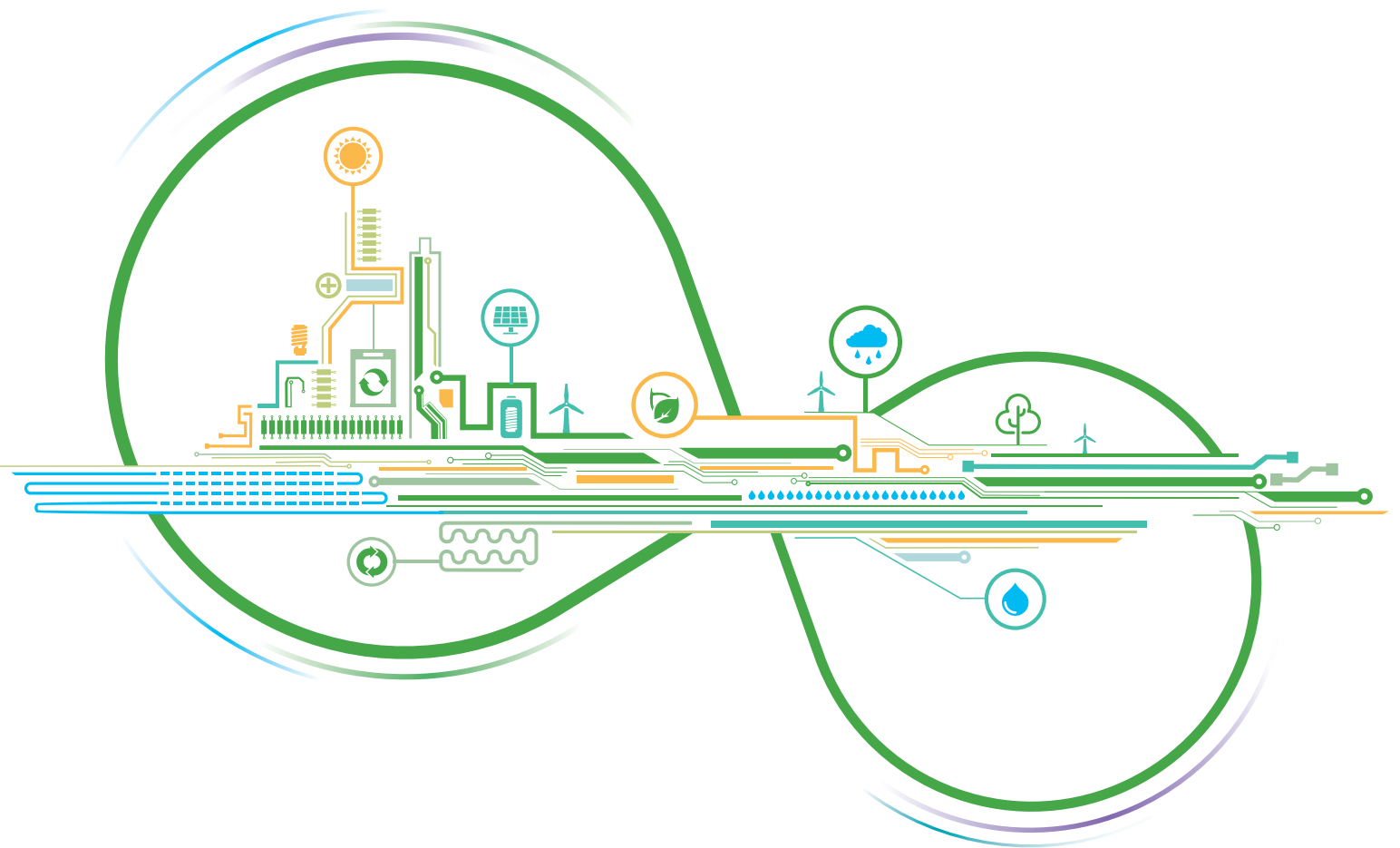


# 社會及環保報告

## SOCIAL AND ENVIRONMENTAL REPORT



# 關於本報告

## About this Report

### 匯報原則

本報告是機電工程署(機電署)<sup>1</sup>的年度<sup>2</sup>社會及環保報告(本報告)。本報告概述我們於2018/19財政年度在環境、社會及經濟方面的表現和成果。

本報告參照環境保護署的《環境管制人員適用環保報告指引》外，亦依照全球報告倡議組織標準的核心選項<sup>3</sup>編寫，相關的全球報告倡議組織議題披露指標和對照的報告章節已載於**全球報告倡議組織內容索引**。我們已委託獨立第三方核實報告的準確性、可靠性及公信力，確保符合全球報告倡議組織標準核心選項的要求。**獨立保證意見聲明書**已載於第172頁<sup>4</sup>。

本報告亦通過全球報告倡議組織標準的「實質性議題審核」。

### 報告範圍

本報告載述機電署由2018年4月1日至2019年3月31日<sup>5</sup>期間內主要的可持續發展成果和措施。除另外說明，報告中截至2019年3月31日止的所有數據均為部門所整合的標準化實際數字。報告披露截至2019年3月31日止財政年度的財務數據，所有金額均以港元為單位<sup>6</sup>。

機電署轄下設有規管服務及營運服務兩大服務範疇，後者亦稱為機電工程營運基金(營運基金)。於匯報年度，營運基金進行架構重組，透過調配各部份工作以加強以客為本的服務及提升各部份的協同效益。營運基金自2018年10月1日開始採用新架構後，除架構變化外，於匯報期內權責關係、規模及供應鏈均無重大改變<sup>7</sup>。

### 重要議題及邊界

本報告參照全球報告倡議組織標準的原則與規定，透過系統性流程界定報告的內容，當中步驟包括識別重要議題，以及舉行持份者參與活動。我們聘請第三方顧問以問卷調查形式<sup>8</sup>收集主要持份者組別<sup>9</sup>中學界、客戶和供應商/承辦商<sup>10</sup>的意見，然後展開重要性及邊界評估，從而界定與機電署運作最相關和持份者共同關注的環境、社會及經濟議題。為確保本報告完整及持平地表述機電署的可持續發展表現和影響，本年度我們進一步評估及核實經界定的重要議題，最終歸納出16項重要議題並按優先次序排列<sup>11</sup>。

<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>8</sup> 102-43

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

### Reporting Principles

This is the annual<sup>2</sup> Social and Environmental Report (hereafter “the Report”) of the Electrical and Mechanical Services Department (EMSD)<sup>1</sup>. The Report presents and summarises our major performance and achievements on environmental, social and economic aspects in the fiscal year 2018/19.

In addition to making reference to the Environmental Protection Department’s A Guide to Environmental Reporting for Controlling Officers, this report has been prepared in accordance with the GRI Standards: Core option<sup>3</sup>. Please refer to the **GRI Content Index** for cross-referencing relevant disclosures to corresponding sessions of the Report. An independent third-party has verified the accuracy, reliability and credibility of the Report to ensure compliance with the Core option of the GRI Standards. The **Independent Assurance Opinion Statement** can be found on page 172<sup>4</sup>.

The Report has also successfully completed the GRI Materiality Disclosures Service.

### Reporting Scope

The Report highlights our key sustainability achievements and initiatives from 1 April 2018 to 31 March 2019<sup>5</sup>. Unless otherwise stated in this Report, all data are normalised and presented as absolute figures as of 31 March 2019, to the best of our knowledge. Financial data in the Report are disclosed for the financial year, which ended on 31 March 2019. All monetary values are expressed in Hong Kong Dollars<sup>6</sup>.

The EMSD consists of two functional units, namely Regulatory Services and Trading Services, or better known as the Electrical and Mechanical Services Trading Fund (EMSTF). During the reporting year, the EMSTF underwent re-organisation to better sharpen customer focus and create larger synergy by re-organising the work among various Divisions. The new EMSTF structure took effect on 1 October 2018. Aside from structural change, there were no significant changes with regard to departmental ownership, size or its supply chain during the reporting period<sup>7</sup>.

### Material Topics and Boundary

With reference to the principles and the requirements stipulated in the GRI Standards, the content of the Report is defined through a systematic process that involves the identification of material topics, stakeholder engagement exercise in the form of questionnaire survey<sup>8</sup> with academia, clients and suppliers/contractors<sup>10</sup> who are our key stakeholder groups<sup>9</sup> via external consultant, followed by materiality and boundaries assessment to identify environmental, social and economic topics that are most relevant to the EMSD’s operations and the shared interests of our stakeholders. To ensure completeness and balanced representation of the EMSD’s sustainability performance and impacts, validation of identified material topics was further reviewed this year. As a result, a total of 16 material topics were consolidated and prioritised<sup>11</sup>.

<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>8</sup> 102-43

<sup>9</sup> 102-42 Major stakeholder groups are identified and engaged with reference to their relevance to the EMSD’s operation.

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

類別 Categories	重要議題 <sup>12</sup> Material Topics <sup>12</sup>	邊界 <sup>13</sup> Boundaries <sup>13</sup>	
		機電署的運作 Operations of the EMSD	主要供應商的運作 Operations of our Major Suppliers
<b>環境</b> <b>Environmental</b> 	生態保育 Ecological Conservation 節約能源 Energy Conservation 污水及廢物處理 <sup>14</sup> Effluents and Waste Treatment <sup>14</sup> 廢氣控制 Emissions Control 節約用水 <sup>14</sup> Water Conservation <sup>14</sup> 物料使用 <sup>14</sup> Use of Materials <sup>14</sup> 評估供應商/承辦商的環境表現 Supplier/Contractor Environmental Assessment	✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓
<b>經濟</b> <b>Economic</b> 	財務表現 Financial Performance 部門的採購政策 Departmental Procurement Practices 間接經濟影響 <sup>14</sup> Indirect Economic Impact <sup>14</sup> 遵守市場行為法規 Market Behaviour Compliance	✓ ✓ ✓ ✓	✓ ✓ ✓
<b>社會</b> <b>Social</b> 	員工培訓及教育 Employee Training and Education 職業健康及安全 Occupational Health and Safety 多元化及平等機會 Diversity and Equal Opportunity 員工政策及相關統計數據 Employment Policy and Statistics 客戶健康及安全 Customer Health and Safety	✓ ✓ ✓ ✓ ✓	✓ ✓ ✓ ✓

本報告載於網上發布。歡迎讀者直接與我們聯繫（電郵：ccsd@emsd.gov.hk）<sup>15</sup>，就我們的運作、可持續發展方面的績效、報告內容和方式提出寶貴意見，以便我們持續改進。

This Report is available online. We welcome comments and suggestions from readers on our operations, sustainability performance, report content, as well as reporting approach for our continuous improvement. For comments, please contact us directly at ccscsd@emsd.gov.hk<sup>15</sup>.

<sup>12</sup> 102-44, 102-47 <sup>13</sup> 103-46 <sup>14</sup> 102-49 <sup>15</sup> 102-53

<sup>12</sup> 102-44, 102-47 <sup>13</sup> 103-46 <sup>14</sup> 102-49 <sup>15</sup> 102-53

## 可持續發展管理方針

# Sustainability Management Approach

### 管理方針

機電署把可持續發展概念融入在日常營運和決策過程中。我們全力推行可持續發展方針，並且在環境、安全及健康政策和所有企業策略與計劃中明文表述。本署設有的管理系統具有詳細程序，使我們於營運過程中在環境、職安健和社會層面致力達致可持續發展。此外，機電署亦積極識別與可持續發展相關的風險及管理潛在影響，在可行的情況下發掘更多新機遇，同時廣開溝通渠道，務求與持份者保持緊密對話。

### 規管服務的可持續發展方針

為響應全球對氣候變化的呼籲，香港特別行政區政府已定下目標，於2030年前將本港的碳強度，從2005年水平，大幅降低65-70%。機電署一直積極發掘機遇，以加強能源管理的規管架構，從而協助香港實現相關的碳排放及節能目標。

在能源應用的效益和安全兩個範疇，機電署擔當規管角色，頒布、實施及檢討與公眾利益有關的主要法例和標準，其中包括《建築物能源效益條例》及「強制性能源效益標籤計劃」。「強制性能源效益標籤計劃」第三階段已於2018年6月正式生效，目的是擴大所涵蓋的電器產品範圍。

我們致力提供專業諮詢方案及技術支援，通過各類指引和計劃提升能源效益，主要例子包括《重新校驗技術指引》、淡水冷卻塔計劃及香港建築物能源效益註冊計劃。我們亦發布《屋宇裝備裝置能源效益實務守則》2018年版和《建築物能源審核實務守則》2018年版。本署不時舉辦技術論壇及行業教育活動，向業界推廣良好作業。例如，我們主辦兩年一度的「傑出註冊電業工程人員選舉」，向電業工程人員推廣工作安全意識。有關詳情請參閱**環保成效**和**社會成效**章節。

### Management Approach

At the EMSD, we embed sustainability in our operations and decision-making process. Our approach to sustainability is well supported and reflected in the environmental, safety and health policies, corporate strategies and plans. We have adopted management systems with detailed procedures so that we are able to continuously attain sustainable operations in environmental, occupational health and safety, and social aspects. Furthermore, we endeavour to identify any sustainability-related risks, manage potential impacts and explore new opportunities when feasible, as well as offer a range of communication channels to maintain close dialogue with our stakeholders.

### Sustainability Approach in our Regulatory Services

To echo with the global call for climate action, the Hong Kong Special Administrative Region (HKSAR) Government targets to reduce 65-70% of the city's carbon intensity by 2030 from the 2005 level. The EMSD remains active in seeking opportunities to enhance regulatory framework for energy management, and to help the city achieve associated carbon emission and energy-saving goals.

With regard to efficiency and safety of energy utilisation, the EMSD uptakes the regulatory role to enact, implements and reviews key legislations and standards for public interest, for examples, Buildings Energy Efficiency Ordinance (BEEO) and Mandatory Energy Efficiency Labelling Scheme (MEELS). The third phase of MEELS has commenced in June 2018, with an aim to extend the coverage of the MEELS in electrical products.

In addition to providing professional advisory solutions and technical support, the EMSD introduces various guidelines and schemes to enhance energy efficiency. Notable examples include the Technical Guidelines on Retro-commissioning, Fresh Water Cooling Towers Scheme and Hong Kong Energy Efficiency Registration Scheme for Buildings. We also published the Code of Practice for Energy Efficiency of Building Services Installation, 2018 Edition, and Code of Practice for Building Energy Audit, 2018 Edition. From time to time, we organise technical forums and trade education sessions to promote best practices with the industries. For instances, we organise the Outstanding Registered Electrical Worker Awards Scheme biennially to promote work safety awareness among electrical workers. More details can be found in the chapters of **Environmental Performance** and **Social Performance**.

## 營運服務的可持續發展方針

營運服務可持續發展方針涵蓋專業機電服務，並結合環保措施，藉此改善客戶場地的能源效益表現。我們嚴格遵守相關的環境及社會法規，並執行本署的環保、工作安全與健康政策。我們採用結合 ISO 9001:2015、ISO 14001:2015 及 OHSAS 18001:2007 認證的綜合管理系統，致力在品質、環境和職業安全健康等多個可持續發展層面尋找改善空間，作出改進。

多年來，機電工程營運基金與客戶建立了長遠伙伴關係，並與業界廣泛合作，共同推動香港可持續發展。為達致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適切的先進能源效益技術，助他們創造長遠的可持續發展價值。

## 管理可持續發展相關風險

奏效的風險管理是可持續發展的關鍵之一，有助我們為不同情況作好準備，藉以應對環境及社會的變化。

為確保專業服務，以及維持機電安全和品質，我們定期為客戶安排機電系統和設備的預防性維修保養，在日常營運和供應鏈則採取風險預防措施，務求在可行的情況下減少對環境和社會的負面影響。我們會根據評估結果發掘新的發展機遇，並納入企業及業務計劃作為日後的指引。

## 持份者的參與

我們定期與各持份者溝通聯繫，透過多種渠道聽取他們的意見，努力達致他們的期望。

持份者參與活動的範圍及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。

## Sustainability Approach in our Trading Services

Our sustainability approach in trading services is well embedded throughout the provision of professional E&M service and incorporation of environmental practices to improve energy efficiency performance at our clients' premises. We strictly comply with relevant environmental and social regulations and adhere to our Environmental & Occupational Health and Safety Policies. We adopt an Integrated Management System (IMS) that comprises ISO 9001:2015, ISO 14001:2015, and OHSAS 18001:2007 to help us identify opportunities for improvement in a range of sustainability aspects such as quality, environmental, and occupational health and safety.

Over the years, the EMSTF has established long-term partnership with clients and extensive collaboration among the trade to make a positive impact on sustainable development of Hong Kong. Towards sustainable low carbon economy, the EMSTF will continue to apply state-of-the-art energy efficiency technologies where appropriate for clients to create lasting sustainability values.

## Managing our Sustainability-related Risks

Effective risk management is a key component of sustainable development and helps us prepare for different conditions associated with environmental and social changes.

To upkeep professional service delivery and uphold the E&M safety and quality, we schedule preventive maintenance for E&M systems and equipment with our clients, and adopt a risk-based precautionary approach in our operations as well as along our supply chain to minimise negative environmental and social impacts where feasible. Based on our assessment results, new development opportunities are also identified and set out in the Corporate and Business Plan that guides our future direction.

## Stakeholder Engagement

We maintain regular communication with our stakeholders while listening to their feedback and addressing expectations through a number of channels.

The scope and boundary of our stakeholder engagement activities cover stakeholders directly affected by or involved in the EMSD's operations, resources, products and services.

# 可持續發展管理方針

## Sustainability Management Approach

我們的主要持份者及參與渠道<sup>16, 17</sup>

Our Key Stakeholders and Engagement Channels<sup>16, 17</sup>

<p>客戶 <b>Clients</b> 政府決策局及部門 <b>Government Bureaux and Departments</b></p> 	<p>客戶意見調查及訪問 Customer Opinion Surveys and Interviews 電話調查 Telephone Surveys 客戶通訊 Customer Newsletters 合作項目 Joint-projects 會議 Meetings 研討會及座談會 Symposiums and Seminars 持份者參與問卷調查<sup>18</sup> Stakeholder Engagement Questionnaires<sup>18</sup></p>
<p>供應商及承辦商 <b>Suppliers and Contractors</b></p> 	<p>持份者參與問卷調查<sup>18</sup> Stakeholder Engagement Questionnaires<sup>18</sup> 會議 Meetings</p>
<p>員工 <b>Staff</b></p> 	<p>員工滿意度調查 Staff Satisfaction Surveys 員工工會及員工協商委員會 Staff Unions and Departmental Consultative Committees 焦點討論小組 Focus Groups 員工通訊 Staff Newsletters 高級管理層親善大使探訪 Ambassador Visits by Senior Management 培訓課程 Training Sessions 比賽及團隊建立活動 Competitions and Team-building activities 會議 Meetings 持份者參與問卷調查<sup>18</sup> Stakeholder Engagement Questionnaires<sup>18</sup></p>

<sup>16</sup> 大多數持份者參與渠道每年進行至少一次。

<sup>17</sup> 102-43

<sup>18</sup> 持份者參與問卷調查為報告編製過程中特定進行的一部分。

<sup>16</sup> Majority of the engagement channels take place at least once every year.

<sup>17</sup> 102-43

<sup>18</sup> Stakeholder Engagement Questionnaires were undertaken specifically as part of the report preparation process.

專業團體及行業公會

**Professional and Trade Associations**

受規管行業

**Regulated Trades**



業界參與計劃

Trade Engagement Programme

研討會及座談會

Symposiums and Seminars

工作小組

Working Groups

會議

Meetings

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

合作項目

Joint-projects

研討會及座談會

Symposiums and Seminars

會議

Meetings

通訊

Newsletters

YouTube

傳媒

**Media**



傳媒聚會

Media Gatherings

就傳媒查詢回應及發表意見

Feedback and Responses to Media Enquiries

# 可持續發展管理方針

## Sustainability Management Approach

### 聯繫我們的客戶

我們積極為客戶提升機電服務的標準和質素。為此，本署每兩年委託獨立市場研究公司進行一次客戶意見調查，以協助我們提升客戶體驗。最近期的客戶意見調查在2018年進行，調查結果顯示我們的客戶滿意指數達到6.61分(8分為滿分)，再創歷史新高。

我們不斷提升對客戶的服務質素，並於2018年設立新的客戶服務中心。我們在機電工程營運基金策略計劃中訂明目標，致力與客戶推行數碼化，利用現有的「顧客為本電子平台 — 工作管理」系統推行無紙環保作業，增進用戶的體驗。

在處理客戶私隱方面，我們嚴格遵從《個人資料(私隱)條例》及我們的私隱政策，確保所有個人資料均妥善處理。年內並無接獲任何關於客戶私隱和客戶資料遺失的投訴或違規事件。

### 管理我們的供應鏈

機電署的產品及服務不但符合法律規定，並會參照國際環境及職安健標準。承辦商和供應商與我們緊密合作，協力提供安全優質的機電服務，以及供應與機電安裝、操作和維修相關的零件、設備及服務。與此同時，我們也積極管理供應鏈衍生出的能源、廢物及用水以至物料消耗對環境的影響，機電署要求承辦商和供應商嚴守ISO 14001:2015標準訂明的環境規定。

在甄選承辦商和供應商時，我們依從公開及公平的程序進行。我們歡迎所有供應商登記納入機電署供應商名冊，以及讓他們的環保產品記錄於本署的數據庫上。我們向承辦商、顧問公司及供應商提供《指引：機電工程署規管服務單位致承辦商、顧問公司及供應商的環保指引》，鼓勵他們盡量以可持續的方式提供優質的產品和服務。我們亦會定期檢討承辦商的表現，確保他們已設有穩健的安全管理系統。此外，機電署亦遵守所有管制反競爭行為的本地法律及規例。

### Engaging our Clients

We strive to uplift our E&M service standards and service quality to our clients. As such, we have appointed an independent market research company to conduct a Customer Opinion Survey (COS) every two years to assist us in enhancing customer experience. The latest COS was conducted in 2018, and the survey result, of which – Customer Satisfaction Index, hits a record high of 6.61 out of 8.

To continue to excel in our customer services, the new Customer Service Centre (CSC) was put into operation in 2018. As set out in the EMSTF Strategic Plan, we target to implement digitisation with the participation of clients and foster user experience in a paperless and environment-friendly approach using our Customer Centric e-Platform – Job Management system.

When it comes to customer data privacy, we strictly adhere to the Personal Data (Privacy) Ordinance and our Privacy Policy to ensure that all personal data are properly handled. During the year, we did not record any complaints or breaches regarding customer privacy and losses of customer data.

### Managing our Supply Chain

Our products and services are not only in compliance with legal requirements, but also often in reference to international environmental and safety and health standards. Our contractors and suppliers work closely with us in delivering safe and quality E&M service as well as in provision of parts or equipment and services related to E&M installation, operation and maintenance. Regarding managing environmental impacts of energy, waste and water along our supply chain, as well as those arising from material consumption, we request our contractors and suppliers to stringently observe the environmental requirements as stipulated by the ISO 14001:2015 standard.

When selecting contractors and suppliers, we follow an open and fair process. All suppliers are welcomed to register on the EMSD Suppliers List and their environmental-friendly products would be recorded in our database. We share with our contractors, consultants and suppliers a Guidance Note: for Contractors, Consultants and Suppliers of EMSD Regulatory Services to encourage them to provide quality goods and services in a sustainable manner wherever applicable and available. Regularly, we review the performance of contractors and ensure that they have a robust safety management system in place. In addition, the EMSD is committed to complying with any local law and regulations that guard against anti-competitive conduct.



為促進香港長遠可持續發展，我們鼓勵在供應鏈上注重公德，竭力紓減負面影響。多年來，我們的承辦商都悉力達致「零意外」，並在工作上大大表現出對工人、社區和環境的關顧。同時機電署亦鼓勵承辦商構思創新意念，改進他們在施工時的表現。

To facilitate long-term sustainable growth in Hong Kong, we encourage consideration and every effort to be made in the supply chain to minimise negative impact. Over the years, our contractors continuously target to achieve "Zero Accidents" while demonstrating great consideration to workers, neighbours and the environment at work. We also encourage contractors to provide innovative ideas for better performance on-site.

在2018/19年度，我們共有兩項維修、保養、改建及加建工程合約於第24屆公德地盤嘉許計劃中獲得銅獎和優異獎。機電署的管理層及監督人員與承辦商出席頒獎典禮，共同分享喜悅。

In 2018/19, two of our repair, maintenance, alteration and addition works contracts were granted the Bronze Award and the Merit Award in the 24th Considerate Contractors Site Award Scheme. The EMSD management and supervisory staff shared the joy with our contractors at the prize presentation ceremony.

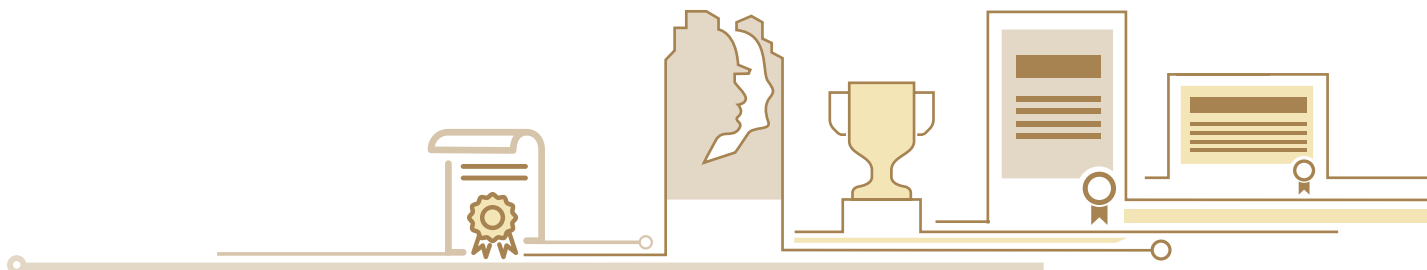


## 可持續發展的卓越成果

我們銳意推進可持續發展，欣然與持份者分享在可持續發展路上的重要時刻，並且感謝他們的支持。我們亦很榮幸於匯報年度內在多個獎項計劃及比賽中脫穎而出，獲得肯定。

## Sustainability Excellence

On our way towards sustainable development, we share important moments with our stakeholders, and appreciate their support. Also, we are honoured to be recognised in multiple awards and competitions for the reporting year.



# 可持續發展管理方針

## Sustainability Management Approach

### 獎項及嘉許

機電署於匯報年度獲得多個業界獎項及嘉許。透過參與各種比賽及計劃，有助我們與業界在表現上進行基準比較，並學習良好作業和緊貼先進的創新及科技，讓香港成為一個綠色及智慧城市。

### Awards and Recognitions

In the reporting year, we received awards and recognitions from the industry. By engaging in various competitions and schemes, we can benchmark our performance and learn about best practices and advanced innovations and technologies that will transform Hong Kong into a green and smart city.



#### 世界技能大賽香港代表選拔賽 2018 WorldSkills Hong Kong Competition 2018



機電署鼓勵年青的見習技術員參加各類技能比賽，挑戰自我。2018年4月，本署三位二級見習技術員（電氣），包括何培楓先生（左三）、陳宇泰先生（中）及陳浩賢先生（右二），在「世界技能大賽香港代表選拔賽2018」的「電氣安裝」類別中取得頭三名。陳宇泰先生更參加於俄羅斯舉行的2019年喀山「世界技能大賽」，代表香港角逐殊榮。

The EMSD encourages young technician trainees to challenge themselves in technical competitions. In April 2018, three of our Technician Trainees II (Electrical), Mr Ho Pui-fung (third left), Mr Chan Yu-tai (middle) and Mr Chan Ho-yin (second right), won the first three places in the "Electrical Installations" trade of WorldSkills Hong Kong Competition 2018. Mr Chan Yu-tai would represent Hong Kong to compete in the WorldSkills Kazan 2019 in Russia.

#### 建造業議會可持續建築大獎

#### Construction Industry Council Sustainable Construction Award



2018年10月，機電署助理工程師羅婷丰女士（左五）榮獲建造業議會可持續建築大獎的年青從業員卓越獎，嘉許她在啟德發展區推廣區域供冷系統應用創新技術解決方案，促進可持續發展。

In October 2018, our assistant engineer, Miss Law Ting-fung, Michelle (fifth left), was presented with the Young Practitioner – Excellent Award, under the Construction Industry Council Sustainable Construction Award, for promoting the use of innovative technologies solution for sustainable development in the District Cooling System at Kai Tak Development.



榮獲美國能源工程師協會亞太區區域能源項目獎

**Regional Energy Project of the Year Award for the Asia-Pacific region by the Association of Energy Engineers**



2018年10月，機電署獲美國能源工程師協會頒發亞太區區域能源項目獎。獲獎項目由機電署、香港中華煤氣有限公司與醫院管理局攜手研發。這是本港首個在醫院應用的熱電聯產發電項目，利用堆填區產生的沼氣為大埔雅麗氏何妙齡那打素醫院發電，實踐轉廢為能。

In October 2018, the EMSD was awarded the Regional Energy Project of the Year Award for the Asia-Pacific region by the Association of Energy Engineers. This award-winning project was jointly developed under the collaboration of the EMSD, the Hong Kong and China Gas Company Limited, and the Hospital Authority. It is the first combined heat and power electricity generation project for Hong Kong hospitals, which utilises biogas generated from landfills to produce electricity for Alice Ho Miu Ling Nethersole Hospital, turning waste into energy.



香港工程師學會青年會員創意獎  
2019 及傑出青年工程師獎 2019  
**Hong Kong Institution of Engineers  
(HKIE) Innovation Awards for Young  
Members 2019 and the Young  
Engineer of the Year Award 2019**

機電署一向不遺餘力應用創新工程知識，令公共服務達致更卓越水平。2019年3月，本署與香港科技大學聯合研發的智能發燒偵測系統奪得「香港工程師學會青年會員創意獎2019(組別I—發明)大獎」。我們的「智能眼碌碌」空調控制系統亦於另一組別(組別II—創新應用)贏得優異獎。機電署的工程師陸珮群女士(後排右三)更獲頒本年度「傑出青年工程師獎」。

The EMSD was devoted to applying innovative engineering knowledge to enhance public services quality. In March 2019, the Smart Fever Screening System jointly developed by the EMSD and the Hong Kong University of Science and Technology was awarded a grand prize of the HKIE Innovation Awards for Young Members 2019 (Category I – An Invention). Our NeuroSmart Eyes Air-conditioning Control System also won a merit award in another category (Category II – An Innovative Application of Engineering Theories). In addition, the Young Engineer of the Year Award 2019 was presented to our engineer, Miss Luk Pui-kwan, Clare (third right, last row).



# 可持續發展管理方針

## Sustainability Management Approach



### 2018年傑出學徒獎勵計劃 2018 Outstanding Apprentices Award



2019年3月，其中一名參與本署技術員訓練計劃的見習電子技術員李穎聰先生(前排右三)，在242名被提名參加職業訓練局舉辦的傑出學徒獎勵計劃的候選人中，獲選為2018年傑出學徒。

In March 2019, one of our electronics technician trainees under the Technician Training Scheme, Mr Lee Wing-chung, Vincent (third right, front row), was selected as one of the 2018 Outstanding Apprentices by the Vocational Training Council out of 242 nominations.



### 機場管理局工程承包商安全運動 2018/19 Airport Authority's Technical Services Department (TSD) Contractors Safety Campaign 2018/19

我們負責機場工程的同事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2018/19中，何德成先生(右一)、孫璋泰先生(右四)及劉晨杰先生(右五)獲得安全知識比賽亞軍。機電署亦於工程及維修部承包商安全運動2018/19中獲得企業嘉許獎。

Our colleagues responsible for airport engineering services received a high recognition in their excellent safety performance from the Airport Authority Hong Kong. Mr Ho Tak-shing (first right), Mr Suen Wai-tai (fourth right) and Mr Lau Sen-kit (fifth right) won the first runner-up in the Safety Knowledge Competition. The EMSD also received the Corporate Recognition Award in the TSD Contractors Safety Campaign 2018/19.



### 機電工程署的社會及環保報告 2017/18 The Social and Environmental Report 2017/18 of the EMSD

機電工程署的《社會及環保報告 2017/18》在專業傳訊評選機構 MerComm, Inc. 主辦的2019年ARC國際年報大獎「非牟利機構(網上年報): 綠色/環保年報」組別中榮獲銀獎。ARC國際年報大獎是備受業界尊崇的國際年度年報比賽，旨在評估和表彰卓越、清晰、有效和具創意的溝通。

The EMSD Social and Environmental Report 2017/18 won the Silver Award in the category of "Non-Profit Organisation (Online A.R.): Green/Environmentally Sound Report" at the 2019 International Annual Report Competition (ARC) Awards, curated by MerComm, Inc., a professional communication awards organisation. The award is a highly respected and prestigious competition in the industry that evaluates and honours the excellence, clarity, effectiveness and creativity of communication.



## 年度重點

## Highlights of the Year

**2018年4月**  
**April 2018**

機電工程營運基金制訂第二個五年策略計劃，擬定三套策略：機電數碼化、培育團隊及科技·創新。

Commenced the EMSTF's second Five-year Strategic Plan with three strategies: E&M Digitisation; Excellent Work Team, and Technology · Innovation.

**2018年6月**  
**June 2018**

與廣州市工貿技師學院簽署《人才培訓合作備忘錄》。

Signed the Memorandum of Co-operation for Talent Training with the Guangzhou Industry and Trade Technician College.

**2018年11月**  
**November 2018**

與廣州市人力資源和社會保障局簽署《機電人才發展合作備忘錄》。

Signed the Memorandum of Co-operation on E&M Talent Development with the Guangzhou Municipal Human Resources and Social Security Bureau.

**2018年11月**  
**November 2018**

發布《屋宇裝備裝置能源效益實務守則》2018年版及《建築物能源審核實務守則》2018年版。

Launched Code of Practice for Energy Efficiency of Building Services Installation, 2018 Edition, and Code of Practice for Building Energy Audit, 2018 Edition.

**2018年9月**  
**September 2018**

開設互動學習中心，配備虛擬實境模擬器和全息影像及三維投影技術培訓設施。

Opened Interactive Learning Centre with the virtual reality simulator and hologram training facilities.

2018

2019

**2018年5月**  
**May 2018**

代表中國香港主辦亞太經濟合作組織(亞太經合組織)能源工作組第55次會議，共商減少能源強度及使用可再生能源的目標。

Hosted the 55th Asia-Pacific Economic Cooperation (APEC) Energy Working Group meetings on behalf of Hong Kong, China, to discuss goals for reducing energy intensity and the use of renewable energy.

**2018年9月**  
**September 2018**

舉行機電署七十年典禮。

Held the EMSD 70th Anniversary Ceremony.

**2018年11月**  
**November 2018**

於機電工程署研討會2018上簽署《粵港澳大灣區建築物重新校驗(再調適)合作備忘錄》。

Signed the Memorandum of Co-operation on Retro-commissioning (RCx) of Buildings in the Guangdong-Hong Kong-Macao Greater Bay Area in the EMSD Symposium 2018.

**2019年1月**  
**January 2019**

發出《建築信息模擬—資產管理標準及指引》(2.0版)。

Issued the Building Information Modelling for Asset Management (BIM-AM) Standards and Guidelines (Version 2.0).

**2018年12月**  
**December 2018**

發布更新的《重新校驗技術指引(2018)》。

Updated and issued the Technical Guidelines on Retro-commissioning (2018).

## 環保成效

# Environmental Performance

為達到香港政府訂下於2030年把碳強度由2005年水平降低65%至70%的目標，機電署多年來高度重視保護環境，轄下所有服務和業務也周全考慮環境因素。我們會繼續檢討法例、政策倡議及計劃以制訂監管要求，和提高公眾對能源效益的意識，為香港的可持續發展作出貢獻。與此同時，我們在日常營運積極優化能源使用，盡量減少耗用資源和產生碳排放。機電署透過執行環境管理系統，並且依從環保採購指引，致力實施環保措施，以及持續加強相關工作。

To attain the goal of Hong Kong Government 65% to 70% carbon intensity reduction in 2030 compared to 2005 level, we have attached great importance to environmental protection over the years, taking both our services and operations into consideration. We continue to review legislations, policy initiatives and schemes to set regulatory requirements and promote public awareness in energy efficiency to contribute to the city's sustainable development. Meanwhile, we strive for optimisation of energy use throughout our operations to minimise resource consumption and carbon emission. By implementing Environmental Management System and adopting green procurement guidelines, we are committed to introducing environmental measures and enhancing our practices on an on-going basis.

## 優化香港的能源效益

機電署提供專業技術，並且與廣大社會分享推動能源效益的使命。我們的服務涵蓋多個範疇，其中包括發布指引和實務守則，例如《建築物能源效益守則》，以及與各行各業合作推廣善用電能等。我們亦不斷研究先進的節能技術，並與業界分享有關能源效益和可再生能源技術的最佳作業方法。以下是機電署於本匯報年度為優化香港能源效益而推行的各項重要措施。

## Enhancing Energy Efficiency for the City

At the EMSD, we provide technical expertise and share the mission of driving energy efficiency for the city. Our services span across a range of areas, including issuing guidelines and codes of practices such as Building Energy Code, working with trades to promote the efficient use of electricity. We also continue to explore advanced energy efficiency technologies and share good practices with the industry on energy efficiency as well as renewable energy technologies. The following are the highlights of the EMSD's initiatives in enhancing energy efficiency for the city in the reporting year.

### 強制性能源效益標籤計劃

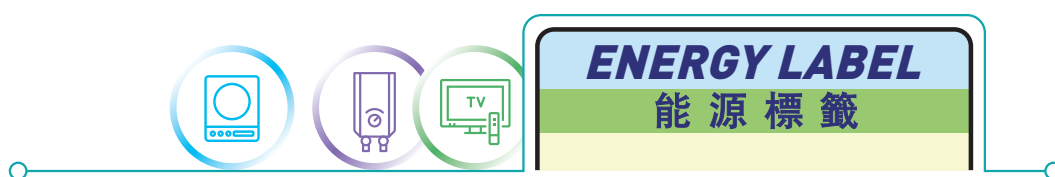
為協助市民選購高能源效益的電器，並提高公眾的節能意識，機電署自2009年推出「強制性能源效益標籤計劃」，規定在香港售賣的訂明產品需貼上能源標籤，讓消費者得知標籤上所標明產品的能源效益表現。

### Mandatory Energy Efficiency Labelling Scheme

To facilitate the public in choosing energy-efficient appliances and raising public awareness on energy saving, the EMSD has introduced the Mandatory Energy Efficiency Labelling Scheme (MEELS) since 2009 in which energy labels were required to be shown on prescribed products in Hong Kong to inform consumers of their energy efficiency performance.

「強制性能源效益標籤計劃」第三階段已於2018年6月1日起正式生效，此階段新增三種電氣產品，包括電視機、儲水式電熱水器及電磁爐。除此之外，計劃亦擴大現行兩類訂明產品的涵蓋範圍，納入逆轉循環型空調機的供暖功能和額定洗衣量超過7公斤但不超過10公斤的洗衣機。

The MEELS entered its third phase on 1 June 2018. Three additional types of electrical products were covered now under the scheme, namely televisions, storage type electric water heaters, and induction cookers. Furthermore, the scope of two existing types of prescribed products was expanded to include the heating performance of reverse cycle type room air-conditioners and washing machines with rated washing capacity exceeding 7 kg but not exceeding 10 kg.



## 建築物能源效益

### 《建築物能源效益條例》

政府於2012年9月實施《建築物能源效益條例》以監管建築物的能源效益，而機電署同年開始發布《建築物能源效益守則》及《能源審核守則》，規管屋宇裝備裝置，確保符合指定的設計標準，並規定商業樓宇業主每十年進行一次能源審核。

機電署於2018年年底完成了《建築物能源效益守則》及《能源審核守則》的修訂工作，正式發布2018年版的《屋宇裝備裝置能源效益實務守則》(亦簡稱《建築物能源效益守則》)和《建築物能源審核實務守則》(亦簡稱《能源審核守則》)，使建築物達到更高能源效益。最新版的《建築物能源效益守則》進一步收緊屋宇裝備裝置的能源效益標準和規定，比2012年版提高約18%。隨着新版《建築物能源效益守則》於2019年生效，《建築物能源效益條例》預期在2012年至2028年期間可為本港所有新建和現有建築物節省約270億千瓦小時電力，相當於減少約1 900萬公噸二氧化碳排放。而新的《能源審核守則》則對能源審核的技術規範訂明更嚴格的要求。



2018年版《屋宇裝備裝置能源效益實務守則》於2019年5月16日起適用於新建建築物，並於2019年8月16日起適用於現有建築物。

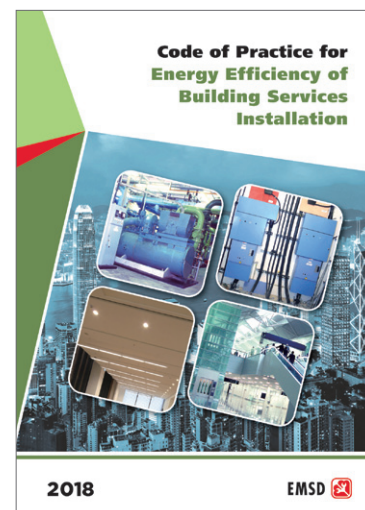
The Code of Practice for Energy Efficiency of Building Services Installation, 2018 Edition, is applicable to newly constructed buildings effective on 16 May 2019 and to existing buildings effective on 16 August 2019.

## Buildings Energy Efficiency

### Buildings Energy Efficiency Ordinance

To regulate buildings' energy efficiency in Hong Kong, the Buildings Energy Efficiency Ordinance (BEEO) has been effective since September 2012. In the same year, the EMSD started to promulgate the Building Energy Code (BEC) and Energy Audit Code (EAC) to regulate building services installation for compliance of the stipulated design standards, and to require owners of commercial buildings to carry out energy audit once every ten years respectively.

The EMSD completed the revision of the BEC and EAC in late 2018, and published the 2018 Edition of Code of Practice for Energy Efficiency of Building Services Installation (also known as Building Energy Code (BEC)) and Code of Practice for Building Energy Audit (also known as Energy Audit Code (EAC)) aiming to further enhance the energy efficiency of buildings. The energy efficiency standards and requirements of building services installations are further tightened in the new edition of BEC, resulting in an over 18% improvement compared with the 2012 Edition. With the new edition of the BEC taking effect in 2019, it is expected that the implementation of BEEO will achieve an energy saving of about 27 billion kWh from both new buildings and existing buildings in Hong Kong between 2012 and 2028, which is equivalent to a reduction in carbon dioxide emissions of about 19 million tonnes. Meanwhile, the new edition of EAC imposes more stringent requirements on the technical aspects for conducting energy audits.



## 環保成效

# Environmental Performance

2018年版《建築物能源審核實務守則》於2019年8月16日生效。

The Code of Practice for Building Energy Audit, 2018 Edition, effective on 16 August 2019.



### 建築物重新校驗

我們除了提倡高能源效益的建築設計，也積極推動重新校驗的發展和應用，透過改善現有樓宇的運作效率節省能源。繼2017年發布首份《重新校驗技術指引》後，機電署於2018年12月發布更新的《重新校驗技術指引(2018)》，新增內容包括重新校驗的籌備工作、數據管理和中央控制管理系統的要求，向樓宇業主、操作人員及其他持份者提供更全面及詳細的程序指引，以便進行重新校驗。

年內，我們在重新校驗的發展路上再立里程碑。2018年11月15日，機電署與香港、澳門及內地多個機構簽訂《粵港澳大灣區建築物重新校驗(再調適)合作備忘錄》，促進粵港澳大灣區以及其他內地城市的進一步合作，協力推廣和採用重新校驗作為提升建築物能源效益的新方案。此合作備忘錄為各方合作奠定基石，透過經驗分享和資訊交流提高技術才能。

### Retro-commissioning of Buildings

In addition to building energy efficiency designs, we actively promote the development and application of Retro-commissioning (RCx), so as to improve the operational efficiency of existing buildings for energy saving. Following the launch of the first Technical Guidelines on Retro-commissioning (TG-RCx) in 2017, the EMSD updated and issued the Technical Guidelines on Retro-commissioning (2018) (TG-RCx 2018) in December 2018. New topics, including the preparation of RCx, data management, requirements on Central Control Management System were added in the TG-RCx 2018 to provide more comprehensive and detailed procedural guidance to the buildings' owners, operators and other stakeholders in carrying out RCx.

Another milestone was achieved for the RCx development on 15 November 2018 when we signed a Memorandum of Co-operation (MoC) on RCx of Buildings in the Guangdong-Hong Kong-Macao Greater Bay Area with various organisations in Hong Kong, Macau and Mainland China. The MoC fosters further collaboration among the Greater Bay Area and other Mainland cities to promote and adopt RCx as a new solution for achieving higher buildings energy efficiency. The MoC also laid down a solid foundation for different parties to develop technical competence through experience sharing and information exchange.

《粵港澳大灣區建築物重新校驗(再調適)合作備忘錄》簽署儀式。

The Signing Ceremony of Memorandum of Co-operation on Retro-commissioning (RCx) of Buildings in the Guangdong-Hong Kong-Macao Greater Bay Area.





## 提倡使用可再生能源

政府一直致力推廣發展可再生能源，鼓勵香港各界廣泛使用，並於2018/19年度撥款8億元在現有政府建築物、場地和社區設施安裝可再生能源設備。下圖列出機電署於匯報年度推廣可再生能源的主要項目。

## Promoting the Use of Renewable Energy

The Government actively promotes the development of renewable energy (RE) and encourages wider adoption of RE in Hong Kong. In 2018/19, the Government allocated \$800 million for the provision of the RE installations in existing government buildings, venues and community facilities. The following figure highlighted our promotion of RE during the reporting year.



### 2018年5月 May 2018

網頁升級後的「香港可再生能源網」，方便公眾查詢可再生能源的最新資訊及參考材料。

The revamped website of Hong Kong Renewable Energy Net launched to improve public access to the latest information and reference materials on RE.



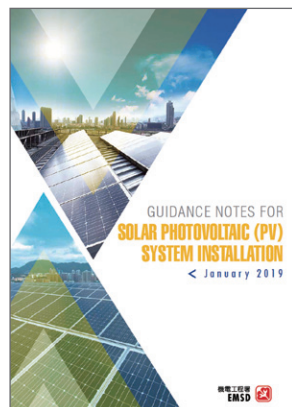
### 2019年3月 March 2019

推出「採電學社：學校及非政府福利機構太陽能支援計劃」，倡導合資格學校和非政府福利機構使用可再生能源。這項免費計劃為合資格申請者提供一站式服務，協助他們安裝太陽能光伏系統及加入上網電價計劃。

The Solar Harvest – Solar Energy Support Scheme for Schools and Welfare Non-governmental Organisations was introduced to promote the use of RE in eligible schools and welfare non-governmental organisations. This free-of-charge scheme provides eligible applicants with one-stop service on solar PV system installation and how to join the Feed-in Tariff Scheme.

2018

2019



### 2019年1月 January 2019

發布《太陽能光伏系統安裝指南》，加深公眾對太陽能光伏系統的認識及了解申請上網電價的程序。

The Guidance Notes for Solar Photovoltaic (PV) System Installation issued to assist the public to better understand solar PV system installation and the Feed-in Tariff application procedures.

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## 環保成效

# Environmental Performance

### 淡水冷卻塔計劃

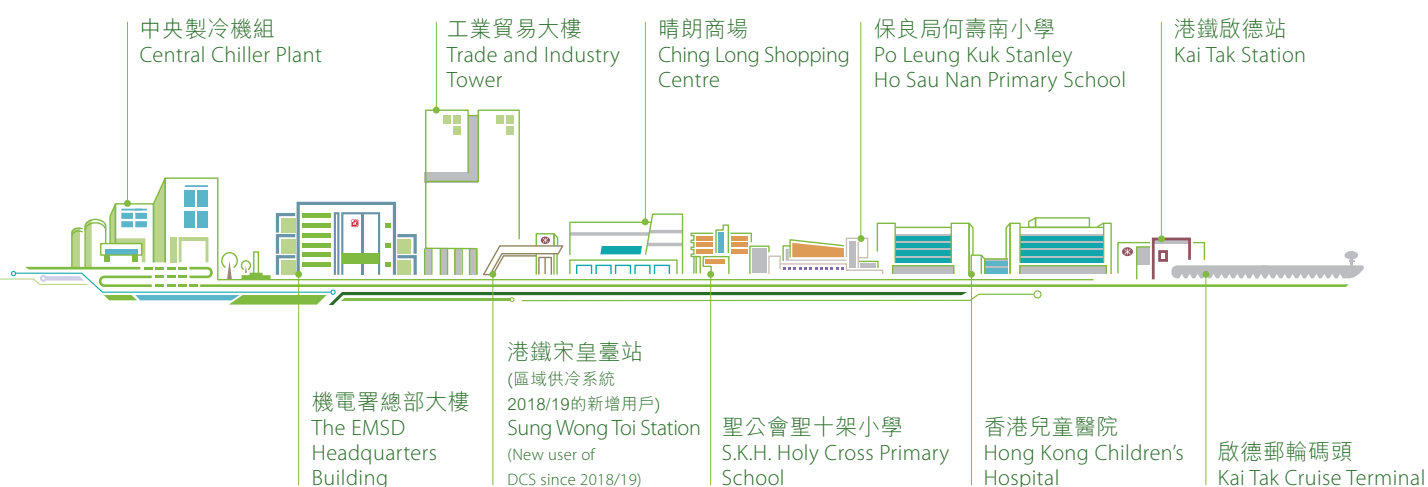
淡水冷卻塔計劃自2000年推行以來，一直以非住宅樓宇為目標，旨在鼓勵於這類建築物更廣泛採用淡水冷卻塔的高能效空調系統，截至2019年3月，機電署合共接獲1 150項有關申請，當中有2 600<sup>19</sup>個淡水冷卻塔已落成並投入運作。按照估計，已落成的裝置每年可節省5.3億千瓦小時用電量，相當於每年減少排放約370 000公噸二氧化碳。為管理淡水冷卻塔的水質，機電署於2018/19年度採集了980個淡水冷卻塔的水質樣本，檢驗退伍軍人桿菌總數有否超出指定上限。

### 啟德區域供冷系統

啟德區域供冷系統是大型中央空調系統，設有中央製冷機組供應冷凍水，透過地下水管網絡輸送到啟德發展區內的建築物。此計劃的第I、II期及第III期(組合甲)的工程已經先後於2013年、2014年及2017年落成，第III期(組合乙)及(組合丙)的工程將於2020年啟用，進一步促進用戶對區域供冷系統的使用，為用戶帶來多重效益。截至2019年3月，區內共有十座建築物使用區域供冷系統。

按照估計，區域供冷系統的用電量分別比傳統風冷式系統和獨立水冷式系統減少35%及20%，因此啟德發展區使用區域供冷系統每年可節省約8 500萬千瓦小時電力，相等於每年減少59 500公噸碳排放。

### 啟德發展計劃區域供冷系統用戶(截至2019年3月)



### Fresh Water Cooling Towers Scheme

Since its launch in 2000, the Fresh Water Cooling Towers (FWCT) Scheme has been targeting at the non-domestic buildings to encourage a wider use of fresh water cooling towers for energy-efficient air-conditioning. As of the end of March 2019, the EMSD had received 1 150 applications since the introduction of FWCT Scheme. Amongst them, 2 600<sup>19</sup> FWCTs have been completed and put into operation. It is estimated that these successful installations could save up to about 530 million kWh electricity annually, which is equivalent to around 370 000 tonnes carbon reduction. To manage the water quality of the FWCTs, the EMSD took 980 water samples in 2018/19 from FWCTs to check the total legionella count in water samples are within the stipulated threshold.

### District Cooling System at the Kai Tak Development

The District Cooling System (DCS) is a large scale centralised air-conditioning system that uses chilled water from the central plants to provide cooling to multiple buildings at Kai Tak Development (KTD) connected by an underground water piping system. Phase I, II and III (Package A) of the KTD DCS project were completed in 2013, 2014 and 2017 respectively, while Phase III (Package B) and (Package C) will be scheduled to be put into operation in 2020 with an aim to further promote the uptake of DCS that can bring multiple benefits to users. As of March 2019, ten buildings were using DCS.

It is estimated that DCS consumes 35% and 20% less electricity as compared to traditional air-cooled systems and individual water-cooled systems respectively. As a result, the use of DCS at KTD can save approximately 85 million kWh electricity annually, equivalent to 59 500 tonnes of carbon reduction per annum.

### Users of DCS at KTD (as of March 2019)

<sup>19</sup> 每個淡水冷卻塔申請可能涉及一個或以上的淡水冷卻塔。

<sup>19</sup> Each FWCT application may involve one or more than one cooling tower(s).

## 機電署綠色工作環境

機電署的員工嚴格遵守環保政策，致力採取環保措施，在工作場所培養綠色文化，以減少營運對環境的影響。早於2000年，我們已實施環境管理系統，並持續管理空氣、水、噪音、土地污染、資源使用和動植物生態各方面的環保工作，以實現妥善的環境管理。

### 環保目標



#### 2018/19年度環保目標

##### Environmental Targets in 2018/19

機電署場地<sup>20</sup>經調整後用電量不超過10 405 200千瓦小時

Normalised electricity consumption for the EMSD venues<sup>20</sup> not exceeding 10 405 200 kWh

設定用紙量配額為31 068令

Paper consumption quotas are 31 068 reams

## Green Workplace at the EMSD

At the EMSD, our staff adhere closely to Environmental Policy. We strive to adopt environment-friendly measures and cultivate a green culture at workplace to reduce environmental impacts of our operations. With the adoption of the Environmental Management System since 2000, we continue to control our environmental aspects covering air, water, noise, land contamination, resource use, flora and fauna to achieve good environmental management.

### Environmental Targets



#### 2018/19年度工作進展

##### Progress in 2018/19



達標  
Achieved



達標  
Achieved



#### 2018/19年度工作成果

##### Achievements in 2018/19

9 625 397 千瓦小時  
9 625 397 kWh

28 184 令  
28 184 reams

<sup>20</sup> 包括機電署總部、企業數據中心(不包括客戶用電量)、以及策略業務單位。

<sup>20</sup> Including the EMSD Headquarters, Corporate Data Centre (exclude client's usage) and Strategic Business Units.

## 廢物管理

### 辦公室紙品及碳粉盒廢物量趨勢

機電署產生的廢物主要來自辦公室及工場作業。為減低對環境的影響，我們嚴格遵從環境管理系統的措施，盡量回收廢舊物料以紓緩堆填區的壓力。從辦公室回收的廢棄物主要是紙張、碳粉盒和光管。

機電署自2001年開始採用再造紙，直至2018/19年度，我們全面採用回收再造紙品，而匯報期內的紙張採購總量為28 184令。

本署工場的作業包括翻新舊車胎及零件，和其他機電工程，例如安裝、保養及修理等。工場作業產生的廢物包括充電池、金屬廢料、含水銀照明燈及車胎。具體回收數據請參閱統計資料摘要。

## Waste Management

### Office Paper and Toner Waste Trend

The majority of the waste generated at the EMSD comes from office operation and workshop activities. Following the environmental procedures under the Environmental Management System, we recycle waste materials as far as practicable in order to minimise the impacts to landfill. The office waste that we recycle consists of paper, toner cartridges and fluorescent tubes.

We have implemented the adoption of recycled paper since 2001. In 2018/19, all our paper consumed was recycled paper and we purchased a total of 28 184 reams of paper.

As for our workshop activities that involve the restoration of worn vehicle tyres and parts as well as E&M works such as installations, maintenance and repairs, etc., the waste arising from workshop activities are rechargeable batteries, metal scraps, mercury lamps, and vehicle tyres. More data on waste recycling of these materials can be found in the **Summary of Statistics**.

## 環保成效

# Environmental Performance

### 減少氣體排放

#### 車隊的廢氣排放

我們對日常作業設有嚴格的溫室氣體管制措施，由於機電署部分的碳足印源自部門的車隊，因此我們會確保妥善的車輛維修，再配合完善的內務管理和定期升級改良，盡量減低車輛的廢氣排放。目前機電署車隊的燃油耗用量比體積相近的傳統車輛少40%，有助降低本港的路邊空氣污染和碳排放。截至2019年3月31日，機電署轄下共有203部車輛，當中包括貨車、小型貨車、轎車及電單車，其中13部為電動車，6部為混合動力車輛。

機電署於2018/19年度的碳足跡(公噸)列表如下。

#### 溫室氣體排放

公噸(二氧化碳當量)

Tonnes of CO<sub>2</sub>-equivalent



7 251

總排放  
Total Emissions

1 186

直接排放(範圍一)  
Direct Emissions (Scope 1)

6 065

能源間接排放(範圍二)  
Energy Indirect Emissions (Scope 2)

#### 建築物排放量

除了車輛運輸，辦公室和工場用電亦是主要的溫室氣體排放源。於2018/19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12%<sup>21</sup>。用電量下降是多項節能措施的成果，包括以發光二極管照明設備取代傳統燈具、辦公室於午飯時間關燈、調整通風系統運作時間、連接冷氣系統至區域供冷系統等。2018/19年度的能源強度為每平方米2 111千瓦小時。

### Emission Reduction

#### Emission from Vehicle Fleet

We place tight control in greenhouse gas (GHG) emissions throughout our operations. A part of our carbon footprint comes from our vehicle fleet. As such, we keep our transportation emission as low as possible through proper vehicle maintenance, good housekeeping and regular upgrade for our vehicles. Currently, our vehicle fleet consumes 40% less fuel than conventional vehicles of similar size for reducing roadside air pollution and carbon emissions. As of 31 March 2019, the EMSD owned 203 vehicles including lorries, vans, saloon cars and motorcycles, of which 13 were electric vehicles and 6 were hybrid vehicles.

The graph below shows the breakdown of carbon footprint of the EMSD in 2018/19 (in tonnes).

#### Greenhouse Gas Emissions

#### Emission from Buildings

Apart from transportation, electricity consumption in our offices and workshops are the major GHG emissions sources. In 2018/19, 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) decreased by 12%<sup>21</sup> compared to 2013/14 level. This reduction was mainly contributed by replacing traditional luminaires with LED lights, switching off the lights during lunch time, adjusting the operation hours of the ventilation system, connecting our air-conditioning system to the District Cooling System, etc. In 2018/19, the energy intensity is 2 111kWh per m<sup>2</sup>.

<sup>21</sup> 此計算比較於2013/14至2018/19年度仍然運作的營運單位淨耗電量的改變。

<sup>21</sup> The calculation compares the net consumption changes for operating units that are still under operations from 2013/14 to 2018/19.

本署政府建築物<sup>22</sup> 2013/14年度至2018/19年度的用電量列表如下：

Electricity consumption of our government buildings<sup>22</sup> from 2013/14 to 2018/19 is tabulated below:

	用電量 Electricity consumption		於相若運作情況下的用電量 <sup>21</sup> Electricity consumption under comparable operating conditions <sup>21</sup>	
	千兆焦耳 GJ	'000 千瓦小時 '000 kWh	千兆焦耳 GJ	'000 千瓦小時 '000 kWh
<b>2013/14 (基線 Baseline)<sup>23</sup></b>	53 057	14 738	/	/
<b>2014/15</b>	53 712	14 920 (+1.2%)	52 481	14 578 (-1.1%)
<b>2015/16</b>	53 993	14 998 (+1.8%)	52 495	14 582 (-1.1%)
<b>2016/17</b>	52 276	14 521 (-1.5%)	51 102	14 195 (-3.7%)
<b>2017/18</b>	42 818	11 894 (-19.3%)	47 671	13 242 (-10.1%)
<b>2018/19</b>	42 304	11 751 (-20.3%)	46 710	12 975 (-12.0%)

<sup>22</sup> 用電量包括機電署總部、企業數據中心、加路連山廠房以及所有策略業務單位的工場、廠房及中心。

<sup>22</sup> The electricity consumption covers the EMSD Headquarters, Corporate Data Centre, Caroline Hill Depot, and all Strategic Business Units' workshops, depots and centres.

<sup>23</sup> 此基準年乃參考政府公布的《香港都市節能藍圖2015~2025+》，當中以2013/14年為基準，訂定政府建築物的能源消耗五年內(即2019/20年)減少5%。

<sup>23</sup> This baseline year made reference to Energy Saving Plan for Hong Kong's Built Environment 2015~2025+ published by the Government, that used 2013/14 as the baseline year to set out a 5% electricity reduction target for government buildings to be achieved within five years (i.e. 2019/20).

## 綠化總部大樓

多年來，機電署先後融入高能源效益的建築設計和採用節能技術，改善內務管理方式，致力減低總部的能源耗用量。本署總部大樓採用了下列措施以減少耗能及相關的碳足跡。

- 機電署總部大樓是首棟連接啟德區域供冷系統的現有建築物，能源效益比使用普通水冷式空調系統設置多個獨立冷卻塔的建築物高約20%
- 機電署總部大樓屋頂安裝了太陽能光伏系統，最高可產出350千瓦的再生能源。系統於2005年投入運作，迄今截至2019年3月底已為大樓供應220萬千瓦小時電力

## Greening our Headquarters Building

Over the years, the EMSD has been incorporating energy-efficient building designs, implementing energy efficiency technologies, and optimising housekeeping practices, to reduce energy consumption at the headquarters. We have implemented the following measures at the headquarters building to reduce energy consumption and associated carbon footprint.

- As the first existing building connected to DCS at KTD, the building is about 20% more efficient than a building that uses a regular water-cooled air-conditioning system equipped with separate cooling towers
- A photovoltaic system installed on the rooftop can generate a maximum output of 350 kW of renewable energy. Since its inception in 2005, a total of 2.2 million kWh had been supplied for the building's use up to the end of March 2019

## 環保成效

# Environmental Performance

- 辦公室、汽車維修站、火警逃生路線、洗手間及行車道等的所有傳統燈具均已改裝發光二極管照明設備
- 辦公室裝設智能風機盤管控制器
- 會議室加裝多功能傳感器探測人員移動、溫度和濕度
- 辦公室裝設多個光探測器調節人工照明設備
- 「綠建環評既有建築」最終白金級認證
- All traditional luminaires in the offices, vehicle workshops, fire escape routes, washrooms, driveways, etc. have been replaced with LED lights
- A Smart Fan Coil Unit Control System has been installed in offices
- Multi-functional sensors were added in meeting rooms to detect motion, temperature and humidity
- A number of photodetectors were installed in offices to regulate artificial lighting
- Final Platinum Rating in BEAM Plus Existing Buildings



掃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 scanning this QR Code or visit: <https://bems.emsd.gov.hk/bems/faces/dist/public.10031.139.xhtml>.

## 節約用水

我們矢志減少整體食水用量，特設中水處理系統回收洗手盆及沐浴設施的廢水，經處理後作沖廁用途。洗手間亦廣泛採用節水傳感器控制用水量，以及在屋頂設置雨水回用系統，收集雨水並用於灌溉和洗車。上述措施推行後，本署的用水量持續在匯報年度下降。

此外，機電署總部大樓已連接啟德區域供冷系統，利用海水作冷卻媒體，用後可排出大海，取代了耗用淡水的傳統空調系統。我們確保污水在排入排水渠和水體前符合本地政府要求。

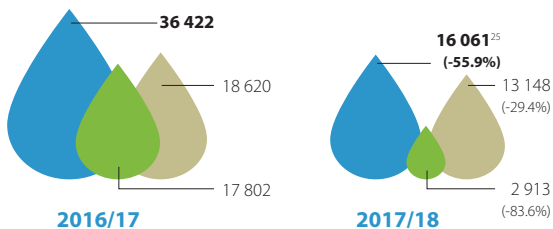
## Water Conservation

The EMSD is committed to reducing our total potable water usage. We have adopted a grey water system to collect and process the waste water from the water basin and shower areas, and the processed water is used for toilet flushing. Water-saving sensor equipped water taps are widely applied in the toilets to help control water consumption. In addition, we have set up a rainwater collection system to collect rainwater from the roof for irrigation and car washing. With these measures in place, we continue to lower our water consumption throughout the reporting year.

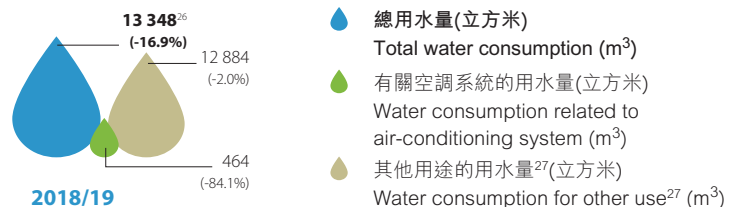
By utilising DCS at the EMSD Headquarters Building, seawater was used as a cooling medium and then discharged to the sea to replace fresh water that was used in traditional air-conditioning systems. We ensure water discharge to drainage systems and water bodies were in compliance with local government requirements.






我們定期每年監察用水量，機電署的用水量列圖如下<sup>24</sup>：



Water consumption is monitored regularly every year. The water consumption at the EMSD is shown in the figure below<sup>24</sup>:



 總用水量(立方米)  
 Total water consumption (m<sup>3</sup>)  
 有關空調系統的用水量(立方米)  
 Water consumption related to air-conditioning system (m<sup>3</sup>)  
 其他用途的用水量<sup>27</sup>(立方米)  
 Water consumption for other use<sup>27</sup> (m<sup>3</sup>)

<sup>24</sup> 報告期內未訂立用水量相關目標。

<sup>24</sup> No water-related goals and targets were set during the reporting period.

<sup>25</sup> 用水量包括總部大樓(由第三方營運的飯堂除外)和加路連山工場。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月應用區域供冷系統所致。

<sup>25</sup> 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.

<sup>26</sup> 自2018年7月25日之後，加路連山工場的水冷式空調系統終止，令加路連山工場再無用水量，因此2018/19年度總用水量進一步下降。

<sup>26</sup> No more water was consumed at workshops in Caroline Hill after 25 July 2018 due to the termination of water-cooled air-conditioning system, resulting in further drop in total water consumption in 2018/19.

<sup>27</sup> 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。

<sup>27</sup> Including water use for irrigation, cleansing and general ablution purpose for the EMSD Headquarters Building and workshops.

## 環保採購

## Green Procurement

我們非常關注所有產品及服務的整個生命周期對環境影響，在任何適用及可行的情況下，會在採購指引加入環保要求。機電署甄選供應商時必會考慮他們的環保表現，鼓勵可供應環保產品的供應商登記成為機電署供應商。於2018/19年度，機電署供應商名冊共有837間環保供應商。年內，本署共斥資3,782萬元採購環保產品，佔部門總採購金額的8.25%以上。

At the EMSD, we place a strong focus on the environmental implications of products and services throughout their lifecycles. Our procurement guidelines incorporate environmental requirements wherever applicable and available. When selecting suppliers, we consider their environmental performance and encourage those who are able to provide green products to register on the EMSD Suppliers List. In 2018/19, the EMSD Suppliers Lists consisted of 837 environment-friendly suppliers. During the year, we spent a total of \$37.82 million (over 8.25%) of the total purchased value to procure green products.



為釐清服務及辦公室用品的採購規定或規格，我們於2010年成立了環保採購工作小組，協助員工就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。此外，我們亦會按環境保護署擬備的環保規格作出參考。

Regarding procurement requirements or specifications for our services, we have a Working Group on Green Procurement in E&M Works since 2010 to identify appropriate green materials and products, systems and construction methodologies for E&M works. We also take reference from the green specifications established by the Environmental Protection Department.

# 社會成效

## Social Performance

作為政府部門及領頭的機電工程服務供應商，機電署充分理解其在社會所擔當的獨特角色，致力貢獻社會。憑藉部門的資源與人才，我們不斷提升服務，滿足市民的需要。作為一個有社會責任感的僱主，我們亦重視對員工的關愛，致力提供良好安全的工作環境和多元化的培訓發展機會。

As both a government body and a leading E&M engineering service provider, the EMSD fully appreciates its unique role to contribute to the society. Leveraging on our resources and talents, we endeavour to continuously make improvement throughout our services to better address the needs of the community. As a socially responsible employer, we also place high importance on caring for our staff, providing a safe and sound working environment, as well as a variety of training and development opportunities.

### 社會目標

於匯報年度，我們擬定了具體目標，把社會責任的承諾實踐至具體行動，同時持續監察達標進度。

### Social Targets

During the year, we set up specific targets to convert our commitment on social responsibilities to detailed actions, and continued to monitor our progress against the set targets.



#### 2018/19 年度社會目標

#### Social Targets in 2018/19

#### 2018/19 年度工作進展

#### Progress in 2018/19

#### 2018/19 年度工作成果

#### Achievements in 2018/19

在 2021 年 3 月前將機電署營運服務的 OHSAS 18001 職業健康及安全管理系統過渡至最新的 ISO 45001 職業健康及安全管理系統 Transit from OHSAS 18001 to new Occupational Health and Safety Management System, ISO 45001, for Trading Services of the EMSD before March 2021	進行中 In Progress	於 2019 年 2 月完成將 OHSAS 18001 過渡至 ISO 45001 的差距評估 Gap Assessment for the conversion of OHSAS 18001 to ISO 45001 completed in February 2019
目標於 2016 年至 2020 年期間，為業界每年培訓 100 名四年制二級技術員 Train up to 100 nos. of Technician Trainee II (four-year) for the industry between 2016 and 2020 every year	進行中 In Progress	已招募 303 名四年制二級技術員 303 nos. of Technician Trainee II (four-year) recruited
每千名員工呈報的意外宗數不超過 5 宗 Not more than 5 nos. of in-house staff reportable accident per 1 000 staff	達標 Achieved	每千名員工呈報的意外宗數為 4.7 宗 4.7 nos. of in-house staff reportable accident per 1 000 staff
客戶滿意指數達到 6.6 分 (以 8 分為滿分計) Reach Customer Satisfaction Index of 6.6 (on an 8-point scale)	達標 Achieved	6.61 分 Index of 6.61
每名員工培訓日數達到 4.5 日 Reach 4.5 training days per staff	達標 Achieved	每名員工培訓日數為 5.43 日 5.43 training days per staff
於員工建議書計劃、工作改善小組計劃及業務流程改進建議獲得 75 項建議書 Obtain 75 Awards for Staff Suggestion Scheme and Work Improvement Team Scheme/Business Process Improvement Proposals	達標 Achieved	116 項 116 nos.



## 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。我們對機電服務要求標準高，藉此為市民提供更安全及優質的生活。

### 提高業界技能

機電署向來在分享專業知識和加強業界雙向溝通方面發揮主導作用。多年來，我們經常籌辦技術研討會、講座、論壇及嘉年華活動，積極向機電業界推廣和交流機電工程服務、能源效益、綠色作業、創新科技、職安健等良好作業方式。此外，我們從2012年起在香港機電業推廣工作小組擔當領導角色，讓來自公營機構、行業組織和工會的成員一同向年青一代推廣機電業，鼓勵他們投身業界。以下是簡介機電署於匯報年度推廣行業及增進知識的計劃和活動亮點。

### 車輛維修自願註冊計劃

為提升車輛維修業的服務水平及優化業界的專業形象，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」。我們希望透過「車輛維修工場自願註冊計劃」，確認合規格車輛維修車房符合技術、環境、安全、員工培訓、服務及文件處理等範疇的要求。截至匯報年度年底，在上述兩項計劃下，已有約9 300名車輛維修技工及2 060間車輛維修工場獲批准註冊。

約 Approximately

**9 300** 名 nos.



註冊車輛維修技工  
Registered vehicle mechanics

## Improving Electrical & Mechanical Service for the City

The EMSD has been providing various advisory and regulatory services for the city's E&M installations, including mechanical safety, gas safety, electrical safety, railway safety as well as energy efficiency and utilities monitoring. We pursue a high E&M standard to enhance the safety and quality of city life.

### Enhancing Industry Capabilities

The EMSD takes a lead in sharing professional knowledge and facilitating two-way communication with the industry. Over the years, we have hosted technical seminars, symposiums, forums and carnivals to help promote and exchange best practices on E&M engineering services, energy efficiency, green operation, innovation and technology, and occupational health and safety, among the E&M trade. We have also been taking the lead in the Hong Kong Electrical and Mechanical Trade Promotion Working Group, involving different practitioners from public organisations, trade associations and unions since 2012 to promote the E&M trade as a desirable career pathway to the younger generations. The following examples are the highlights of our trade promotion and knowledge enhancement schemes and programmes in the reporting year.

### Voluntary Registration Schemes for Vehicle Maintenance

To advance the service standard of the vehicle maintenance industry and uplift the professional image of the trade, the EMSD launched the Voluntary Registration Scheme for Vehicle Mechanics in 2007, and the Voluntary Registration Scheme for Vehicle Maintenance Workshops in 2015. We aim to recognise the compliance of the registered vehicle maintenance workshops in terms of technical, environmental, safety, staff training, service and documentation aspects. As of the end of the reporting year, there were approximately 9 300 vehicle mechanics and 2 060 workshops registered under the respective schemes.

約 Approximately

**2 060** 間 nos.



註冊車輛維修工場  
Registered vehicle  
maintenance workshops

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### 承辦商研討會

為維持卓越表現，確保客戶及廣大市民享有優良的服務，我們定期舉辦承辦商研討會交流技術和知識。2018年7月4日，本署的安全分部舉辦了一場以安全創新為主題的承辦商研討會，除了安排同事與承辦商分享最佳作業，亦介紹了機電署新成立的「機電創科網上平台」，促進廣泛應用新科技和創新。

研討會吸引約130名承辦商出席，交流安全及創新的知識。

The forum drew a crowd of approximately 130 contractors to share knowledge on safety and innovation.

### Contractors Forum

We engage and exchange expertise with contractors on a regular basis to maintain service excellence for our clients and the public. On 4 July 2018, our Safety Sub-division organised a Contractors Forum, focusing on the theme of "Innovation for Safety". Besides sharing safety best practices with the contractors, our colleagues introduced the establishment of E&M InnoPortal in enhancing the wide application for new technology and innovation.



### 機電工程署研討會 2018

為促進業界專家、學者及政府部門分享創科經驗和在創科研究上的突破，我們於2018年11月15日假香港科學園舉辦「共創智慧未來」研討會。活動有超過350位參加者，客戶部門和業界代表聚首一堂，分享彼此的心得及透過專題小組討論探討如何創建更好的綠色未來，研討的議題包括能源管理、紓緩氣候變化及營造利好創新的環境。

### EMSD Symposium 2018

To foster the sharing of experiences and research breakthroughs on technology and innovation, among industry experts, academics and government departments, we organised the EMSD Symposium with a theme, "Co-creating a Smart Future", on 15 November 2018 at the Hong Kong Science Park, attracting over 350 attendees. Representatives from client departments and the trade shared insights and explored ways to create a better green future through panel discussions, touched upon issues that include but not limited to energy management, climate change mitigation, and fostering an environment for innovation.

客戶部門和業界踴躍參與機電工程署研討會 2018。

The EMSD Symposium 2018 attracted a large crowd from client departments and the trade.



### 淡水冷卻塔和建築物能源效益技術研討會

機電署於 2018 年 12 月 14 日舉辦淡水冷卻塔和建築物能源效益技術研討會，吸引了 600 多名參加者。我們向業界介紹「淡水冷卻塔計劃」的主要事項及淡水冷卻塔的正確供水事宜。此外，機電署人員亦對新推出的《屋宇裝備裝置能源效益實務守則》及《建築物能源審核實務守則》2018 年版中的主要更新作出講解。一如往年，研討會也邀請了去年「慳神有計大比拼」比賽得獎的物業管理公司，講述其節能措施及成果。

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

The Technical Forum on Fresh Water Cooling Towers (FWCTs) and Buildings Energy Efficiency was held by the EMSD on 14 December 2018. Attracting over 600 attendees, we highlighted major aspects under the FWCTs Scheme as well as proper water connection to FWCTs. In addition, our colleagues also presented major updates on the newly published Code of Practice for Energy Efficiency of Building Services Installation 2018 Edition and Code of Practice for Building Energy Audit 2018 Edition. Similar to previous years, we invited a property management company that was an awardee of Energy Saving Championship Scheme in the previous year to share their measures and achievement in energy saving.

### 建造業安全周嘉年華

於 2018 年 5 月，本署繼續支持第七屆「建造業安全周」的主要年度活動「建造業安全周嘉年華」。今年的嘉年華以「協力提升工地安全」為主題，我們設立有趣及具教育意義的遊戲攤位，讓建造業工友和公眾認識建造業安全，推廣建築地盤「零意外」。

### Construction Safety Week Carnival

In May 2018, we continued to support the annual Construction Safety Week Carnival, a major event at the Seventh Construction Safety Week with the theme of "Partnering for Safety Enhancement". In the Construction Safety Week Carnival, the EMSD set up interesting educational game booths for construction workers and the public to promote "zero accidents" at construction sites.

機電署署長薛永恒先生(右九)出席「建造業安全周嘉年華」開幕禮。

Director of Electrical and Mechanical Services, Mr Sit Wing-hang, Alfred (ninth right), attended the opening ceremony of the Construction Safety Week Carnival.



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### 2018年「機電·啟航」迎新典禮

由機電署牽頭的香港機電業推廣工作小組於2018年9月20日舉辦第二屆「機電·啟航」迎新典禮，歡迎逾660位年青學員參加機電培訓計劃。現今數碼科技一日千里，今年的活動特別注重提倡學員在機電業應用創新技術，同時宣傳機電業的就業和發展前景。

### “E&M GO! 2018” Orientation Ceremony

The Hong Kong Electrical and Mechanical Trade Promotion Working Group, led by the EMSD, welcomed over 660 young trainees who joined E&M training schemes. The “E&M GO!” Orientation Ceremony was organised for a second year on 20 September 2018. In light of new digital technologies, this year we put a strong focus on enhancing the trainees’ awareness of applying technological innovations in the E&M industry, as well as promoting the trade’s career prospects and development.

「機電·啟航」迎新典禮的出席盛況。  
“E&M GO!” Orientation Ceremony was very well received.



### 機電創科網上平台

我們努力為機電業引入新科技，並協助創科企業將研發成果商品化。機電署特別設立「機電創科網上平台」，就政府部門、公營機構的需要與初創企業和學界提供的相關創科解決方案進行配對，另亦提供本署總部大樓及安排合適場地進行機電相關項目的實地測試，以核實其成效和表現。

### E&M InnoPortal

We strive to assist the E&M trade in uptaking new technologies and supporting the commercialisation of research and development achievements from innovation and technology (I&T) enterprises. Our E&M InnoPortal was set up as a platform to match technology development needs from government departments and public organisations, with relevant I&T solutions offered by start-ups and academic institutions. We also offered our headquarters building and arranged suitable venues to field-test E&M-related projects and validate their effectiveness and performance.

### 社區教育計劃

除了加強與公眾的關係，透過社區外展活動，可提高公眾對能源效益和使用可再生能源的意識，以及加深他們了解本署規管電力、氣體及機械安全的職能。年內，機電署在社區推行多項宣傳計劃及巡迴展覽，向不同的關注團體介紹我們的工作和宣傳機電知識。

### Community Educational Programmes

On top of strengthening our relationship with the public, community outreach is essential for us to enhance public awareness of energy efficiency and renewable energy, as well as our regulatory functions in electrical, gas and mechanical safety. Within the year, the EMSD hosted a wide array of promotional events and roving exhibitions to introduce our work and E&M knowledge to different interest groups.

## 機電青少年大使計劃

我們透過「機電青少年大使」計劃招募學童及青少年成為機電署的大使，向他們灌輸機電安全、能源效益和機電工程的知識。於匯報年度，本計劃安排大使到不同機電設施參觀考察，包括以下具代表性的活動：

## E&M Young Ambassador Programme

Through recruiting children and teenagers to become Ambassadors in our E&M Young Ambassador Programme, we instill in Ambassadors solid knowledge on E&M safety, energy efficiency and E&M engineering. During the reporting year, a number of site visits were organised for the Ambassadors, including the following signatory events:

### 2018年4月 April 2018

#### 參觀「機電·夢飛翔」展覽館 Visit to the EMSD Gallery

為機電青少年大使安排導賞團參觀「機電·夢飛翔」展覽館，與環境局局長黃錦星先生對話。

Ambassadors were given a guided tour to the EMSD Gallery where they had a dialogue with Mr Wong Kam-sing, Secretary for the Environment.



#### 機電青少年大使周年聚會 E&M Young Ambassador Annual Gathering

### 2018年8月 August 2018

#### 參觀九龍站及其港鐵展廊 Visit to Kowloon Station and MTR Gallery

#### 參觀機場民航處航空教育徑 Visit to Education Path of Civil Aviation Department

#### 參觀T·PARK[源·區] Visit to T·PARK

為機電青少年大使暑假期間安排了參觀T·PARK[源·區]，讓他們在課堂外學習機電知識概念。

Tour visits were arranged for the Ambassadors to T·PARK during the summer holiday to enhance their E&M knowledge outside classroom.



#### 機電工作體驗日 E&M Young Ambassador Job Shadow Day

### 2018年12月 December 2018

#### 參觀青馬管制區 Visit to Tsing Ma Control Area

機電青少年大使參加青馬管制區導賞團，了解區內的機電設施，例如隧道照明系統、通風系統及控制監察系統。

Ambassadors joined a guided tour to the Tsing Ma Control Area to learn about its E&M facilities, e.g. tunnel lighting system, ventilation system as well as the control and surveillance system.



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### 2018 國際環保博覽

在2018年，本署參與第13屆國際環保博覽，設置攤位向參觀者介紹本署在推廣能源效益及節能的工作成果，並且透過一系列展板和短片，介紹「機電創科網上平台」，講解如何協助機電初創企業利用「機電創科網上平台」在業界內應用創新科技。

### 推廣樂齡科技

於2018年11月，我們參與「樂齡科技博覽暨高峰會」，宣傳樂齡科技，向公眾推廣改善長者生活質素的創新科技和其應用。我們的參展攤位展出多種專為長者而設的健康管理技術，以及一款創新的電動輪椅，後者在機電署與香港社會服務聯會合辦的「樂齡科技顯愛心」比賽奪得中學組金獎。

### Eco Expo Asia 2018

At the 13th Eco Expo Asia in 2018, we set up a booth to showcase the Department's achievement in promoting energy efficiency and conservation. We also set up a series of panels and videos this year to introduce the E&M InnoPortal and its work in supporting E&M start-ups for applying innovative technologies to the E&M trade via E&M InnoPortal.

### Promoting Gerontechnology

The EMSD promoted gerontechnology at the Gerontech and Innovation Expo cum Summit in November 2018 to raise public awareness on innovative technologies and applications in enhancing the quality of life of the elderly. Our exhibition booth displayed different types of technologies to aid the elderly's health management, as well as an innovative electric wheelchair that had won the gold prize in the secondary school category of the Gerontech Youth Challenge organised by the EMSD and the Hong Kong Council of Social Service.

我們的展覽攤位展示多項樂齡科技。  
Our exhibition booth showcased gerontechnology.



### 機電業博覽2019 —「機電新動力」

由機電署牽頭的香港機電業推廣工作小組於2019年3月8日主辦機電業博覽2019，吸引逾2 000人參加。今年博覽主題為「機電新動力」，展示機電業塑造智能香港所作出的努力，並提供培訓、入職途徑、就業前景及晉升階梯等資訊，鼓勵青年人投身業界。

### E&M Expo 2019 – E&M New Momentum

On 8 March, the E&M Expo 2019, organised by the Hong Kong E&M Trade Promotion Working Group leading by the EMSD, attracted over 2 000 participants. The Expo, entitled "E&M New Momentum", showcased the efforts of E&M trade in developing a smart Hong Kong. Latest information on training, entry paths and career prospects were provided to encourage young people to join the industry.

機電業博覽2019吸引中學生、家長和教師出席，讓他們對機電業就業前景有更多了解。

E&M Expo 2019 attracted secondary school students, their parents and teachers to join, so then they can know more about career prospects of the E&M trade.



## 其他業界及公眾參與活動 Other Trade and Public Engagement Events



### 車輛維修自願註冊計劃

#### Voluntary Registration Schemes for Vehicle Maintenance

- 製作專題報道分享參與計劃的好處。報道於2019年3月在政府新聞處網站、Facebook和YouTube發布。  
Produced a feature story that shared the advantages of participating in the schemes and published the story on Information Services Department's website, Facebook and YouTube channels in March 2019.
- 到訪逾 **270** 間尚未註冊參與「車輛維修工場自願註冊計劃」的車輛維修工場。  
Visited over **270** vehicle maintenance workshops not yet registered under the Voluntary Registration Scheme for Vehicle Maintenance Workshops.



### 《重新校驗技術指引》

#### Technical Guidelines on Retro-commissioning

- 舉辦 **29** 場簡報會或分享會向各界機構講解指引。  
Delivered **29** presentations/sharing sessions to various organisations.



### 能源效益

#### Energy Efficiency

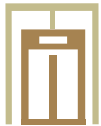
- 舉辦 **72** 場外展講座，及安排 **330** 次機電署總部教育徑參觀活動，當中包括了 **21 189** 名來自不同機構和學校的訪客。  
Organised **72** outreach talks and **330** visits to the Education Path of the EMSD Headquarters for **21 189** visitors from different organisations and schools.
- 舉行 **108** 個有關「強制性能源效益標籤計劃」的學校展覽。  
Conducted **108** school exhibitions on the Mandatory Energy Efficiency Labelling Scheme.



### 淡水冷卻

#### Fresh Water Cooling

- 舉辦 **5** 場外展講座提倡採用淡水冷卻塔。  
Organised **5** outreach talks to promote the use of fresh water cooling tower.



### 升降機和自動梯安全、機動遊戲機安全及架空纜車安全

#### Lifts and Escalators Safety, Amusement Rides Safety and Aerial Ropeways Safety

- 在幼稚園、青年中心及長者中心舉辦了 **457** 場外展講座，向超過 **26 960** 名參加者，推廣安全使用機動遊戲、架空纜車、升降機和自動梯。  
Conducted **457** sessions of outreach talk for kindergartens, youth centres and elderly centres, reaching over **26 960** participants to promote the safe use of amusement rides, aerial ropeways, lifts and escalators.
- 為業界代表、升降機/自動梯擁有人、業主立案法團成員及物業管理人員舉行 **63** 場講座和其他宣傳活動，講解《升降機及自動梯條例》和升降機及自動梯的管理、優化改善和使用安全。  
Conducted **63** 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 management, modernisation and safe use of lifts and escalators.



### 氣體安全

#### Gas Safety

- 為氣體用戶、業界和工程承辦商舉辦 **56** 場氣體安全講座及研討會，並為推廣《避免損壞氣體喉管工作守則》，進行 **187** 次工地坑道巡查。  
Conducted **56** gas safety talks and seminars for gas users, trades and works contractors, and carried out **187** trench inspections to construction sites to promote Code of Practice on Avoidance of Damage to Gas Pipes.



### 義工服務

#### Voluntary Services

- 本署的員工共花了 **432** 小時完成 **10** 個義工項目，成功籌得 **29,265** 元。受惠機構包括華懋集團、保良局、公益金、義務工作發展局及建造業關懷基金。  
**10** volunteering projects were completed by our staff who had spent a total of **432** man-hours. Our staff had successfully raised **\$29,265**. Beneficiaries include Chinachem Group, Po Leung Kuk, the Community Chest of Hong Kong, Agency for Volunteer Service and Construction Charity Fund.

# 社會成效

## Social Performance

### 關懷我們的員工

我們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，我們亦為員工提供多元化的培訓機會。此外，我們致力履行企業公民責任，更連續第五年榮獲香港社會服務聯會頒發「同心展關懷」標誌。

#### 員工數據

截至2019年3月，機電署共有5 566名員工(包括全職、常任制及合約制員工)，其中605名員工為新入職人員(約佔員工總人數10.9%)。年內並無聘用兼職員工。本匯報年度的離職率為3.1%。

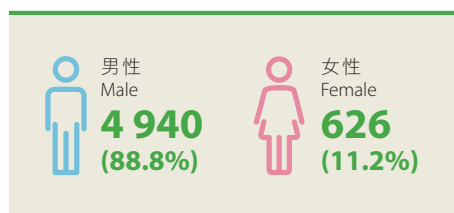
### Caring for our Staff

Apart from 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 diverse staff training opportunities. Furthermore, underlining our dedicated commitment in responsible corporate citizenship, we have been awarded the Caring Organisation Logo by the Hong Kong Council of Social Service for the fifth consecutive year.

#### Employment Statistics

As of March 2019, we had a total of 5 566 staff (including full-time, permanent and contract), out of which 605 were new hires (around 10.9%). No part-time staff was recorded during the year. The turnover rate was 3.1% in this reporting year.

#### 按性別劃分 Breakdown by Gender



#### 按職級劃分 Breakdown by Grade



### 多元化與平等機會

機電署絕不容許工作間出現任何形式的歧視行為。我們在部門內實行共融，並恪守平等機會原則，以確保員工不會受到騷擾或誹謗。

年內我們繼續參與《有能者·聘之約章》及共融機構嘉許計劃的僱主機構，積極推動有特殊需要的人士就業。於匯報期內，我們共僱用200名輕度殘疾人士，約佔員工總人數3.6%。我們致力提供和諧體諒的共融工作環境，並秉持企業文化，尊重員工的人權和他們在作業場所應有的權利，嚴禁轄下任何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 Opportunities

The EMSD considers all forms of discrimination to be unacceptable in the workplace. We embrace the diversity within the organisation and are committed to the goal of equal opportunities. We ensure our staff are free from harassment and vilification.

We continued to take part in the Talent-Wise Employment Charter and Inclusive Organisations Recognition Scheme as an Employer Organisation to promote employment with special needs. During the period, we employed a total of 200 staff members with minor disabilities, equivalent to about 3.6% of our total workforce. We strive to provide a harmonious, considerate and inclusive working environment. Our respect to human and workplace rights is ingrained in our culture where the use of forced or compulsory labour is forbidden 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 the child and forced labour.

### 職業安全與健康

機電署各部別均已設立綜合管理系統，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。

### Occupational Safety and Health

Integrated Management System (IMS) has been put in place in our divisions to govern the planning, implementation, evaluation and continuous improvement of Occupational Safety and Health (OSH) practices. We strictly adhere to the EMSD Safety and Health Policy that stipulates work safety as the foremost consideration when our staff delivers any E&M services.



## 職安健委員會

我們按照OHSAS 18001標準(只適用於營運服務)設立職安健管理系統，藉此確保員工和承辦商的作業安全及健康，此外並成立策導委員會，全面統籌及監察本署營運上所有事宜。職業安全及健康策導委員會轄下的部別職安健委員會職責是加強溝通，推行可保障工作間安全及健康的作業方法。截至2019年3月31日，全體員工均在部別職安健委員會中設有代表。

## 職安健委員會的角色與職責

### 職安健策導委員會

#### Steering Committee on OSH

- 成員來自高級管理層，並由助理署長主持  
Comprises senior management staff and chaired by Assistant Director
- 制訂部門職安健政策和措施，以提高內部的安全意識及培養安全文化  
Formulates departmental OSH policies and initiatives on promoting safety awareness and safety culture throughout the organisation
- 監察職安健政策和措施的實施成效及進行情況，持續改善安全及健康表現  
Monitors the effectiveness and compliance of OSH policies and initiatives for continuous improvement
- 檢討內部及承辦商的工傷事件  
Reviews in-house and contractor accidents
- 每三至六個月開會一次  
Meets every three to six months

### 部別職安健委員會

#### Divisional OSH Committees

- 成員來自管理層及部別的員工代表，並由總工程師或其代表主持  
Comprise management and staff representatives from divisions and chaired by Chief Engineer or his delegate
- 商討職安健議題及推行職安健措施  
Discuss OSH issues and implement OSH initiatives
- 向員工推廣職安健  
Promote OSH among staff
- 每三個月開會一次  
Meet every three months

## 針對重大職安健風險的指引

我們在綜合管理系統的框架下編製了系統程序手冊，訂明識別作業相關危險和評估風險的程序。本署的技術通告載有發現風險及危險時作出通報及調查的詳細程序。我們亦進行內部審計以評估及減低潛在的風險，並持續改進我們的職業健康及安全管理系統。機電署轄下的策略業務單位會根據各自的業務性質進行風險評估，並會擬定相關的作業指示，以防範職安健危險和緩解潛在影響。員工遇到與工作有關的危險，應向直屬上司報告，並轉由組別安全督導員或部別安全主任跟進。為保護員工免被解僱或被報復，我們會就任何與工作有關的危險進行調查，並處理所有合理的查詢。員工應確保在安全環境下工作，如有疑問應向直屬上司尋求建議。

## OSH Committees

We have established an OSH management system in accordance with the standard of OHSAS 18001 (applicable to Trading Services only) to ensure workplace safety and health for our staff and contractors. A steering committee has been formed to oversee and monitor all OSH issues of our operations. Overseen by the Steering Committee on OSH, the Divisional Occupational Safety and Health Committees (DivOSHCs) enhance communication and adoption of workplace safety and health practices. All workforce was represented by the DivOSHCs as of 31 March 2019.

## Roles and Responsibilities of OSH Committees

### OSH Committees

#### Roles and Responsibilities of OSH Committees

We formulate a System Procedure Manual under our IMS to set out the process of identification of work-related hazards and risk assessment. Our Technical Circular details the reporting and investigation procedure upon identification of risks and hazards. We also conduct internal audits to evaluate and mitigate potential risks, as well as ensure continuous improvement to our health and safety management system. Each of our Strategic Business Unit executes own risk assessment regarding its specific business nature, and establishes relevant work instructions to prevent OSH hazards and mitigate potential impacts. In face of work-related hazards, staff are requested to report to their immediate supervisors, which then are to be followed up by Sectional Safety Supervisor or Safety Officer of the division. To protect staff against reprisals, we will conduct investigation in relation to any work-related hazards and answer to all reasonable enquiries. Staff should always ensure they are working under safe conditions and seek supervisor's advice in case of doubt.

# 社會成效

## Social Performance

### 職安健培訓及推廣

我們通過員工培訓、職安健計劃和顧問服務等渠道強調職安健的重要性，同時定期向員工派發職安健宣傳物料，員工亦可在部門內聯網的「安全角」查閱相關資訊。此外，本署並會安排職安健講座和舉辦各類比賽，提高員工的職安健意識。本署的訓練組也定期安排平安卡培訓、安全督導員培訓及一般職安健培訓課程，為不同崗位的同事提供職安健知識。在醫療方面，機電署公務員根據其受僱、合約條款可享有《公務員事務規例》及公務員事務局通告和通函列明的醫療及牙科護理福利。如員工需要情緒支援，我們亦提供熱線等心理支援服務。

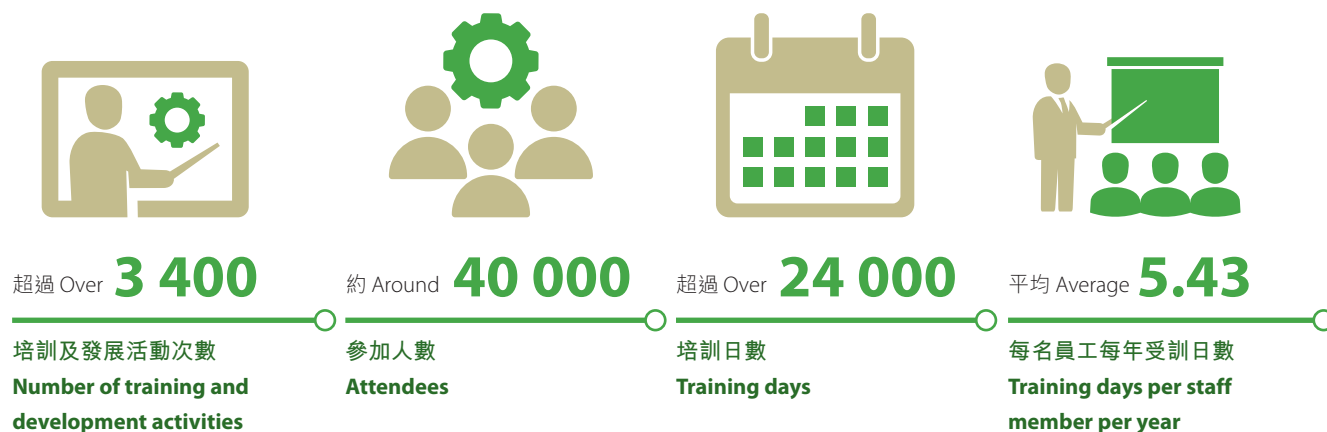
機電署舉辦承辦商研討會以確保承辦商在工地上的安全標準，並推廣最新的良好工地安全措施。承辦商亦需根照《工地安全特別規格》，為工地工人提供必要的安全培訓。

### 培訓及發展

機電署透過見習工程師及技術員訓練計劃為新入職員工提供專業及技術培訓，並且投資六億元，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，詳細擬定及推行員工培訓及發展計劃。員工可按個人需要報讀技術技能、證書、職業發展和職安健等課程。

### 2018/19年度員工培訓數據

#### Staff Training Statistics in 2018/19



### Training and Promotion of OSH

We use different channels, for examples, staff training, OSH programmes and consultancy service, to emphasise the importance of OSH. OSH promotional materials are delivered to our staff regularly. The staff can access the related information at the "Safety Corner" in departmental intranet. In addition, we arrange OSH seminars and competitions to increase staff awareness. Besides, our Training Unit organises regular Green Card Training, Safety Supervisor Training, and General OSH Training to enable the staff in different job positions to receive OSH education. Regarding healthcare services, those EMSD staff appointed on civil services and non-civil service terms are entitled to a range of medical and dental benefits, based on their employment terms, given that they meet eligibility criteria as set out in the Civil Service Regulations and Civil Service Bureau Circulars and Circular Memoranda. Psychological support service through hotline service is also offered to staff if they would like to reach out for emotional support.

To upkeep the high safety standards of the EMSD contractors in their works and to promote the latest development of good site safety measures on workers' behaviour, an EMSD Contractors Forum has been arranged. Contractors are also required to provide necessary safety training for site personnel as listed out in "Particular Specifications on Site Safety".

### Training and Development

Alongside the EMSD's Engineering Graduate and Technician Training Schemes that offer professional and technical trainings, a total of \$600 million will be invested in recruiting and training over a thousand of technician trainees by 2020. To further ensure a holistic personal and professional growth of our staff, we prepare a Departmental Training and Development Plan on an annual basis to detail planning and implementation of all staff training and development programmes in the EMSD. Different programmes ranging from technical skills, certificate courses, career development and OSH related courses are available for our staff to apply.

## 見習工程師訓練計劃

2018/19 年度共有 20 位見習工程師受訓，分別來自電力、機械、電子、屋宇裝備、資訊科技及生物醫學工程等背景。我們安排見習工程師轉換到本署的不同部別和其他政府部門接受工作培訓，讓他們汲取理論知識和實習訓練，掌握實用技能，為長遠事業發展打好基礎。

## 技術員訓練計劃

技術員訓練計劃為學員提供技術訓練，安排實習學員分配到政府轄下不同場所工作，加深對操作各類機電工程系統的技術。於匯報年度，我們成功招募 217 位見習技術員，包括 99 位四年制的見習二級技術員、68 位三年制的見習二級技術員及 50 位三年制的見習一級技術員。

此外，五名機電署見習學員亦被挑選參加海外交流計劃，分別負笈蘇格蘭、南韓及日本，修讀實用技能課程和參觀多間企業。除了與當地學徒交流技術外，亦學習了不同主題，包括如何應用建築信息模擬技術和虛擬實境技術協助查找建築物的潛在風險。

機電署見習學員參觀蘇格蘭的建築工地。

The EMSD trainees paid a visit to a construction site in Scotland.

## Engineering Graduate Training Scheme

In 2018/19, 20 engineering graduates were recruited from the field of electrical, mechanical, electronics, building services, information technology and biomedical engineering. We train the graduates in different divisions of the EMSD and other governmental departments on a rotational basis, aiming to instill them with theoretical knowledge, hands-on training as well as practical skills that are essential for their long-term career development.

## Technician Training Scheme

Under the Technician Training Scheme, our trainees have opportunities to brush up their skills through operating E&M engineering systems at different government premises. During the reporting year, we successfully recruited 217 trainees, including 99 technician trainees II (four-year), 68 technician trainees II (three-year), and 50 technician trainees I (three-year) respectively.

Five of our trainees were selected for an overseas exchange programme to Scotland, Korea and Japan respectively, where they were offered with practical skill classes and firm visits. Participants were not only able to exchange their skills with local apprentices, but also studied various topics including Building Information Modelling and virtual reality that can help investigate the potential risk of a building.



## 中期實習計劃

我們除了為見習工程師和見習技術員提供職業訓練，另亦於 2015 年開始推出為期一年的中期實習計劃，旨在扶植在學的工程學生，讓他們汲取更多實際工作經驗，為投身機電業作好準備。

## Medium Term Internship Programme

Besides the provision of vocational training to the graduates and technicians, we have implemented a one-year Medium Term Internship Programme since 2015, which is designed to help the engineering undergraduates better equip themselves with actual working experience before entering the E&M industry.

# 社會成效

## Social Performance

### 培訓發展合作項目

年內我們與大灣區機構一同加強機電人才培訓及發展方面的合作，主要活動和計劃如下：

### Collaboration on Training Development

During the year, we partnered with the institutions in the Greater Bay Area to strengthen collaboration on E&M talent training. Some of the activities and initiatives are highlighted below:



### 員工溝通

工作場所的開放溝通是高效營運的關鍵。正因如此，我們致力與員工保持雙向溝通，鼓勵他們發表意見和提出創新意念。

#### 員工滿意度調查

每隔兩至三年，我們會聘請獨立專門機構進行員工滿意度調查，收集員工的意見和了解他們的看法。最近一次調查於2019年3月進行，並舉行十場調查前焦點小組討論，以收集對問卷調查設計的意見。以10分為滿分計，2019員工滿意度為6.8分。我們會在緊接的財政年度進行調查後的跟進工作，成立焦點小組，擬定行動方案回應員工關注的議題。

### Staff Communication

Open communication in the workplace is vital to efficient and productive operation. In view of this, a range of two-way communication channels is offered to our staff to encourage feedback and innovative ideas.

#### Staff Satisfaction Survey

We appoint an independent specialist to conduct a staff satisfaction survey every two to three years to collect opinion and thoughts from our staff. The latest survey was conducted in March 2019 where ten sessions of the pre-survey focus group discussion were organised to gather the opinion of the survey design. The Staff Satisfaction Rating in 2019 was 6.8 out of a scale of 10. Following up with the survey, focus groups will be organised in the coming financial year with a view to working out action plans to address staff concerns.

## 員工諮詢途徑

為進一步加強內部溝通，我們設有四個部門協商委員會和五個個別協商委員會，定期與管理層會面，表達員工的意見。員工既可參加上述的協商委員會，亦可自由參加11個部門工會和組織，表達他們的意見和關注議題，以作為集體談判。除此之外，我們亦廣開輕鬆的渠道讓員工傾談他們關注的事項，例如午餐會及茶聚等。

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，讓員工就任何不滿發表意見。所有關於勞工措施的申訴均會記錄在案，並透過正式機制處理和解決。

## 員工建議計劃

為鼓勵員工提高部門的生產力和表現，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，就工作效率、職安健及善用資源等提出建議。於2018/19年度，我們共收到34份員工建議書，這些得獎建議其後上載到機電署內聯網供同事分享交流。此外，我們亦推行多項計劃，改善員工福利和工作環境及優化工作流程。

## Staff Consultation Channels

To further reinforce internal communication, we have set up four departmental consultative committees and five divisional consultative committees to allow regular exchanges of the staff views with the senior management. We welcome staff members to take part in these consultative committees, as well as 11 staff unions and associations, to share their feedback and concerns for collective negotiation. In addition, informal channels, such as luncheon and tea gatherings, are available for the staff to discuss their interested matters.

To ensure proper handling of staff complaints, the Staff Complaints Procedure is a mechanism that allows our staff to report complaints. Grievance associated with labour practices are filed, addressed, and resolved through formal mechanisms.

## Staff Suggestion Programmes

We have been organising various staff suggestion programmes, such as the Work Improvement Team Scheme, the Staff Suggestion Scheme, and the Business Process Improvement to incentivise our staff to improve the Department's productivity and performance. Suggestions made relate to work efficiency, OSH, resources conservation, etc. In 2018/19, a total of 34 staff suggestion proposals were received. These award-winning ideas were then uploaded to our intranet for sharing and exchanging among colleagues. Moreover, we have also implemented several initiatives to improve the staff's welfare, working environment and optimisation of workflow.



培養員工創新的潛能

Unleash the Potential in Innovation within our Staff



於第二個五年策略計劃，其中一項策略是在部門應用創新，為此我們舉辦了「Inno@E&M 創新科技挑戰賽」，邀請機電署員工工作出提議，建議如何利用創科提高機電署或其他政府部門的服務質素。我們一共接獲140項建議，分別涵蓋物聯網、自動化科技、人工智能和能源效益等範疇。

In light of the second Five-year Strategic Plan, one of our strategies is to promote the application of innovation within the Department. Inno@E&M Challenge was a contest which invited the EMSD staff to submit proposals of using I&T to improve the service quality of the EMSD or other government departments. We received a total of 140 proposals that covered aspects including Internet of Things, automation technology, artificial intelligence, and energy efficiency.

# 社會成效

## Social Performance

### 表揚傑出員工

我們感謝員工提供卓越服務，並定期表揚他們的傑出表現和貢獻。署長嘉許狀是頒發給對提高部門的效率或福利有重大貢獻的同事。本匯報年度共有 103 位員工獲頒發此獎狀。

### Staff Recognition

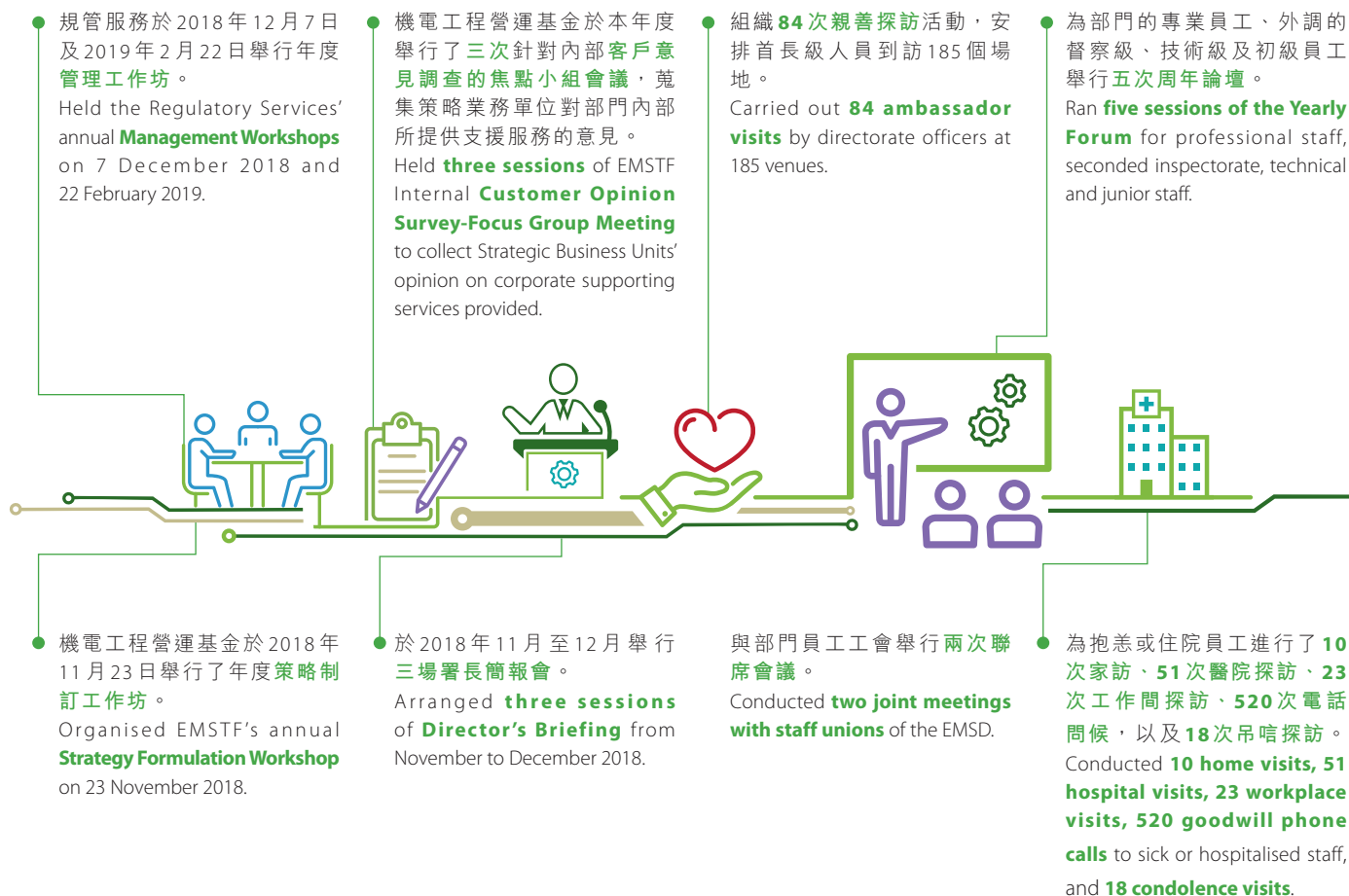
We express compliments to our staff regularly in order to recognise them for their outstanding service and contribution. The Director's Commendation is presented to the staff who contributed to the Department's working efficiency and well-being. In this reporting year, a total of 103 staff received this award.

### 2018/19 年度員工活動

我們在年內舉辦了多項員工活動，部分列表如下：

### Staff Engagement Activities in 2018/19

A number of staff engagement activities were organised during the year. Some of them are listed below:



# 全球報告倡議組織內容索引

## GRI Content Index



對於本報告的英文版，全球報告倡議組織確認本報告按要求清晰表述全球報告倡議組織內容索引以及標示「一般披露」102-40至102-49的位置。

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report. The service was performed on the English version of the report.

可持續發展報告標準 GRI Standards	一般披露 General Disclosures	參照/*直接解釋 Reference/*Direct Answer	頁數 Page No.	外部認證 External Assurance
GRI 101：基礎 2016 GRI 101: Foundation 2016				
GRI 102：一般披露 2016 GRI 102: General Disclosures 2016	<b>機構簡介 Organisational Profile</b>			
	102-1 機構名稱 Name of the organisation	關於本報告 About this Report	p. 120	✓
	102-2 業務活動、品牌、產品及服務 Activities, brands, products, and services	部門簡介及架構 Organisational Profile and Structure	封面內頁 Inner page of Cover	✓
	102-3 機構總部的地址 Location of headquarters	香港九龍啟成街3號 3 Kai Shing Street, Kowloon, Hong Kong	-	✓
	102-4 營運地點 Location of operations	只限香港 Hong Kong only	-	✓
	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	-	✓
	102-7 機構的規模 Scale of the organisation	機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 22-23, 81	✓
		社會成效 Social Performance	p. 150	
	102-8 有關僱員及其他員工的資料 Information on employees and other workers	可持續發展管理方針 Sustainability Management Approach	p. 126	✓
		社會成效 Social Performance	p. 150	
		統計資料摘要 Summary of Statistics	p. 168-169	
	102-9 供應鏈 Supply chain	可持續發展管理方針 Sustainability Management Approach	p. 126	✓
		* 機電工程署聘請了2 529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 2 529 suppliers engaged by the EMSD. They are mainly involved in provision of parts/ equipment and services related to E&M installation, operation and maintenance.		
	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. 120	✓
	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. 123	✓
	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. 127-131	✓
	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： * The EMSD holds membership in the following associations. 1) 美國能源工程師學會 Association of Energy Engineers 2) 香港照明學會 CIE (Hong Kong) Limited 3) 國際鐵路安全議會 International Railway Safety Council 4) 保障資料主任聯會 Data Protection Officers' Club 5) 綠十字會 Green Cross Group 6) 香港職業安全衛生協會 Hong Kong Occupational Safety and Health Association	-	✓

# 全球報告倡議組織內容索引

## GRI Content Index

策略 Strategy				
102-14	最高決策者的聲明 Statement from senior decision-maker	機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 2-9	✓
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. 122-123	✓
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	機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 11, 75	✓
管治 Governance				
102-18	管治結構 Governance structure	*我們的管治結構載於： <a href="https://www.emsd.gov.hk/tc/about_us/our_organisation/">https://www.emsd.gov.hk/tc/about_us/our_organisation/</a> * Our governance structure is listed on our website at: <a href="https://www.emsd.gov.hk/en/about_us/our_organisation/">https://www.emsd.gov.hk/en/about_us/our_organisation/</a> 我們的品質、環境及生產力策導委員會及職安健策導委員會負責經濟、環境和社會主題的決策。Our Quality, Environmental & Productivity Steering Committee and Steering Committee on OSH are responsible for decision-making on economic, environmental and social topics.	-	✓
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。機電署的助理署長負責監督機構內部的可持續發展議題。 * Our senior management staff participates in Quality, Environmental & Productivity Steering Committee and internal working group on green procurement. Assistant Directors of the EMSD are appointed to oversee sustainability issues within the organisation.	-	✓
持份者參與 Stakeholder Engagement				
102-40	持份群體清單 List of stakeholder groups	關於本報告 About this Report 可持續發展管理方針 Sustainability Management Approach	p. 120 p. 124-125	✓
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，另有九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。全體的員工(100%)都受集體談判協議的保障。 * There are 11 EMSD staff unions joined on voluntary basis. There are also nine departmental consultative committees who are representatives of all grades and ranks of the EMSD staff to liaise with the Department for the well-being of the staff. All of our employees (100%) are covered by collective bargaining agreements.	-	✓
102-42	界定及挑選持份者 Identifying and selecting stakeholders	關於本報告 About this Report	p. 120	✓
102-43	引入持份者參與的方針 Approach to stakeholder engagement	關於本報告 About this Report 可持續發展管理方針 Sustainability Management Approach	p. 120 p. 124-125	✓
102-44	提出的主要議題及關注事項 Key topics and concerns raised	關於本報告 About this Report	p. 121	✓



### 報告方式 Reporting Practice

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. 120	✓
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. 120-121	✓
102-47	重要議題清單 List of material topics	關於本報告 About this Report	p. 121	✓
102-48	重整信息 Restatements of information	統計資料摘要 Summary of Statistics	p. 165-167	✓
102-49	匯報上的改變 Changes in reporting	關於本報告 About this Report *「避免對員工強迫勞動」和「保安政策及培訓」沒有被納入重要議題列表。「關於本報告」部分亦概述了新添加的議題邊界。 * "Avoid Forced Labour" and "Security Policy and Training" were removed from the list of material topics. Newly added topic boundaries were also outlined in "About this Report".	p. 121	✓
102-50	匯報期 Reporting period	關於本報告 About this Report	p. 120	✓
102-51	上一份報告的日期 Date of most recent report	2018年12月 December 2018	-	✓
102-52	匯報周期 Reporting cycle	關於本報告 About this Report	p. 120	✓
102-53	查詢報告的聯絡點 Contact point for questions regarding the report	關於本報告 About this Report	p. 121	✓
102-54	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. 120	✓
102-55	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. 157-164	✓
102-56	外部認證 External assurance	關於本報告 About this Report 獨立保證意見聲明書 Independent Assurance Opinion Statement	p. 120 p. 172-175	✓

# 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	特定議題標準 Topic-specific Standards		參照/*直接解釋 Reference/*Direct Answer	頁數 Page No.	外部認證 External Assurance
<b>經濟 Economic</b>					
<b>經濟成效 Economic Performance (財務表現 Financial Performance)</b>					
GRI 103 : 管理方針 2016	103-1 103-2		機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 81	✓
GRI 103: Management Approach 2016	103-3		關於本報告 About this Report	p. 121	
GRI 201 : 經濟成效 2016	201-1	機構所產生及分配的直接經濟價值 Direct economic value generated and distributed	機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 81	✓
GRI 201: Economic Performance 2016					
<b>間接經濟影響 Indirect Economic Impacts</b>					
GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		社會成效 Social Performance	p. 142-149	
GRI 203 : 間接經濟影響 2016	203-1	基礎設施投資與支援性服務 Infrastructure investments and services supported	機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 14-19, 80-85	✓
GRI 203: Indirect Economic Impacts 2016	203-2	重大間接經濟影響 Significant indirect economic impacts	社會成效 Social Performance	p. 142-149	✓
<b>採購實務 Procurement Practices</b>					
GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		環保成效 Environmental Performance	p. 141	
GRI 204 : 採購實務 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(即指香港)供應商/承辦商或分銷商。香港以外的供應商於2018/19年度只佔大約0.02%。 * Acquisition of services and goods handled by Supplies sub-division are mainly from local (i.e Hong Kong) suppliers/contractors or local agents. Suppliers outside Hong Kong only take up around 0.02% in 2018/19.	-	✓
GRI 204: Procurement Practices 2016					
<b>遵守市場行為法規 Market Behaviour Compliance</b>					
GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		可持續發展管理方針 Sustainability Management Approach	p. 122-123, 126-127	
GRI 206 : 反競爭行為 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. 171	✓
GRI 206: Anti- competitive Behaviour 2016					
<b>環境 Environmental</b>					
<b>物料 Materials</b>					
GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		環保成效 Environmental Performance	p. 137	
GRI 301 : 物料 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. 166	✓
GRI 301: Materials 2016					
<b>能源 Energy</b>					
GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		環保成效 Environmental Performance	p. 138-140	

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. 138-139  p. 165	✓
	302-3	能源強度 Energy intensity	環保成效 Environmental Performance 統計資料摘要 Summary of Statistics	p. 138  p. 165	✓
	302-4	減少能源的消耗 Reduction of energy consumption	環保成效 Environmental Performance	p. 138-140	✓
<b>水 Water</b>					
GRI 103 : 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		關於本報告 About this Report 環保成效 Environmental Performance	p. 121  p. 140-141	✓
GRI 303 : 水 2018 GRI 303: Water 2018	303-1	水資源共享的處理 Interactions with water as a shared resources	環保成效 Environmental Performance	p. 140-141	✓
	303-2	排水管理及影響 Management of water discharge-related impacts	環保成效 Environmental Performance	p. 140-141	✓
	303-5	耗水量 Water consumption	環保成效 Environmental Performance 統計資料摘要 Summary of Statistics * 香港沒有特定地區遭受缺水威脅。 * No specific regions are water stressed in Hong Kong.	p. 141  p. 165	✓
<b>生物多樣性 Biodiversity (生態保育 Ecological Conservation)</b>					
GRI 103 : 管理方針 2016 GRI 103: Management Approach 2016	103-1 103-2 103-3		關於本報告 About this Report 環保成效 Environmental Performance * 所有運營點均不在環境保護區或其他 具有重要生物多樣性價值的地區或其 毗鄰地區。在接近自然生態的運營點， 我們密切監測生物多樣性的狀況。報 告期內，我們並沒有收到任何有關影 響本地生物多樣性的投訴。 * No operation sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. At operational sites that are of close proximity to natural habitats, we closely monitor the status of biodiversity. During the reporting year, we did not receive any complaints on affecting the local biodiversity.	p. 121  p. 137	✓
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	* 所有運營點均不在環境保護區或其他 具有重要生物多樣性價值的地區或其 毗鄰地區。 * No operation sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	-	✓

# 全球報告倡議組織內容索引

## GRI Content Index

### 排放物 Emissions

GRI 103：管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		環保成效 Environmental Performance	p. 138	
GRI 305：排放物 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	p. 138	✓
GRI 305: Emissions 2016			統計資料摘要 Summary of Statistics	p. 166	
	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	p. 138	✓
			統計資料摘要 Summary of Statistics	p. 166	

### 污水及廢物 Effluent and Wastes

GRI 103：管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		環保成效 Environmental Performance	p. 137	
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. 137	✓
GRI 306: Effluent and Wastes 2016			統計資料摘要 Summary of Statistics	p. 167	

### 評估供應商/承辦商的環境表現 Supplier Environmental Assessment

GRI 103：管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		環保成效 Environmental Performance	p. 141	
GRI 308：評估供應商/ 承辦商的環境表現 2016	308-1	按照環境準則篩選的新供應商 New suppliers that were screened using environmental criteria	* 機電署未有用環保標準篩選新供應 商。本署歡迎所有供應商登記成為 機電工程署的供應商，並會記錄他 們的環保產品。 * No new suppliers were screened using environmental criteria by the EMSD. All suppliers are welcome to register on the EMSD Suppliers List and their environment-friendly products would be recorded.	-	✓
GRI 308: Supplier Environmental Assessment 2016					

### 社會 Social

#### 僱員關係 Employment

GRI 103：管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		社會成效 Social Performance	p. 150	
GRI 401：僱員關係 2016	401-1	新入職員工及員工離職率 New employee hires and employee turnover	社會成效 Social Performance	p. 150	✓
GRI 401: Employment 2016			統計資料摘要 Summary of Statistics	p. 168-169	
	401-2	不提供予臨時或兼職員工的全職員工 福利 Benefits provided to full-time employees that are not provided to temporary or part-time employees	* 公務員及非公務員僱員如符合相關規 定及守則要求，均享有醫療及牙醫服 務、教育津貼、年假、房屋津貼等。 * Employees appointed on civil service and non-civil service terms are entitled with medical and dental services, education allowance, leave and passage, housing benefit, etc. if they meet the eligibility criteria as stipulated in the relevant rules and regulations.	-	✓

### 職業健康及安全 Occupational Health and Safety

GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		社會成效 Social Performance	p. 142, 151-152	
GRI 403 : 職業健康及 安全 2018	403-1	職業健康與安全管理體系 Occupational health and safety management system	社會成效 Social Performance	p. 151-152	✓
GRI 403: Occupational Health and Safety 2018	403-2	危險辨識、風險管理及事故調查 Hazard identification, risk management, and incident investigation	社會成效 Social Performance	p. 151-152	✓
	403-3	職業健康服務 Occupational health services	社會成效 Social Performance	p. 151-152	✓
	403-4	員工參與、諮詢及溝通有關職業健康 及安全的事宜 Worker participation, consultation, and communication on occupational health and safety	社會成效 Social Performance *機電署的規管及營運服務中的全體 員工，均參與了部別職安健委員會及 職安健策導委員會。 * Both Regulatory and Trading Services of the EMSD, which represented the whole workforce of the EMSD, participated in the Divisional Occupational Safety and Health Committees and Steering Committee on Occupational Safety and Health.	p. 151-152	✓
	403-5	員工職業健康及安全培訓 Worker training on occupational health and safety	社會成效 Social Performance	p. 151-152	✓
	403-6	促進員工健康 Promotion of worker health	社會成效 Social Performance	p. 151-152	✓
	403-7	預防和減輕與業務關係直接相關的職 業健康和安全的影響 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	社會成效 Social Performance	p. 151-152	✓
	403-9	因工受傷 Work-related injuries	統計資料摘要 Summary of Statistics	p. 170	✓

### 培訓與教育 Training and Education

GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		社會成效 Social Performance	p. 152-154	
GRI 404 : 培訓與教育 2016	404-3	定期接受成效及職業發展評估的員工 百分比 Percentage of employees receiving regular performance and career development reviews	* 報告期內，100%的機電署員工接受 工作表現評估及培訓需要評估。 * 100% of the EMSD's employees received performance review as well as evaluation on training needs during the reporting period.	-	✓
GRI 404: Training and Education 2016					

### 多元化與平等機會 Diversity and Equal Opportunity

GRI 103 : 管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		社會成效 Social Performance	p. 150	
GRI 405 : 多元化與平等 機會 2016	405-1	管治機構及員工多樣性 Diversity of governance bodies and employees	社會成效 Social Performance	p. 150	✓
GRI 405: Diversity and Equal Opportunity 2016			統計資料摘要 Summary of Statistics *機電署沒有員工多樣性相關資料 提供。 * The EMSD does not hold any information on diversity of employees.	p. 168-169	

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### 客戶健康及安全 Customer Health and Safety

GRI 103：管理方針 2016	103-1 103-2		機電工程署二零一八至一九年年報 EMSD Annual Report 2018/19	p. 24-48	✓
GRI 103: Management Approach 2016	103-3		關於本報告 About this Report	p. 121	
GRI 416：客戶健康及 安全 2016	416-2	關於產品及服務健康與安全影響的違 規事件	統計資料摘要 Summary of Statistics	p. 171	✓
GRI 416: Customer Health and Safety 2016		Incidents of non-compliance concerning the health and safety impacts of products and services			

### 客戶私隱 Customer Privacy

GRI 103：管理方針 2016	103-1 103-2		關於本報告 About this Report	p. 121	✓
GRI 103: Management Approach 2016	103-3		可持續發展管理方針 Sustainability Management Approach	p. 126	
GRI 418：客戶私隱 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	統計資料摘要 Summary of Statistics	p. 171	✓
GRI 418: Customer Privacy 2016		Substantiated complaints concerning breaches of customer privacy and losses of customer data			

# 統計資料摘要

## Summary of Statistics

### 環境 Environment

	單位 Unit	2016/17	2017/18	2018/19
<b>能源<sup>1</sup> Energy<sup>1</sup></b>				
<b>非再生能源燃料 Non-renewable Sources</b>				
柴油 Diesel	千兆焦耳 <sup>2</sup> GJ <sup>2</sup> (升 L)	4 795 (133 184)	3 298 (91 618)	2 790 (77 507)
汽油 Gasoline	千兆焦耳 <sup>2</sup> GJ <sup>2</sup> (升 L)	10 721 (324 864)	11 068 (335 405) <sup>3</sup>	11 848 (359 034)
總用電量 <sup>4</sup> Total Electricity Consumption <sup>4</sup>	千兆焦耳 <sup>2</sup> GJ <sup>2</sup> (‘000 千瓦小時 '000 kWh)	52 276 (14 521)	42 818 (11 894)	42 305 (11 751)
能源強度 Energy Intensity	千瓦小時/員工 kWh per employee	2 901	2 171	2 111
區域供冷系統的用電量 Electricity Consumed for District Cooling System	千兆焦耳 <sup>2</sup> GJ <sup>2</sup> (‘000 千瓦小時 '000 kWh)	/	23 623 (6 562)	30 717 (8 532)
<b>可再生能源燃料 Renewable Source</b>				
太陽能光伏系統所生產的電力 <sup>5</sup> Electricity Generated from Solar Photovoltaic System <sup>5</sup>	千兆焦耳 <sup>2</sup> GJ <sup>2</sup> (千瓦小時 kWh)	/	/	633 (175 631)
<b>水<sup>6</sup> Water<sup>6</sup></b>				
水 Water	立方米 m <sup>3</sup>	36 422	16 061	13 348

<sup>1</sup> 302-1

<sup>2</sup> 系數的單位統一換算成千兆焦耳：柴油(0.036 千兆焦耳/升)，汽油(0.033 千兆焦耳/升)，電力(0.0036 千兆焦耳/千瓦小時)。

<sup>3</sup> 102-48，個別部別修訂2017/18年度汽油的用量，所以更正數字。

<sup>4</sup> 因耗用購買的電力的溫室氣體排放系數，是根據兩家本地電力公司的可持續發展報告而釐定：0.80 kg CO<sub>2-e</sub>/kWh(香港電燈)及0.51 kg CO<sub>2-e</sub>/kWh(中電)。

<sup>5</sup> 只供內部使用。2016/17及2017/18年度的數據沒有記錄。

<sup>6</sup> 303-5

<sup>1</sup> 302-1

<sup>2</sup> Conversion factors used to standardise the units to gigajoules (GJ): diesel (0.036GJ/L), gasoline (0.033GJ/L), electricity (0.0036GJ/kWh).

<sup>3</sup> 102-48. 2017/18 figures updated due to revision of gasoline consumption in a division.

<sup>4</sup> The emission factors of greenhouse gas emissions due to electricity consumption are obtained from the sustainability reports of the two local electricity companies: 0.80 kg CO<sub>2-e</sub>/kWh (Hong Kong Electric) and 0.51 kg CO<sub>2-e</sub>/kWh (CLP).

<sup>5</sup> For internal use only. No data record keeping in 2016/17 and 2017/18.

<sup>6</sup> 303-5

# 統計資料摘要

## Summary of Statistics

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

Since 2017/18, the following data scope covered the carbon emission, disposal and materials consumption by the EMSD internal use only.

	單位 Unit	2017/18	2018/19
<b>溫室氣體排放<sup>7</sup> GHG Emissions<sup>7</sup></b>			
直接排放(範疇一) Direct Emissions (Scope 1)	噸 tonnes	1 152 <sup>8</sup>	1 186
能源間接排放(範疇二) Energy Indirect Emissions (Scope 2)	噸 tonnes	6 152	6 065
<b>物料<sup>9</sup> Material<sup>9</sup></b>			
<b>不可再生材料 Non-renewable Materials</b>			
油漆及溶劑 Paint & Solvent	升 L	149	493
潤滑油 Lubrication Oil	升 L	1 809 <sup>10</sup>	2 378
油脂 Grease	公斤 kg	249	492
工業用氣體 Industrial Gas	立方米 m <sup>3</sup>	25	0
蓄電池電解液 Battery Electrolyte	升 L	0 <sup>10</sup>	0
原子車胎 Tubeless Tyre	條 No.	220	230
外車胎 Outer Cover Tyre	條 No.	160	0
車胎內膽 Inner Tube	條 No.	30	0
<b>可再生材料 Renewable Materials</b>			
紙張 <sup>11</sup> Paper <sup>11</sup>	令 ream	25 870	28 184

<sup>7</sup> 305-1, 305-2, 計算參考《香港建築物(商業、住宅或公共用途)的溫室氣體排放及減除的審計和報告指引》(由環境保護署及機電工程署發布), 溫室氣體包括二氧化碳、甲烷、氧化亞氮及氫氟碳化物。

<sup>8</sup> 102-48, 由於修訂2017/18年度汽油的用量, 所以更正數字。

<sup>9</sup> 301-1

<sup>10</sup> 102-48, 由於修訂2017/18年度的用量, 所以更正數字。

<sup>11</sup> 機電署購買和使用的紙張全都是再造紙。

<sup>7</sup> 305-1, 305-2. Calculation methodology 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), greenhouse gas types include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O and HFCs.

<sup>8</sup> 102-48. 2017/18 figures updated due to revision of gasoline consumption.

<sup>9</sup> 301-1

<sup>10</sup> 102-48. 2017/18 figures updated due to revision of consumption.

<sup>11</sup> At the EMSD, we purchase and consume paper with recycled content.



	單位 Unit	2017/18		2018/19	
		棄置 Disposed	回收 Recycled	棄置 Disposed	回收 Recycled
<b>污水及廢物<sup>12</sup> Effluent and Wastes<sup>12</sup></b>					
<b>無害廢物<sup>13</sup> Non-hazardous Waste<sup>13</sup></b>					
廢紙 Waste Paper	公斤 kg	6 895	26 431	4 307	30 596
鋁罐及金屬罐 Aluminium and Metal Cans	個 No.	–	27 063	–	20 750
膠樽 Plastic Bottles	個 No.	–	6 156	–	6 375
即棄電池 Disposable Batteries	公斤 kg	667	529	546	310
金屬廢料 Metal Scraps	公斤 kg	13 897	5 691	9 789	7 149
<b>有害廢物<sup>14</sup> Hazardous Waste<sup>14</sup></b>					
碳粉盒 Toner Cartridges	個 No.	–	2 589	2 640	2 500
可充電電池 Rechargeable Batteries	公斤 kg	–	960 <sup>15</sup>	–	1 394
廢油 Waste Oil	升 L	–	2 895 <sup>15</sup>	–	4 801
舊車胎 Used Vehicle Tyre	條 No.	–	278 <sup>15</sup>	–	58
舊光管 / 含水銀照明燈 Spent Fluorescent/Mercury Lamp	盞 No.	–	7 179	–	9 230

<sup>12</sup> 306-2

<sup>13</sup> 廢物處置方法根據本地政府要求處理。產生的無害廢物由合資格承辦商收集以作回收或妥善棄置。

<sup>14</sup> 廢物處置方法根據本地政府要求處理。產生的有害廢物由合資格承辦商收集以作回收。

<sup>15</sup> 102-48，更正了 2017/18 年度的數字以撇除客戶的回收表現。

<sup>12</sup> 306-2

<sup>13</sup> Disposal method determined based on compliance with local government requirements. Non-hazardous waste are collected through licensed contractors for recycling or disposal to the landfills.

<sup>14</sup> Disposal method determined based on compliance with local government requirements. All hazardous waste are collected by licensed contractors for recycling.

<sup>15</sup> 102-48. 2017/18 figures updated to exclude clients' recycling performance.

# 統計資料摘要

## Summary of Statistics

### 社會 Social

#### 僱員人數<sup>16</sup> Employees Statistics<sup>16</sup>

	截至 2019 年 3 月 31 日 As of 31 March 2019	百分比 Percentage
總人數 Total Number	5 566	–
男女分佈 By Gender		
男性 Male	4 940	88.8%
女性 Female	626	11.2%
合約類型分佈 By Employment Type		
常任制 Permanent		
男性 Male	3 399	87.3%
女性 Female	494	12.7%
合約制 Contract		
男性 Male	1 541	92.1%
女性 Female	132	7.9%
年齡分佈 By Age Group		
50 歲或以上 Aged 50 or above	1 696	30.5%
30–49 歲 Aged 30-49	2 593	46.6%
29 歲或以下 Aged 29 or lower	1 277	22.9%

#### 2018/19 新入職員工<sup>17</sup> 2018/19 New Hires<sup>17</sup>

	截至 2019 年 3 月 31 日 As of 31 March 2019	百分比 Percentage
總人數 Total Number	605	佔總員工 10.9% 10.9% of total employee
年齡分佈 By Age Group		
50 歲或以上 Aged 50 or above	86	14.2%
30–49 歲 Aged 30-49	147	24.3%
29 歲或以下 Aged 29 or lower	372	61.5%
男女分佈 By Gender		
男性 Male	530	87.6%
女性 Female	75	12.4%

<sup>16</sup> 102-8, 405-1, 機電署並無聘用任何非僱員的工人, 所有員工均在香港執勤。

<sup>16</sup> 102-8, 405-1. The EMSD does not employ workers who are not employees. All staff are based in Hong Kong.

<sup>17</sup> 401-1

<sup>17</sup> 401-1

## 離職員工<sup>17</sup> Turnover<sup>17</sup>

	截至2019年3月31日 As of 31 March 2019	百分比 Percentage
總人數 Total Number	172	佔總員工 3.1% 3.1% of total employee
年齡分佈 By Age Group		
50歲或以上 Aged 50 or above	160	93.0%
30–49歲 Aged 30-49	2	1.2%
29歲或以下 Aged 29 or lower	10	5.8%
男女分佈 By Gender		
男性 Male	153	89.0%
女性 Female	19	11.0%

## 管理層的結構<sup>18</sup> Composition of Senior Management<sup>18</sup>

	截至2019年3月31日 As of 31 March 2019	百分比 Percentage
總管理層人數 Total Number of Senior Management Staff	162	佔總員工 2.9% 2.9% of total employee
年齡分佈 By Age Group		
50歲或以上 Aged 50 or above	107	66.0%
30–49歲 Aged 30-49	55	34.0%
29歲或以下 Aged 29 or lower	0	0
男女分佈 By Gender		
男性 Male	148	91.4%
女性 Female	14	8.6%

<sup>18</sup> 405-1

<sup>18</sup> 405-1

# 統計資料摘要

## Summary of Statistics

### 職業健康及安全指標<sup>19</sup> Occupational Health and Safety Indicators<sup>19</sup>

			2018/19
機電署員工 The EMSD Employees	死亡 Fatalities	數字 Number	0
		比率 Rate	0
	嚴重工傷 <sup>20</sup> High-consequence work-related injuries <sup>20</sup>	數字 Number	0
		比率 Rate	0
機電署承辦商 The EMSD Contractors	工傷 <sup>21</sup> Recordable work-related injuries <sup>21</sup>	數字 Number	26
		比率 Rate (按每 200 000 工時計算) (number per 200 000 man-hours)	0.41
	工作小時 Number of hours worked	小時 Hour	12 617 592
	死亡 Fatalities	數字 Number	0
機電署承辦商 The EMSD Contractors		比率 Rate	0
	嚴重工傷 <sup>20</sup> High-consequence work-related injuries <sup>20</sup>	數字 Number	0
		比率 Rate	0
	工傷 <sup>22</sup> Recordable work-related injuries <sup>22</sup>	數字 Number	5
	比率 Rate (按每 200 000 工時計算) (number per 200 000 man-hours)	0.15	
	工作小時 Number of hours worked	小時 Hour	6 735 766

<sup>19</sup> 403-2

<sup>20</sup> 嚴重工傷(不包括死亡)指因工作而導致的損傷，從而使員工不能/不可/預計未能於六個月內回復傷前的健康狀態。

<sup>21</sup> 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。2018/19年度機電署員工工傷主要類型是滑倒、絆倒或在同一高度跌倒以及與固定或不動的物件碰撞。

<sup>22</sup> 2018/19年度機電署承辦商工傷主要類型是受困於物件之內或物件之間、高處墮下以及滑倒、絆倒或在同一高度跌倒。

<sup>19</sup> 403-2

<sup>20</sup> High-consequence work-related injuries (excluding fatalities) refer to work-related injury that results in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.

<sup>21</sup> Any accidents involving the EMSD personnel on duty reported, including those accidents which have not resulted in the granting of any sick leave to the injured person. Main types of work-related injury reported in 2018/19 for the EMSD employees were slip, trip or fall on the same level and striking against fixed or stationary object.

<sup>22</sup> Main types of work-related injury reported in 2018/19 for the EMSD contractors were trapped in or between objects, fall of person and slip, trip or fall on the same level.

其他社會指標 **Other Social Indicators**

	單位 Unit	2016/17	2017/18	2018/19
須予呈報意外宗數 Reportable Accidents	宗/千名員工 No./1 000 staff	4.90	3.65	4.70
平均培訓日數(目標: 4.5) Average Training Days (Target: 4.5)	日/員工 Days/staff	5.41	5.29	5.43
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	案件數量 No. of case	未能提供數據 Figure not available	0	0
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	案件數量 No. of case	未能提供數據 Figure not available	0	0
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	案件數量 No. of case	未能提供數據 Figure not available	0	0

聲明書號碼：SRA-HK-718204

## 機電工程署 社會及環保報告 2018/19

英國標準協會與香港特別行政區政府機電工程署(以下簡稱「機電署」)為相互獨立的公司及組織，英國標準協會除了針對機電署社會及環保報告 2018/19(以下簡稱「報告」)進行評估和核查外，與機電署並無任何財務上的關係。

本獨立保證意見聲明書的目的，僅作為對下列有關機電署社會及環保報告所界定範圍內的相關事項進行保證之結論，而不作為其他之用途。除對查證事實提出獨立保證意見聲明書外，對於關於其他目的之使用，或閱讀此獨立保證意見聲明書的任何人，英國標準協會並不負有或承擔任何有關法律或其他之責任。本獨立保證意見聲明書供機電署之持份者及管理人員使用。

本獨立保證意見聲明書是基於機電署提供予英國標準協會之相關資料審查所作成之結論，因此審查範圍乃基於並只限在這些提供的資料內容之內，英國標準協會認為這些資料內容都是完整且準確的。

對於這份獨立保證意見聲明書所載內容或相關事項之任何疑問，只能向機電署提出。

### 核查範圍

機電署與英國標準協會協議的核查範圍包括：

1. 整份報告及焦點放於系統與活動，包括機電署於 2018 年 4 月 1 日 至 2019 年 3 月 31 日期間，於香港的規管服務及營運服務。報告依據全球報告倡議組織標準的核心選項編製而成。
2. 第一類型中度保證等級評估機電署遵循三項報告原則：包容性、實質性及回應性的本質與程度，以及對指定可持續發展的資料/數據作出評估。

本聲明書以英文編製，中文翻譯本只供參考。

### 意見聲明

我們可以總結，本報告年度的報告為機電署的可持續發展計劃與成效提供一個公平的觀點。我們相信報告內之經濟、社會及環境成效指標是被正確無誤地展現。報告所披露的成效指標展現了機電署為可持續發展所作出的努力，備受持份者的廣泛認同。

這次核查工作是由一組具有可持續發展報告核查能力之團隊執行。透過策劃和進行核查時所獲得的資料及說明，我們認為機電署就符合全球報告倡議組織標準的核心選項之聲明，是屬公允的描述。

### 核查方法

為了收集能讓我們得出結論的證據，我們執行了以下工作：

- 對來自外部團體關於機電署政策的議題，進行高階管理層的審查，以確認本報告中聲明書的合適性
- 與機電署管理人員討論有關持份者參與的方式，然而，我們並無直接接觸外部持份者
- 訪問與可持續發展管理、報告編製及資料提供有關的員工
- 審查組織的主要發展內容
- 審查報告中所作宣告的支持性證據
- 審查報告的製作及管理流程是否按照包容性、實質性及回應性的原則進行

### 結論

我們對於包容性、實質性及回應性原則，及全球報告倡議組織標準的審查如下：

## 包容性

此報告反映機電署透過以下多種渠道作持份者參與，包括：客戶意見調查及訪問、電話調查、通訊、會議、研討會、座談會、持份者參與問卷調查、員工滿意度調查、員工工會及員工協商委員會、焦點討論小組、高級管理層親善大使探訪、培訓課程、比賽及團隊建立活動、業界參與計劃、工作小組、機電安全及節能社區推廣活動、合作項目、YouTube、傳媒聚會、就傳媒查詢回應及發表意見等。

機電署日常運作包括不同的持份者參與方式。此報告包括持份者關注的經濟、社會及環境範疇，並以公允的水平披露。我們專業的意見認為，機電署遵循包容性原則。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

## 實質性

機電署發佈可持續發展資訊，讓持份者對機電署的管理及表現可作出有事實根據的判斷。我們專業的意見認為，報告遵循實質性原則，並透過合適的方法識別出機電署的實質範疇，以重要範疇概覽展現出實質範疇。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

## 回應性

機電署實行措施以回應持份者的期望與意見，包括對內部及外部持份者的各種問卷及反映機制。以我們專業的意見，機電署遵循回應性原則。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

## 全球報告倡議組織標準

機電署向我們提供有關於已符合依循全球報告倡議組織標準的核心選項的自我申報。從審查的結果，我們確定報告內之三個類別(環境、社會及經濟)的社會責任及可持續發展披露，是根據符合全球報告倡議組織標準的核心選項披露。

以我們專業的意見認為，本報告包括機電署的社會責任及可持續發展事務。我們對報告的改善意見已被機電署於發出本意見聲明書前採納。

## 保證等級

我們提供的第一類型中度保證等級審查，是以本聲明書內之範圍及方法作定義。

## 責任

這份報告所展現的資料，是由機電署的高階管理層負責確保準確。我們的責任為基於所描述的範圍與方法，提供專業意見並提供持份者一個獨立的保證意見聲明書。

## 能力與獨立性

本核查團隊是由具房地產背景，且接受過包括全球報告倡議組織(以下簡稱「GRI」)G3、GRI G3.1、GRI G4、GRI標準、當責性原則、香港聯交所「環境、社會及管治報告指引」、聯合國全球契約十項原則、ISO 10002、ISO 14001、OHSAS 18001、ISO 45001及ISO 9001等之一系列可持續發展、環境及社會標準的訓練，具有主導擔保及核查員資格之成員組成。英國標準協會於1901年成立，是全球標準及驗證機構的領導者。本保證是依據英國標準協會公平交易準則執行。

英國標準協會代表：



陳肇雄先生  
英國標準協會亞太區營運總監

2019年10月30日

Statement No.: **SRA-HK-718204**

## **Electrical and Mechanical Services Department Social and Environmental Report 2018/19**

The British Standards Institution is independent to Electrical and Mechanical Services Department of the Government of the Hong Kong Special Administrative Region (hereafter referred to as "EMSD" in this statement) and has no financial interest in the operation of EMSD other than for the assessment and assurance of EMSD's Social and Environmental Report 2018/19 ("Report").

This independent assurance opinion statement has been prepared for EMSD only for the purposes of assuring its statements relating to the Report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read. This statement is intended to be used by stakeholders & management of EMSD.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by EMSD. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to EMSD only.

### **Scope**

The scope of engagement agreed upon with EMSD includes the following:

1. The assurance covers the whole Report, and focuses on systems and activities of EMSD in Hong Kong, which include Regulatory Services and Trading Services during the period from 1st April 2018 to 31st March 2019. The Report is prepared in accordance with the Core option of GRI Sustainability Reporting Standards ("GRI Standards").
2. Type 1 Moderate Level of Assurance evaluates of the nature and extent of EMSD's adherence to three reporting principles, which include Inclusivity, Materiality and Responsiveness. The specified sustainability performance information/data disclosed in the Report has been evaluated.

This statement was prepared in English and translated into Chinese for reference only.

### **Opinion Statement**

We conclude that the Report provides a fair view of the EMSD's sustainability programmes and performances in the reporting year. We believe that the economic, social and environmental performance indicators are fairly represented in the Report, in which EMSD's efforts being made to pursue sustainable development are widely recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurers. We planned and performed this part of our work to obtain the necessary information and explanations. We considered EMSD has provided sufficient evidence that EMSD's self-declaration of compliance with the Core option of GRI Standards were fairly stated.

### **Methodology**

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- A top level review of issues raised by external parties that could be relevant to EMSD's policies to provide a check on the appropriateness of statements made in the Report
- Discussion with senior executives on EMSD's approach to stakeholder engagement. We had no direct contact with external stakeholders
- Interview with staff involved in sustainability management, report preparation and provision of report information were carried out
- Review of key organisational developments
- Review of supporting evidence for claims made in the Report
- An assessment of the company's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality and Responsiveness.



## Conclusions

A detailed review against the principles of Inclusivity, Materiality and Responsiveness, and in accordance with GRI Standards is set out below:

### Inclusivity

The Report has reflected a fact that EMSD is seeking the engagement of its stakeholders through numerous channels such as Customer Opinion Surveys and Interviews, Telephone Surveys, Newsletters, Meetings, Symposiums, Seminars, Stakeholder Engagement Questionnaires, Staff Satisfaction Surveys, Staff Unions and Departmental Consultative Committees, Focus Groups, Ambassador Visits by Senior Management, Training Sessions, Competitions and Team-building activities, Trade Engagement Programme, Working Groups, Community-wide Promotion of E&M Safety and Energy Efficiency, Joint Projects, YouTube, Media Gatherings, Feedback and Responses to Media Enquiries, and more.

EMSD's operation involves various methods of engaging its stakeholders on daily basis. The Report covers economic, social and environmental aspects concerned by its stakeholder with a fair level of disclosures. In our professional opinion, EMSD adheres to the principle of Inclusivity. Our view in area for enhancement to the Report was adopted by EMSD before issue of this opinion statement.

### Materiality

EMSD publishes sustainability information that enables its stakeholders to make informed judgments about the company's management and performance. In our professional opinion, the Report adheres to the principle of Materiality and identifies EMSD's material aspects by using appropriate method of materiality analysis and demonstrating material issues in a matrix form. Area for enhancement to the Report was adopted by EMSD before issue of this opinion statement.

### Responsiveness

EMSD has implemented practices to respond to the expectations and perceptions of its stakeholders. It includes various surveys and feedback mechanisms to both internal and external stakeholders. In our professional opinion, EMSD adheres to the principle of Responsiveness. Area for enhancement to the Report was adopted by EMSD before issue of this opinion statement.

### GRI Standards Reporting

EMSD provided us with their self-declaration of compliance with GRI Standards "In Accordance" - Core option. Based on our verification review, we are able to confirm that social responsibility and sustainable development disclosures in all three categories (Environmental, Social and Economic) are reported with reference to "In accordance" with the GRI Standards – Core option.

In our professional opinion the report covers EMSD's social responsibility and sustainability issues. Areas for enhancement of the Report were adopted by EMSD before the issue of this opinion statement.

### Assurance Level

The Type 1 Moderate Level of Assurance provided in our review is defined by the scope and methodology described in this statement.

### Responsibility

It is the responsibility of EMSD's senior management to ensure the information being presented in the Report is accurate. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

### Competency and Independence

The assurance team was composed of Lead Assuror, who are experienced in real estate sector, and trained in a range of sustainability, environmental and social standards including GRI G3, GRI G3.1, GRI G4, GRI Standards, AA1000, HKEx ESG Guide, UNGC's Ten Principles, ISO 10002, ISO 14001, OHSAS 18001, ISO 45001 and ISO 9001, etc. British Standards Institution is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:



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**Mr. Wilfred Chan**  
**Head of Operations, BSI Asia Pacific**