclosure on the breakdown of water withdrawn by source, e.g. surface water, groundwater, etc. is considered to be not applicable.		✔

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	303-4	排水量 Water discharge	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✔
			機電署的環保表現（用水效益） Environmental Performance at the EMSD (Water Efficiency)	P. 202	
			各項目排放的水均輸往所在城市的市立廢水系統。 100% of water discharged from our operations was transported to municipal wastewater systems in the cities where we operate.		
	303-5	耗水量 Water consumption	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✔
			機電署的環保表現（用水效益） Environmental Performance at the EMSD (Water Efficiency)	P. 202	
			香港沒有特定地區遭受缺水威脅。 No specific regions are water-stressed in Hong Kong.		
	生物多樣性（生態保育） Biodiversity (Ecological Conservation)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✔
			重要性評估 Materiality Assessment	P. 181-183	
GRI 304: 生物多樣性 2016 GRI 304: Biodiversity 2016	**304-1**	機構所擁有、租賃、管理的營運地點或其鄰近地區位於環境保護區或區外的具有重要生物多樣性價值的地區或其毗鄰地區 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	機構所擁有、租賃、管理的營運地點均不在環境保護區或區外的具有重要生物多樣性價值的地區或其毗鄰地區。 No operation sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.		✔
	304-2	業務活動、產品及服務，對生物多樣性方面的顯著影響 Significant impacts of activities, products and services on biodiversity	不適用。作為政府部門，機電署擔任機電安全的監管機構以及工程解決方案的提供者，我們的業務活動、產品和服務對生物多樣性的影響並不顯著。 Not applicable. As a government department, the EMSD serves as a regulatory authority for electrical and mechanical safety and a provider of engineering solutions. The impact of our activities, products and services on biodiversity is considered insignificant.		✔
	304-3	受保護或復育的棲息地 Habitats protected or restored	不適用。作為政府部門，機電署擔任機電安全的監管機構以及工程解決方案的提供者，我們不直接參與保護或復育的棲息地工作。 Not applicable. As a government department, the EMSD serves as a regulatory authority for electrical and mechanical safety and a provider of engineering solutions. We do not directly engage in the protection or restoration of habitats.		✔

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	304-4	受營運影響的棲息地中，已被列入IUCN紅色名錄及國家保育名錄的物種 IUCN Red List species and national conservation list species with habitats in areas affected by operations	不適用。作為政府部門，機電署擔任機電安全的監管機構以及工程解決方案的提供者，我們的運作對瀕危物種的影響並不顯著。 Not applicable. As a government department, the EMSD serves as a regulatory authority for electrical and mechanical safety and a provider of engineering solutions. The impact of our operation on endangered species is considered insignificant.		✓
	排放物（廢氣控制） Emissions (Emissions Control)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 305: 排放 2016 GRI 305: Emissions 2016	**305-1**	直接溫室氣體排放（範圍一） Direct GHG emissions (Scope 1)	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現 Environmental Performance at the EMSD	P. 200-203	
	305-2	能源間接溫室氣體排放（範圍二） Energy indirect GHG emissions (Scope 2)	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現 Environmental Performance at the EMSD	P. 200-203	
	305-3	其它間接溫室氣體排放（範圍三） Other indirect GHG emissions (Scope 3)	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現 Environmental Performance at the EMSD	P. 200-203	
	305-4	溫室氣體排放強度 GHG emissions intensity	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現 Environmental Performance at the EMSD	P. 200-203	
	305-5	溫室氣體減排量 Reduction of GHG emissions	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現 Environmental Performance at the EMSD	P. 200-203	
	305-6	臭氧層破壞物質的排放 Emissions of ozone-depleting substances (ODS)	匯報年度中記錄的製冷劑不屬於臭氧層破壞物質。 The recorded refrigerants during the reporting year are not ODS.		✓
	305-7	氮氧化物、硫氧化物及其他重大的氣體排放 Nitrogen Oxides (NOx), Sulfur Oxides (SOx) and other significant air emissions	統計資料摘要 Summary of Statistics	P. 238-245	✓

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	廢棄物（廢物處理） Waste (Waste Treatment)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 306: 廢棄物 2020 GRI 306: Waste 2020	**306-1**	廢棄物的產生與廢棄物相關的重大影響 Waste generation and significant waste-related impacts	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現（廢物管理） Environmental Performance at the EMSD (Waste Management)	P. 203	
	306-2	廢棄物相關的重大影響管理 Management of significant waste-related impacts	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現（廢物管理） Environmental Performance at the EMSD (Waste Management)	P. 203	
	306-3	產生的廢棄物 Waste generated	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現（廢物管理） Environmental Performance at the EMSD (Waste Management)	P. 203	
	306-4	廢棄物的處置移轉 Waste diverted from disposal	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現（廢物管理） Environmental Performance at the EMSD (Waste Management)	P. 203	
	306-5	廢棄物的直接處置 Waste directed to disposal	環境可持續發展成效 Environmental Sustainability Performance	P. 196-203	✓
			機電署的環保表現（廢物管理） Environmental Performance at the EMSD (Waste Management)	P. 203	
	供應商環境評估（評估供應商/承辦商的環境表現） Supplier Environmental Assessment (Supplier/Contractor Environmental Assessment)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	**3-3**	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 308: 供應商環境評估 2016 GRI 308: Supplier Environmental Assessment 2016	**308-1**	按照環境準則篩選的新供應商 New suppliers that were screened using environmental criteria	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			與持份者保持聯繫（與供應商合作） Engagement with Our Stakeholders (Partnership with Our Suppliers)	P. 194-195	
	308-2	供應鏈對環境的負面影響，以及所採取的行動 Negative environmental impacts in the supply chain and actions taken	可持續發展管理方針 Sustainability Management Approach	P. 188-195	✓
			與持份者保持聯繫（與供應商合作） Engagement with Our Stakeholders (Partnership with Our Suppliers)	P. 194-195	

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GRI CONTENT INDEX

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	僱傭關係（員工政策及統計數據） Employment (Employment Policy and Statistics)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	3-3	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 401: 僱傭關係 2016 GRI 401: Employment 2016	401-1	新入職員工及員工離職率 New employee hires and employee turnover	統計資料摘要 Summary of Statistics	P. 238-245	✓
	401-2	提供給全職員工（不包含臨時或兼職員工）的福利 Benefits provided to full-time employees that are not provided to temporary or part-time employees	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（員工福祉） Caring for Our Colleagues (Staff Wellbeing)	P. 218	
	401-3	育嬰假 Parental leave	統計資料摘要 Summary of Statistics	P. 238-245	✓
	職業健康與安全 Occupational Health and Safety				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	3-3	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 403: 職業健康與安全 2018 GRI 403: Occupational Health and Safety 2018	403-2	危險辨識、風險評估及事故調查 Hazard identification, risk assessment and incident investigation	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	
	403-3	職業健康服務 Occupational health services	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	
	403-4	有關職業健康及安全之工作者參與、諮詢與溝通 Worker participation, consultation and communication on occupational health and safety	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	
	403-5	有關職業健康及安全之工作者培訓 Worker training on occupational health and safety	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	
	403-6	促進工作者健康 Promotion of worker health	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	403-7	預防和減緩與業務關係直接相關之職業健康及安全的影響 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	
	403-8	職業健康安全管理系統所涵蓋之工作者 Workers covered by an occupational health and safety management system	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			職業安全與健康 Occupational Safety and Health	P. 210-214	
	403-9	工傷 Work-related injuries	統計資料摘要 Summary of Statistics	P. 238-245	✓
	403-10	職業病 Work-related ill health	統計資料摘要 Summary of Statistics	P. 238-245	✓
	培訓與教育（員工培訓及發展） Training and Education (Employee Training and Education)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	3-3	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 404: 培訓與教育 2016 GRI 404: Training and Education 2016	404-1	每名員工每年接受培訓的平均小時數 Average hours of training per year per employee	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（培訓和發展） Caring for Our Colleagues (Training and Development)	P. 216-217	
	404-2	提升員工職能及過渡協助方案 Programmes for upgrading employee skills and transition assistance programmes	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（培訓和發展） Caring for Our Colleagues (Training and Development)	P. 216-217	
	404-3	定期接受成效及職業發展評估的員工百分比 Percentage of employees receiving regular performance and career development reviews	報告期內，100% 的機電署員工接受工作表現評估及培訓需要評估。 100% of the EMSD's employees received performance review as well as evaluation on training needs during the reporting period.		✓

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GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	多元化與平等機會 Diversity and Equal Opportunity				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	3-3	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 405: 多元化與平等機會 2016 GRI 405: Diversity and Equal Opportunity 2016	405-1	管治機構及員工多樣性 Diversity of governance bodies and employees	統計資料摘要 Summary of Statistics	P. 238-245	✓
	405-2	女性對男性基本薪資加薪酬的比率 Ratio of basic salary and remuneration of women to men	釐定公務員薪酬的政策和安排並不涉及任何性別因素的考慮，並且完全遵守《性別歧視條例》現有框架下對同值同酬的要求。女性對男性基本薪資加薪酬的比率為 1：1。 The policy and practice for the determination of civil service pay is gender neutral by design and is in full compliance with the requirements for equal pay for work of equal value under the existing framework as provided for under the Sex Discrimination Ordinance. Ratio of basic salary and remuneration of women to men is 1:1.		✓
	反歧視（非重要議題） Non-discrimination (Not Material Topic)				
GRI 406: 反歧視 2016 GRI 406: Non-discrimination 2016	406-1	歧視事件及組織採取的改善行動 Incidents of discrimination and corrective actions taken	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（多元化與平等機會） Caring for Our Colleagues (Diversity and Equality)	P. 216	
	強迫或強制勞動（防止強迫或強制勞動） Forced or Compulsory Labour (Prevent Forced or Compulsory Labour)				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	3-3	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 409: 強迫或強制勞動 2016 GRI 409: Forced or Compulsory Labour 2016	409-1	具強迫或強制勞動事件重大風險的營運據點和供應商 Operations and suppliers at significant risk for incidents of forced or compulsory labour	社會可持續發展成效 Social Sustainability Performance	P. 204-219	✓
			關懷員工（員工福利） Caring for Our Colleagues (Staff Welfare)	P. 215	

GRI 標準 GRI Standards	披露 Disclosure		參照/直接解釋 Reference/Direct Answer	頁數 Page No.	外部認證 External Assurance
	顧客健康與安全 Customer Health and Safety				
GRI 3: 重要議題 2021 GRI 3: Material Topics 2021	3-3	重要議題的管理 Management of material topics	關於本報告 About this Report	P. 180-183	✓
			重要性評估 Materiality Assessment	P. 181-183	
GRI 416: 顧客健康與安全 2016 GRI 416: Customer Health and Safety 2016	416-1	評估產品和服務類別對健康和安全的衝擊 Assessment of the health and safety impacts of product and service categories	機電工程署是規管香港電力、氣體及機械設備的機構。我們的主要任務，是透過全面推行規管機電及氣體設備的架構和制度，保障公眾安全，並與社會各界緊密合作。我們的服務承諾及服務表現可見於：https://www.emsd.gov.hk/tc/about_us/performance_pledges_pledge_performance/index.html The EMSD is the regulatory agency for the electrical, gas and mechanical systems used in Hong Kong. Our main responsibility is to safeguard public safety through implementation of a set of comprehensive regulatory frameworks and systems on electrical, mechanical and gas applications. Detail of our Performance Pledges & Pledge Performance are listed on: https://www.emsd.gov.hk/en/about_us/performance_pledges_pledge_performance/index.html		✓
	416-2	違反有關產品與服務的健康和安全法規之事件 Incidents of non-compliance concerning the health and safety impacts of products and services	統計資料摘要 Summary of Statistics	P. 238-245	✓

統計資料摘要
SUMMARY OF STATISTICS

環境
Environment

		單位 Unit	2022/23	2023/24	2024/25
能源 Energy					
柴油 Diesel		千兆焦耳[4]（GJ）[4] （升L）	4 713 （130 909）	6 240 （173 320）	7 637 （212 134）
汽油 Gasoline		千兆焦耳[4]（GJ）[4] （升L）	8 363 （253 420）	7 402 （224 295）	6 182 （187 319）
太陽能發電系統所生產的可再生電力[5] Renewable electricity generated from solar photovoltaic system[5]		千兆焦耳[4]（GJ）[4] （千瓦小時 kWh）	516 （143 285）	508 （141 108）	936 （259 908）
購買電力使用總量[6] Total purchased electricity consumption[6]		千兆焦耳[4]（GJ）[4] （'000千瓦小時 '000 kWh）	148 109 （41 141）	167 447 (46 513)	194 165 （53 935）
購買電力使用強度 Purchased electricity consumption intensity		千瓦小時/員工 kWh/employee	7 048	8 255	9 140
購買電力使用強度（不包括區域供冷系統相關耗能）[7] Purchased electricity consumption intensity (excluding District Cooling System (DCS)–related consumption)[7]		千瓦小時/員工 kWh/employee	-	-	1 572
水 Water					
水 Water		立方米 m^3	14 983	22 714	18 369
溫室氣體排放[8] Greenhouse Gas (GHG) Emissions[8]					
直接排放（範圍一） Direct emissions (Scope 1)	燃油 Fuel	公噸二氧化碳當量 tCO_2e	1 047	1 085	1 079
	製冷劑 Refrigerant	公噸二氧化碳當量 tCO_2e	1 526	3.54	566
	乙炔[9] Acetylene[9]	公噸二氧化碳當量 tCO_2e	0.05	0.004	0.02

[4] 系數的單位統一換算成千兆焦耳：柴油（0.036千兆焦耳/升）、汽油（0.033千兆焦耳/升）、電力（0.0036千兆焦耳/千瓦小時）。
Conversion factors used to standardise the units to gigajoules (GJ): diesel (0.036GJ/L), gasoline (0.033GJ/L), electricity (0.0036GJ/kWh).

[5] 產生的可再生電力，只供內部使用。
The generated renewable electricity is for internal use only.

[6] 購買電力使用總量包括中電、港燈和區域供冷系統產生的電力。
The total purchased electricity consumption included the electricity generated from CLP Power Hong Kong Limited, HK Electric, and DCS.

[7] 本報告新增了購電耗能強度指標（不包括區域供冷系統相關耗能）。該指標的計算不包括向區域供冷系統客戶供應冷凍水所需的能源消耗，以及區域供冷系統廠房本身的能源消耗。
The purchased electricity consumption intensity (excluding DCS-related consumption) figure has been newly added in the Report. The calculation of this figure excludes the energy consumption to supply chilled water to DCS customers, as well as the energy consumption of the DCS plant.

[8] 參考《香港建築物（商業、住宅或公共用途）的溫室氣體排放及減除的審計和報告指引》（由環境保護署及機電工程署發布），溫室氣體包括二氧化碳、甲烷、氧化亞氮及氫氟碳化物。
Made reference to the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (by Environmental Protection Department and the EMSD), GHGs include CO_2, CH_4, N_20 and HFCs.

[9] 參考《香港中小企業碳審計工具箱》（由香港大學及香港城市大學發布）。
Made reference to the Carbon Audit Toolkit for Small and Medium Enterprises in Hong Kong (by The University of Hong Kong and City University of Hong Kong).

	單位 Unit	2022/23	2023/24	2024/25
溫室氣體排放[8] GHG Emissions[8]				
能源間接排放（範圍二）[10] Energy indirect emissions (Scope 2)[10]	公噸二氧化碳當量 tCO_2e	14 863	16 768	18 890
其他間接排放（範圍三） Other indirect emissions (Scope 3)	公噸二氧化碳當量 tCO_2e	305[11]	308	1 414[12]
總排放量[10] Total emissions[10]	公噸二氧化碳當量 tCO_2e	17 741	18 164	21 949
物料 Material				
不可再生材料 Non-renewable materials				
油漆及溶劑 Paint & solvent	升 L	6	728	1 408
潤滑油 Lubrication oil	升 L	2 395	2 895	4 528
油脂 Grease	公斤 kg	20	26	28
工業用氣體 Industrial gas	立方米 m^3	44	3	16
蓄電池電解液 Battery electrolyte	升 L	0	7	0
原子車胎 Tubeless tyre	條 No.	312	187	143
外車胎 Outer cover tyre	條 No.	0	0	0
車胎內膽 Inner tube	條 No.	0	0	0
可再生材料 Renewable materials				
紙張[13] Paper[13]	令 ream	28 380	26 950	26 169

[10] 排放量不包括由區域供冷系統產生的電力。
The electricity generated from DCS is not included in the emissions.

[11] 數據包括處置廢紙、公務旅行、處理食水和污水時耗用的電力。
It included waste paper disposal, business travelling, electricity used for fresh water and sewage processing.

[12] 2024/25年度的範圍三排放量較往年有所上升，主要由於疫後公務出行活動增加。與處理食水和污水時耗用的電力，以及廢紙處置相關的範圍三排放量根據《香港建築物（商業、住宅或公共用途）的溫室氣體排放及減除的審計和報告指引》進行計算。
The increase in the Scope 3 emissions for 2024/25 compared to previous years is due to the post-epidemic increase in business travel. The Scope 3 emissions relating to electricity used for fresh water and sewage processing, as well as waste paper disposal, have been calculated following the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong document.

[13] 機電署購買和使用再造紙張。
At the EMSD, we purchase and consume paper with recycled content.

統計資料摘要
SUMMARY OF STATISTICS

	單位 Unit	2022/23 妥善棄置 Properly Disposed	2022/23 由承辦商處理 Handled by Contractors	2023/24 妥善棄置 Properly Disposed	2023/24 由承辦商處理 Handled by Contractors	2024/25 妥善棄置 Properly Disposed	2024/25 由承辦商處理 Handled by Contractors
污水及廢物 Effluents and Waste							
無害廢物[14] Non-hazardous waste[14]							
廢紙 Waste paper	公斤 kg	2 284	26 123	1 572	27 387	1 647	39 986
鋁罐及金屬罐 Aluminium and metal cans	個 No.	0	11 625	0	11 501	0	11 502
膠樽 Plastic bottles	個 No.	0	6 092	0	5 901	0	5 934
即棄電池 Disposable batteries	公斤 kg	26	55	22	85	36	19
金屬廢料 Metal scraps	公斤 kg	33 957	0	40 100	0	46 953	0
有害廢物[15] Hazardous waste[15]							
可充電電池 Rechargeable batteries	公斤 kg	-	428	-	776	-	595
廢油（潤滑油） Waste oil (Lubrication oil)	升 L	-	2 357	-	4 703	-	4 517
舊車胎 Used vehicle tyres	條 No.	-	312	-	183	-	143
舊光管/含水銀照明燈 Spent fluorescent / mercury lamps	盞 No.	-	3 947	-	2 964	-	420

	單位 Unit	2022/23	2023/24	2024/25
車輛的排放[16] Emissions from Vehicles[16]				
氮氧化物 Nitrogen Oxides (NOx)	克 g	3 215 632	3 246 502	3 228 924
硫氧化物 Sulfur Oxides (SOx)	克 g	5 825	6 083	6 169
顆粒物 Particulate Matter (PM)	克 g	238 300	248 738	237 888

[14] 廢物處置方法根據本地政府要求處理。產生的無害廢物由合資格承辦商收集以作回收或妥善棄置。
Disposal method determined based on compliance with local government requirements. Non-hazardous waste is collected through licensed contractors for recycling or disposal to landfills.

[15] 廢物處置方法根據本地政府要求處理。產生的有害廢物由合資格承辦商收集以作回收或妥善棄置。可充電電池、廢油（潤滑油）、舊車胎及舊光管/含水銀照明燈沒有棄置量數據記錄。
Disposal method determined based on compliance with local government requirements. Hazardous waste is collected by licensed contractors for recycling or disposal to landfills. There were no data record keeping for disposal of rechargeable batteries, waste oil (lubrication oil), used vehicle tyres and spent fluorescent/mercury lamps.

[16] 參考香港環境保護署的「香港車輛排放計算模型」（EMFAC-HK）及美國環境保護署的車輛排放模擬軟件 – MOBILE6.1。
Made reference to the Hong Kong Environmental Protection Department's EMFAC-HK Vehicle Emission Calculation model and the United States Environmental Protection Agency's Vehicle Emission Modelling Software – MOBILE6.1.

社會
Social

僱員人數[17] Employee Statistics[17]

	截至2023年3月31日（百分比） As of 31 March 2023 (Percentage)	截至2024年3月31日（百分比） As of 31 March 2024 (Percentage)	截至2025年3月31日（百分比） As of 31 March 2025 (Percentage)
總人數 Total number	5 837	5 893	5 901
男女分佈 By gender			
男性 Male	5 134 (88.0%)	5 182 (87.9%)	5 175 (87.7%)
女性 Female	703 (12.0%)	711 (12.1%)	726 (12.3%)
合約類型分佈 By employment type			
常任制 Permanent			
男性 Male	3 488 (86.4%)	3 547 (86.5%)	3 543 (86.3%)
女性 Female	551 (13.6%)	554 (13.5%)	561 (13.7%)
合約制 Contract			
男性 Male	1 646 (91.5%)	1 635 (91.2%)	1 632 (90.8%)
女性 Female	152 (8.5%)	157 (8.8%)	165 (9.2%)
年齡分佈 By age group			
50歲或以上 Aged 50 or above	1 695 (29.0%)	1 741 (29.5%)	1 750 (29.7%)
30 – 49歲 Aged 30-49	2 785 (47.7%)	2 802 (47.5%)	2 834 (48.0%)
29歲或以下 Aged 29 or under	1 357 (23.2%)	1 350 (22.9%)	1 317 (22.3%)

新入職員工 New Hires

	截至2023年3月31日（百分比） As of 31 March 2023 (Percentage)	截至2024年3月31日（百分比） As of 31 March 2024 (Percentage)	截至2025年3月31日（百分比） As of 31 March 2025 (Percentage)
總人數 Total number	444 （佔總員工7.6%） (7.6% of total employees)	570 （佔總員工9.8%） (9.8% of total employees)	559 （佔總員工9.5%） (9.5% of total employees)
男女分佈 By gender			
男性 Male	399 (89.9%)	508 (89.1%)	494 (88.4%)
女性 Female	45 (10.1%)	62 (10.9%)	65 (11.6%)
年齡分佈 By age group			
50歲或以上 Aged 50 or above	81 (18.2%)	76 (13.3%)	112 (20.0%)
30 – 49歲 Aged 30-49	88 (19.8%)	113 (19.8%)	123 (22.0%)
29歲或以下 Aged 29 or under	275 (61.9%)	381 (66.8%)	324 (58.0%)

[17] 機電署並無聘用任何非僱員的工人，所有員工均在香港執勤。
The EMSD does not employ workers who are not employees. All staff are based in Hong Kong.

統計資料摘要
SUMMARY OF STATISTICS

離職員工 Turnover

	截至2023年3月31日（百分比） As of 31 March 2023 (Percentage)	截至2024年3月31日（百分比） As of 31 March 2024 (Percentage)	截至2025年3月31日（百分比） As of 31 March 2025 (Percentage)
總人數 Total number	514 （佔總員工8.8%） (8.8% of total employees)	384 （佔總員工6.5%） (6.5% of total employees)	469 （佔總員工7.9%） (7.9% of total employees)
男女分佈 By gender			
男性 Male	468 (91.1%)	346 (90.1%)	420 (89.6%)
女性 Female	46 (8.9%)	38 (9.9%)	49 (10.4%)
年齡分佈 By age group			
50歲或以上 Aged 50 or above	287 (55.8%)	198 (51.6%)	267 (56.9%)
30 – 49歲 Aged 30-49	71 (13.8%)	49 (12.8%)	59 (12.6%)
29歲或以下 Aged 29 or under	156 (30.4%)	137 (35.7%)	143 (30.5%)

管理層的結構 Composition of Senior Management

	截至2023年3月31日（百分比） As of 31 March 2023 (Percentage)	截至2024年3月31日（百分比） As of 31 March 2024 (Percentage)	截至2025年3月31日（百分比） As of 31 March 2025 (Percentage)
總管理層人數 Total number of senior management staff	191 （佔總員工3.3%） (3.3% of total employees)	207 （佔總員工3.5%） (3.5% of total employees)	194 （佔總員工3.3%） (3.3% of total employees)
男女分佈 By gender			
男性 Male	165 (86.4%)	175 (84.5%)	156 (80.4%)
女性 Female	26 (13.6%)	32 (15.5%)	38 (19.6%)
年齡分佈 By age group			
50歲或以上 Aged 50 or above	113 (59.2%)	123 (59.4%)	112 (57.7%)
30 – 49歲 Aged 30-49	78 (40.8%)	84 (40.6%)	82 (42.3%)
29歲或以下 Aged 29 or under	0 (0%)	0 (0%)	0 (0%)

職業健康及安全指標 Occupational Health and Safety Indicators

機電署員工 For EMSD employees		2022/23	2023/24	2024/25
死亡 Fatalities	數字 Number	0	0	0
	比率 Rate	0	0	0
嚴重工傷[18] High-consequence work-related injuries[18]	數字 Number	2	3	5
	比率 Rate（按每200 000工時計算） (number per 200 000 man-hours)	0.03	0.05	0.08
工傷[19] Recordable work-related injuries[19]	數字 Number	15	22	25
	比率 Rate（按每200 000工時計算） (number per 200 000 man-hours)	0.26	0.37	0.41
工作小時 Number of hours worked	小時 Hour	11 697 712	11 967 020	12 187 864
職業病所造成的死亡數量 Number of fatalities as a result of work-related ill health	數字 Number	0	0	0
可記錄之職業病的案件數量 Number of cases of recordable work-related ill health	數字 Number	0	0	0

機電署承辦商 For EMSD contractors		2022/23	2023/24	2024/25
死亡 Fatalities	數字 Number	0	0	0
	比率 Rate	0	0	0
嚴重工傷[18] High-consequence work-related injuries[18]	數字 Number	3	4	3
	比率 Rate（按每200 000工時計算） (number per 200 000 man-hours)	0.05	0.07	0.05
工傷[19] Recordable work-related injuries[19]	數字 Number	12	13	14
	比率 Rate（按每200 000工時計算） (number per 200 000 man-hours)	0.22	0.22	0.23
工作小時 Number of hours worked	小時 Hour	11 001 611	11 940 117	11 929 666
職業病所造成的死亡數量 Number of fatalities as a result of work-related ill health	數字 Number	0	0	0
可記錄之職業病的案件數量 Number of cases of recordable work-related ill health	數字 Number	0	0	0

[18] 嚴重工傷（不包括死亡）指因工作而導致的損傷，從而使員工不能/不可/預計未能於六個月內回復傷前的健康狀態。
High-consequence work-related injuries (excluding fatalities) refer to work-related injury that results in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.

[19] 報告涉及相關人員工作時的任何意外，包括未導致給予受傷人員病假的意外。
Any accident involving the related personnel on duty reported, including those accidents which have not resulted in the granting of any sick leave to the injured person.

統計資料摘要
SUMMARY OF STATISTICS

培訓與教育 Training and Education

	單位 Unit	2022/23	2023/24	2024/25
平均受訓時數 Average training hours				
男女分佈 By gender				
男性 Male	小時 Hour	24.3	27.2	28.0
女性 Female	小時 Hour	28.8	29.8	28.7
職系分佈 By grade				
高級管理層[20] Senior management[20]	小時 Hour	26.4	30.7	41.9
一般員工[21] General staff[21]	小時 Hour	24.9	27.5	28.0

[20] 高級管理層指首長職系員工。
Senior management refers to directorate grade staff.

[21] 一般員工指技術職系、專業職系和行政及輔助職系員工。
General staff refers to technical, professional, administrative and support staff.

育嬰假 Parental Leave

	2022/23	2023/24	2024/25
享有育嬰假的員工總數 Total number of employees that were entitled to parental leave			
男女分佈 By gender			
男性 Male	5 134	5 182	5 175
女性 Female	703	711	726
實際使用育嬰假的員工總數 Total number of employees that took parental leave			
男女分佈 By gender			
男性 Male	88	65	83
女性 Female	22	15	16
休完育嬰假後，在匯報年度內復職的員工總數 Total number of employees that returned to work in the reporting period after parental leave ended			
男女分佈 By gender			
男性 Male	80	62	75
女性 Female	19	11	16
休完育嬰假且復職後 12 個月仍在職的員工總數 Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work			
男女分佈 By gender			
男性 Male	78	61	74
女性 Female	18	11	15
復職率[22] Return to work rates[22]			
男女分佈 By gender			
男性 Male	90.9%	95.4%	90.4%
女性 Female	86.4%	73.3%	100.0%
留任率[23] Retention rates[23]			
男女分佈 By gender			
男性 Male	97.5%	98.4%	98.7%
女性 Female	94.7%	100.0%	93.8%

[22] 復職率是以育嬰假後實際復職的員工總數除以育嬰假後應該復職的員工總數再乘 100% 計算。
Return to work rate is calculated as the total number of employees who did return to work after parental leave divided by total number of employees due to return to work after taking parental leave, and then multiplied by 100%.

[23] 留任率是以育嬰假結束後且復職後 12 個月仍在職的員工總數除以上個報告期內育嬰假結束後復職的員工總數再乘 100% 計算。
Retention rate is calculated as the total number of employees retained 12 months after returning to work following a period of parental leave divided by total number of employees returning from parental leave in the prior reporting period(s), and then multiplied by 100%.

獨立保證意見聲明書
INDEPENDENT ASSURANCE OPINION STATEMENT

聲明書號碼：**SRA-HK-831948**

機電工程署
社會及環保報告 2024/25

英國標準協會與中華人民共和國香港特別行政區政府機電工程署(以下簡稱「機電署」)為相互獨立的公司及組織，英國標準協會除了針對機電署社會及環保報告 2024/25 (以下簡稱「報告」)進行評估和核查外，與機電署並無任何財務上的關係。

本獨立保證意見聲明書的目的，僅作為對下列有關機電署社會及環保報告所界定範圍內的相關事項進行保證之結論，而不作為其他之用途。除對查證事實提出獨立保證意見聲明書外，對於關於其他目的之使用，或閱讀此獨立保證意見聲明書的任何人，英國標準協會並不負有或承擔任何有關法律或其他之責任。本獨立保證意見聲明書供機電署之持份者及管理人員使用。

本獨立保證意見聲明書是基於機電署提供予英國標準協會之相關資料審查所作成之結論，因此審查範圍乃基於並只限在這些提供的資料內容之內，英國標準協會認為這些資料內容都是完整且準確的。

對於這份獨立保證意見聲明書所載內容或相關事項之任何疑問，只能向機電署提出。

核查範圍
機電署與英國標準協會協議的核查範圍包括：

1. 整份報告及焦點放於系統與活動，包括機電署於 2024 年 4 月 1 日至 2025 年 3 月 31 日期間，於香港的規管服務及營運服務。報告符合全球報告倡議組織標準編制而成。

2. 第一類型中度保證等級評估機電署遵循四項報告原則：包容性、實質性、回應性及影響性的本質與程度，以及對報告中指定可持續發展的資料/數據作出評估。

意見聲明
我們可以總結，報告為機電署於本報告年度的可持續發展計劃與績效提供一個公允的觀點。我們相信報告內之經濟、社會及環境績效指標是被正確無誤地展現。報告所披露的成效指標展現了機電署為可持續發展所作出的努力，備受持份者的廣泛認同。

這次核查工作是由一組具有可持續發展報告核查能力之團隊執行。透過策劃和進行核查時所獲得的資料及說明，我們認為機電署就符合全球報告倡議組織標準之聲明，是屬公允的描述。

核查方法
為了收集能讓我們得出結論的證據，我們執行了以下工作：

- 對來自外部團體關於機電署政策的議題，進行高階審查，以確認本報告中聲明書的合適性
- 與機電署管理人員討論有關持份者參與的方式，然而，我們並無直接接觸外部持份者
- 訪問與可持續發展管理、報告編制及資料提供有關的員工
- 審查組織的主要發展內容
- 審查報告中所作宣告的支持性證據
- 審查報告的製作及管理流程是否按照包容性、實質性、回應性及影響性的原則進行

結論
我們對於包容性、實質性、回應性及影響性原則，及符合全球報告倡議組織標準的審查如下：

包容性
此報告反映機電署透過以下多種渠道作持份者參與，包括：客戶意見調查及訪問、電話調查、客戶通訊、合作項目、會議、研討會及座談會、報告重要議題調查、參觀機電署總部、機電安全及節能社區推廣活動、通訊、YouTube、社交媒體平台、外展計劃、公眾調查、傳媒聚會、就傳媒查詢回應及發表意見、員工滿意度調查、員工工會及員工協商委員會、焦點討論小組、員工通訊、高級管理層親善大使探訪、培訓課程、比賽及團隊建立活動、業界調查、工作小組等。

機電署日常運作包括不同的持份者參與方式。此報告包括持份者關注的經濟、社會及環境範疇，並以公允的水平披露。我們專業的意見認為，機電署遵循包容性原則。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

實質性
機電署發布可持續發展資訊，讓持份者對機電署的管理及表現可作出有事實根據的判斷。我們專業的意見認為，報告遵循實質性原則，並透過合適的方法識別出機電署的實質範疇，以重要性矩陣展現出實質範疇。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

回應性
機電署實行措施以回應持份者的期望與意見，包括對內部及外部持份者的各種問卷及反饋機制。以我們專業的意見，機電署遵循回應性原則。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

影響性
機電署設立流程以定性及定量方式去了解、計量及評價其影響，讓機電署評估其影響及於報告內披露。以我們專業的意見，機電署遵循影響性原則。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

全球報告倡議組織標準
機電署向我們提供有關於已符合全球報告倡議組織標準的自我申報。從審查的結果，我們確定報告內之三個類別(環境、社會及經濟)的社會責任及可持續發展披露，是根據符合全球報告倡議組織標準披露。

以我們專業的意見認為，本報告包括機電署的社會責任及可持續發展事務。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

保證等級
我們提供的第一類型中度保證等級審查，是以本聲明書內之範圍及方法作定義。

責任
這份報告所展現的資料，是由機電署的高階管理層負責確保準確並無偏袒。我們的責任為基於所描述的範圍與方法，提供專業意見並提供持份者一個獨立的保證意見聲明書。

能力與獨立性
本核查團隊的組成包括主任驗證員，且富有經驗及接受過包括全球報告倡議組織(以下簡稱「GRI」) GRI G3、GRI G3.1、GRI G4、GRI 標準、GRI 認證的可持續發展專業人士、當責性原則、香港聯交所「環境、社會及管治報告指引」、聯合國全球契約十項原則、ISO 10002、ISO 14001、OHSAS 18001、ISO 45001 及 ISO 9001 等之一系列可持續發展、環境及社會標準的訓練，具有主導擔保及核查員資格之成員組成。 英國標準協會於 1901 年成立，是全球標準及驗證機構的領導者。本保證是依據英國標準協會公平交易準則執行。

For and on behalf of BSI:

Michael Lam
Senior Vice President, APAC Assurance

本報告驗證員

Aaron Chim
主任驗證員

獨立保證意見聲明書
INDEPENDENT ASSURANCE OPINION STATEMENT

Statement No.: **SRA-HK-831948**

Electrical and Mechanical Services Department
Social and Environmental Report 2024/25

The British Standards Institution is independent to the Electrical and Mechanical Services Department of the Government of the Hong Kong Special Administrative Region of the People's Republic of China (hereafter referred to as "EMSD" in this statement) and has no financial interest in the operation of the EMSD other than for the assessment and assurance of the EMSD Social and Environmental Report 2024/25 ("Report").

This independent assurance opinion statement has been prepared for the EMSD only for the purposes of assuring its statements relating to the Report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read. This statement is intended to be used by stakeholders & management of the EMSD.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by the EMSD. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to the EMSD only.

Scope
The scope of engagement agreed upon with the EMSD includes the following:

1. The assurance covers the whole Report, and focuses on systems and activities of the EMSD in Hong Kong, which include Regulatory Services and Trading Services during the period from 1 April 2024 to 31 March 2025. The Report is prepared in accordance with the GRI Sustainability Reporting Standards ("GRI Standards").

2. Type 1 Moderate Level of Assurance evaluates of the nature and extent of EMSD's adherence to four reporting principles, which include Inclusivity, Materiality, Responsiveness and Impact. The specified sustainability performance information/data disclosed in the Report has been evaluated.

Opinion Statement
We conclude that the Report provides a fair view of EMSD's sustainability programmes and performances in the reporting year. We believe that the economic, social and environmental performance indicators are fairly represented in the Report, in which EMSD's efforts being made to pursue sustainable development are widely recognised by its stakeholders.

Our work was carried out by a team of sustainability report assurors. We planned and performed this part of our work to obtain the necessary information and explanations. We considered the EMSD has provided sufficient evidence that EMSD's self-declaration of compliance with the GRI Standards were fairly stated.

Methodology
Our work was designed to gather evidence on which to base our conclusion. We have conducted the practices below:

- A top level review of issues raised by external parties that could be relevant to EMSD's policies to provide a check on the appropriateness of statements made in the Report
- Discussion with representative of senior executives on EMSD's approach to stakeholder engagement. We are here to declare that we do not have any contact with external stakeholders
- Interview with staff involved in sustainability management, report preparation and provision of report information
- Review of key organisational developments
- Review of supporting evidence for claims made in the Report
- Assessment of EMSD's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact

Conclusions
An in-depth review against the principles of Inclusivity, Materiality, Responsiveness and Impact, and in accordance with GRI Standards is set out below:

Inclusivity
The Report has reflected a fact that the EMSD is seeking the engagement of its stakeholders through numerous channels such as Customer Opinion Surveys and Interviews, Telephone Surveys, Customer Newsletters, Joint-projects, Meetings, Symposiums and Seminars, Report Materiality Surveys, Tours to the EMSD Headquarters, Community-wide Promotion of E&M Safety and Energy Efficiency, Newsletters, YouTube, Social Media Platforms, Outreach Programmes, Public Surveys, Media Gatherings, Feedback and Responses to Media Enquiries, Staff Satisfaction Surveys, Staff Unions and Departmental Consultative Committees, Focus Groups, Staff Newsletters, Ambassador Visits by Senior Management, Training Sessions, Competitions and Team-building Activities, Trade Surveys, Working Groups, and more.

EMSD's operation involves various methods of engaging its stakeholders on daily basis. The Report covers economic, social and environmental aspects concerned by its stakeholder with a fair level of disclosures. In our professional opinion, the EMSD adheres to the principle of Inclusivity. Our view in area for enhancement to the Report was adopted by the EMSD before issue of this opinion statement.

Materiality
The EMSD publishes sustainability information that enables its stakeholders to make informed judgments about EMSD's management and performance. In our professional opinion, the Report adheres to the principle of Materiality and identifies EMSD's material aspects by using appropriate method of materiality analysis and demonstrating material issues in a matrix form. Area for enhancement to the Report was adopted by the EMSD before issue of this opinion statement.

Responsiveness
The EMSD has implemented practices to respond to the expectations and perceptions of its stakeholders. It includes various surveys and feedback mechanisms to both internal and external stakeholders. In our professional opinion, the EMSD adheres to the principle of Responsiveness. Area for enhancement to the Report was adopted by the EMSD before issue of this opinion statement.

Impact
The EMSD has established processes to understand, measure and evaluate its impacts in qualitative and quantitative way. These processes enable the EMSD to assess its impact and disclose them in the Report. In our professional opinion, the EMSD adheres to the principle of Impact. Areas for enhancement of the Report were adopted by the EMSD before the issue of this opinion statement.

GRI Standards Reporting
The EMSD provided us with their self-declaration of compliance in accordance with GRI Standards. Based on our verification review, we are able to confirm that social responsibility and sustainable development disclosures in all three categories (Environmental, Social and Economic) are reported in accordance with the GRI Standards.

In our professional opinion, the report covers EMSD's social responsibility and sustainability issues. Areas for enhancement of the Report were adopted by the EMSD before the issue of this opinion statement.

Assurance Level
The Type 1 Moderate Level of Assurance provided in our review is defined by the scope and methodology described in this statement.

Responsibility
It is the responsibility of EMSD's senior management to ensure the information being presented in the Report is accurate, without biases. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence
The assurance team was composed of Lead Assuror, who are experienced and trained in a range of sustainability, environmental and social standards including GRI G3, GRI G3.1, GRI G4, GRI Standards, GRI Certified Sustainability Professional, AA1000, HKEX ESG Guide, UNGC's Ten Principles, ISO 10002, ISO 14001, OHSAS 18001, ISO 45001 and ISO 9001, etc. British Standards Institution is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Michael Lam
Senior Vice President, APAC Assurance

Verifier of the Report

Aaron Chim
Lead Assuror

鳴謝
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中央援港應急醫院	Central Government-aided Emergency Hospital
民航處	Civil Aviation Department
香港海關	Customs and Excise Department
中華電力有限公司	CLP Power Hong Kong Limited
衞生署	Department of Health
渠務署	Drainage Services Department
消防處	Fire Services Department
食物環境衞生署	Food and Environmental Hygiene Department
政府產業署	Government Property Agency
香港警務處	Hong Kong Police Force
醫院管理局	Hospital Authority
房屋署	Housing Department
入境事務處	Immigration Department
康樂及文化事務署	Leisure and Cultural Services Department
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EMSD

機電工程署
香港九龍啟成街3號

Electrical and Mechanical Services Department
3 Kai Shing Street, Kowloon, Hong Kong

電話 Tel: (852) 1823　傳真 Fax: (852) 2890 7493
網址 Website: www.emsd.gov.hk
電郵 Email: info@emsd.gov.hk