

# 關於本報告 About this Report

# 匯報原則

本報告是香港特別行政區政府機電工程署(機電署)」的年度<sup>2</sup>社會及環保報告(本報告)。本報告全面闡述 我們於2017/18財政年度,在環境、社會及經濟方面的措施和表現。

本報告參照全球報告倡議組織標準的核心選項3編寫,並且參照環境保護署的《環境管制人員適用環保報告指引》。

所有相關的全球報告倡議組織披露議題和對照的報告章節及頁次已載於本報告最後部分的全球報告倡議組織內容索引表。為提高本報告的公信力及可靠性,我們已委託獨立第三方核實報告的內容,確保符合全球報告倡議組織標準核心選項的要求4。

# 報告範圍

本報告載述機電署由2017年4月1日至2018年3月31日5期間主要的可持續發展措施及成果。除另外說明,報告中截至2018年3月31日止的所有數據乃根據部門所知悉的實際數字。報告涵蓋截至2018年3月31日止的財政年度的財務數據,所有金額均以港元為單位6。於報告期內,本署的權責關係、規模、架構,及其供應鏈並無重大改變7。

# 重要議題及邊界

為確保報告所涵蓋的議題與本署的營運和持份者息息相關,我們透過重要性評估界定一系列環境、社會及經濟層面的重要議題。我們與不同持份者組別®(即員工、客戶及供應商®)緊密聯繫,以問卷調查形式收集他們的意見。此外,我們亦透過焦點小組®就機電署2017/18年度的可持續發展事務收集實質的意見,據此歸納出18項重要議題,並按持份者問卷調查結果排列優先次序"。

# **REPORTING PRINCIPLES**

This is the annual<sup>2</sup> Social and Environmental Report (hereafter "the Report") published by the Electrical and Mechanical Services Department (EMSD)<sup>1</sup> of the Government of the Hong Kong Special Administrative Region (HKSAR), which presents our initiatives and performance on environmental, social and economic aspects in the fiscal year 2017/18.

The Report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core option<sup>3</sup> and made reference to the Environmental Protection Department's A Guide to Environmental Reporting for Controlling Officers.

Details of relevant GRI topic disclosures and the corresponding chapters and pages are tabulated in the GRI Content Index at the end of the Report. To enhance the credibility and reliability of the Report, we have commissioned an independent third-party to verify the contents of the Report and to ensure compliance with the requirements of the Core option of the GRI Standards<sup>4</sup>.

# **REPORTING SCOPE**

The Report highlights our key sustainability initiatives and achievements from 1 April 2017 to 31 March 2018<sup>5</sup>. Unless otherwise stated, all data in the Report are presented as absolute figures as of 31 March 2018, to the best of our knowledge. Financial data are reported for the financial year, which ended on 31 March 2018. All monetary values in this Report are expressed in Hong Kong Dollars<sup>6</sup>. There were no significant changes with regard to departmental ownership, size, structure, or its supply chain during the reporting period<sup>7</sup>.

# MATERIAL TOPICS AND BOUNDARY

To better address topics that are of greatest significance to our operations and stakeholders, a materiality assessment was conducted to identify a list of material topics including those of environmental, social and economic aspects. We engaged our key stakeholder groups<sup>8</sup> (i.e. staff, clients and suppliers<sup>9</sup>) to collect their opinions in the form of questionnaire survey. In addition, a staff focus group<sup>10</sup> was also conducted to collect qualitative feedback on EMSD's sustainability issues for 2017/18. As a result, a total of 18 material topics were consolidated and prioritised based on the outcome of the stakeholder survey<sup>11</sup>.

Categories	Material Topics <sup>12</sup>	Boundaries <sup>13</sup>		
		機電署的運作 Operations of EMSD	主要供應商的運作 Operations of Our Major Suppliers	
	生態保育 Ecological Conservation	✓		
	節約能源 Energy Conservation	✓	✓	
	污水及廢物處理 Effluents and Waste Treatment	✓		
環境 Environment	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	✓		
6	財務表現 Financial Performance	✓		
經濟	部門的採購政策 Departmental Procurement Practices	✓	1	
Economic	間接經濟影響 Indirect Economic Impact	✓		
	遵守市場行為法規 <sup>14</sup> Market Behaviour Compliance <sup>14</sup>	<b>✓</b>		
	員工培訓及教育 Employee Training and Education	<b>√</b>		
	職業健康及安全 Occupational Health and Safety	✓		
	多元化及平等機會 Diversity and Equal Opportunity	✓		
社會 Social	員工政策及相關統計數據 Employment Policy and Statistics	✓		
	避免對員工強迫勞動 Avoid Forced Labour	✓		
	保安政策及培訓 <sup>14</sup> Security Policy and Training <sup>14</sup>	✓		
	客戶健康及安全 <sup>14</sup> Customer Health and Safety <sup>14</sup>	✓		

重要議題12

本社會及環保報告 2017/18已在網上發布。歡迎讀者直接與我們聯繫(電郵: cpsd@emsd.gov.hk),就我們在可持續發展方面的績效或報告方式提出寶貴意見 15。

The Social and Environmental Report 2017/18 is also published online. Readers are welcome to provide feedback on our sustainability performance or reporting approach by contacting us directly at cpsd@emsd.gov.hk<sup>15</sup>.

<sup>&</sup>lt;sup>1</sup> 102-1 <sup>2</sup> 102-52 <sup>3</sup> 102-54 <sup>4</sup> 102-56 <sup>5</sup> 102-50 <sup>6</sup> 102-45 <sup>7</sup> 102-10

<sup>&</sup>lt;sup>8</sup> 102-42 主要持份者組別主要參考其與機電署的運作之相關性而 挑選及聯繫

<sup>9 102-40 10 102-43 11 102-46</sup> 

 $<sup>^1</sup>$  102-1  $\,^2$  102-52  $^3$  102-54  $\,^4$  102-56  $\,^5$  102-50  $\,^6$  102-45  $\,^7$  102-10

<sup>8 102-42</sup> Major stakeholder groups are identified and engaged with reference to their relevance to EMSD's operations

<sup>9 102-40 &</sup>lt;sup>10</sup> 102-43 <sup>11</sup> 102-46

<sup>&</sup>lt;sup>12</sup> 102-44, 102-47 <sup>13</sup> 102-46

<sup>14 102-49</sup> 本報告新增內容 15 102-53

<sup>12 102-44, 102-47 13 102-46</sup> 

<sup>&</sup>lt;sup>14</sup> 102-49 Newly covered in this report <sup>15</sup> 102-53

# 可持續發展管理方針 Sustainability Management Approach

# 管理方針

管控風險是機電署日常運作不可或缺的一環,藉此 確保內部營運符合可持續發展的原則。我們為市民 提供機電服務,時刻將安全放在第一位。除了制訂環 境、安全及健康政策外,我們還積極應用風險為本的 預防模式,務求盡量減低本署和供應鏈對社會及環 境造成的影響。

# 規管服務的可持續發展

為支持香港於《巴黎協定》下的責任和環境局2017年 公布的《香港氣候行動藍圖 2030+》,機電署廣開途徑 尋找能源管理的機遇,全力紓減氣候變化對政府及 客戶的影響。

機電署作為規管機構,負責檢視和制訂包括能源效 益及機電公用設施安全等範疇的主要法例和標準。 早前推行的「強制性能源效益標籤計劃」第一及第二 階段成效理想,我們將於2018年6月啟動第三階段。 第三階段涵蓋三類新增的電器產品,包括電視機、儲 水式電熱水器及電磁爐,並把逆轉循環型冷氣機現 時的涵蓋範圍擴大至供暖功能,而洗衣機現時的涵 蓋範圍則擴大至洗衣量超過七公斤但不超過十公斤。

我們致力推動及提供可提升能源效益的專業諮詢、 技術支援和指引,例如《建築物能源效益條例》、香 港建築物能源效益註冊計劃、「全民節能2017」及《重 新校驗技術指引》等。此外,我們亦透過不同渠道舉 辦各類推廣運動,致力提高公眾對節能和機電安全 的意識。此類活動包括「慳神有計大比拼2017」、技 術講座、樓宇機電安全及能源效益講座、學校外展計 劃和展覽。

與此同時,本署亦提倡香港各界推動優質樓宇管理 和安全工作的文化。2017年9月,機電署協辦首屆跨 部門「優質樓宇管理周」活動,向業界和公眾提供實 用的樓宇管理資訊。年內,機電署亦繼續舉辦「傑出 計冊電業工程人員選舉 | , 向電業工程人員推廣工作 安全意識。

# **MANAGEMENT APPROACH**

One of the integral parts of EMSD's operation is managing risk to ensure sustainability within our department. We place safety as first priority in the course of our Electrical and Mechanical (E&M) services. On top of our environmental, safety and health policies, we foster a pro-active risk-based precautionary approach to minimise impacts of our department and our supply chain on their social and environmental aspects where feasible.

# **Sustainability Approach in our Regulatory Services**

In view of Hong Kong's commitment under the Paris Agreement and the Hong Kong's Climate Action Plan 2030+ published by the Environment Bureau in 2017, EMSD continues to seek energy management opportunities in order to mitigate the climate change impacts for the Government and our clients.

EMSD uptakes the regulatory role of reviewing and establishing key legislations and standards on different aspects including efficient utilisation of energy and safety of E&M public utilities. With the successful implementation of the first and second phases of Mandatory Energy Efficiency Labelling Scheme (MEELS), EMSD will push forward the third phase of the MEELS in June 2018. The third phase of MEELS covers three additional types of new electrical appliances including televisions, storage type electric water heaters and induction cookers as well as expand the existing scopes of reverse cycle type room air-conditioners to heating function and washing machines to a rated washing capacity exceeding 7 kg but not exceeding 10 kg.

We continuously drive and deliver professional advisory, technical support and guidelines on energy efficiency such as the Buildings Energy Efficiency Ordinance, Hong Kong Energy Efficiency Registration Scheme for Buildings, Energy Saving for All 2017 Campaign, Technical Guidelines on Retro-commissioning, etc. We also organised different types of promotional campaigns through extensive means with the aim to build public awareness on energy conservation and safety compliance. Examples include Energy Saving Championship Scheme 2017, technical forums, Property Management Seminar, school outreach programmes and exhibitions.

Furthermore, EMSD advocates quality building management and work safety culture in Hong Kong. In September 2017, EMSD has jointly debuted the interdepartmental Building Management Week to provide practical building management information for the industry and the public. EMSD has continued to organise the Outstanding Registered Electrical Worker Awards Scheme to promote work safety awareness among electrical workers.

112 / 113

# 營運服務的可持續發展

機電工程營運基金致力保持專業及卓越的機電服務 水平。我們利用運作上的彈性,持續推廣本地機電業 在各種優化能源效益技術的普及應用。

機電署致力保障我們的員工和客戶的健康及安全, 同時希望減低營運對環境的影響。透過採用結合ISO 9001、ISO 14001及OHSAS 18001認證的綜合管理系 統,我們精簡了在品質、環境和職業安全健康方面的 影響的管理流程。於2017年,我們完成了多次監督 審核,證明無任何違規情況,成功通過ISO 14001升 級認證,達到持續改善的目標。此外,我們的總部大 樓亦獲得ISO 50001證書,再次證明機電署致力不斷 提升管理能源的措施。

# **Sustainability Approach in our Trading Services**

EMSTF maintains high standards of professional E&M service. By leveraging our operational flexibility, we continue to pave the way to pursue a widespread of technology application for improving energy efficiency performance of the E&M industry in Hong Kong.

EMSD endeavours to protect our staff and client health and safety, as well as minimising the operational impacts to the environment. Through deploying an Integrated Management System (IMS), combining ISO 9001, ISO 14001, and OHSAS 18001, we have streamlined the management of our impact on quality, environmental and occupational health and safety. In 2017, we underwent surveillance audits and successfully upgraded our ISO 14001 without non-conformity for continuous improvement. In addition, obtaining the ISO 50001 certification for our headquarters building is yet another testament to EMSD's commitment in energy management.



規管服務及機電工程營運 基金ISO 14001 證書 ISO 14001 Certificates of Regulatory Services Units and Electrical & Mechanical Services Trading Fund

多年來,機電工程營運基金與客戶建立了長遠的伙 伴關係,並鼓勵業界廣泛協作推動可持續發展。為實 現可持續發展的低碳經濟,機電工程營運基金將繼 續為客戶提供先進的解決方案和技術,致力為香港 於可持續發展方面謀福祉。

Throughout the years, EMSTF has established long-term partnerships with our clients and encouraged extensive collaborations among industry in advancing sustainability. In the guest for a sustainable low carbon economy, EMSTF will continue to offer advance solutions and technologies for our clients to create lasting sustainability benefits to Hong Kong.

# 可持續發展管理方針 Sustainability Management Approach

# 持份者的參與

# STAKEHOLDER ENGAGEMENT

# 我們的主要持份者及參與方法「

# Our Key Stakeholders and Engagement Process<sup>1</sup>

客戶 Clients	客戶意見調查 Customer Opinion Survey 持份者參與問卷調查 Stakeholder Engagement Questionnaire
供應商及承辦商 Suppliers and contractors	持份者參與問卷調查 Stakeholder Engagement Questionnaire
員工 Staff	員工滿意度調查 Staff Satisfaction Survey 員工工會及員工協商委員會 Staff Unions and Departmental Consultative Committees 持份者參與問卷調查 Stakeholder Engagement Questionnaire 焦點討論小組 Focus Group
專業團體、行業公會 Professional and trade associations 受規管行業 Regulated trades	業界參與計劃 Trade Engagement Programme
決策局及部門 Policy bureaux and departments 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
傳媒 Media	傳媒聚會 Media Gathering

機電署經常透過左頁所述途徑<sup>2</sup>與各界持份者緊密聯繫,其中包括但不限於我們的員工、客戶、供應商及承辦商和其他重要持份者。持份者參與活動的範圍和界限涵蓋受機電署的營運、資源、產品及服務直接影響,或參與在內的持份者。我們聽取持份者的意見,根據本署的抱負、使命與策略,及按優先排序識別出對本署營運可持續性具有關鍵意義的重大議題。我們非常重視與持份者的交流,致力透過擴闊溝通層面,為公眾創造更多正面的裨益,與此同時不斷提升我們在可持續發展的表現。

# 聯繫我們的客戶

我們致力為客戶提供優質機電服務,為評估服務質素,我們每兩年委託獨立市場研究公司進行一次客戶意見調查,以協助我們持續改善機電工程營運基金的表現。最近期的客戶意見調查在2016年進行,調查結果顯示我們的客戶滿意指數達到6.45分(8分為滿分),再創歷史新高。我們已根據是次調查結果擬出優化客戶服務的計劃,力求達致卓越水平。新一輪的客戶意見調查將於2018年第四季進行。在處理客戶私隱方面,我們嚴格遵從我們的私隱政策,確保所有個人資料均按照《個人資料(私隱)條例》的有關條文處理。

2018年3月,我們推出了「顧客為本電子平台」。本項目是機電工程營運基金五年策略計劃的主要措施之一,為客戶提供更高效率的資訊及溝通平台,加強彼此的聯繫。為確保機電工程營運基金的服務質素,我們改善了合約管理,促進客戶提供更完善的公共服務。此外,機電署亦嚴守管制反競爭行為的本地法規。

At EMSD, we regularly engage our stakeholders, including but not limited to our staff, clients, suppliers and contractors and other important stakeholders through various methods described on the left page<sup>2</sup>. The scope and boundary of our stakeholder engagement activities include stakeholders directly affected by or involved in EMSD's operations, resources, products and services. By taking into account the inputs from our stakeholders as well as EMSD's vision, mission and strategies, we identify and rank key material topics areas that are pivotal to the sustainability of our operations. We value such interactions to extend our reach and magnify our positive impacts on the community, which also enable continual furtherance of our sustainability performance.

# **ENGAGING OUR CLIENTS**

We strive to uplift our E&M service standards provided to our clients. To review our service quality, we have engaged an independent market research company to conduct a Customer Opinion Survey (COS) every two years for EMSTF's continuous improvement. The most recent round of COS was conducted in 2016, in which survey results hit another record high Customer Satisfaction Index of 6.45 out of 8. Based on the customers' opinion, we have formulated customer service improvement plans to strive for service excellence. A new round of COS will be conducted again in the fourth quarter 2018. When handling our customer privacy, we strictly follow with our Privacy Policy to ensure that all personal data are handled in accordance with the Personal Data (Privacy) Ordinance.

As part of EMSTF's key initiatives in its five-year strategic plan, we have successfully launched a "Customer Centric e-Platform" in March 2018. We will be able to offer a more efficient information and communication platform for our clients and strengthen our ties with them. We have also enhanced contract management to ensure EMSTF's service quality, enabling our clients to provide better services to the public. In addition, EMSD is committed to comply with any local law and regulations that guard against anti-competitive conduct.

# 可持續發展管理方針 Sustainability Management Approach

# 管理我們的供應鏈

機電署的供應商主要提供與機電安裝、運作及維修 相關的零部件或設備及服務。在甄選承辦商時,我們 堅持公平及開放的方式,同時訂有一套有關可持續 提供優質產品與服務。

承辦商是我們的重要伙伴,以確保能夠提供安全而 卓越的機電服務。在甄選承辦商時,我們會檢討他們 過往的表現和確保他們已實施穩健的安全管理系統。 於2017/18年度,我們共有兩項維修、保養、改建及 加建工程合約於第23屆公德地盤嘉許計劃中獲得金 獎和銀獎, 肯定了承辦商在協助業界實現「零意外」 上作出的貢獻。除此之外,我們亦鼓勵承辦商構思創 新意念,改進他們在工地的表現。

# **MANAGING OUR SUPPLY CHAIN**

EMSD's suppliers are mainly involved in provision of parts or equipment and services related to E&M installation, operation and maintenance. When selecting contractors, we follow an open and fair process and lay down sustainability-related 發展的標準,以鼓勵準供應商盡量以可持續的方式 criteria to encourage potential suppliers to provide quality goods and services in a sustainable manner wherever applicable and available.

> Contractors are our important partners to ensure the delivery of safe and quality E&M services. When selecting contractors, we will review their past performance and ensure that they have a robust safety management system in place. In 2017/18, two of our repair, maintenance, alteration and addition works contracts were granted the Gold Award and the Silver Award in the 23rd Considerate Contractors Site Award Scheme. Contractors were acknowledged for their contribution towards achieving "Zero Accidents" in the industry. We also encourage our contractors to provide innovative ideas for uplifting their performance on-site.



兩項維修、保養、改建及加建工程合 約於第23屆公德地盤嘉許計劃中獲得 金獎和銀獎。

Two of our repair, maintenance, alteration and addition works contracts were granted the Gold Award and the Silver Award in the 23rd Considerate Contractors Site Award Scheme.

116 / 117

# 可持續發展的卓越成果

# 取得ISO認證

機電署在可持續發展的路上不斷求進。自1999年設 立首個ISO 9001 品質管理系統後,我們定期檢討工作 程序,不斷增廣專業知識與技術,確保可為公眾提供 優質服務及全面推行可持續的綠色作業。

# 機電署獲ISO認證的時序

# SUSTAINABILITY EXCELLENCE

# **Achieving ISO Certifications**

EMSD continues to endeavour and mature in our sustainability journey. Through on-going review of our processes, we strive to maintain our competence in delivering quality service and sustaining green operation ever since our first ISO 9001 Quality Management System established in 1999.

# **Timeline for ISO Certifications Achievements**



# 獎項及嘉許

機電署竭誠為客戶提供優質機電服務。於匯報年度, 本署及本署傑出的員工獲得多個獎項及殊榮,為我 們帶來莫大鼓舞。透過參與各種比賽及計劃,可鼓勵 員工與時並進,緊貼最新的創新科技發展,使香港成 為更優秀、更具能源效益的綠色城市。

# **Awards and Recognition**

EMSD places a high premium on providing high quality E&M services to our clients. In the reporting year, we are encouraged by the awards and recognitions received at the departmental level as well as for our dedicated and talented staff. Through participating these competitions and schemes, it can be of great help in keeping up our staff with advanced innovations and technologies that could make Hong Kong a better, more energy-efficient and greener city.

# 可持續發展管理方針 Sustainability Management Approach

### 區域能源管理機構獎

於2017年9月,機電署獲美國能源工程師學會頒發亞太區「區域能源管理機構獎」,以表揚我們在制訂、籌辦、管理和實施綜合能源管理計劃方面的傑出表現。此外,本署並聯同醫院管理局(醫管局)奪得亞太區「區域能源項目獎」,以嘉許我們推展創新能源管理項目。自2015年起,機電署和醫管局合作為多間醫院更換高效能製冷機,並安排香港科技大學核實成本效益,結果顯示有關措施每年可節省約1,300萬港元的用電成本。

# Regional Institutional Energy Management Award

In September 2017, EMSD was awarded the Regional Institutional Energy Management Award for the Asia-Pacific Rim Region by the Association of Energy Engineers (AEE), commending our outstanding performance in developing, organising, managing and implementing our comprehensive energy management programme. In addition, EMSD and the Hospital Authority (HA) jointly received the Regional Energy Project of the Year Award for the Asia-Pacific Rim Region in recognition of the innovative energy management projects that we have implemented. Since 2015, EMSD has been co-operating with the HA in installing high-efficiency chillers in various hospitals, and engaged the Hong Kong University of Science and Technology in verifying their cost effectiveness, which concluded that an annual electricity cost of around HK\$13 million could be saved.



美國能源工程師學會在美國亞特蘭大舉行2017年頒獎典禮。

The 2017 Award Presentation Ceremony of the AEE in Atlanta in the United States.

# 2017年傑出學徒獎勵計劃

於2018年3月,兩位參與本署技術員訓練計劃的見習技術員劉至正先生(見習二級技術員(空氣調節))及楊凱超先生(見習一級技術員(屋宇裝備))在職業訓練局舉辦的傑出學徒獎勵計劃獲選為優異學徒。

# 2017 Outstanding Apprentices Award

In March 2018, two trainees under our Technician Training Scheme, Mr Lau Chi-ching (Technician Trainee II (Air-conditioning)) and Mr Yeung Hoi-chiu (Technician Trainee I (Building Services)) were both selected as one of the Outstanding Apprentices (Merit) by the Vocational Training Council.



# 2017年傑出學徒獎勵計劃頒獎典禮

The 2017 Outstanding Apprentices Award Presentation Ceremony.

# 機場管理局工程承包商安全運動

我們的機場工程分部出色的安全表現獲得香港機場管理局(機管局)認同。在機管局工程及維修部所舉辦的工程承包商安全運動2017/18中,本署麥國樑先生、徐志傑先生、曾德信先生及岑惠峯先生獲得安全短片比賽第三名。麥先生、徐先生和陳卓年先生亦獲得最佳工作間比賽第三名。

# Airport Authority's Technical Services Department (TSD) Contractors Safety Campaign

Our Airport Engineering Services Sub-division's outstanding safety performance was recognised by the Airport Authority (AA) Hong Kong. Mr Mak Kwok-leung, Mr Tsui Chi-kit, Mr Tsang Tak-shun, and Mr Shum Wai-fung won the 2nd runner-up in the Safety Video Shooting Competition while Mr Mak, Mr Tsui, together with Mr Chan Cheuk-nin also won the Best Workplace Competition in the AA's TSD Contractors Safety Campaign 2017/18.



工程承包商安全運動頒獎典禮。 TSD Contractors Safety Campaign Award Presentation Ceremony.

# 機場安全嘉許計劃

本署員工梁凌峯先生及機場污水處理廠組分別奪得由機管局主辦的2017/18機場安全嘉許計劃最優秀安全督導員獎及企業安全表現大獎,表揚他們在2017/18年度持續作出貢獻,促進機場安全。

# Airport Safety Recognition Scheme

Mr Leung Ling-fung was honoured with the Best Safety Supervisor while the Airport Wastewater Treatment Team was awarded the Corporate Safety Performance Award respectively at the 2017/18 Airport Safety Recognition Scheme held by the AA which commended their continuous contribution to airport safety in 2017/18.





2017/18機場安全嘉許計劃頒獎典禮。

2017/18 Airport Safety Recognition Scheme Award Presentation Ceremony.

# 可持續發展管理方針 Sustainability Management Approach

### 香港青年技能大賽2017

機電署用心培育年青一代的見習技術員,鼓勵他們參加各類比賽接受新的挑戰。2017年6月,本署的見習技術員陳肇霖先生(見習二級技術員(電氣))以香港代表身份,參與青年技能比賽常務委員會舉辦的「香港青年技能大賽」,憑着出眾技能於「電氣安裝」組別奪得金獎,並入選成為香港代表出戰「2017阿布扎比世界技能大賽」。

### WorldSkills Hong Kong Competition 2017

EMSD is committed to grooming young technician trainees and encouraging them to take on new challenges by participating in various competitions. In June 2017, one of our technician trainees, Mr Chan Siu-lam (Technician Trainee II (Electrical)) represented Hong Kong in the WorldSkills Hong Kong Competition 2017 which is organised by the Standing Committee on Youth Skills Competition. With his outstanding skills, Mr Chan clinched the gold award in the "Electrical Installations" category and was selected to represent Hong Kong in the WorldSkills Abu Dhabi 2017



陳肇霖先生(中)於「香港青年技能大賽2017」 頒獎典禮。

Mr Chan Siu-lam (centre) at the WorldSkills Hong Kong Competition 2017 Prize Presentation Ceremony.



# 2017阿布扎比世界技能大賽

第44屆「世界技能大賽」於阿聯酋阿布扎比市舉行,本署的見習技術員陳肇霖先生在「世界技能大賽」的「電氣安裝」組別中獲得優異獎,而劉至正先生(見習二級技術員(空氣調節))在「空調製冷」組別中順利完成有關安裝工程和測試,表現令人滿意。

### WorldSkills Abu Dhabi 2017

The 44th WorldSkills Competition held in Abu Dhabi, the United Arab Emirates. We were proud of our technician trainees, Mr Chan Siu-lam in obtaining the Medallion for Excellence in "Electrical Installations" category and Mr Lau Chi-ching (Technician Trainee II (Air-conditioning)) for his effort in competing in the "Refrigeration and Air-Conditioning" category.



劉至正先生參與「空調製冷」項目。 Mr Lau Chi-ching competing in "Refrigeration and Air-Conditioning".



助理署長/氣體及一般法例彭耀雄 先生(左二)出席2017年仁愛堂義工 嘉許典禮。

120 / 121

Assistant Director/Gas and General Legislation, Mr Pang Yiu-hung (2nd left) at the 2017 Yan Oi Tong Volunteer Award Presentation Ceremony.



# 仁愛堂愛心團體義工獎

機電署員工康樂會義工小組過去二十年來一直參與 仁愛堂義工服務。2017年10月,員工康樂會義工小 組的「仁愛堂義工隊」獲仁愛堂頒發愛心團體義工獎, 以讚揚機電署義工攜手造福社群,為長者和有需要 人士提供家居維修服務。

# Yan Oi Tong Volunteer Award Scheme

EMSD Staff Club Volunteer Team has been actively joining the Yan Oi Tong volunteer service in the last two decades. In October 2017, the Yan Oi Tong Volunteer Team under the Staff Club Volunteer Team was awarded the Compassion Group Volunteer Award by Yan Oi Tong in recognition of the concerted efforts of EMSD's volunteers for providing household maintenance service to the elderly and the needy in our community.

# 年度重點



升級認證至ISO 14001: 2015 環境管理系統。

HIGHLIGHTS OF THE YEAR

Upgraded to ISO 14001:2015 Environmental Management System Certification.



發布《重新校驗技術指引》。

Issued Technical Guidelines on Retro-commissioning.



推出自願性的香港建築物能源效益註冊計劃。

Launched the voluntary Hong Kong Energy Efficiency Registration Scheme for Buildings.



榮獲美國能源工程師學會頒發兩項國際權威 獎項包括亞太區「區域能源管理機構獎」及亞 太區「區域能源項目獎」。

Won two international prestigious awards in the AEE Awards including the Regional Institutional Energy Management Award for the Asia-Pacific Rim Region and Regional Energy Project of the Year Award for the Asia-Pacific Rim Region.



推出創新科技協作平台 E&M InnoPortal,支援初創企業推展創新項目,並羅列各政府部門、公營機構、機電業界及各大學對科技發展相關的需求,提供科技工程方案的配對平公。

Launched E&M InnoPortal as an innovation and technology collaboration platform for facilitating start-up projects, and pairing up technology needs with engineering solutions among government departments, public bodies, E&M trade, universities and start-ups.



協助醫院管理局大樓及建築署的建業中心榮 獲「綠建環評既有建築2.0版自選評估計劃」 中能源使用範疇之卓越評級。 Assisted in earning the Excellent rating for Energy Use under the BEAM Plus Existing Buildings (V2.0) Selective Scheme for the Hospital Authority Building and the APB Centre of the Architectural Services Department.



獲得研發全球市場首創的「流動製冷系統」的香港註冊專利。

Obtained a patent in Hong Kong for developing the Mobile Chiller System which is the first of its kind in the global market.

# 環保成效 Environmental Performance

我們十分重視與日常營運及廣大市民息息相關的環 保成效。機電署致力發揮最大的資源使用效益,藉着 環境管理系統持續改善環保措施,與此同時亦積極 建議訂立法例或政策措施優化香港的能源效益。

# 優化香港的能源效益

機電署全力支持政府實現減低能源強度的目標,除 推出多項計劃提高能源效益外,我們亦使用更多可 再生能源。

# 高能源效益產品

# 強制性能源效益標籤計劃

為了讓消費者選購產品時可根據產品的能源效益表現作出明智決定,我們於2009年11月開始實施「強制性能源效益標籤計劃」,提供產品的能源效益資訊。計劃第一及第二階段涵蓋五種產品,包括冷氣機、冷凍裝置、慳電膽、洗衣機及抽濕機。截至2018年3月,約有8700款產品型號已被列入計劃名單當中。

為進一步推廣公眾的節能意識,政府已修訂《能源效益(產品標籤)條例》以推行「強制性能源效益標籤計劃」第三階段。新一期計劃預計於2018年6月1日正式生效,寬限期為18個月,涵蓋三類新增的電器產品,包括電視機、儲水式電熱水器及電磁爐,並把原有計劃內的逆轉循環型冷氣機的涵蓋範圍擴大至供暖功能,而洗衣機則擴大至七公斤至十公斤洗衣量的型號。第三階段料會創造更多節能機遇,估計實施後本港每年可節省約1.5億千瓦小時電力,即每年可減少排放105 000噸二氧化碳。「強制性能源效益標籤計劃」第三階段新規定的技術詳情已載於《產品能源標籤實務守則2018》。

# 建築物能源效益

# 《建築物能源效益條例》

機電署向來注重建築物的能源效益。建築物的用電量佔全港用電總額很大比重,政府早於2012年9月頒布《建築物能源效益條例》,監管建築物的能源效益。

《建築物能源效益條例》為主要的屋宇裝備裝置訂明 多項最低能源效益設計標準。根據該條例,四類主要 屋宇裝備裝置,包括新建建築物的空調、照明、電力 裝置、升降機和自動梯裝置及主要裝修工程,必須符 合《建築物能源效益守則》所定的設計標準。 EMSD cares about the environmental performance for our operation and for the wider community. Committed to optimise the resources usage efficiency, EMSD continues to improve its environmental initiatives through the adoption of its Environmental Management System (EMS). Dedicated to enhance the energy efficiency for the city, EMSD takes every opportunity to propose legislation or policy initiatives that promote energy efficiency.

# ENHANCING ENERGY EFFICIENCY FOR THE CITY

To take steps towards the Government's energy intensity reduction target, EMSD has endeavoured to implement various schemes and programmes to promote energy efficiency and the wider use of renewable energy.

# **Energy Efficient Products**

# Mandatory Energy Efficiency Labelling Scheme

In order to help consumers make a better choice with reference to the product's energy efficiency performance, we have implemented the Mandatory Energy Efficiency Labelling Scheme (MEELS) since November 2009, providing product's energy efficiency information. Five types of products including room airconditioners, refrigerating appliances, compact fluorescent lamps, washing machines and dehumidifiers were covered in the first and second phases of the MEELS. As of March 2018, around 8 700 product models have been listed under the Scheme.

To further promote public awareness on energy saving, we introduced the third phase of MEELS through amendments to the Energy Efficiency (Labelling of Products) Ordinance, which will commence on 1 June 2018 with a grace period of 18 months. The third phase of MEELS will cover three additional types of electrical appliances including televisions, storage type electric water heaters and cookers, as well as expanding the existing scopes of reverse cycle type room air-conditioners to heating function and washing machines to a rated washing capacity exceeding 7 kg but not exceeding 10 kg. The additional energy-saving potential yielded by the third phase of MEELS is estimated to be around 150 million kWh per year, equivalent to 105 000 tonnes of carbon reduction annually. The technical details of the new requirements of the third phase of MEELS were covered in the Code of Practice on Energy Labelling of Products 2018.

# **Buildings Energy Efficiency**

# **Buildings Energy Efficiency Ordinance**

Buildings energy efficiency has long been a focus area for EMSD. As the major electricity consumption source in Hong Kong, buildings' energy efficiency was regulated by the Buildings Energy Efficiency Ordinance (BEEO) since its enforcement in September 2012.

The BEEO has set out the minimum energy efficiency design standards for major building services installation. Under the BEEO, four key types of building services installation, namely air-conditioning, lighting, electrical installation, lift and escalator installations in newly constructed buildings and major retrofitting works, have to comply with the design standards stipulated in the Building Energy Code (BEC).

122 / 123

根據《能源審核守則》,商業樓宇業主除了必須依從 能源效益設計標準外,亦需要為上述四類主要屋宇 裝備裝置每十年進行一次能源審核。

透過實施《建築物能源效益守則》和《能源審核守則》,本港預期可在2025年前累計節省50億千瓦小時的能源,相當於減少約350萬噸溫室氣體排放。機電署每三年便會檢討《建築物能源效益守則》和《能源審核守則》,確保緊貼最新的技術及行業發展。首次檢討已於2015年完成,第二次檢討已於2017年初展開籌備,預計於2018年年底完成。

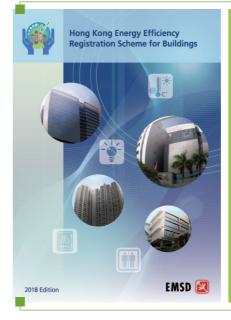
### 香港建築物能源效益註冊計劃

為鼓勵樓宇業主進一步提升建築物的能源效益,以 達致比法定要求更佳的表現,我們修訂了自願性的 香港建築物能源效益註冊計劃,並於2018年1月1日 正式生效。各類新建及現有建築物/處所(不限於訂 明建築物)的能源表現只要超出《建築物能源效益條 例》的法定最低要求,並取得由香港綠色建築議會管 理的綠建環評或其他國際認可的建築物環境評估制 度頒發的良好能源表現認證,均可申請加入此計劃。 合資格的建築物能源效益裝置(包括照明、空調、電 力裝置、升降機和自動梯裝置)的資本開支或可享受 扣稅優惠。 Apart from following the design standards, according to the Energy Audit Code (EAC), it is also required for owners of commercial buildings to carry out energy audit for the above-mentioned four key types of building service installation once every ten years.

Through the adoption of BEC and EAC, it is expected that a cumulative energy saving of 5 billion kWh by 2025, equivalent to a reduction in greenhouse gas (GHG) emissions of about 3.5 million tonnes, can be achieved. EMSD reviews the BEC and EAC every three years to suit with the technology development and industry practices. With the first review completed in 2015, EMSD has started the preparation for the second review in early 2017 and targeted to be completed by end of 2018.

# Hong Kong Energy Efficiency Registration Scheme for Buildings

To promote building owners to drive towards better building energy performance beyond the statutory requirement, we reviewed the voluntary Hong Kong Energy Efficiency Registration Scheme for Buildings (HKEERSB), which took effect from 1 January 2018. New and existing buildings/premises (not limited to prescribed buildings) which achieved energy performance better than the minimum statutory requirements under the BEEO, and obtained certificates of good building energy performance through the BEAM Plus Assessment System managed by the Hong Kong Green Building Council, or other internationally recognised building environmental assessment systems, are eligible to apply for joining the HKEERSB. The capital expenditure incurred by procuring the eligible energy-efficient building installations (include lighting installation, air-conditioning installation, electrical installation, lift and escalator Installations) may be eligible for accelerated tax deduction.



# 《香港建築物能源效益註冊計劃》 Hong Kong Energy Efficiency Registration Scheme for Buildings

# 環保成效

# Environmental Performance

# 《重新校驗技術指引》

除監管建築物的能源效益設計外,我們亦積極推廣「重新校驗」的概念,鼓勵業主採取有系統的流程,定期檢查現有建築物的能源表現,尋找節約能源的改進空間。首份《重新校驗技術指引》於2017年6月發布,該份指引説明重新校驗的重點、主要流程及技術方法。指引獲得廣大認同,我們會繼續向業界推廣重新校驗。

### **Technical Guidelines on Retro-commissioning**

Apart from regulating buildings energy efficiency designs, we also actively promote the concept of "Retro-commissioning", which is a systematic process to check an existing building's performance periodically to identify operational improvements that can save energy. The first Technical Guidelines on Retro-commissioning (RCx) issued in June 2017 illustrates the focus area, key procedures, and technical approaches to RCx. The general responses we received have been very positive, and we will continue to promote RCx.



# 政府建築物的節能措施

機電署作為政府轄下機電服務的專責部門,自2003 年起我們一直全力協助各決策局和部門安裝具能源 效益的系統及推行最佳節能作業方式。於2017/18年 度,我們協助多個決策局及部門推展不同的節能工 程,工程總開支約1.5億港元。工程主要涉及更換舊 空調、以LED燈取代原有的照明系統和優化製冷機等。

# **Energy Savings in Government Buildings**

As a government department specialised in electrical and mechanical services, we have been assisting government bureaux and departments (B&D) to install energy-efficient engineering systems and implement energy-saving best practices since 2003. In 2017/18, we implemented various energy-saving projects for B&D with a total project cost of around HK\$150 million. These projects mainly involve replacement of aged air-conditioning equipment, replacement of lighting system with LED lighting, optimisation of chiller plants, etc.





# 提倡使用可再生能源

為應對氣候變化,政府率先以身作則在技術及經濟可行的情況下廣泛使用可再生能源。由2017年5月起,新建政府建築物將採用更高的可再生能源供應目標。於2017/18年度,政府預留了2億港元為現有政府建築物、場地及社區設施安裝可再生能源裝置。我們會積極向其他政府部門推廣使用可再生能源,並協助這些建築物加上可再生能源的設計。

# 淡水冷卻塔計劃

冷氣系統是建築物內耗用最多能源的裝置之一,研究發現水冷式空調系統相比風冷式空調系統在環境及經濟方面均有更大效益。為推廣非住宅樓宇的空調系統採用淡水冷卻塔,我們於2000年推出淡水冷卻塔計劃,迄今已接獲1095項申請,當中2438個淡水冷卻塔已落成並投入運作。按照估計,已落成的裝置每年可節省5億千瓦小時用電量,相當於每年減少排放約350000噸二氧化碳。

# Promoting the Use of Renewable Energy

To cope with climate change, the Government is committed to take the lead in applying renewable energy (RE) on a wider and larger scale where technically and financially feasible. Starting from May 2017, higher RE provision targets have been set for new government buildings. In 2017/18, the Government has earmarked HK\$200 million for the provision of RE installations in existing government buildings, venues and community facilities. We will actively promote the use of RE to other government departments and assist these buildings to incorporate the RE design as far as possible.

# Fresh Water Cooling Towers Scheme

Air-conditioning system was one of the largest energy consuming units in buildings. It was found that the use of water-cooled air-conditioning systems has greater environmental and economic benefits than air-cooled air-conditioning systems. To promote the use of fresh water in cooling towers for air-conditioning systems in non-domestic buildings, we launched the Fresh Water Cooling Towers (FWCT) in 2000. EMSD has received 1 095 applications since the launch of the FWCT Scheme. Among them, 2 438 FWCTs have been completed and put into operation. It is estimated that the completed installations could save up to 500 million kWh electricity annually, which is equivalent to around 350 000 tonnes carbon reduction per annum.

# 環保成效

# Environmental Performance

# 啟德區域供冷系統

為提升新發展區域的節能效益,我們在啟德發展區安裝了區域供冷系統。該大型中央空調系統設有中央製冷機組,負責製造冷凍水,透過地下水管網絡輸送到啟德發展區內的建築物。啟德發展區的區域供冷系統較傳統風冷式空調系統的用電量節省35%,較獨立使用冷卻塔的水冷式空調系統節省20%,估計每年可節省高達8500萬千瓦小時電力,相當於每年減少排放59500噸二氧化碳。此計劃的第1、II期及第III期(組合甲)的工程經已落成,現正進行第III期(組合乙)及第III期(組合丙)的工程。

### 啟德發展計劃區域供冷系統用戶(截至2018年中期)

工業貿易大樓

Trade and Industry Tower

# District Cooling System at the Kai Tak Development

To promote energy saving in newly developed areas, we have installed the District Cooling System (DCS) at the Kai Tak Development (KTD). The DCS is a large scale centralised air-conditioning system which produces chilled water at the central plants and distributes the chilled water to buildings in the Kai Tak Development through underground water piping network. It consumes 35% and 20% less electricity as compared to traditional air-cooled air-conditioning systems and individual water-cooled air-conditioning systems using cooling towers respectively. It is estimated that the use of DCS at KTD can save up to 85 million kWh electricity annually, which is equivalent to 59 500 tonnes of carbon reduction per annum. The Phase I, II and III (Package A) of the KTD DCS project were completed and the Phase III (Package B) and III (Package C) are underway.

### Users of DCS at KTD (as of mid-2018)

# 晴朗商場 Ching Long Shopping Centre 聖公會聖十架小學 S.K.H. Holy Cross Primary School 保良局何壽南小學 Po Leung Kuk Stanley Ho Sau Nan Primary School 香港兒童醫院' Hong Kong Children's Hospital' 機電署總部大樓 EMSD Headquarters 放德郵輪碼頭 Kai Tak Cruise Terminal

### 

# 全民節能計劃

除了推動落實政策及措施外,我們也致力倡導各行各業節約能源,一同應對氣候變化。環境局與我們攜手合辦「全民節能2017」運動,此項運動包括「節能約章2017」、「4Ts約章」及「慳神有計大比拼2017」。各約章和比賽旨在鼓勵香港社會各界採取各種節能措施並定下節能目標,同時表揚在規劃、應用和推廣節能方面表現傑出的機構。

# **Energy Saving for All Campaign**

Apart from driving policy and initiatives, we have actively promoted energy saving in all sectors to combat climate change. The Environment Bureau and the EMSD jointly held the Energy Saving for All 2017 Campaign. The Campaign covered the Energy Saving Charter 2017, the 4Ts Charter and the Energy Saving Championship Scheme 2017. These charters and schemes aim to encourage all sectors of the community in Hong Kong to adopt energy-saving practices, set energy-saving targets, and recognise organisation with outstanding performance in the planning, application and promotion of energy saving.



# 機電署綠色作業

我們一方面鼓勵公眾節約能源,另一方面亦致力優 化資源的使用效益,盡量減低日常營運對環境的影響,培育綠色文化。

# 環境管理系統

中央製冷機組

Central Chiller Plant

我們自2000年起實施ISO 14001環境管理系統,以管理與法規、環境問題、物料消耗和企業關注等議題衍生的環境影響、風險及機遇。我們的環境管理系統已於2017/18年度升級至符合ISO 14001標準最新的2015年版本。

環境管理系統為我們提供規範方針,以檢視本署的 營運對不同環境範疇,包括空氣、水、噪音、視覺、 土地污染、資源利用、動植物及一般營運所造成的影響。當發現到重要的潛在影響時,環境管理系統設有 管控機制,向員工提供相關的環境指引及程序手冊, 避免造成實際影響。

# PROMOTING GREEN OPERATIONS IN EMSD

Apart from enlisting the community in energy saving, we strive to optimise the resources usage efficiency, minimise the environmental impacts of our operation and cultivate a green culture.

# **Environmental Management System**

EMSD has adopted the ISO 14001 Environmental Management System (EMS) since 2000 to manage the impacts, risks and opportunities of potential environmental aspects arising from legal requirements, environmental consequences, use of materials and corporate concerns. In 2017/18, we have upgraded our EMS to comply with the latest ISO 14001:2015 version.

The EMS has governed our approach in reviewing the environmental aspects such as air, water, noise, visual, land contamination, resource use, flora and fauna, and general nuisance of our operations. A control mechanism will also be in place when significant potential impacts are identified. Corresponding environmental instruction and procedure manual will be available and communicated to the staff to prevent the occurrence of the potential impacts.

# 環保成效

# Environmental Performance

指標,包括:

為促進持續改善,我們制訂了與環保相關的目標及 To facilitate continuous improvement, we have set environmental-related objectives and targets including:



積極應用可再生能源及智能科技。

Actively apply the use of renewable energy and smart technology.



或重新校驗,以推動我們的客戶於他們的場 所實踐更多節能措施。

應用創新的工程方案,例如冷氣系統的優化 Apply innovative engineering solutions such as adopting optimisation or retro-commissioning of air-conditioning system in supporting our clients to implement more energy-saving measures in their venues.

善小組計劃及業務流程改善計劃提供環保範 疇的建議。

為員工培養綠色文化,鼓勵他們透過工作改 Nurture our staff on green culture and encourage their suggestion on green aspects through Work Improvement Team Scheme and Business Process

> To align with our Environmental Policy, we also place high regards to optimise our resources usage efficiency, minimise waste generation, and reduce our emissions.

> These messages were also conveyed to our staff, contractors and suppliers as far as

practicable in order to achieve a greener operation and supply chain.

為了配合我們的環保政策,我們全力提高資源利用 效率、盡量減少廢物產生及廢氣排放,同時積極向所 有員工、承辦商和供應商傳遞以上訊息,令整體營運 及供應鏈更環保。

# **Waste Management**

# 廢物管理

我們的廢物主要來自辦公室和工場作業,例如更換 車胎及零件、修理機電裝置等。為紓減我們對環境構 成的影響,我們除了在營運過程中採取環保措施,亦 會盡量回收廢舊物料。從辦公室回收的廢棄物主要 是舊光管、紙張和碳粉盒,而從工場回收的廢棄物則 以舊光管、舊充電池、金屬廢料、廢潤滑油和舊車胎 為主。具體回收數據請參閱統計資料摘要,廢紙及碳 粉盒的回收量趨勢列表如下。

In EMSD, our major source of waste generation comes from our office operation and workshop activities such as replacing vehicle tyres and parts, repairing E&M installations, etc. To minimise our impacts to the environment, apart from adopting the environmental procedures during our operation, we maximise the waste recycling as far as practicable. The major office wastes that we recycled include paper, spent fluorescent tubes and toner cartridges, while those for workshops include spent fluorescent tubes, rechargeable batteries, metal scraps, waste lubricant oil, and vehicle tyres. Details of the waste recycling data can be found in Summary of Statistics. The trend for waste paper and toner cartridge recycling is shown in below chart.

# 辦公室廢物循環再用量 **Amount of Recycled Office Waste**



128 / 129

廣泛採用雙面印刷,至於碳粉盒回收量減少則因為 營運所需的碳粉盒數目減少。

# 減少氣體排放

為支持政府達到2030年將香港的碳強度由2005年的 水平降低65%至70%的減排目標,機電署積極節約用 電及不斷改善轄下建築物的能源效益,從而控制和 減低營運產生的溫室氣體。我們的溫室氣體排放主 要來自辦公室及工場的用電和運輸工具的排放。機 電署轄下建築物於2017/18年度的碳足跡(公噸)列表 如下。

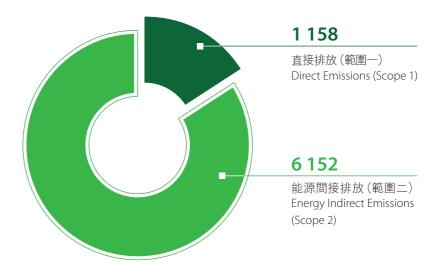
2017/18年度廢紙回收量下降,主因是用紙量減少和 The decrease in the amount of waste paper recycled in 2017/18 is mainly due to the decreasing paper consumption and the extensive use of both sides of paper. While the decrease in the number of toner cartridge recycled is due to the decrease in toner consumption for operational requirement.

### **Emission Reduction**

To achieve the Government's 65–70% carbon intensity reduction target in 2030 compared to 2005 level, we have strived to control and reduce the GHG emissions from our operation through electricity conservation and continuously improvement of the energy efficiency of our buildings. Our major GHG emissions come from the electricity consumption in our offices and workshops, and transportation emission. The breakdown of carbon footprint of EMSD premises in 2017/18 (in tonnes) is shown in the graph below.

# 機電署2017/18年度溫室氣體排放 **EMSD Greenhouse Gas Emissions in 2017/18**

溫室氣體排放	公噸(二氧化碳當量)	Greenhouse Gas Emissions	Tonnes of CO <sub>2</sub> -equivalent
直接排放(範圍一) 能源間接排放(範圍二)	1 158 6 152	Direct Emissions (Scope 1) Energy Indirect Emissions (Scope 2)	1 158 6 152
總排放	7 310	Total Emissions	7 310



# 環保成效

# Environmental Performance

外,基於營運所需,本署亦設有不同類型的車隊。截 至2018年3月31日,我們的車隊共有216部車輛,包 括貨車、客貨車、大型房車及電單車等。除此之外, 我們亦為客戶部門的5 826部政府車輛提供維修服務。 為盡量減少廢氣排放,我們妥善維修所有車輛及實 行良好的內務管理,並定期更新。我們目前共有 13部電動車及七部混能車,其燃料消耗量較體積相 近的傳統車輛少40%,同時能減低路邊空氣污染及碳 排放。

# 綠化總部大樓

我們是香港推廣節能建築設計的先驅之一。本署總 部大樓是首棟連接啟德區域供冷系統的現有建築物, 我們亦在大樓的設計當中加入可再生能源的元素。 機電署總部大樓安裝的太陽能光伏系統自2005年至 2018年3月底已產生215萬千瓦小時的能源,最高可 產出350千瓦的再生能源。我們亦於總部大樓增設了 「能源儀錶板」,實時監察大樓的能源消耗量,以及提 供大樓的碳排放資訊。

機電署其中一項主要職責是維修保養政府車輛。此 As one of EMSD's services, we provide vehicle maintenance for government vehicles. Our operations also require the use of different vehicle fleet types. As of 31 March 2018, we have a total of 216 vehicles including lorries, vans, saloon cars and motorcycles. We are also responsible for maintaining 5 826 government vehicles for our client departments. Through proper vehicle maintenance, good housekeeping and regular upgrade, we aim to reduce our transportation emission as much as possible. Currently, we have 13 electric vehicles, and seven hybrid vehicles which consume 40% less fuel than conventional vehicles of similar size for lessen roadside air pollution and carbon emissions.

# **Greening our Headquarters**

We have been one of the pioneers in promoting energy-efficient building designs in Hong Kong. EMSD Headquarters Building was the first existing building connected to District Cooling System at the Kai Tak Development and incorporated with renewable energy feature in the building design. The photovoltaic system installed in the EMSD Headquarters, with a maximum output of 350kW, has generated a total of 2.15 million kWh up to end of March 2018 since its inception in 2005. We have also added an "Energy Dashboard" to monitor the real-time energy consumption and provide the carbon emission information of the headquarters.



据描此二維碼或登入以下網址可 連結至機電署總部大樓的「能源 儀錶板|資訊。

The information on the "Energy Dashboard" can be accessed through canning this QR Code or visit: nttps://bems.emsd.gov.hk/bems/ aces/dist/public.10031.139.xhtml.

# 節約資源

為配合政府所訂由2015/16至2019/20年度減少用電量 5%的目標,我們現正將設施升級和廣泛採用環保措 施,全方位減低營運的能源耗用,同時亦致力節省用 水及其他資源的用量。

於2017/18年度,除由第三方營運的員工飯堂及基建 設施外(例如連接總部的行人天橋和無線電站),我 們轄下各政府建築物(例如總部大樓、工場、租用辦 公室及數據中心)的總用電量較2013/14年度減少 19.3%。在2013/14年度相若的運作情況下,2017/18 年度所節省的用電量達10.1%。用電量下降是多項節 能措施的成果,包括使用更多LED照明設備、辦公室 午飯時間關燈、調整通風系統運作時間表、連接冷氣 系統至區域供冷系統等。

# **Resource Conservation**

To step towards the government 5% electricity reduction target from 2015/16 to 2019/20, we have been upgrading our facilities and adopting various green measures to reduce our operations' energy consumption. We also made every effort to conserve other resources such as water.

In 2017/18, the total electricity consumption of our government buildings (e.g. the headquarters, depots, rented offices and data centre) excluding staff canteen operated by the third party and infrastructure (e.g. the footbridge connecting to the headquarters, and radio stations) was decreased by 19.3% compared to 2013/14 level. There was also a 10.1% saving in electricity consumption in 2017/18 when compared with similar operating conditions in 2013/14. This was achieved by extending the use of LED lighting, switching off the lights during lunch time, reviewing the operating schedule of the ventilation system, connecting our airconditioning system to the District Cooling System, etc.

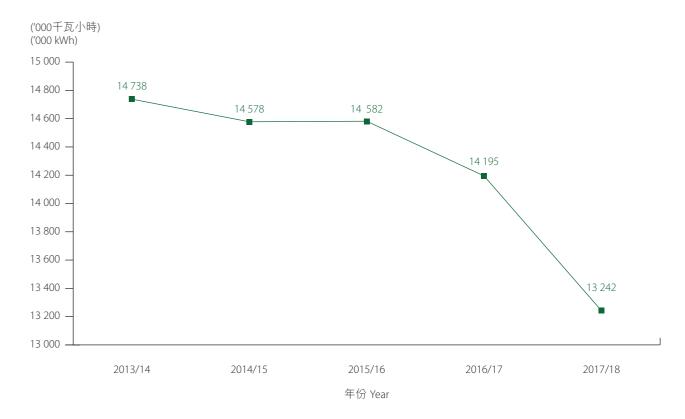
130 / 131

本署政府建築物2013/14年度至2017/18年度的用電量 列表如下:

Electricity consumption of our government buildings from 2013/14 to 2017/18 is tabulated below

	用電量 Electricity consumption ('000千瓦小時) ('000 kWh)	於相若運作情況下的用電量 <sup>2</sup> Electricity consumption under comparable operating conditions <sup>2</sup> ('000 千瓦小時) ('000 kWh)
2013/14 (基線 baseline)	14 738	不適用 Not Applicable
2014/15	14 920 (+1.2%)	14 578 (-1.1%)
2015/16	14 998 (+1.8%)	14 582 (-1.1%)
2016/17	14 521 (-1.5%)	14 195 (-3.7%)
2017/18	11 894 (-19.3%)	13 242 (-10.1%)

# 機電署於相若運作情況下的用電量 **Electricity Consumption under Comparable Operating Conditions**



此計算比較於 2013/14 至 2017/18 年度仍然運作的營運單 位淨耗雷量的改變。

The calculation compares the net consumption changes for operating units that are still under operations from 2013/14 to 2017/18.

# 環保成效

# Environmental Performance

機電署的用水量列表如下:

The water consumption at EMSD is shown in the table below:

	2015/16	2016/17	2017/18
總用水量(立方米) Total water consumption(m³)	40 226	36 422 (-9.5%)	16 061 (-55.9%)³
有關空調系統的用水量 Water consumption related to air-conditioning system	15 039	17 802 (+18.3%)	2 913 (-83.6%)
其他用途的用水量 <sup>4</sup> Water consumption for other use <sup>4</sup>	25 187	18 620 (-26.1%)	13 148 (-29.4%)

# 環保採購

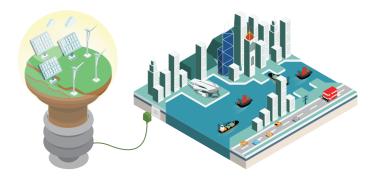
我們致力提供比法規和國際標準更高的優質產品及 服務。在足夠供應商及可行的情況下,我們會在日常 採購中加入環保要求。我們參考環境保護署擬備的 環保產品規格,此外亦鼓勵可提供環保產品的供應 商登記成為機電署供應商。

2017/18年度,機電署供應商名冊新增了173間可提供符合環保規格產品的供應商,目前名冊上共有995間環保供應商。年內,本署在總採購金額的3.98億元中, 下資3,740萬元採購環保產品,佔部門總採購金額逾9%。

# **Green Procurement**

At EMSD, we go beyond compliance with legal requirements and international standards for our products and services engaged. Environmental requirements have been incorporated into our procurement practices wherever applicable and available. Apart from referencing to the green specifications established by the Environmental Protection Department, EMSD also welcome suppliers who are able to provide environmental friendly products to register on the EMSD supplier list.

In 2017/18, the updated EMSD Suppliers Lists contained newly added 173 suppliers who are able to provide environment-friendly products complying with our green specifications, making up a total no. of 995 environment-friendly suppliers on our supplier list. During the year, we have spent a total of \$37.40 million (over 9%) purchasing green products out of our total purchase amount of \$398 million.



我們並於2001年開始使用再造紙。2017/18年度,我們使用的紙張全都是再造紙,共購入25 870令紙,比原訂限額低1.5%。

為了協助採購人員和其他員工實踐環保採購,我們在內聯網提供了環保採購指引,高效能產品及裝置的標準,以及綠色產品的規格等。我們於2010年成立環保採購工作小組,協助員工為各類機電工程選定符合環保要求的材料、產品、系統及建造方法,全力推進綠色作業。

- 3 用水量包括總部大樓(由第三方營運的飯堂除外)及加路 連山的工場。2017/18年度用水量的明顯跌幅主要由於機 電署總部大樓自2017年5月所應用的區域供冷系統所致。
- 4 包括用於機電署總部大樓及工場的灌溉、清潔及一般淋 浴的用水。

We have also adopted the use of recycled paper since 2001. In 2017/18, all our paper consumed was recycled paper and we purchased a total of 25 870 reams of paper, which was 1.5% below the set quota.

Green procurement-related guidelines, energy-efficient products and installations' standards, and green product specifications were available in intranet for procurement officers and staff to facilitate green procurement. To coordinate the identification of suitable green materials and products, systems and construction methodologies for E&M works, a Working Group on Green Procurement in E&M Works was established in 2010 to further enhance our green operation.

- The water consumption covers the headquarters (excluding staff canteen operated by third party) and workshops in Caroline Hill. The significant drop of water consumption in 2017/18 was due to the application of District Cooling System since May 2017 at the EMSD Headquarters.
- Including water use for irrigation, cleansing and general ablution purpose for EMSD Headquarters and workshops

# 社會成效 Social Performance

作為規管者和機電工程服務供應商,我們在日常的 營運中充分履行社會責任,致力提升工程服務以滿 足市民的需要。我們亦重視長遠的人力資源發展和 投資,積極為員工提供培訓機會,以及安全穩健的工 作環境。

# 提升本港的機電工程服務

機電署多年來一直為本港的機電裝置範疇提供各種諮詢及規管服務,範圍涵蓋機械安全、氣體安全、電力安全、鐵路安全以至能源效益和機電公用設施監察等。我們為機電服務制訂了極高的品質與安全標準,為市民提供更安全及更優質的生活。

# 由始至終的整全服務

我們的機電服務範圍廣泛,除了為眾多政府部門、決策局和公營機構提供多元化的支援外,同時亦為不同年齡組別的市民及各行各業服務。我們提供廣泛的顧問、工程及維修服務,主要涵蓋醫院、機場、政府建築物和設施、學校、紀律部隊、公路、港口、康樂文娛設施以至靈灰安置所等,在市民生活的各個階段給予整全的支援。

Wearing two hats as both a regulatory body and a leading Electrical & Mechanical (E&M) engineering service provider, we are fully aware of our social responsibility in which we take it at the heart of our daily operations. We are highly committed in continuous improvement of our engineering service to meet the needs for the community. We also value the long-term investment to our staff through providing training opportunities, as well as a safe and sound working environment.

# IMPROVING ELECTRICAL & MECHANICAL SERVICE FOR THE CITY

EMSD has been providing various consultation and regulatory service for the City's E&M installations area, including mechanical safety, gas safety, electrical safety, railway safety as well as energy efficiency and E&M public utilities monitoring. We follow a high standard to ensure quality and safe E&M services to enhance the safety and quality of life of citizens.

### From Cradle to Grave

The diverse scope of our E&M service not only offers a full-range support to an extensive number of government departments, bureaux and public bodies, but also reaching out to different age groups and industries. Our consultancy, engineering and maintenance services provide cradle-to-grave support to every stage of our lives, including but not limit to hospitals, airport, government buildings and facilities, schools, security forces, highways, ports to recreational and leisure facilities, and to columbarium and more.



# 社會成效

# Social Performance

# 提高業界技能

機電署致力與業界分享專業知識和加強聯繫。我們早於2012年便率先帶領業界成立香港機電業推廣工作小組,成員包括公營機構、行業組織和工會,致力向公眾推廣機電業。多年來,我們經常舉辦技術研討會、論壇、工作坊和會議,積極向業界推廣和交流科技應用、職安健、工程操作及維修服務、能源效益、綠色作業等良好作業方式。以下簡介機電署部分提升行業技能的計劃及活動。

### 車輛維修自願註冊計劃

為提高車輛維修業的服務水平,機電署先後於2007年及2015年推出「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」。當中,「車輛維修工場自願註冊計劃」鼓勵更多車輛維修工場履行關於技術、環境、安全、員工培訓、服務及文件處理等範疇的業界指引。截至2017年年底,在上述兩項計劃下,已有約9500名車輛維修技工和1870間車輛維修工場獲批計冊。

# **Enhancing Industry Capabilities**

EMSD is committed in sharing professional knowledge and strengthening communication with the industry. We take the lead to establish the Hong Kong Electrical and Mechanical Trade Promotion Working Group with different practitioners from public organisations, trade associations and unions since 2012 to promote the E&M industry to the public. Over the years, we have organised technical seminars, symposiums, workshops and conferences to help promote and exchange best practices on technology applications, occupational health and safety, engineering operational and maintenance services, energy efficiency, green operation to the industry. Below show some examples of our industry capability enhancement schemes and programmes.

# Voluntary Registration Schemes for Vehicle Maintenance

To help raise the service standard of the vehicle maintenance industry, EMSD launched the Voluntary Registration Scheme for Vehicle Mechanics in 2007, and the Voluntary Registration Scheme for Vehicle Maintenance Workshops in 2015. The Voluntary Registration Scheme for Vehicle Maintenance Workshops further encourages more vehicle workshops to fulfill the industry guidelines in terms of technical, environmental, safety, staff training, services and documentation aspects. By the end of 2017, there were approximately 9 500 vehicle mechanics and around 1 870 workshops have been registered under the respective schemes.



# 2017年度傑出註冊電業工程人員選舉

為增進電業界人員的技術水平和安全意識,我們與 多個業界團體合辦「2017年度傑出註冊電業工程人員 選舉」,嘉許致力提升電業界安全標準的傑出註冊電 業工程人員,表彰他們的成就和努力。得獎者可藉此 機會與其他同業分享工作經驗與心得,促進電業界 達到更高的安全水平。

# Outstanding Registered Electrical Worker Awards Scheme 2017

To strengthen the technical know-how and raise the safety awareness among electrical workers, we collaborated with trade associations to organise the Outstanding Registered Electrical Worker Awards Scheme 2017 to commend the outstanding registered workers on their achievement and dedicated effort in uplifting the safety standard of the electrical trade. The awardees were given the opportunity to share their work experience and insights with other practitioners, which helped to further promote the safety standard among the electrical work industry.

### 建造業安全周嘉年華

機電署於2017年9月23日參與由發展局和建造業議會合辦的首屆「建造業安全周嘉年華」,以提高建造業從業員及公眾對建築安全的認識。

# **Construction Safety Week Carnival**

EMSD participated the first Construction Safety Week Carnival that was jointly organised by the Development Bureau and the Construction Industry Council on 23 September 2017 to help raise the construction practitioners and public awareness on construction safety.



機電署於「建造業安全周嘉年華」設置富教育意義的遊戲攤位。

EMSD's educational game booth at the Construction Safety Week Carnival.



我們與參加者一起砌出「人體組成的最大反光衣圖形」來推廣建造業安全,並創下當時的健力士世界紀錄。

Participants lined up in the "Largest Human Image of a Safety Vest" for promotion of construction safety and set the Guinness World Record at that time.



# 社會成效 Social Performance

### 創新科技日

為促進工程方案應用創新科技,我們於2017年12月 12日與香港科技園公司合辦首屆「創新科技日」,邀 請了12間初創企業介紹其創科方案予多個政府部門 及公營機構。

# Innovative Technology Day

To facilitate the uptake of innovative technology application in engineering solution, we have co-organised with Hong Kong Science and Technology Parks Corporation (HKSTP) on the first Innovative Technology Day that was held on 12 December 2017. Twelve start-ups were invited to share their I&T solutions to various government departments and public organisations.



# 首次合辦的「創新科技日」吸引多名客戶部門的代表參與。 The first Innovative Technology Day attracted many participants from various client departments.

# 淡水冷卻塔和建築物能源效益技術研討會

淡水冷卻塔和建築物能源效益技術研討會於2017年 12月15日圓滿舉行,共吸引了600多名參加者。研討 會的第一部分邀請了政府部門及於「慳神大比拼 2016」的得獎物業管理公司分享他們的節能經驗。我 們和水務署的代表亦於研討會上介紹了淡水冷卻塔 的重要範疇及最新規定。在研討會的第二部分,我們 向參加者簡介了《建築物能源效益條例》下有關主要 裝修工程的要求及注意事項,同時亦就「建築物重新 校驗」作出深入淺出的介紹。

# Technical Forum on Fresh Water Cooling Towers and Buildings Energy Efficiency

The Technical Forum on Fresh Water Cooling Towers (FWCT) and Buildings Energy Efficiency was held on 15 December 2017, attracting over 600 attendees to participate in the event. At the first session of the forum, government departments and property management companies who were awarded with the Energy Saving Championship 2016 were invited to share their experience in energy saving. Together with representatives from the Water Supplies Department, we explained the major aspects and the updated requirements of FWCT. At the second session, "building retro-commissioning" was introduced, and the requirement and consideration in conducting major retrofitting works under the Buildings Energy Efficiency Ordinance were highlighted.

136 / 137

# 社區教育計劃

除了舉辦行業計劃及活動外,社區外展活動亦是我們的工作之一。我們在社區推行林林總總的宣傳計劃和教育,例如安全講座、嘉年華、巡迴宣傳及展覽、大型計劃及比賽等,加深公眾對我們的機電工作和服務的了解,同時推廣能源效益。

# 「樂齡科技顯愛心」比賽

機電署與香港社會服務聯會合辦「樂齡科技顯愛心」 比賽,旨在鼓勵年青人和市民開創新穎的智能家居 及生活項目,促進長幼共融。是次活動共有93隊報 名參賽,大家運用創意與機電知識構思解決方案,使 長者的生活更便利。

# **Community Educational Programmes**

Apart from organising industry schemes and programmes, community outreach is also an integral part of our work. Within the community, we host a wide array of promotional and educational campaigns, ranging from safety talks, carnivals, road shows and roving exhibitions, to large-scale programmes and competitions to enhance public understanding of our E&M work and services as well as to promote energy efficiency.

# **Gerontech Youth Challenge**

EMSD joined with Hong Kong Council of Social Service to organise the Gerontech Youth Challenge competition, aiming to encourage teenagers and the general public to come up with innovative ideas to promote smart living environment and integration of the young and old generations. A total of 93 teams signed up for the competition where they utilised their creativity with electrical and mechanical knowledge to create solution for the betterment of the elderly.





「樂齡科技顯愛心」比賽得獎者及嘉賓。

Awardees and honourable guests of the Gerontech Youth Challenge.

參賽者展出作品和介紹設計特色。

Participants presenting their finished product to explain the characteristics of their design.

# 機電青少年大使計劃

我們透過「機電青少年大使」計劃招募兒童及青少年成為機電署的大使,為他們提供機電安全、能源效益及機電工程的知識。2017年,本計劃為大使們組織了不同機電設施的考察活動,包括參觀發電廠、香港天文台和港鐵車廠。我們希望透過安排不同活動,促進青少年關注機電安全的良好作業,以及提升他們對工程的興趣。

# **E&M Young Ambassador Programme**

We recruit children and teenagers as our young ambassadors through the E&M Young Ambassador (EMYA) programme and provide them with solid knowledge on E&M safety, energy efficiency and E&M engineering. In 2017, the programme has organised various visits to E&M facilities, including visits to power plants, the Hong Kong Observatory, and MTR depot. By organising different activities, we hope to arouse teenagers awareness on the E&M best practices, and their interest in engineering.

# 社會成效 Social Performance

### 機電嘉年華2018

為提高公眾對我們的規管服務及營運服務的認識, 我們於2018年1月與香港工程師學會合辦了機電嘉年華,向公眾推廣機電安全、節能環保和科技應用。嘉 年華當日安排了精彩的活動,包括表演、展覽、動畫和遊戲攤位,吸引了約12000名市民參加。

### E&M Carnival 2018

To raise public understanding of our Regulatory Services and Trading Services, we have organised the E&M Carnival together with the Hong Kong Institution of Engineers in January 2018 to promote E&M safety, energy efficiency, environmental protection and technology application to the public. A variety of performances, exhibitions, animation, and game booths were arranged and attracted approximately 12 000 visitors.



機電嘉年華安排了不同的精彩表演,小 朋友樂在其中。

Children were enjoying the interesting performance in the E&M Carnival.





# 機電業博覽2018 一機電工程新力量

我們聯同香港機電業推廣工作小組於2018年2月1日至4日在教育及職業博覽中舉辦機電業博覽2018,向到場人士推廣機電業,並在2月2日的「機電工程日」舉行「機電工程新力量」系列講座,邀請業界代表介紹機電業最新的培訓、職業發展前景和晉升機會,為行業吸納人才。

### E&M Trades Expo 2018 — E&M Gear Up!

Between 1 and 4 February 2018, we organised the E&M Trades Expo 2018 in conjunction with the Hong Kong E&M Trade Promotion Working Group at the Education and Careers Expo to promote E&M industry. On 2 February 2017, a seminar series entitled "E&M Gear Up!" were held on the E&M Day with a purpose to attract new talents to the E&M trade. During the seminars, we have introduced the latest information on training, career advancement and promotion pathways of E&M trade.



機電署的同事介紹本署的職業發展及晉升機會。

Our colleagues introduced the career development and advancement opportunities at EMSD.







# 2017國際環保博覽

於2017年10月26日至29日期間,我們參與國際環保博覽,向參觀者介紹本署在推廣能源效益及節能的工作及成效。除了推廣啟德區域供冷系統、節能裝置、新政府建築物的節能項目外,我們亦向參觀者重點介紹「強制性能源效益標籤計劃」的優化方案、淡水冷卻塔計劃及《建築物能源效益條例》。於博覽會舉辦的「政府部門論壇」上,我們更分享了最新發布的《重新校驗技術指引》予業界人士,並藉此與業界分享政府部門實行的環保項目。

# Eco Expo Asia 2017

EMSD participated in the Eco Expo Asia from 26–29 October 2017 to introduce our works on energy efficiency and conservation. Besides showcasing the Kai Tak District Cooling System, energy-efficient installation and energy-saving projects at new government buildings, we have also highlighted the enhancement of the Mandatory Energy Efficiency Labelling Scheme, Fresh Water Cooling Towers Scheme, and the Buildings Energy Efficiency Ordinance to the visitors. During the "Government Departments' Forum", we introduced the newly released Technical Guidelines on Retro-commissioning for trade personnel to facilitate the sharing of environmentally-conscious governmental projects with industries.

# 社會成效 Social Performance

# 其他業界及公眾參與活動

我們於匯報期內舉辦了連串業界參與活動,促進業內技術。此外,我們亦與多個政府部門和公營機構緊密合作,共同籌辦各類公眾活動。以下是年內的主要活動:

舉行30場簡報會或分享會給各界機構,宣傳《重新校驗技術指引》。

舉辦63場外展講座及接待276個團體共11176位訪客參觀機電 署總部教育徑,向各機構及學校宣傳能源效益和節能。

在幼稚園、青年中心及老人中心舉行466場外展講座,向逾 25 000位參加者宣傳使用機動遊戲、吊車、升降機及自動梯的 安全須知。

舉辦84場學校展覽推廣「強制性能源效益標籤計劃」。

舉行簡介會,介紹即將實施的「強制性能源效益標籤計劃」第三階段和詳細渦渡安排。

舉辦19場講座及其他宣傳活動予行業代表、升降機/自動梯擁有人、業主立案法團成員及物業管理人員,講解《升降機及自動梯條例》和升降機及自動梯的管理、更新工程及使用安全。

舉辦「車輛維修技工自願註冊計劃」宣傳短片故事大綱及標語 創作比賽。

到訪超過2 000間車輛維修工場,向車輛維修同業及公眾推廣「車輛維修工場自願註冊計劃」和「車輛維修技工自願註冊計劃」。 劃 。

組織八次講座暨參觀示範工場,向車輛維修同業講解註冊成為「車輛維修工場自願註冊計劃」的車輛維修工場的基本要求。

為氣體用戶、氣體業界及各類承辦商舉辦36場氣體安全研討會,並進行201次工地坑道巡查,推廣有關避免損壞氣體喉管的安全作業守則。

2017年9月21日至24日聯同水務署、屋宇署、消防處、食物環境衞生署及民政事務總署合辦「優質樓宇管理週2017」,推廣優質樓宇管理。

我們的員工共花了370小時完成11個義工項目。於2017年 11月份的「華懋行」及2018年1月的港島、九龍區百萬行各成功籌得4,390港元及6,780港元。

# Other Trade and Public Engagement Activities

In this reporting year, we hosted a wide array of engagement events for the trade to enhance the industry capabilities. In addition, we have worked closely with other government departments and public organisations to host different types of public activities. Major events and activities are highlighted below:

Delivered 30 presentations/sharing sessions to various organisations to promote Technical Guidelines on Retro-commissioning.

Organised 63 outreach talks and 276 visits to the Education Path of EMSD Headquarters for 11 176 visitors from different organisations and schools to promote energy efficiency and conservation.

Conducted 466 sessions of outreach talks for kindergartens, youth centres and elderly centres, reaching over 25 000 participants to promote the safe use of amusement rides, aerial ropeways, lifts and escalators.

Conducted 84 school exhibitions on the Mandatory Energy Efficiency Labelling Scheme (MEELS).

Carried out briefing session on commencement and detailed transitional arrangement of the third phase of MEELS.

Conducted 19 talks and other publicity activities for trade representatives, lift/escalator owners, members of incorporated owners and building management staff to introduce the Lifts and Escalators Ordinance as well as the management, modernisation and safe use of lifts and escalators.

Organised the Voluntary Registration Scheme for Vehicle Mechanics API Storyline and Slogan Writing Competition.

Visited over 2 000 vehicle maintenance workshops to promote the Voluntary Registration Scheme for Vehicle Maintenance Workshops and the Voluntary Registration Scheme for Vehicle Mechanics to the vehicle maintenance trade and the general public.

Conducted eight talks cum visits to the Sample Workshop to introduce to the vehicle maintenance trade the basic requirements for acquiring registration as a Vehicle Maintenance Workshop under the Voluntary Registration Scheme for Vehicle Maintenance Workshops.

Conducted 36 gas safety seminars for gas users, trades and different contractors, and 201 trench inspections to construction sites to promote safety practices on avoiding damage to gas pipes.

Jointly organised the Building Management Week 2017 with the Water Supplies Department, Buildings Department, Fire Services Department, Food and Environmental Hygiene Department and Home Affairs Department on 21 to 24 September 2017 to promote quality building management.

Eleven volunteering projects were completed by our employees who had spent a total of 370 man-hours. Our staff had successfully raised HK\$4,390 and HK\$6,780 for Chinachem Eco-Walk and Hong Kong & Kowloon Walk for Millions in November 2017 and January 2018 respectively.

# 關懷我們的員工

機電署的工作成果建基於我們的團隊,而員工是我們最寶貴的資產,所以我們矢志確保所有員工享有安全健康的作業環境。此外,我們亦根據政府的公務員聘用條款和非公務員合約僱員計劃提供具競爭力的薪酬及福利。與此同時,我們亦為員工提供培訓機會,讓他們盡展所長。我們力求樹立企業公民的良好榜樣,更連續第四年榮獲香港社會服務聯會頒發「同心展關懷」標誌。

# 職業安全與健康

基於業務性質,我們非常關注工作間的健康與安全。機電署各分部均已設立安全管理系統,負責規劃、實施、評估及持續改善職業安全與健康(職安健)的措施和良好作業守則。我們嚴格遵守機電署的安全與健康政策,執行機電工程時必定將安全放在首要位置。為確保員工和承辦商於施工時遵從職安健守則,我們特別成立職業安全及健康策導委員會(職安健策導委員會),專責統籌和監察部門營運涉及的所有職安健事務。委員會亦會定期檢討我們的表現,杜絕不安全的作業方式。

# **CARING FOR OUR STAFF**

The success of EMSD rests upon our staff for they are our most valuable asset. We are committed to provide a safe and healthy environment for all employees. Besides following the Government's civil service employment terms and the non-civil service contract staff scheme to offer competitive remuneration and benefits, we also provide numerous staff training opportunities to enable our employees in maximising their potential. Underlining our dedicated support to good corporate citizenship, we have been awarded the Caring Organisation Logo by the Hong Kong Council of Social Service for the fourth consecutive year.

140 / 141

# **Occupational Safety and Health**

We pay a high regard on workplace health and safety considering the nature of our operations. Safety management systems are in place in our divisions to govern the planning, implementation, evaluation and continuous improvement of Occupational Safety and Health (OSH) initiatives and best practices. We strictly adhere to the EMSD Safety and Health Policy that affirms work safety as the first priority when comes to E&M service delivery. To ensure the compliance of OSH at work for in-house staff and contractor, we formed Steering Committee on OSH to oversee and monitor all OSH issues of our operations. The committee also regularly review our performance and deter unsafe work practices.



# 社會成效 Social Performance

除了職業安全及健康策導委員會,部門亦設有部別 職業安全及健康委員會(部別職安健委員會),成員 涵蓋管理層及員工代表,以加強在安全與健康議題 上的溝通,及促進推行有關措施。部別職安健委員會 成員由各職級員工代表組成,並定期舉行會議,商討 和審議與職安健相關的議題及措施。截至2018年3月 31日,全體員工均在部別職安健委員會中設有代表。

Apart from the Steering Committee on OSH, there are Divisional Occupational Safety and Health Committees (DivOSHCs) which are formed by management and staff representatives to enhance communication and facilitate the practice of safety and health. DivOSHCs comprise staff representatives from different levels and meet on a regular basis to discuss and review on OSH-related issues and initiatives. All workforce is represented by the DivOSHCs as at 31 March 2018.

# 培訓及發展

機電署現有的見習工程師及技術員訓練計劃為新入 職員工提供優質及專業的培訓。未來我們會投資超 過六億元,在2020年前招募和培訓逾千位見習技術 員。為確保團隊可在個人及專業層面持續發展,我們 每年均會制訂部門培訓發展計劃,擬定員工培訓發 展的方向。

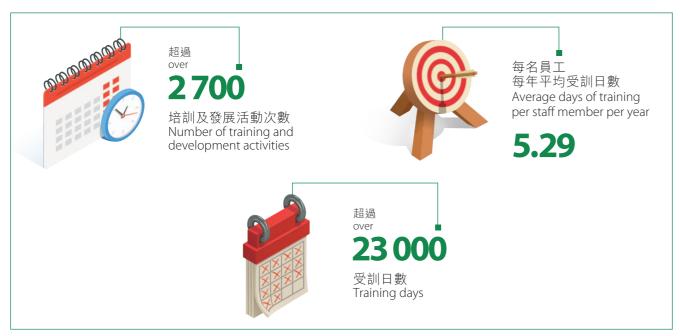
# **Training and Development**

**EMSD Staff Training Statistics in 2017/18** 

Alongside Engineering Graduate and Technician Training Schemes that offer professional and quality training, we will invest over \$600 million on internal recruiting and training for over a thousand of technician trainee till 2020. To further ensure the ongoing personal and professional growth of our people, we prepared a Departmental Training and Development Plan on an annual basis to guide the training and development directions.

### 2017/18年度機電署員工培訓數據





# 見習工程師訓練計劃

我們的見習工程師訓練計劃歷史悠久,於1960年代 開辦,是本港最佳的工程師在職培訓計劃之一,更獲 香港工程師學會認可。我們迄今已培育超過700位見 習工程師,透過結合理論知識、實習與實用技巧的課 程培育專才,滿足香港工程界的需要。受訓學員還有 機會加入機電署,建立長遠的事業發展。訓練為期兩 年,期間見習工程師會到機電署及其他政府部門工 作,接受多個範疇的專業知識及技術培訓。2017/18 年度共有20位見習工程師受訓,各來自電力、機械、 電子、屋宇裝備、資訊科技及生物醫學工程等背景。

# **Engineering Graduate Training Scheme**

As one of the best on-the-job engineering training schemes in Hong Kong, our engineering graduate training scheme is recognised by the Hong Kong Institution of Engineers and has been in place since 1960s. Over the years, we have trained over 700 engineering graduates, instilling them with theoretical knowledge, hands-on training as well as practical skills to fulfill the needs of the local profession that can allow them to develop their long-term career. During the two-year training period, the engineering graduates work at EMSD and other government departments on a rotation basis to receive different types of professional knowledge and skills. In 2017/18, 20 engineering graduates were recruited, and they came from the fields of electrical, mechanical, electronics, building services, information technology and biomedical engineering.

### 技術員訓練計劃

已舉辦60多年的技術員訓練計劃是機電署另一旗艦 培訓項目,為學員提供系統化的技術訓練。實習學員 會被分配到政府轄下不同場所工作,認識各類機電 工程系統。此外,我們亦安排部分傑出學員參與職業 訓練局(職訓局)的傑出學徒獎勵計劃,修讀職訓局 舉辦的相關證書或文憑課程。

我們目前計劃於2016年至2020年間為業界培訓100位 四年制的見習二級技術員。於匯報年度,我們成功招 募295位見習技術員,包括140位四年制的見習二級 技術員、116位三年制的見習二級技術員及39位三年 制的見習一級技術員。

除派學員參加如「世界技能大賽」等國際比賽擴闊視 野外,我們也提名學徒參加職訓局舉辦的交換生計 劃。2017年8月,我們安排了六名見習技術員到英國 參觀多間企業,與當地學徒交流意念,增廣見聞。

# 員工溝通

與員工保持溝通對於持續改善我們的營運至為重要。 正因如此,我們鼓勵與員工保持雙向溝通和互動,同 時設有多種途徑聽取員工的意見及建議。

# 員工諮詢途徑

為加強內部溝通,我們設有四個部門協商委員會和 五個部別協商委員會,定期與管理層會面,表達員工 的意見。此外,員工還可自由參加11個部門工會和 機電署以外的政府人員工會組織,表達他們的意見 和關注議題,以參與集體談判。除此之外,為確保員 工的投訴得到妥善處理,我們制訂了員工投訴程序, 讓員工就任何不善對待或不滿發表意見。

### 員工建議計劃

為廣開思路提升機電署的營運表現,我們定期舉辦 各類型員工建議計劃,例如工作改善小組計劃、員工 建議書計劃及業務流程改善計劃。於2017/18年度, 我們共收到25項建議

### **Technician Training Scheme**

With over 60 years of history, Technician Training Scheme is another flagship training programme on systematic technical training offered by EMSD. Our trainees are assigned to different government premises to train up their skillset on E&M engineering systems. In addition, we nominated some of the outstanding trainees to study relevant certificate or diploma courses offered by the Vocational Training Council (VTC) under the Outstanding Apprentices Award.

142 / 143

Between 2016 and 2020, we aim to train 100 technician trainees II (four-year) for the industry. During the reporting year, we have successfully recruited 295 trainees, including 140 technician trainees II (four-year), 116 technician trainees II (three-year) and 39 technician trainees I (three-year) respectively.

Apart from sending our staff to gain exposure in international competitions, like WorldSkills Competitions, we also nominated our apprentices to participate in an exchange programme organised by VTC. In August 2017, we sent six technician trainees to the United Kingdom to broaden their horizon. During the exchange programme, company visits were organised and trainees were given opportunities to exchange ideas with the local apprentices.

# Staff Communication

Maintaining an open dialogue with our staff is vital in continuous improvement of our operations. In view of this, we encourage two-way internal communications and interaction amongst employees. We have established a few communication channels to collect employees' feedback and ideas.

# **Staff Consultation Channels**

To further enhance internal communication, we have established four departmental consultative committees and five divisional consultative committees to collect and exchange views regularly with the management. Also, our staff members are welcome to participate in 11 departmental staff unions, as well as government staff unions outside EMSD to gauge their views and concerns for collective negotiations. In addition, to ensure proper handling of staff complaints, the Staff Complaints Procedures is a mechanism that allows our staff members to report in case of any mistreatment and dissatisfaction.

### **Staff Suggestion Programmes**

To promote idea-jamming on the advancement of EMSD's operational performance, we have been organising various staff suggestion programmes such as the Work Improvement Team Scheme, Staff Suggestion Scheme, and the Business Process Improvement. In 2017/18, a total of 25 proposals were received.

# 社會成效 Social Performance

4	<b>員工活動</b> 我們在匯報年度舉辦了多項員工活動,部 分列表如下:	Staff Engagement Activities  A number of staff engagement activities were organised during the year.  Some of them are listed below.
	規管服務於2017年12月8日及2018年2月 7日舉行年度管理工作坊。	Held the Regulatory Services' annual Management Workshops on 8 December 2017 and 7 February 2018.
	機電工程營運基金於2017年7月5日及 11月21日舉行了年度策略制訂工作坊。	Organised two EMSTF's annual Strategy Formulation Workshops on 5 July 2017 and 21 November 2017.
	機電工程營運基金於本年度舉行了四次針 對內部客戶意見調查的焦點小組會議,蒐 集策略業務單位對部門內部所提供支援服 務的意見。	Held four sessions of EMSTF Internal Customer Opinion Survey — Focus Group Meeting to collect Strategic Business Units' opinion on internal supporting services provided.
	於2017年11月至2018年1月舉行四場署長 簡報會。	Arranged four sessions of Director's Briefing from November 2017 to January 2018.
	組織86次親善探訪活動,安排首長級人員 到訪188個場地。	Carried out 86 ambassador visits by directorate officers at 188 venues.
	於2017年4月及2018年3月與部門11個工會舉行兩次聯席會議。	Conducted two joint meetings with 11 staff unions of EMSD in April 2017 and March 2018.
<b>TO</b>	於2018年1月至3月為部門的專業員工、 外調的督察級、技術級及初級員工舉行五 次周年論壇。	Ran five sessions of the Yearly Forums for professional staff, seconded inspectorate, technical and junior staff from January to March 2018.
	員工福利組為抱恙或住院員工進行了五次 家訪、43次醫院探訪、29次工作間探訪、 372次電話問候及34次吊唁探訪。	Conducted five home visits, 43 hospital visits, 29 workplace visits, 372 goodwill phone calls and 34 condolence visits to sick or hospitalised staff, by the Staff Welfare Unit.

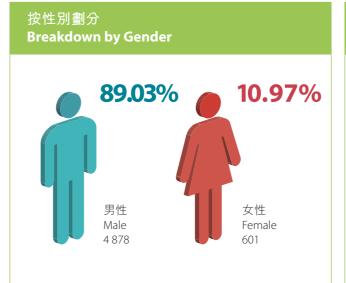
# 多元化與平等機會

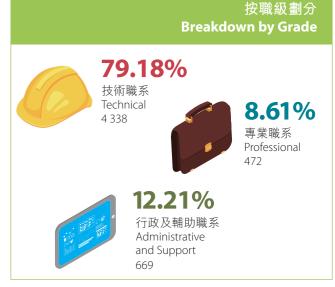
# 員工數據

截至2018年3月,機電署共有5 479名員工(包括常任制及合約制員工),其中708名員工為新入職人員,約佔員工總人數12.9%。年內並無聘用兼職員工。於本匯報年度的離職率為8.1%。我們恪守多元化及平等機會的僱傭原則,全力創造共融的工作環境,並嚴格遵守和履行公務員事務局制訂的行為守則規範。我們繼續參與《有能者·聘之約章》和共融機構嘉許計劃的僱主機構,積極推動殘疾人士就業。年內我們共僱用210名輕度殘疾人士,約佔員工總人數3.8%。我們十分重視人權,並一律禁止轄下所有單位聘用強迫及強制性勞工。匯報年內並無發現任何營運或供應商違反關於童工及強迫勞工的法規。

# Diversity and Equal Opportunity Employment Statistics

As of March 2018, we had a total of 5 479 employees (including permanent and contract), amongst them 708 are new hires that constitute to around 12.9%. No part-time staff was recorded during the year. We recorded a turnover rate of 8.1% in this reporting year. Our commitment to promote diversity and equal opportunity employment in the workplace is demonstrated through our close observation and adherence to the Civil Service Bureau's code of conduct. We continued to take part in the Talent-Wise Employment Charter and Inclusive Organisations Recognition Scheme as an Employer Organisation to promote the employment of persons with disabilities. During the period, we had employed a total of 210 staff with minor disabilities which takes up about 3.8% of our total employment. In addition, our respect to human rights is ingrained in our culture where we prohibit the use of forced or compulsory labour at all of our units. In this reporting year, we did not identify any operations or suppliers in breaching the laws and regulations in relation to child and forced labour.





# 全球報告倡議組織內容索引 GRI Content Index



可持續發展 報告標準

GRI Standards GRI 102:一般 披露 2016 GRI 102: General Disclosures 2016

	一般披露 General Disclosures		參照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
	機構簡介 Org	anisational Profile			
	102-1	機構名稱 Name of the organisation	關於本報告 About this Report	p. 110	✓
	102-2	業務活動、品牌、產品及服務 Activities, brands, products, and services	可持續發展管理方針 Sustainability Management Approach	p. 112–113	1
	102-3	機構總部的位置 Location of headquarters	香港九龍啟成街 3 號 3 Kai Shing Street, Kowloon, Hong Kong	-	1
	102-4	營運地點 Location of operations	只限香港 Hong Kong only	-	1
	102-5	擁有權及法律形式 Ownership and legal form	屬於香港特區政府的一部分 Part of the Hong Kong SAR Government	-	✓
	102-6	所服務的市場 Markets served	香港 Hong Kong	-	1
	102-7	機構的規模 Scale of the organisation	社會成效 Social Performance	p. 145	✓
,	102-8	有關僱員及其他員工的資料 Information on employees and other workers	社會成效 Social Performance 統計資料摘要	p. 145 p. 155–156	✓
	102-9	供應鏈 Supply chain	Summary of Statistics 機電工程署聘請了 2 465名供應商,他們大多負責提供機電安裝、運作及保養相關的配件/設備及服務。 There are 2 465 suppliers engaged by EMSD. They are mainly involved in provision of parts/equipment and services related to E&M installation, operation and maintenance.	-	<b>√</b>
	102-10	機構與其供應鏈方面的重大改變 Significant changes to the organisation and its supply chain	關於本報告 About this Report	p. 110	1
	102-11	謹慎方針或原則 Precautionary Principle or approach	可持續發展管理方針 Sustainability Management Approach	p. 112–113	1
	102-12	由外部所制訂的倡議 External initiatives	可持續發展管理方針 Sustainability Management Approach	p. 118–121	✓
	102-13	機構參與的協會的會員資格 Membership of associations	機電工程署屬於以下協會的成員: EMSD holds membership in the following associations.  1) 美國能源工程師學會 Association of Energy Engineers  2) 香港綠色建築議會 Hong Kong Green Building Council  3) 香港照明學會 CIE (Hong Kong) Limited  4) 國際物業設施管理協會 International Facility Management Association  5) 國際鐵路安全議會 International Railway Safety Council  6) 保障資料主任聯會 Data Protection Officers' Club	-	/

102-14	最高決策者的聲明 Statement from senior decision-maker	機電工程署二零一七至一八年年報 EMSD Annual Report 2017/18	p. 2–7	✓
102-15	重大影響、風險及機遇 Key impacts, risks, and opportunities	可持續發展管理方針 Sustainability Management Approach	p. 112–113	✓
道德與誠信	Ethics and Integrity			
102-16	價值、原則、標準和行為規範 Values, principles, standards, and norms of behaviour	機電工程署二零一七至一八年年報 EMSD Annual Report 2017/18	p. 9, 67	1
管治 Gover	rnance			
102-18	管治架構 Governance structure	機電工程署二零一七至一八年年報 EMSD Annual Report 2017/18	p. 1	✓
102-20	管理層在經濟、環境和社會議題方面 的責任 Executive-level responsibility for economic, environmental, and social topics	我們的高級管理層參與了品質、環境及生產力策導委員會以及內部環保採購工作小組。 Our senior management staff participates in Quality, Environmental & Productivity Steering Committee and internal working group on green procurement.	-	✓
持份者參與	Stakeholder Engagement			
102-40	持份群體清單	關於本報告	p. 110	/
	List of stakeholder groups	About this Report 可持續發展管理方針 Sustainability Management Approach	p. 114	
102-41	集體談判協議 Collective bargaining agreements	共有11個機電工程署工會由員工以自願性質參與,另有9個員工協商委員會代表不同職級的機電工程署員工就員工福利與部門溝通。 There are 11 EMSD staff unions joined on voluntary basis. There are also 9 departmental consultative committees who are representatives of all grades and ranks of EMSD staff to liaise with the Department for the well-being of the staff.	-	✓
102-42	界定及挑選持份者 Identifying and selecting stakeholders	關於本報告 About this Report	p. 110	1
102-43	引入持份者參與的方針 Approach to stakeholder engagement	關於本報告 About this Report	p. 110	1
		可持續發展管理方針 Sustainability Management Approach	p. 115	
102-44	提出的主要議題及關注事項	關於本報告	p. 111	/

# 全球報告倡議組織內容索引 GRI Content Index

102-45	財務報表所包含的單位 Entities included in the consolidated financial statements	關於本報告 About this Report	p. 110	✓
102-46	界定報告內容及議題界限 Defining report content and topic boundaries	關於本報告 About this Report	p. 110–111	✓
02-47	重要議題清單 List of material topics	關於本報告 About this Report	p. 111	✓
02-48	重整信息 Restatements of information	機電署已於 2017/18 年度調整資料範圍,以涵蓋 純粹機電署內部的碳排放、棄置量及物料消耗 量。因此 2015/16 年度及 2016/17 年度的數據未 能提供。 EMSD has fine-tuned the data scope in 2017/18 to cover the carbon emission, disposal and materials consumption by EMSD internal use only. Thus the figures for 2015/16 and 2016/17 are not available.	-	1
102-49	匯報上的改變 Changes in reporting	新增的議題請閱關於本報告。 Newly added material topics can be found in About this Report.	p. 111	1
02-50	匯報期 Reporting period	關於本報告 About this Report	p. 110	1
02-51	上一份報告的日期 Date of most recent report	2017年12月 December 2017	-	✓
02-52	匯報周期 Reporting cycle	關於本報告 About this Report	p. 110	✓
02-53	查詢報告的聯絡點 Contact point for questions regarding the report	關於本報告 About this Report	p. 111	✓
02-54	按照 GRI 標準提出的匯報申述 Claims of reporting in accordance with the GRI Standards	關於本報告 About this Report	p. 110	✓
02-55	全球報告倡議組織內容索引 GRI content index	全球報告倡議組織內容索引 GRI Content Index	p. 146–152	1
02-56	外部認證 External assurance	關於本報告 About this Report 核實聲明 Verification Statement	p. 110 P. 159–160	✓

可持續發展 報告標準 GRI Standards	特定議題標準 Topic-specific Standards		参照/直接解釋/省略資料的原因 Reference/Direct Answer/Reasons for Omissions	頁數 Page No.	外部認證 External Assurance
經濟 Economic					
經濟成效 Economic P	erformance				
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		機電工程署二零一七至一八年年報 EMSD Annual Report 2017/18	p. 3	✓
GRI 201:經濟成效 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	機電工程署二零一七至一八年年報 EMSD Annual Report 2017/18	p. 3	✓
間接經濟影響 Indired	t Economic Imp	acts			
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		社會成效 Social Performance	p. 133–140	✓
GRI 203:間接經濟 影響 2016 GRI 203: Indirect	203-1	基礎設施投資與支援性服務 Infrastructure investments and services supported	機電工程署二零一七至一八年年報 EMSD Annual Report 2017/18	p. 12–17, 70–75	1
Economic Impacts 2016	203-2	重大間接經濟影響 Significant indirect economic impacts	社會成效 Social Performance	p. 133–140	1
採購實務 Procureme	nt Practices				
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 132	✓
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	物料供應分部的服務及產品主要購自本地供應商/承辦商或分銷商。海外供應商於2017/18年度只佔大約2%。 Acquisition of services and goods handled by Supplies sub-division are mainly from local suppliers/contractors or local agents. Only around 2% of suppliers are from overseas in 2017/18.	-	<b>✓</b>
遵守市場行為法規 M	arket Behaviour	Compliance			
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		可持續發展管理方針 Sustainability Management Approach	p. 112–113, 116	✓
GRI 206:反競爭行為 2016 GRI 206: Anti- competitive Behaviour 2016	206-1	就反競爭行為、反壟斷及壟斷獨 營手法採取法律行動 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	統計資料摘要 Summary of Statistics	p. 157	
環境 Environmental					
物料 Materials					
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 127–128	<b>✓</b>
GRI 301:物料 2016 GRI 301: Materials 2016	301-1	所採用原材料的重量或體積 Materials used by weight or volume	統計資料摘要 Summary of Statistics	p. 153	✓
能源 Energy					
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 130	✓
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	環保成效 Environmental Performance 統計資料摘要 Summary of Statistics	p. 130–131 p. 153	<b>√</b>

# 全球報告倡議組織內容索引 GRI Content Index

水 Water					
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 130–132	1
GRI 303: 7 <u>/</u> 2016 GRI 303: Water 2016	303-1	依來源劃分的總取水量 Total water withdrawal by source	環保成效 Environmental Performance 統計資料摘要 Summary of Statistics	p. 132 p. 153	1
生物多樣性 Biodivers	ity				
GRI 103:管理方針 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 127–128	1
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 區或其他高生物多樣性價值的地 區 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	所有營運點均不在環境保護區或其他具有高生物多樣性價值的地區或其毗鄰地區。 No operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	-	√
排放物 Emissions					
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 129–130	✓
GRI 305:排放物2016 GRI 305: Emissions 2016	305-1	直接溫室氣體排放(範疇 1) Direct (Scope 1) GHG emissions	環保成效 Environmental Performance 統計資料摘要 Summary of Statistics	p. 129 P. 153	1
	305-2	能源間接溫室氣體排放(範疇 2) Energy indirect (Scope 2) GHG emissions	環保成效 Environmental Performance 統計資料摘要 Summary of Statistics	p. 129 P. 153	1
污水及廢物 Effluent a	nd Wastes				
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 128–129	✓
 GRI 306:污水及 廢物 2016	306-2	按類別及處置方法劃分的廢物 Waste by type and disposal method	環保成效 Environmental Performance	p. 128–129	1
GRI 306: Effluent and Wastes 2016			統計資料摘要 Summary of Statistics	p. 153–154	
評估供應商的環境表	現 Supplier E	nvironmental Assessment			
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		環保成效 Environmental Performance	p. 132	1
GRI 308:評估 供應商的環境 表現 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	環保成效 Environmental Performance	p. 132	✓

社會 Social					
僱員關係 Employmen	nt				
GRI 103: 管理方針	103-1		社會成效	p. 145	/
2016	103-2		Social Performance	p	·
GRI 103: Management	103-3				
Approach 2016					
GRI 401: 僱員關係	401-1	新入職員工及員工離職率	社會成效	p. 145	✓
2016		New employee hires and employee			
GRI 401: Employment		turnover	統計資料摘要	p. 155–156	
2016			Summary of Statistics		
	401-2	不提供予臨時或兼職員工的全職	公務員及非公務員僱員根據自身的聘用條款,	-	✓
		員工福利	如符合相關規定及守則要求,均享有醫療及		
		Benefits provided to full-time	牙醫服務、教育津貼、年假、房屋津貼等。		
		employees that are not provided to	Employees appointed on civil service and		
		temporary or part-time employees	non-civil service terms are entitled with medical		
			and dental services, education allowance, leave and passage, housing benefit, etc. based on their		
			employment terms, if they meet the eligibility		
			criteria as stipulated in the relevant rules and		
			regulations.		
職業健康及安全 Occi	upational Healt	h and Safety			
GRI 103:管理方針	103-1	in and barety	社會成效	p. 141–142	
2016	103-1		公司 Performance	p. 171 - 172	•
GRI 103: Management	103-3		Social Fenomianee		
Approach 2016					
GRI 403: 職業健康及	403-1	由勞資雙方組建的職工健康與安	社會成效	p. 142	✓
安全2016		全委員會中員工代表所佔的百分	Social Performance	•	
GRI 403: Occupational		比			
Health and Safety		Workers representation in formal			
2016		joint management — worker health			
		and safety committees			
	403-2	工傷類別及工傷率、職業疾病、	統計資料摘要	p. 157	✓
		損失日數及缺勤和與工作相關死	Summary of Statistics		
		亡個案			
		Types of injury and rates of injury, occupational diseases, lost days,			
		and absenteeism, and number of			
		work-related fatalities			
	403-3	因職業關係而發病率高或患病風	2017/18年度並無任何僱員組別存在重大的職	_	/
	.03 3	險高的工人	業病風險。		•
		Workers with high incidence or	In 2017/18, there is no specific group of employee		
		high risk of diseases related to their	who faces significant risk related to occupational		
		occupation	disease.		
培訓與教育 Training	and Education				
GRI 103:管理方針	103-1		社會成效	p. 142-143	✓
2016	103-2		Social Performance		
GRI 103: Management	103-3				
Approach 2016					
GRI 404:培訓與教育	404-2	提升員工技能計劃及過渡支援計	社會成效	p. 142–143	✓
2016		劃	Social Performance		
GRI 404: Training and Education 2016		Programmes for upgrading employee skills and transition			
LuucatiOI1 2010		assistance programmes			
多元化與平等機會 Di	versity and Fo				
GRI 103:管理方針	103-1	opportunity	社會成效	p. 145	1
2016	103-1		公司 Performance	p. 1+3	•
GRI 103: Management			Joelan Chormanec		
Approach 2016					
	40F 1	管治機構及員工多樣性	社會成效	p. 145	/
GRI 405: 多元 4 印					v
GRI 405: 多元化與 平等機會 2016	405-1		Social Performance	p	
	405-1	Diversity of governance bodies and employees	— — — — — — — — — — — — — — — — — — — —	p. 155–156	
平等機會 2016	405-1	Diversity of governance bodies and	Social Performance		

# 全球報告倡議組織內容索引 GRI Content Index

強迫與強制性勞工Fo	orced or Con	npulsory Labour			
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2		社會成效 Social Performance	p. 143	1
GRI 409:強迫與 強制性勞工 2016 GRI 409: Forced or Compulsory Labour 2016	409-1	強迫或強制勞工風險偏高的營運 活動及供應商 Operations and suppliers at significant risk for incidents of forced or compulsory labour	沒有發現任何營運點和供應商具有嚴重強迫 或強制勞工事件風險。 No operations and suppliers were identified to have high risk of forced or compulsory labour.	-	1
保安政策 Security Pr	actices				
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		社會成效 Social Performance	p. 141–142	✓
GRI 410:保安政策 2016 GRI 410: Security Practices 2016	410-1	保安人員接受人權政策或程序培訓 Security personnel trained in human rights policies or procedures	保安人員由我們的承辦商提供。他們必須遵守我們的職安健政策,並遵守本地所有職安健相關的法規。當工程控制方法已不可行時,他們必須向員工提供適當的個人防護設備作為最後方案。但是,有關人權政策或程序的正式培訓並不是保安人員的強制性要求。在資訊保安方面,我們的數據中心遵循ISO 27001 資訊保安系統。 The security personnel are provided by our contractor. They have to follow our Occupational Health and Safety policy and comply with all relevant local occupational health and safety legislation. They are required to provide appropriate personal protective equipment to employees as a last resort where engineering control methods are not feasible. However, formal training on human rights policies or procedures is not a mandatory requirement for our security personnel. For information security, our Data Centre follows the ISO 27001 Information Security System.	-	<b>\</b>
客戶健康及安全 Cust	tomer Healt	h and Safety			
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		可持續發展管理方針 Sustainability Management Approach	p. 115	1
GRI 416:客戶健康及 安全 2016 GRI 416: Customer Health and Safety 2016	416-2	關於產品及服務健康與安全影響 的違規事件 Incidents of non-compliance concerning the health and safety impacts of products and services	統計資料摘要 Summary of Statistics	p. 158	1
客戶私隱 Customer F	Privacy				
GRI 103:管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		可持續發展管理方針 Sustainability Management Approach	p. 115	1
GRI 418:客戶私隱 2016 GRI 418: Customer Privacy 2016	418-1	關於違反客戶私隱和遺失客戶資料而證明屬實的投訴 Substantiated complaints concerning breaches of customer privacy and losses of customer data	統計資料摘要 Summary of Statistics	p. 158	✓

# 統計資料摘要 Summary of Statistics

# 環境 Environment

	單位			
	Unit	2015/16	2016/17	2017/18
能源¹Energy¹				
柴油	升	139 926	133 184	91 618
Diesel	L	139 920	133 184	91018
汽油	升	351 939	324 864	335 126
Gasoline	L	331 333	324 004	333 120
電力	′000千瓦小時	14 998	14 521	11 894
Electricity	′000 kWh	14 990	14 321	11 094
水 <sup>2</sup> Water <sup>2</sup>				
水	立方米	40.226	26.422	16.061
Water	$m^3$	40 226	36 422	16 061

機電署已於2017/18年度調整以下資料範圍,以涵蓋純粹機電署內部的碳排放、棄置量及物料消耗量。

EMSD has fine-tuned the following data scope in 2017/18 to cover the carbon emission, disposal and materials consumption by EMSD internal use only.

	單位	
	Unit	2017/18
溫室氣體排放 <sup>3</sup> GHG Emissions <sup>3</sup>		
直接排放(範疇一)	噸	1.150
Direct Emissions (Scope 1)	tonnes	1 158
能源間接排放(範疇二)	噸	6.152
Energy Indirect Emissions (Scope 2)	tonnes	6 152
物料⁴ Material⁴		
紙張	令	25 870
Paper	ream	25 870
油漆及溶劑	升	1.40
Paint & Solvent	L	149
潤滑油	升	4 42 4
Lubrication Oil	L	4 434
油脂	公斤	0.40
Grease	kg	249
工業用氣體	立方米	0.5
Industrial Gas	m³	25
蓄電池電解液	升	
Battery Electrolyte	L	50
原子車胎	條	
Tubeless Tyre	No.	220
外車胎	條	
Outer Cover Tyre	No.	160
車胎內膽	條	30
Inner Tube	No.	30

<sup>302-1 2 303-1</sup> 

<sup>3 305-1,305-2,</sup>參考《香港建築物(商業、住宅或公共用途) 3 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)。

<sup>305-1, 305-2.</sup> Made reference to the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purposes in Hong Kong (by Environmental Protection Department & EMSD).

<sup>4 301-1 4 301-1</sup> 

# 統計資料摘要 Summary of Statistics

		201	17/18
	單位	棄置	回收
污水及廢物 5 Effluent and Wastes5	Unit	Disposed	Recycled
無害廢物 Non-hazardous Waste			
廢紙	公斤	6.005	26.424
Waste Paper	kg	6 895	26 431
鋁罐及金屬罐	個		27.062
Aluminium and Metal Cans	No.	_	27 063
膠樽	固		6.456
Plastic Bottles	No.	_	6 156
即棄電池	公斤		500
Disposable Batteries	kg	667	529
金屬廢料	公斤	12.007	5.604
Metal Scraps	kg	13 897	5 691
有害廢物 Hazardous Waste			
碳粉盒	個		2 589
Toner Cartridges	No.	_	2 589
可充電電池	公斤		0.000
Rechargeable Batteries	kg	_	9 800
廢油	升		25.075
Waste Oil	L	_	35 975
舊車胎	條		2.260
Used Vehicle Tyre	No.	_	3 269
舊光管/含水銀照明燈	盞		7 179
Spent Fluorescent/Mercury Lamp	No.		/ 1/9

5 306-2 5 306-2

# Social 社會

# 僱員人數 6 Employees Statistics 6

	截至2018年3月31日	百分比	
	As of 31 March 2018	Percentage	
總人數Total Number	5 479	_	
男女分佈 By Gender			
男性 Male	4 878	89.0%	
女性Female	601	11.0%	
合約類型分佈 By Employment Type			
常任制Permanent			
男性 Male	3 356	87.6%	
女性Female	473	12.4%	
合約制Contract			
男性 Male	1 522	92.2%	
女性Female	128	7.8%	
年齡分佈 By Age Group			
50 歲或以上 Aged over 50	1 668	30.4%	
30-49	2 579	47.1%	
29歲或以下 Aged under 29	1 232	22.5%	

# 2017/18新入職員工<sup>7</sup>2017/18 New Hires<sup>7</sup>

	截至 2018 年 3 月 31 日 As of 31 March 2018	百分比 Percentage
總人數Total Number	708	佔總員工12.9% 12.9% of total employee
年齡分佈 By Age Group		
50 歲或以上 Aged over 50	152	21.5%
30-49 歳 Aged 30-49	128	18.1%
29歲或以下 Aged under 29	428	60.5%
男女分佈 By Gender		
男性Male	638	90.1%
女性Female	70	9.9%

員工均在香港執勤。

<sup>6 102-8,405-1,</sup>機電署並無聘用任何非僱員的工人,所有 6 102-8, 405-1. EMSD does not employ workers who are not employees. All staff are based in Hong Kong.

<sup>&</sup>lt;sup>7</sup> 401-1

# 統計資料摘要 Summary of Statistics

### 離職員工®Turnover®

	截至2018年3月31日	百分比
	As of 31 March 2018	Percentage
總人數Total Number	442	佔總員工8.1%
		8.1% of total employee
年齡分佈 By Age Group		
50歲或以上 Aged over 50	316	71.5%
30-49 歲 Aged 30-49	21	4.8%
29歲或以下 Aged under 29	105	23.8%
男女分佈 By Gender		
男性Male	407	92.1%
女性Female	35	7.9%

# 管理層的結構<sup>9</sup> Composition of Senior Management<sup>9</sup>

	截至2018年3月31日	百分比
	As of 31 March 2018	Percentage
總管理層人數Total Number of Senior Management Staff	145	佔總員工2.6%
		2.6% of total employee
年齡分佈 By Age Group		
50 歲或以上 Aged over 50	100	69.0%
30-49 歳 Aged 30-49	45	31.0%
29 歲或以下 Aged under 29	0	0
男女分佈 By Gender		
男性Male	134	92.4%
女性Female	11	7.6%

<sup>8</sup> 401-1 <sup>9</sup> 401-1 <sup>8</sup> 401-1

# 職業健康及安全指標 10 Occupational Health and Safety Indicators 10

			2017/18
機電署員工 For EMSD Employees	工傷人數 11 Number of injuries 11	致命性Fatal	0
		非致命性Non-fatal	20
	工傷率 12 Injury rate12	男性Male	每十萬工時0.16宗
			須呈報意外
			0.16 reportable accident
			per 100 000 man-hours
		女性Female	0
	職業病比率 Occupational disease rate	男性Male	0
		女性Female	0
	誤工率 <sup>13</sup> Lost day rate <sup>13</sup>	男性Male	0.0036%
	,	女性Female	0
	缺勤率 14 Absentee rate 14		1.79%
	死亡人數 Number of fatalities	男性Male	0
		女性Female	0
機電署承辦商 For EMSD Contractors	工傷人數 Number of injuries	致命性Fatal	0
		非致命性Non-fatal	8
	工傷率 <sup>15</sup> Injury rate <sup>15</sup>	每十萬工時0.14宗須呈報意外	
		0.14 reportable accide	nt per 100 000 man-hours
	死亡人數 Number of fatalities	男性Male	0
		女性Female	0

- 10 403-
- 報告涉及機電署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。
- <sup>2</sup> 匯報期內總工傷人數與所有員工原訂的總工作時數之百 <sup>12</sup> 分比。
- 13 一名或多名工人因工傷或患職業病而無法正常工作,引致的不能作業(以致「損失」)的時間(「日數」),有關數字表述為匯報期內總損失日數與所有員工原訂的總工作時數之百分比。
- 14 員工因任何類型的喪失工作能力,而並非純粹因工傷或 疾病缺勤,缺勤員工不包括正在休假、進修、產假或侍 產假和恩恤假獲許可缺勤的員工,有關數字表述為同一 時期所有員工原訂工作總日數之百分比。由於無法從電 子休假系統中檢索,因此未能提供性別細分的缺勤率。
- 由於沒有承辦商員工性別的數據,因此未能提供按承辦 商性別細分的工傷率的數字。

- 10 402
- Any accident involving EMSD personnel on duty reported, including those accidents which have not resulted in the granting of any sick leave to the injured person.

- Frequency of injuries relative to the total number of hours scheduled to be worked by the workforce during the reporting period.
- Time ("days") that could not be worked (and is thus "lost") as a consequence of a worker or workers being unable to perform their usual work because of an occupational accident or disease. It is expressed by comparing the total lost days to the total number of hours scheduled to be worked by the workforce in the reporting period.
- An employee absent from work because of incapacity of any kind, not just as the result of work-related injury or disease. Permitted leave absences such as holidays, study, maternity or paternity leave, and compassionate leave are excluded. It is expressed as a percentage of total days scheduled to be worked by the workforce for the same period. Gender breakdown is not available due to the inability to retrieve from the e-Leave system.
- Gender breakdown for contractor injury rate is not available due to no available data for contractor staff gender.

# 統計資料摘要 Summary of Statistics

### 其他社會指標 Other Social Indicators

	單位			
	Unit	2015/16	2016/17	2017/18
須予呈報意外宗數	宗/千名員工	4.00	4.0	2.65
Reportable Accidents	No./1 000 staff	4.09	4.9	3.65
平均培訓日數(目標: 4.5) Average Training Days (Target: 4.5)	日/員工 Days/staff	4.37	5.41	5.29
就反競爭行為、反壟斷及壟斷獨營手法採取法律行動 <sup>16</sup> Legal Actions for Anti-competitive Behaviour, Anti-trust, and Monopoly Practices <sup>16</sup>	案件數量 No. of case	未能提供數據 Figure not available		0
關於產品及服務健康與安全影響的違規事件 <sup>17</sup> Incidents of Non-compliance Concerning the Health and Safety Impacts of Products and Services <sup>17</sup>	案件數量 No. of case	未能提供數據 Figure not available		0
關於違反客戶私隱和遺失客戶資料而證明屬實的投訴 <sup>18</sup> Substantiated Complaints Concerning Breaches of Customer Privacy and Losses of Customer Data <sup>18</sup>	案件數量 No. of case		供數據 ot available	0

16 206-1,首次在本報告新增的內容。

6 206-1 Newly covered in this Report.

17 416-2,首次在本報告新增的內容。

416-2 Newly covered in this Report.

418-1,首次在本報告新增的內容。

418-1 Newly covered in this Report.

# 核實聲明 Verification Statement



158 / 159

# 獨立驗證聲明

### 簡介

香港德國萊茵技術監護顧問股份有限公司是德國萊茵TÜV集團成員(以下簡稱我們或TÜV萊茵),受香港特別行政區機電工程署(以下簡稱該署)委託對《機電工程署2017/18年度社會及環保報告》(以下簡稱報告)進行獨立驗證。是次驗證工作的合約內容由客戶訂立,而我們的工作是對《機電工程署2017/18年度社會及環保報告》作出公正和合適的評價。

本驗證聲明的讀者對象是關注機電工程署在2017/18年度(即2017年4月1日至2018年3月31日)社會及環保整體表現及受該署工作影響的持份者。我們在驗證過程中完全公正獨立,亦沒有參與報告的編撰工作。

### 驗證範圍:

驗證內容包括:

- 按照全球報告倡議組織GRI準則:核心選項的要求,驗證該署在報告中所述的社會及環保表現;以及
- 採用下述驗證方法評估報告披露的資料。

# 限制:

驗證過程於香港九龍啟成街3號機電工程署總部大樓進行。我們沒有諮詢外間持份者,亦沒有發現任何或會限制驗證工作的重大問題。我們是根據(i)機電工程署提供的數據和資料(假設有關數據和資料完整無誤);以及(ii)與機電工程署編撰報告團隊會面所得資料(假設他們提供的資料可靠)進行是次驗證。

# 驗證方法:

是次獨立驗證採用現今最佳的做法。報告按照全球報告倡議組織制訂的匯報原則和準則進行檢核。

 $T\ddot{U}V$ 萊茵已詳閱報告內容,並評估該署在披露有關社會及環保表現的資料/數據的整個過程。我們根據上述匯報原則和準則,客觀地檢核報告內的資料並作出評價。

我們按照驗證工作的合約條款,透過隨機抽樣進行分析、會面及數據核證,證明及確認報告內的數據和內容。我們亦已會見機電工程署及編撰報告團隊的代表。報告內所有數據均備有文件佐證、由人員直接確認及來自經核證的數據庫,全部可予核實,因此我們認為上述做法可有效驗證報告內容。

是次驗證由我們的跨界別專家團隊負責,他們在企業可持續發展、環境、社會和持份者參與等領域具有豐富經驗。 根據合約內容,我們從驗證工作所得的資料足以支持以下結論。TÜV萊茵毋須就第三方依據此份驗證聲明對機電 工程署作出的看法和決策承擔任何責任。

# 結論:

我們沒有發現任何事件或資料牴觸以下陳述:

- 《機電工程署2017/18年度社會及環保報告》符合依循全球報告倡議組織報告GRI準則:核心選項進行編製的要求。
- 報告內有關表現的數據以有系統和專業的方式收集、貯存和分析,我們認為可合理地反映該署的表現。
- 報告已充分說明蒐集和披露資料的限制以及遺漏。

# 香港德國萊茵技術監護顧問股份有限公司代表



劉佳 主任核證員 大中華區體系部 2018 年 10 月 10 日

# 核實聲明 Verification Statement



# **Independent Assurance Statement**

### **Introduction:**

TÜV Rheinland Hong Kong Limited, member of TÜV Rheinland Group, Germany (TÜV, We) has been commissioned by the Electrical and Mechanical Services Department (EMSD) of the Hong Kong Special Administrative Region (HKSAR) to conduct independent assurance of EMSD's Social and Environmental Report 2017/18 (the Report). All contractual contents for this assurance engagement rest within the responsibility of the client. Our task was to give a fair and adequate judgment on EMSD's Social and Environmental Report 2017/18.

The intended readers of this assurance statement are stakeholders having relevance to EMSD's overall social and environmental performance and impacts of its operations during 2017/18 (1 April 2017 to 31 March 2018). We have maintained complete impartiality and independence during the assurance engagement and were not involved in the preparation of report contents.

# **Scope of Assurance:**

Our Assurance engagement covers the following:

- EMSD's social and environmental performance as described in the Report in accordance with Global Reporting Initiative (GRI) Standards: Core Options: and
- Evaluation of disclosed information in the Report as per the Assurance Methodology.

### **Limitation:**

The assurance engagement was carried out at EMSD Headquarters at 3 Kai Shing Street, Kowloon, Hong Kong. The consultations with external stakeholders were not carried out. We did not observe any significant situations to limit our assurance activity. The verification is carried out based on (i) the data and information provided by EMSD, assuming they are complete and true; and (ii) interview of the EMSD's report preparation team, assuming information reliable.

# **Assurance Methodology:**

The Independent Assurance was carried out based on the current best practices and the Report was reviewed against the GRI reporting principles and standards.

TÜV has examined the report contents and assessed the process undertaken by EMSD from source to aggregate in disclosure of information/data related to social and environmental performance. Our judgment is based on the objective review of reported information as per the assurance principles and standards.

Analytical methods and the performance of interviews as well as verification of data, were done by random sampling to verify and validate the correctness of reported data and contents in light of contractual assurance agreement. Our work included interviewing EMSD representatives and report preparation staff. The approach deemed to be appropriate for the purpose of assurance of the Report since all data therein could be verified through document evidences, staff direct response and verified database entries.

The Assurance was performed by our multidisciplinary team of experienced professionals in the field of Corporate Sustainability, Environment, Social and Stakeholder Engagement. Based on the content of our contract, our work offers a sufficient and substantiated basis to enable us to come to a conclusion mentioned below. TÜV Rheinland shall not bear any liability or responsibility to a third party for perception and decision about EMSD based on this Assurance Statement.

### Conclusion

In conclusion, we can mention that no instances or information came to our attention that would be to the contrary of the statement made below:

- EMSD Social and Environmental Report 2017/18 meets the requirement of GRI Standards: Core Options.
- The performance data we found in the Report are collected, stored and analyzed in a systematic and professional manner and were reasonable.
- · The limitation of information collection, disclosure and its omission have been clearly explained and stated in the Report.

# For and on behalf of TÜV Rheinland Hong Kong Ltd.



Jasmine Liu Lead Verifier Systems Greater China Date: 10 October 2018

# 鳴謝 Acknowledgments

在年報製作過程中,承蒙下列部門及機構提供協助,機電工程署特此鳴謝。

The EMSD would like to express its sincere thanks to the following departments and organisations for their support and cooperation in the course of preparing this annual report (list in alphabetical order).

香港機場管理局 Airport Authority Hong Kong

建築署 Architectural Services Department

民航處 Civil Aviation Department

衞生署 Department of Health

環境保護署 Environmental Protection Department

食物環境衞生署 Food and Environmental Hygiene Department

政府產業署 Government Property Agency

路政署 Highways Department

香港兒童醫院 Hong Kong Children's Hospital

香港消防處 Hong Kong Fire Services Department

香港天文台 Hong Kong Observatory

香港郵政 Hongkong Post

醫院管理局 Hospital Authority

司法機構 Judiciary

康樂及文化事務署 Leisure and Cultural Services Department

海事處 Marine Department

昂坪 360 有限公司 Ngong Ping 360 Limited

海洋公園 Ocean Park Corporation

The Entertainment Corporation Limited The Entertainment Corporation Limited

中華煤氣有限公司 The Hong Kong and China Gas Company Limited

天水圍醫院 Tin Shui Wai Hospital

運輸署 Transport Department



Ç

採用無氯氣漂染紙漿製造的環保紙印刷

Printed on environmentally friendly paper manufactured from totally chlorine-free pulp