







Regulatory Services

Vision

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

Mission

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

Values

Expertise

Integrity

Reliability

Commitment

Trading Services

Vision

To be the most preferred E&M engineering service provider in Hong Kong.

Mission

To give our community a better quality of life by providing our customers and the public with total engineering solutions and service excellence.

Values

Customer focus

Carino

Integrity

Service excellence

Commitment

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About this Report

This is the ninth publication of the Electrical and Mechanical Services Department (EMSD) reporting its annual performance in environmental, social and economic aspects. It also serves as a communication platform between EMSD and its stakeholders regarding its role in the sustainable development of Hong Kong.

Reporting Scope and Boundary

This report covers the operation of EMSD in the territory between 1 April 2007 and 31 March 2008. Data are presented as absolute figures and cover the geographic locations in which we operate. Data on priority issues have been normalised into comparable terms where appropriate and practical. All monetary terms are in Hong Kong dollars.

Reporting Principle

This report makes reference to both the HKSAR Government's Circular Memorandum No. 1/2007 "Controlling Officer's Report" and the Global Reporting Initiative (GRI) G3 Guidelines. A GRI Content Index is provided at the end of this report to facilitate referencing.

An independent verification of this report is also attached at the back.

Director's Message

It is my privilege to present our Social and Environmental Report 2007/08. This report continues to use the Triple Bottom Line approach to highlight our environmental, social and economic performance with reference to the Global Reporting Initiative Guidelines, with a view to maintaining a high level of openness and transparency in our communication with stakeholders.

EMSD conducts a diverse range of activities in both our Trading Services and Regulatory Services. We have always been mindful of our social and environmental responsibilities in addition to our obligation to be economically viable.

We have for many years played a pioneering role in promoting energy efficiency and the wider use of renewable energy in Hong Kong. Internally, we have continued to achieve significant energy savings in our daily operations: our electricity consumption decreased by more than 6% on the previous year, thanks to the use of new energy efficient technologies and good housekeeping. We actively support our client departments to implement energy saving and renewable energy projects. Through promotion and public education programmes, we continue to promote community awareness of the need to conserve energy for the common good.

Occupational health and safety of our staff remains one of our top priorities. Although our performance in this area has been improving in recent years, we believe that there is still room for improvement. A closer look at the statistics shows that some of the incidents are due to unsafe behaviour and inadequate awareness amongst staff in the workplace. We shall therefore introduce a behaviour-based safety model in 2008/09 with a view to fostering higher safety awareness amongst staff.

As Hong Kong enters a new phase of infrastructure growth, new economic activities such as railway development have brought new opportunities for both our Trading and Regulatory Services to expand our scope of work, such as setting up the Railways Branch in February 2008 to oversee railway safety. In these new areas of work, we shall also endeavour to ensure that the key social, environmental and economic parameters are addressed.

I would like to take this opportunity to thank all our colleagues and stakeholders for their commitment and good work, without which this report would not be possible. I look forward to another year of collaboration and success.

Mo MM

Ho Kwong-wai Director of Electrical and Mechanical Services



Challenges and Opportunities

Impact of Sustainability on the Organisation

As an international city, Hong Kong must maintain its economic growth in a fast-paced knowledge economy while at the same time improve the quality of life for its citizens. From a sustainability perspective, this means that organisations such as EMSD must find the most eco-friendly way to conduct its daily activities so that resources are used in an optimal manner with the least possible waste and pollution; while the safety, health and general well-being of its employees, customers and other stakeholders are well taken care of. At the same time, we must also identify and make full use of business opportunities arising from sustainable development.

As the world economy still largely relies on fossil fuels such as oil, surging oil prices as well as global warming and atmospheric pollution have direct impact on EMSD. The impact on our Trading Services is significant. For example, high oil prices have led to escalating material and parts cost, which exacerbated by an inflationary environment, could threaten the viability of our business. Global warming and pollution also create health risks for our employees and the community in general. In response, we have taken prudent cost control measures, stepped up productivity by various means such as increased staff training and better use of information technology, and secured more long-term agreements with client departments to add stability to our business. We have also implemented a comprehensive occupational health and safety programme for staff.

As to opportunities, an obvious area is client departments' increasing demand for our energy management, carbon audit and energy saving and renewable energy project services. This is likely to grow in the long run as client departments become increasingly aware of both the economic and environmental benefits of energy conservation.

The impact of sustainable development on our Regulatory Services is no less significant. Both international bodies and local policy makers call for priority attention to sustainability issues such as emissions control and energy intensity reduction. As a member of the Asia-Pacific Economic Co-operation (APEC), Hong Kong fully supports the APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development adopted in Sydney in 2007, and will seek to reduce at least 25% of energy intensity by 2030, with 2005 as the base year. The Legislative Council is also examining the Energy Efficiency

(Labelling of Products) Bill, and the Government has also conducted public consultation with a view to introducing legislation on mandatory Building Energy Codes.

As a regulatory body, our Regulatory Services must respond with enhanced capabilities in order to effectively implement and enforce the various energy related obligations, as well as to help businesses, trades and the general public develop a higher awareness of energy efficiency. The timely introduction of state-of-the-art energy efficiency technologies into Hong Kong is also important. At the same time, we also see the safety and well-being of the community as important aspects of sustainable development. Indeed our citizens today have high expectations of us as an E&M safety regulating body. This creates opportunities for us to expand both the depth and breadth of our various E&M safety enforcement initiatives and public education programmes.

Organisation's Impact on Sustainability

EMSD makes an impact on sustainability in several ways. Our Trading Services provide E&M engineering services to government departments and public bodies in Hong Kong, a process which inevitably impacts upon the environment through our office operations and engineering related works. To mitigate such impact, we have adopted an Integrated Management System that combines quality, environmental, occupational health and safety management systems as an overall process framework and to identify non-compliances for improvement. At the same time, we also make a positive impact through providing professional engineering services on energy efficiency to client departments that directly reduced energy consumption. We give technical advice and support to clients in the procurement of ecofriendly vehicles, and provide on-going maintenance service. During 2007/08, we helped the Government procure 193 hybrid vehicles, increasing its total hybrid fleet to 202. A batch of six environment-friendly electric scooters was also procured for the Police.

Our Regulatory Services make a positive impact on sustainability via various schemes, promotional campaigns and awards to promote energy efficiency and the wider use of renewable energy. Notable examples are the Energy Efficiency Labelling Scheme for Electrical Appliances, the Scheme on Wider Use of Fresh Water Cooling Towers for Air-conditioning Systems, the Energy Efficiency Registration Scheme for Buildings and the Hong Kong Energy Efficiency Awards.

Highlights and Targets

Highlights in 2007/08

- Reduced annual electricity consumption at EMSD venues by 6% (against target of 1.5%) on the previous year
- Reduced annual paper consumption at EMSD venues by 4% (against target of 2.5%) on the previous year
- Completed public consultation on mandatory implementation of the Building Energy Codes in March 2008
- Introduced the Energy Efficiency (Labelling of Products) Bill to the Legislative Council in April 2007
- Commenced 52 energy efficiency projects for customers with expected annual energy savings of 8.4 million kWh after completion

Way Forward

- Continue to reduce annual electricity consumption at EMSD venues by 1.5% in 2008/09 with respect to 2007/08
- Assist the Environment Bureau in seeking policy support in 2008/09 to the provision of energy efficient District Cooling System at Kai Tak Development
- Commence about 60 energy saving projects for customers in 2008/09
- Introduce the legislative proposal for the mandatory implementation of the Building Energy Codes to the Legislative Council within 2009/10
- Prepare Carbon Audit guidelines jointly with the Environmental Protection Department in 2008/09

Environmental

Economic

Highlights in 2007/08

- Achieved Return on Revenue (ROR) at 10.4% and Rate of Return on Fixed Assets at 29%
- Renewed 100% of Service Level Agreements (against target of 95%)
- Supported the economy by letting out contracts totaling more than \$1.5 billion for the provision of goods and services

Invironmental

Social

Highlights in 2007/08

- Received the 10-Year Service Grand Award presented by the Secretary for the Civil Service to our Staff Volunteer Service Team
- Achieved average 5.67 annual training days per staff (against target of 4.5)
- Achieved a score of 6.5 on a scale of 10 in the Staff Satisfaction Survey
- Achieved 11.8% reduction in no. of reportable accident per 1,000 staff
- Introduced a New Non-Civil Service Contract (NCSC)
 Technician Scheme to reinforce NCSC personnel's
 sense of belonging and provide a clearer career
 progression through Technician II, I and Senior
 Technician grades

Targets

- Obtain ISO 27001 certification on Information Security Management System for our Data Centre in 2008/09 to enhance our ICT business
- Prepare for new business opportunities arising from the ten major infrastructure projects announced in the Policy Address 2007/08

Targets

- Continue to achieve at least 4.5 training days per staff per year on average
- Upgrade our Occupational Health and Safety Management System to OHSAS 18001:2007 by 1 July 2009
- Implement behaviour-based safety programme in 2008/09 to tackle unsafe behaviour at workplace and foster higher safety awareness among staff

About EMSD

Organisational Profile

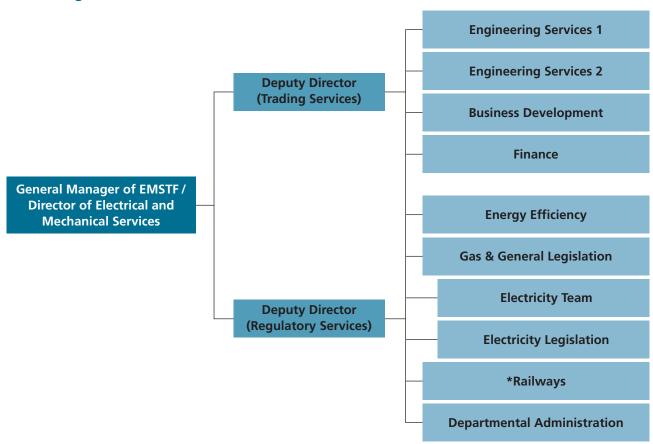
The Electrical and Mechanical Services Department (EMSD) plays a dual role. Its **Trading Services**, known as the **Electrical and Mechanical Services Trading Fund (EMSTF)**, delivers electrical, mechanical, electronic engineering and building services to government departments and public institutions in Hong Kong while its **Regulatory Services (RS)**, provides a regulatory framework to ensure the safety of the public in a number of electrical, mechanical and gas engineering areas via enforcement of safety ordinances, and public education.

In serving our customers, the EMSTF provides a wide range of consultancy and value-added engineering and maintenance services to ensure that the many systems that keep Hong Kong up and running continue to do so effectively and efficiently. We serve more than 100

government departments and public bodies in Hong Kong, including the airport, hospitals, schools, security forces, transport and highways, port and harbour as well as public recreation and leisure facilities, areas that make up the very fabric of life in Hong Kong.

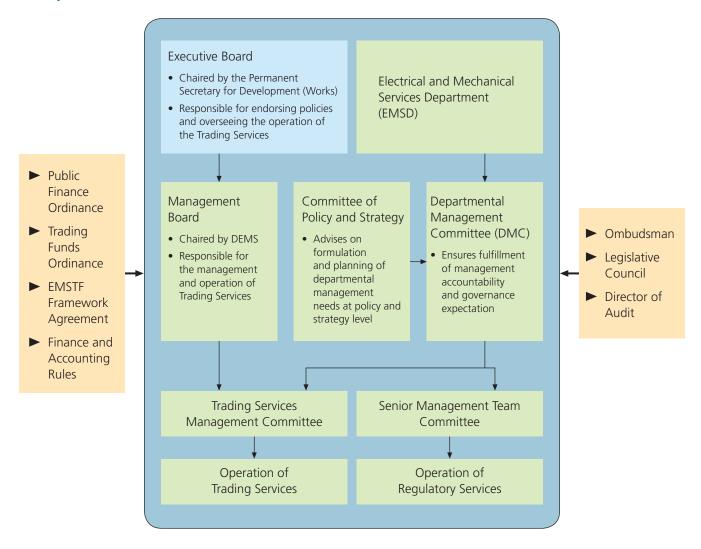
Within the community, the RS issues Guidelines and Codes of Practice and administers the safety ordinances on the safe use of gas, electricity, lifts and escalators, railways, tramways and amusement rides, among others. At the same time, we are actively involved in promoting energy efficiency and the protection of the environment through services and activities both for our customers and the community, and through our support for the Government's environmental initiatives. We are actively involved in the introduction of LPG vehicles, for example, and in studies of renewable energy sources in Hong Kong.

EMSD Organisational Structure



^{*} Established in February 2008

Corporate Governance



Stakeholder Engagement

As a government agency, our stakeholder groups include:

- Customers
- Policy bureaux
- Staff
- Industry and business organisations
- Suppliers and contractors
- Professional and trade associations
- The general public

Given the varied nature of our stakeholders, we have developed different communication programmes to cater for their different needs. Our communication channels include customer liaison groups, EMSTF customer newsletter VoiceLink, staff consultative committees, regular consultations with trade associations and professional institutions, annual reports, and ongoing electrical and mechanical safety and energy efficiency promotion programmes and publications. Furthermore, senior managers are also personally involved in supporting and encouraging colleagues to join the Council and various Boards and Committees of the Hong Kong Institution of Engineers and participate in international engineering organisations, as part of the effort to upkeep the high standards of the profession in Hong Kong.

Staff and customers are two major stakeholder groups. Opinion surveys with these stakeholders are conducted once every two years. The latest Staff Satisfaction Survey was conducted in 2007 while the Customer Opinion Survey has just been completed in April 2008. We have looked into the results to identify areas for improvement.



Environmental Responsibilities

Aiming for a better quality of life for the community represents an underlying principle of the day-to-day operation of EMSD. We are aware that our operations can impact the environment in the course of rendering services to customers and the public. To conserve the environment, our first priority is to avoid creating environmental pollution, or reduce the impact if pollution is inevitable. We reduce impact where it is created, enhance the environment where we operate and conserve resources over the long term. Our efforts include reducing the energy, water and other resources and materials consumed in the course of rendering our services, while minimising pollutants such as emissions, effluents and wastes.

To support the Government's commitment to the Clean Air Charter and improve air quality, we have also implemented various measures, details of which are found on p.25

Environmental Management System

Our performance in environmental aspect is mainly governed by the Environmental Management System (EMS) which has evolved over the years. First implemented in the mid-1990s, EMS featured a decentralised management framework with each division ensuring that its operations comply with internationally recognised standards and the legislative requirements in Hong Kong. In 2000, we took a step forward and became the first government agency to attain the ISO14001 Corporate Certificate. In 2002, we streamlined our various management systems in quality, environment and occupational health and safety, and combined them into an Integrated Management System (IMS) which is the system in current use.

Environmental Policy

Our Goal

The management and staff of the Electrical and Mechanical Services Department are committed to building a better environment through an ongoing environment conservation, protection and improvement programme.

Our Policy

- To take pride in ourselves as a responsible organisation that is helping to build a better environment.
- To take every reasonable and practicable measure to conserve resources, minimise the generation of waste and prevent pollution in each and every one of our business operation processes.
- To comply with green legislation as the baseline of our operations and to ensure that all staff behave accordingly.
- To encourage our contractors and their staff to be equally friendly to the environment.
- To ensure that our environment management system conforms to internationally recognised ISO 14001 standards.

A Leading Role in Energy Conservation Initiatives

We welcome the APEC Leaders' Declaration on Climate Change, Energy Security and Clean Development adopted in Sydney in 2007. As an APEC member, Hong Kong will honour its pledge to support the Declaration and seek to achieve a reduction in energy intensity of at least 25% by 2030 (with 2005 as the base year).

In fact, ever since the 1990s, EMSD has launched many pioneering energy conservation schemes. Our energy conservation work has two aspects: promotingenergy efficiency and encouraging

the wider use of renewable energy. Highlighted below are the latest developments in our efforts to support Government's policy to step up energy conservation.



The Government has proposed a mandatory Energy Efficiency Labelling Scheme covering room air conditioners, refrigerating appliances and compact fluorescent lamps in the initial phase. The Energy Efficiency (Labelling of Products) Bill was introduced to the Legislative Council in 2007 and was passed in April 2008. It was estimated that the Scheme could help reducing 150 GWh of electricity consumption annually.

Proposed Mandatory Building Energy Codes

To promote energy efficiency in buildings, the Government conducted a 3-month consultation on the mandatory implementation of the Building Energy Codes from December 2007 to March 2008. Various stakeholders and the community were consulted on the proposal through a variety of channels such as the media, professional conferences, technical talks and public forums. The views and comments collected will be considered in drafting of the legislative proposal, which is planned to be introduced to the Legislative Council in 2009.

Scheme to Promote Fresh Water Cooling Towers

The Scheme aims to promote the wider use of fresh water evaporative cooling towers in air-conditioning systems which are more energy efficient than air-cooled systems. As of 31 March 2008, a total of 82 areas has been designated for the Scheme, including the newly designated areas of Mid-levels West and Pak Shek Kok.



Since the commencement of the Pilot Scheme and up till 31 March 2008, we have received over 340 applications, and 116 installations with a total cooling capacity of

647,000 kW have been completed and put into operation. We estimate that this would save electricity by 93 million kWh per annum and reduce green house gases by 65,000 k.

tonnes per annum.

The 2nd Hong Kong Energy Efficiency Awards

The competition aims to encourage the public to save energy, promote best practices, as well as to commend those who have made efforts, innovations and achievements in energy efficiency and conservation. This year's Awards competition attracted more than 1,400 entries between January and August 2007, and the winners achieved outstanding results. In the "Common Areas" category, energy savings of around 34% was registered when compared with the same period in the preceding year. For the "Households" and "Tenants" categories, some winners achieved energy saving of more than 40% and 20% respectively.



Promotion of Renewable Energy

Grid Connection of Renewable Energy Power Systems

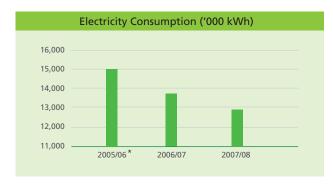
To keep pace with changes in international standards and technological advancements in trade and industry, EMSD published the Technical Guidelines on Grid Connection of Renewable Energy Power Systems (2007 Edition). Compared with the first edition issued in 2005, the application range in the new edition has been increased from 200kW to 1000 kW in respect of the Aggregated Power Rating of the system.

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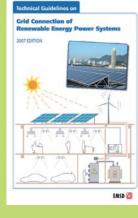
Conservation of Operational Resources

Electricity

The total purchased electricity was 12.82 GWh in 2007/08, covering Kowloon Bay headquarters, Caroline Hill workshop, Fan Garden vehicle depot, Siu Ho Wan vehicle depot, and EMSD workshop at Chek Lap Kok Air Mail Centre. From 2005/06 to 2007/08, there has been a general decline in electricity consumption.



* Note: EMSD relocated its headquarters from Caroline Hill Road to Kowloon Bay in 2005/06. As a result of phased relocation, there was parallel operation of both the old and new headquarters buildings for a brief period leading to a higher consumption level in that year. The increase in consumption was also attributed to the provision of many new facilities in the new headquarters building such as the Corporate Data Centre, Education Path on Energy Efficiency and Safety and training centre for electrical workers. The structural features of the new headquarters building such as the high ceiling and wide circulation area also led to more electricity consumption. The total electricity consumption would have been lower if the additional electricity consumption arising from new facilities and structural features is discounted for a like-to-like comparison.



EMSD strives to continuously look for opportunities for energy saving. The electricity consumption in 2007/08 was lower than that in 2006/07. The factors leading to the decrease included installing occupancy sensors in toilets, fine-tuning the occupancy sensors in office areas and common areas to reduce the idle time, carrying out de-lamping in over illuminated area (a total of 832 lighting fixtures were removed in the period between August 2007 and September 2007), and tightening up of house-keeping measures.

Besides, a departmental wide energy conservation campaign was launched in June 2007 to raise the energy efficiency awareness of our management and staff. Several simple and effective housekeeping measures were promoted throughout this campaign:

- (i) Adjust the room temperature setting (where there is separate air-conditioning control) to 25.5°C in summer months
- (ii) Switch off all electrical appliances after office hours and avoid leaving the office equipment, computers and printers in stand-by mode
- (iii) Appoint energy wardens to remind colleagues to comply with all housekeeping measures
- (iv) Use 7-day timer switch to automatically switch off equipment after office hours



Departmental Wide Energy Conservation Campaign

Gas

Towngas used to be the major fuel for hot water supply in the former Caroline Hill headquarters and the Kowloon workshop. There was a drop in the towngas consumption in 2006/07 after relocation of the headquarters to Kowloon Bay as the new headquarters use a mix of heat pumps, electric boilers and solar water heating system for water heating. The Caroline Hill workshop is the remaining major venue using towngas for water heating. The consumption has continued to decline to around 317,000 MJ in 2007/08 with the stepping up of housekeeping measures.



Water

Water is mainly consumed for air-conditioning, gardening, drinking and cleaning. The overall consumption was around 69,000 m³ in 2007/08 covering major venues including Caroline Hill workshop and headquarters at Kowloon Bay, representing a decrease of about 18% compared with that of the previous year. The reduction was attributable to a number of factors, including the cessation of short term usage of the former Caroline Hill headquarters by a few other departments, use of recycled grey water for gardening at Kowloon Bay headquarters, and so on.



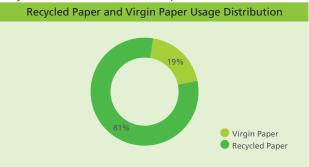
Materials

Materials Used in Offices

Paper

Paper is mainly used for photocopying and printing. We make every effort to reduce our paper consumption,

such as the use of an electronic Document Management System. In 2007/08, paper consumption dropped by 4% on the consumption in 2006/07. Since 2001, we have adopted the extensive use of environment-friendly recycled paper made from recycled fibre. In 2007/08, 81% of our total paper consumption was recycled paper. Use of virgin paper was limited to external documents only and is avoided as much as practicable.



Toner Cartridges

We purchased some 2,800 toner cartridges in 2007/08 and we have followed government initiatives to recycle all used toner cartridges since 2005/06.

Materials Used in Workshops

We recognise that the materials, parts and products used in our everyday operations impact the environment in different ways through their production, use and ultimate disposal. EMSD will work to reduce the use of materials, recondition and re-use them whenever possible in order to sustain resources over the long term. For details of our performance in industrial materials consumption, please refer to the section "Summary of Statistics".

Emissions, Effluents and Wastes

We are aware that our operations produce waste and impact the environment. Our waste management strategy is to maximise material recycling and minimise unavoidable waste generation. Waste is primarily generated from two sources – offices and workshops. The following sections detail our progress in the past 12 months.

Emission factors used in this report

(unless specified otherwise):-

 $\stackrel{*}{\cancel{N}}$ CO₂ emission factor for electricity = 0.7 kg/kWh

 \ref{CO}_2 emission factor for gasoline = 2.4 kg/litre

 $Rrightharpoonup CO_2$ emission factor for diesel = 2.7 kg/litre

 \Re SO_x emission factor for electricity = 2.1 g/kWh

 \Re NO_x emission factor for electricity = 1.3 g/kWh

Waste Generated

Waste from Offices

Waste Paper

Waste paper is one of our major items for recycling. Paper is used everyday in our offices, and therefore an effective and efficient channel for collecting and handling waste paper is needed for proper waste management. Waste paper is collected through various collection points and picked up by paper recyclers. In 2007/08, we collected some 17,000 kg of waste paper for recycling.

Toner Cartridges

Used toner cartridges are collected by recycling collectors, refilled and reused. We collected about 3,000 toner cartridges for recycling in 2007/08.

Waste from Workshops

Waste Oil

Waste oil is generated from our workshops while rendering service to our customers, in particular our vehicle maintenance services. Waste oil is collected regularly by registered chemical waste collectors and treated in registered chemical waste treatment facilities. In 2007/08, about 129,000 litres of waste oil were collected for recycling or disposal in accordance with the relevant ordinance.

Spent Mercury Lamps

Spent mercury lamps are collected from offices and workshops by registered chemical waste collectors and

delivered to the Chemical Waste Treatment Centre in Tsing Yi for recycling. In 2007/08, over 107,000 spent mercury lamps were collected and recycled.

Used Rechargeable Batteries

Used rechargeable batteries contain rare metals that can be recovered and reused. We have adopted and implemented a programme launched by the Environmental Protection Department (EPD) to recycle domestic type rechargeable batteries, and, in addition, collect industrial type batteries generated from our operations for recycling. More information can be found in the Summary of Statistics.

Metal Scraps

Metal scraps are valuable natural resources which can be completely recycled and reused without deterioration in their composition during the recycling processes. Most metal scraps generated from our operations such as vehicle maintenance have been collected and recycled. In 2007/08, about 48,000 kg of metal scraps were collected.

Used Vehicle Tyres

Used vehicle tyres arise from our vehicle maintenance services for government vehicles. They are collected and recycled by local waste tyre collectors listed on the EPD's directory. More than 12,000 tyres were collected and another 541 tyres were retreaded for further use on vehicles in 2007/08.

Emissions

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions are widely acknowledged as a cause of global warming and climate change, and reducing emissions such as CO_2 is one of our biggest challenges. EMSD's greenhouse gas emissions are mainly attributed to the consumption of electricity in our offices and workshops, and transport. In 2007/08, direct emissions from our transport activities amounted to some 1,300 tonnes of CO_2 whereas our electricity consumption gave rise to about 9,000 tonnes of CO_2 .

Transport

The use of transport in EMSD operations consumes non-renewable fossil fuels and generates GHG emissions. We have a fleet of around 250 vehicles including lorries, vans, saloon cars and motorcycles to carry out our services, and at the same time maintain over 5,800 government vehicles for our client departments. We have to ensure that the emissions from such activities are reduced to a minimum by good housekeeping, proper vehicle maintenance, reduced use of transport or switching to hybrid vehicles. We now have two hybrid vehicles, which consume 40% less fuel than conventional cars of similar size.



Social Performance



Social Responsibilities

Our responsibility is not limited to maintaining a green and healthy environment for our client departments and the public. As a caring and responsible corporate citizen, we also have the obligation to provide a safe and healthy environment for our employees, other parties working for us, as well as those who may be affected by our work, and to comply with the relevant laws and regulations. As a government department, we operate under the HKSAR Government policy framework, especially on labour and human rights issues. Governed by the Civil Service Bureau's codes of conduct, we also provide equal employment opportunities in accordance with the law.

Staff Employment

At the end of 2007/08, we have approximately 5,100 employees, about 71% of whom are employed on permanent terms. As a commitment to upholding the equal opportunity employment policy, we currently have 255 employees with minor disabilities, representing about 5% of our total workforce.



As for salary payment, we strictly adhere to government policies on timely payment of staff salaries and maintain payment records as required.

In 2007/08, we introduced a New Non-Civil Service Contract (NCSC) Technician Scheme to reinforce NCSC personnel's sense of belonging and provide a clearer career progression through Technician II, I and Senior Technician grades.

Young Engineer Recognised for Outstanding Community Service

2007/08 was a remarkable year for EMSD's engineer Fanny Ting, winner of the Certificate of Merit under the "Young Engineer of the Year Award" organised by the Hong Kong Institution of Engineers. Ms. Ting was the first woman E&M Engineer to receive the award.

Ms. Ting joined EMSD as an engineering graduate in 2002 and was awarded the Best Trainee of the Year in 2004. During her service in EMSD, she participated in a number of installation projects related to public services. Ms. Ting is also active in community services and activities in the engineering field.



Award Presentation Ceremony

Learning and Development

At EMSD, we recognise the need to continually enhance the capabilities and competitive strengths of our people in order to build a capable and progressive workforce. As such, we fully support our employees in pursuing learning and development opportunities that will eventually enhance their contribution to the organisation. We are committed to promoting a continuous learning environment to develop a motivated and competent workforce through effective management and continuous development of our human resources. Our Training and Development Committee, chaired by the Director of Electrical and Mechanical Services and comprising Heads of Departmental Grades as well as senior managers of General and Common Grades, meets regularly to review our training programmes and initiatives.

Graduate Training Scheme

Since its inception in the 1960s, our Engineering Graduate Training Programme has attracted more than 640 graduate participants. The programme has long been considered one of the best on-the-job training schemes in the engineering profession in Hong Kong and has contributed to the provision of trained engineers to meet the needs of the local profession. In 2007, we recruited 19 engineering graduates specialising in electrical, mechanical, electronic, building services, information technology and biomedical engineering.





Apprentice Training Scheme

Another key training programme is our Technician and Craft Apprentice Training Scheme which aims to provide systematic training of good standard to satisfy the present and future needs of EMSD as well as the community in a wide variety of occupations. The long-standing scheme has been running for over 50 years, successfully training more than 4,500 apprentices for the profession.

Training Targets

In 2007/08, we achieved 5.67 training days per staff per year on average, far exceeding the 4.5 days target set for the year. We continue to encourage and provide training relevant to enhancing our services and developing new business, and to facilitate employees' personal growth.

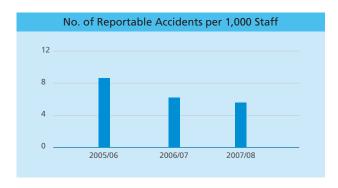
On-line Training Needs Survey

In order to collect the training needs of staff in a more effective way, we launched an on-line training needs survey platform in November 2007 for staff to express their training needs on-line for the coming year. Staff can thus create a personalised training needs profile. The survey data also gives individual division valuable information for overall planning and compilation of their divisional training plans.

Healthy and Safe Working Environment

Occupational Health and Safety

At EMSD, we take a proactive approach to Occupational Health and Safety (OH&S). Our Safety and Health Policy and infrastructure help ensure that a high standard of OH&S in the workplace can be achieved and maintained throughout the department. Our Departmental Occupational Safety and Health Committee, which comprises management and staff representatives from branches/divisions as well as departmental consultative committees, meets on a regular basis to review our health and safety performance in all areas with a view to identifying areas for improvement. We have continued to conduct training and refresher courses, and disseminate information through various channels. Our accident rate has steadily declined since 2000, and more recently from 6.19 per 1,000 staff in 2006/07 to 5.46 per 1,000 staff in 2007/08.



Sick Leave

In 2007/08, a total of 18,151 working days were lost due to sick leave. This is equivalent to around 3.54 days per employee.

Staff Relations

Staff Satisfaction Survey

Independent research specialists are appointed to conduct staff satisfaction surveys on a regular basis. In the latest 2007 survey, every employee at senior engineer rank and below was provided with an opportunity to express his/her views through a survey questionnaire. The average overall staff satisfaction rating is 6.5 (on a scale of 10) which is at the same level as that in 2005. Overall satisfaction level in the past few years shows an upward trend.

Staff Consultation Channels

In addition, we have 4 departmental consultative committees and 5 divisional consultative committees to facilitate communication between particular groups of staff and management within EMSD. Staff members are also free to join the various established staff unions as well as the general government unions.

Internal Communication Audit

An independent consultant was commissioned to conduct an Internal Communication Audit for EMSD from May to September 2007, with the objective to review the effectiveness of our internal communication mechanisms and practices, and to make recommendations for improvement. Follow-up actions will be taken to enhance the various internal communication channels and practices both on a corporate and divisional level, on the basis of the consultant's recommendations.

Contractor and Supplier Management

We often invite our working partners, such as consultants and contractors, to tender for public works contracts. In selecting contractors, we adhere to the basic principles of honesty and fairness, and adopt competitive tendering wherever applicable in compliance with government guidelines. We have established and maintained close communication with our suppliers and contractors to ensure that critical information, such as customer concerns, is clearly conveyed to them and relevant issues are addressed properly and in a timely manner. To monitor the work of contractors, we conduct regular meetings and audits to keep track of project progress as well as to minimise any inconvenience or disturbance caused to the neighbourhoods where the works take place. Postproject reviews are carried out upon project completion to further assess contractor performance. In order to enhance the awareness and sensitivity of staff to issues of integrity and conduct, integrity management workshops are arranged for staff who have official dealings/contacts with consultants/contractors and their supervisors.

Customers

Customer satisfaction influences our day-to-day business, particularly that of our Trading Services. In this regard, we commission an independent Customer Satisfaction Survey once every two years to gauge customer satisfaction level. The most recent survey was completed in April 2008 and we have looked into the results to identify areas for improvement. With regard to Regulatory Services, our Customer Liaison Group meets regularly with representatives from the general public to exchange views and obtain face-to-face feedback on our regulatory and safety promotion activities, and how they can be improved.

Community Activities

Our staff regularly participate in a variety of community activities. Some examples are the Community Chest Walk for Millions, Tree Planting Days, Green Carnival 2008 and Job Shadowing for Secondary School Students. In January 2008, our Staff Voluntary Service Team was awarded the 10-Year Service Grand Award presented by the Secretary for the Civil Service, in recognition of our contribution towards community services.



10-Year Service Grand Award for Staff Voluntary Service Team



Public Education

We work closely with other government departments and the community to promote E&M safety and energy efficiency to the trades and the public, an important aspect of the work of our Regulatory Services. Public education is conducted through a variety of channels, including mass media and the Internet, publications, promotional and advertising campaigns, posters and mail-outs, carnivals, road shows, game contests and quizzes, and talks and seminars tailored to both the trades and the general public. During 2007/08 we have continued to engage the community via the following activities:

E&M Safety Campaign

For the seventh consecutive year in 2007, we have teamed up with 15 key industry players from various sectors to organise the E&M Safety Campaign for the general public. This has been one of the largest public education collaborations between the public and private sectors, featuring an outdoor carnival and a mass media advertising campaign, among other activities.



Hong Kong Energy Efficiency Awards



Riding on the success of the first Awards in 2005, the second Hong Kong Energy Efficiency Awards ran from January to August 2007 and was extended to buildings developed or managed by the Housing Authority, Housing Society, The Link Management Ltd and the Urban Renewal Authority.

The winners achieved outstanding performance, with energy saving of more than 38 per cent and exhibited innovative ideas in their energy saving measures.

E&M Safety Newsletter

This is a family-friendly publication with handy tips on domestic E&M safety and energy efficiency,

and reaches tens of thousands of households and students across the territory.



School Outreach Programme

We continue with a range of school outreach programmes to promote E&M safety and energy efficiency to students via drama performances, talks and interactive activities. Each year,



these programmes reach more than 150,000 students at pre-school, primary, secondary as well as post secondary school levels.

Education Path in EMSD Headquarters

The Education Path in EMSD Headquarters showcases best practices in energy conservation and highlights our regulatory functions. Up to March 2008, the accumulated number of tours has exceeded 250, receiving more than 10,000 visitors.

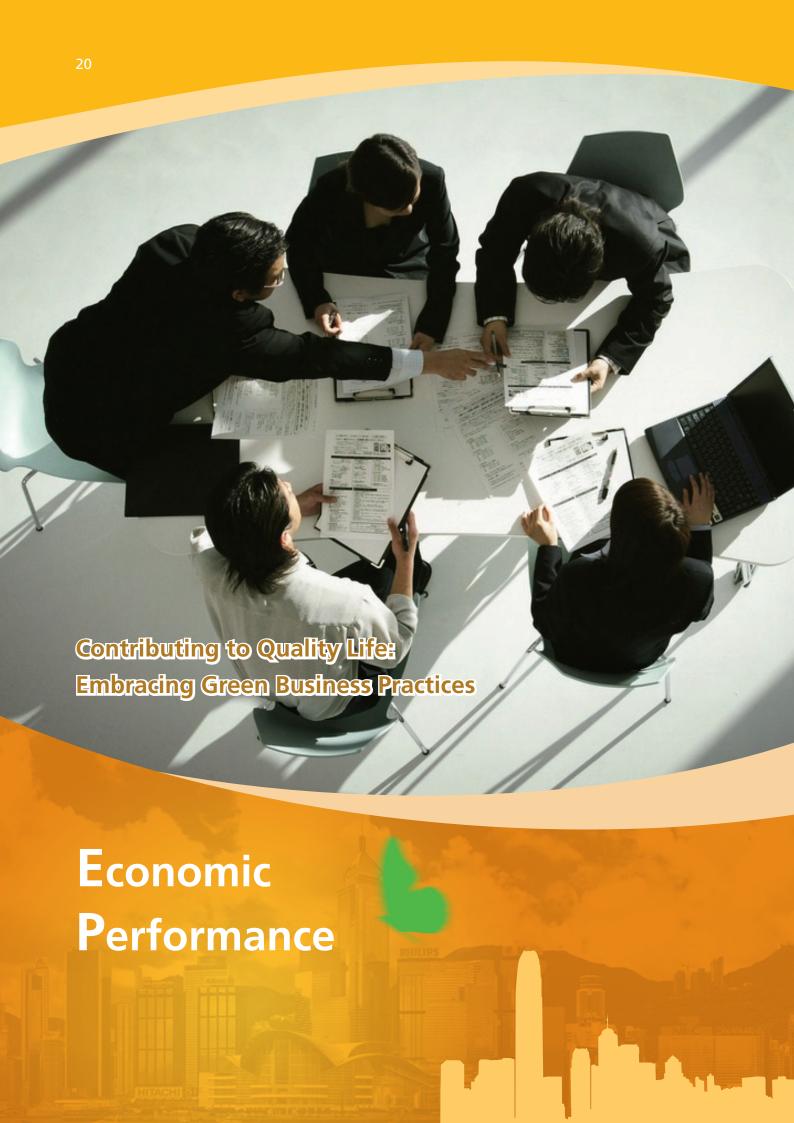


EnergyWits

Published twice a year by our Energy Efficiency Office, the newsletter covers energy efficiency and conservation issues and updates the trades of our



developments in energy efficiency and renewable energy work.



EMSD's Role in Economic Development

EMSD plays an active role in the economic development of Hong Kong. Our Trading Services provide services to our customers comprising other government departments and public bodies, and our Regulatory Services provide services to the general public. In turn, these activities also create jobs for our staff and business opportunities for suppliers and contractors from whom we purchase goods and services. All of these activities contribute to the local economy.

In addition, our Regulatory Services help maintain a safe environment which is vital to attracting business activities and investment into Hong Kong.

Overview

Our economic performance is reviewed on a yearly basis through the annual reporting of the business results of the Electrical and Mechanical Services Trading Fund (EMSTF) for our Trading Services, and through the Administrative Budget for our Regulatory Services. More information can be obtained from the EMSTF Annual Report 2007/08 (http://www.emsd.gov.hk) and the HKSAR Government's General Revenue Account (Head 42) (www.budget.gov.hk) for a complete review of our financial performance. A summary of the actual departmental expenditure is set out in Table A.

Table A
Summary of Key Economic Indicators – Trading Services

	2005/06 (HK\$'000)	2006/07 (HK\$'000)	2007/08 (HK\$'000)
Turnover	3,188,878	3,292,751	3,533,773
Suppliers & Contractors	1,313,353	1,350,598	1,524,659
Total Payroll and Benefits / Staff Costs	1,525,209	1,541,946	1,664,602
Taxation (notional)	57,520	56,566	56,455

Summary of Key Economic Indicators – Regulatory Services

	2005/06 (HK\$'000)	2006/07 (HK\$'000)	2007/08 (HK\$'000)
Suppliers & Contractors	46,142	56,988	57,280
Total Payroll and Benefits / Staff Costs	163,378	163,569	177,490

New Business Development

Our business in Information and Communications Technology (ICT) achieved significant growth in 2007/08. We have participated in a number of client projects, including the Red Light Camera System, the Journey Time Indication System as well as other Intelligent Transport System. Our self-developed mobile system utilising the latest 3.5G wireless technology also won the Bronze Award for the Best Public Service Application (Small Scale Project) of the Hong Kong ICT Awards 2007.

Engineering asset management consultancy services is another potential growth area of our business. We have developed a risk-based replacement prioritisation model to help our client departments assess the conditions and replacement priorities of their E&M assets more scientifically and systematically, thus enhancing the availability and reliability of these assets, which in turn will boost the service quality of our client departments to the public.

Employment

As on 31 March 2008, EMSD employed 5,123 staff members. This represents a 1.6% increase on the previous year. Staff cost including payroll, Mandatory Provident Fund (MPF) contribution, allowance, and fringe benefit expenses for 2007/08, is set out in Table A.

Procurement of Goods and Services

We regularly work with our consultants, suppliers and contractors who support us in providing quality services efficiently and effectively to the public and our client departments. For the purchase of materials and services, we strictly adhere to the procurement procedures and tender processes for various types of contracts according to the guidelines set by the Development Bureau (Works) and the Government Logistics Department. The estimated expenses on contractors and suppliers in 2007/08 were approximately \$1,582 million, or 46% of our departmental operating expenditures.

GRI Indicator Index

Indicators		GRI Reference		Page
		(Included)	(Not Included)	Reference
Strategy and Analy	vsis	(madada)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
brideegy and man	, 5.13	1.1,1.2		3,4,5
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	Biodiversity		EN11- EN15	12.12.21
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	Products and Services	EN26	EN27	10,11
	Compliance	EN28		4.2
	Transport	EN29	ENIDO	13
Social	Overall Human Rights		EN30	
SOCIAL	- Investment & Procurement Practices		HR1, HR2, HR3	
	Non-discrimination		HR4	
	 Freedom of Association & collective Bargaining 	HR5	111/4	17
	- Child Labour	TINO	HR6	17
	- Forced & Compulsory Labour		HR7	
	- Security Practices		HR8	
	– Indigenous Right		HR9	
	Labour Practices and Decent Work			
	– Employment	LA1	LA2, LA3	15
	– Labour/Management Relations		LA4, LA5	
	– Occupational Health & Safety	LA6, LA7	LA8, LA9	17,24
	– Training and Education	LA10, LA11	LA12	16,24
	– Diversity & Equal Opportunity	LA13	LA14	15
	Society			
	– Community	SO1		9-13,18,19
	– Corruption		SO2, SO3, SO4, SO5	
	– Public Policy		SO6	
	 Anti-competitive Behavior 		SO7	
	– Compliance		808	
	Product Responsibility			
	– Customer Health & Safety	PR1	PR2	17,18
	– Product & Service Labelling	PR5	PR3, PR4	7,18
	- Marketing Communications		PR6, PR7	
	– Customer Privacy		PR8	
	– Compliance		PR9	

Fully Included, Partially Included, Not Included For more information about the GRI indicators, please visit the website http://www.globalreporting.org/Home

Summary of Statistics

	2005/06	2006/07	2007/08
Resource			
Electricity (kWh)*	15,020,621	13,709,967△	12,821,719
Towngas (MJ)	764,880	485,760	317,000
Water (m³)	87,935	83,649	69,000
Diesel (I)	N/A	54,548△	56,194
Gasoline (I)	N/A	484,467△	464,259
Paper – A3, A4 (ream)	29,216	30,547	29,326
Paint & Solvent (I)	15,643	32,315	44,626
Lubrication Oil (I)	116,274	78,022	140,599
Grease (kg)	1,585	2,015	2,212
Refrigerant (kg) (e.g. R22 & R134a)	20,171	18,708	16,379
Industrial Gas (m³) (e.g. Oxygen, Argon & Acetylene)	2,279	3,988	3,733
Battery Electrolyte (I)	2,625	2,715	2,520
Tubeless Tyre (no.)	10,065	8,696	9,064
Outer Cover Tyre (no.)	2,591	2,872	3,393
Inner Tube (no.)	1,470	1,521	2,422

Emissions, Effluents and Waste			
Waste Paper (kg)	24,841	24,140	16,748
Toner Cartridges (no.)	1,546	2,024	3,058
Batteries (kg)	3,373	3,368	3,553
Metal Scraps (kg)	38,240	36,557	47,714
Waste Oil (I)	138,024	79,991	128,778
Used Vehicle Tyre (no.)	9,904	11,123	12,210
Spent Mercury Lamp (no.)	N/A	N/A	107,039

Staff			
Number of Accidents per 1,000 Staff (reportable)	8.84	6.19	5.46
Staff Satisfaction (out of a score of 10)	6.6	Not applicable	6.5
Training (average training days/staff)	6.05	6.36	5.67

 $^{^\}star$ Electricity Consumption of canteen, rented offices not included $^\vartriangle$ Figures published last year corrected

Clean Air Charter

The Hong Kong Special Administratioive Region (HKSAR) Government has endorsed and signed the Clean Air Charter, a project launched by the Hong Kong General Chamber of Commerce (HKGCC) and the Hong Kong Business Coalition on the Environment (BCE) aiming to engage the whole community in tackling air pollution. We are pleased to report our progress made under the Charter as follow

Commitment 1: Operate by a recognised worldclass standard, or the standards established by the Hong Kong / Guangdong governments on emissions of air pollutants, even if it is not required to do so here.

Measures Implemented: We have adopted the ISO 14001 "Environmental Management System - Requirements with Guidance for Use" Standard. The system featured a decentralised management framework with each division ensuring that its operations comply with internationally recognised standards and legislative requirements in Hong Kong.

Commitment 2: Use continuous emissions monitors (CEMs) at significant sources such as large and medium plants.

Measures Implemented: Indirect CO_2 emitted from electricity consumption is the major source of our emissions. To minimise its environmental impact, we have established yearly electricity saving objectives and consumption data are monitored closely. In 2007/08, we reduced electricity consumption by 840,000 kWh, equivalent to the reduction of about 600 tonnes CO_2 emissions.

Commitment 3: Publish information on energy and fuel use, as well as total emissions of air pollutions annually and timely, if emissions are significant.

Measures implemented: We have published ever since 1999 our environmental performance data in our annual "Environmental Report" (renamed as "Social and environmental Report" in 2007). Data on electricity consumption, our main source of emissions, is disclosed every year in the report.

Commitment 4: Undertake to adopt energy efficient measures in operations.

Measures Implemented: Our Energy Efficiency Office provides advice on energy efficiency and renewable energy measures and application technologies to other government bodies as well as our own colleagues. Guidelines on energy saving measures are established and made available to our staff to guide their day-to-day operations. We have also appointed Green Executives in each division/unit to coordinate matters related to energy efficiency. Besides, staggered working hours are adopted to reduce emissions caused by traffic congestion.

Besides, energy efficient and renewable energy systems and facilities have been incorporated into the design of our headquarters building. Details of those features are set out at the end of this section.

Commitment 5: Identify and encourage business-relevant measures to be taken on days when air pollution is high.

Measures Implemented: On top of our day-to-day measures to minimise GHG emissions, additional measures, where appropriate, will be implemented to deal with days with severe air pollution.

Commitment 6: Share air quality expertise of business with others

Measures implemented: We have been working closely with members from representative organisations including professional institutes, trade associations and the academia to review and update various Codes of Practice, Guidelines and Schemes related to energy efficiency and renewable energy from time to time. We shall also organise seminars and workshops for the general public and related bodies to explain the requirements whenever the Codes, Guidelines and Schemes are revised or new editions launched.

In 2007/08, we provided professional advice to EPD in the preparation of the Guidelines for reporting progress under the Clean Air Charter. In the Clean Air Charter Workshop held in January 2008, our representatives also shared their experience in implementing measures to fulfill the Charter requirements.



Energy Efficiency and Renewable Energy Features of EMSD Headquarters

Photovoltaic System

The photovoltaic system installed on the roof of our headquarters building is the largest of its kind in Hong Kong. It comprises more than 2,300 panels covering a total surface area of about 3,200 m² and has a maximum output of 350 kW. The system currently contributes approximately 3-4% of the total power source for the headquarters building.



Solar Water Heating System

The system comprises high efficiency evacuated tube type solar collectors, and can provide hot shower water for around 40 persons in the workshops.



Sun Pipes

Utilisation of natural light can minimise the artificial lighting demand in a building. Sunlight is captured through a dome shaped collector of each sun pipe on the rooftop. The light captured then travels down the highly reflective tubes of the sun pipes to illuminate the corridor on 7/F.





Motion Sensors for Lighting Control

The system automatically switches off the light fittings in a space when the motion sensors detect no people movement for a certain period of time.

By the same token, the motion sensors automatically switch on the light fittings once motion of people is detected.



Water-Cooled Ammonia Chillers

Our headquarters building is equipped with water-cooled ammonia chillers that operate at low cost and can enhance the overall operating efficiency of the cooling system as compared to traditional air-conditioning systems. Moreover, ammonia is a highly environment-friendly refrigerant and can easily be found in nature.



Solar Control Window Films

Solar control window films can reduce about half of the solar heat and lower the average space temperature by 1-2 °C which result in saving in energy for air conditioning.



Green Roof Garden

Our green roof garden provides landscaped rest area for staff and keeps the roof surface temperature low in summer.



Independent Verification Statement



SCOPE AND OBJECTIVE

Hong Kong Quality Assurance Agency (HKQAA) was commissioned by the Electrical and Mechanical Services Department (the EMSD) to conduct an independent verification of the Social and Environmental Report 2007-08 (herein referred to as "the Report"). The Report described the social, economic and environmental performance of the EMSD for the period from 1st April 2007 to 31st March 2008. The objective of the verification exercise was to provide an independent opinion on the materiality, completeness, accuracy and reliability of the information presented in the Report.

The scope of the verification included all reporting contents presented.

The verification scope included:

- Assess whether the information presented is accurate and represents the social and environmental performance of the EMSD;
- Verify the reliability of data and information management mechanism for gathering, collating, analyzing and presenting the data in the Report;
- · Assess the overall reasonableness and balance of reporting with regard to the information presented;
- Identify the relevant areas for future improvement.

VERIFICATION METHODOLOGY

Our verification procedure included review of relevant documentation, interview with representatives of the EMSD with accountability for preparing the Report and analysis of selected sample of data and information consolidated in the Report. The sample data were verified for accuracy through examination of supporting information.

OUR OPINION

In the opinion of HKQAA, the EMSD has continued to improve the quality, breadth and overall presentation of the sustainability information. The Report provided a structured, balanced, fair, honest and accurate representation of the environmental, social and economic performance of the EMSD.

All selected data examined during our verification were accurate and consistent with the supporting information reviewed. We are not aware of any misstatement made in relation to the information presented. The materials stated in the Report were reliable in the presentation of the EMSD commitments, initiatives, performance and achievements for the reporting period.

Signed for and on behalf of HKQAA

Connie Sham

Lead Verifier

Feedback Form

Thank you for reading our Social and Environmental Report 2007/08. To help us improve future editions of our Social and Environmental Report, we would be grateful to have your comments:

1. Which aspect	. Which aspect of the report do you find most informative? Inadequ			Acceptable	Ve	ery Informative
		1	2	3	4	5
a. About	this Report					
b. Challe	nges and Opportunities					
c. Enviro	nmental Performance					
d. Social	Performance					
e. Econo	mic Performance					
f. Summa	ary of Statistics					
	ort enable you to understand more about ormance on environmental issues?	Yes		No	1	No Comment
•	ort enable you to understand more about					
EMSD's perfo	SD's performance on social issues?	Yes		No	1	No Comment
4. Overall, how	would you rate our report?	Poor		Good		Excellent
		1	2	3	4	5

5. Other comments and suggestions please specify.

6. How can we convey our response to your comments/suggestions? (Please provide email or contact details for us to follow up.) – Optional

Please return feedback form to: Quality and Research Manager 3 Kai Shing Street, Kowloon, Hong Kong

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