



Hong Kong Fire Services Department Environmental Report 2023

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Introduction

The Fire Services Department (FSD) provides firefighting, rescue and emergency ambulance services as well as advice on fire protection to the public. Despite resource constraints, we remain committed to protecting the environment by delivering our services in an environmental-friendly manner on the premise that the efficiency and cost-effectiveness of our core functions will not be compromised, and strive for continuous improvement on this front. We endeavour to comply with all relevant green legislation; to monitor and control the significant environmental impacts associated with our activities and operations; and to render vigorous support to environmental programmes and activities.

Environmental Management System

We have been working hard to take forward and coordinate the development and implementation of green initiatives, with an aim to enhancing energy efficiency, energy conservation and resources recycling.

While our staff's willingness to participate in green initiatives is crucial to the success in building a green culture in the Department, our staff are well-informed of the latest green housekeeping practices and tips through persistent email circulation. They are also encouraged to make joint efforts towards building a greener workplace. To foster the culture of environmental management in the Department, we nominate our staff to attend briefings and experience-sharing workshops on the relevant legislative initiatives and green management measures organised by relevant government departments and organisations.

Environmental Performances

Energy Conservation

Our total electricity consumption in 2023 was 53,223,171 kWh, representing a decline of about 0.08% compared to 2022 and we also have achieved the target of improving the overall energy performance of government premises by more than 6% for 2023-24 under comparable operating conditions in 2018-19 as the baseline. We strive to control electricity consumption despite our ever-expanding scope of service. Fully aware of the importance of energy saving, all our staff are keen to play an active part in this regard.

Energy Saving Measures

In order to reduce energy consumption, we have put in place a number of energy saving measures in Fire Services premises ("FS premises") such as using more energy-efficient T5

fluorescent lights, de-lamping unnecessary lights in office area where colleagues do not normally have to read written material, switching off electrical equipment when they are not in use, replacing aged elevators and air-conditioners to ramp up energy efficiency, switching off some elevators during off-peak hours, installation of motion sensor lighting, and installing facilities which generate renewable energy to reduce electricity supply from the power company.

Carbon Audit

As part of our efforts to help combat climate change, we compiled Carbon Audit Reports for 10 FS premises in 2023. It was found that greenhouse gas emissions from these buildings were on average 0.29 tonnes of carbon dioxide per square metre of floor area.

Economy in the Use of Paper

In alignment with the E-Government strategy, we have rolled out computer-aided systems and IT Programmes in a bid to reduce paper records and transactions. We encourage our staff to reduce the consumption of papers, print only when necessary, issue emails instead of hard copies of memos and use recycled envelopes in day-to-day administrative communications. We will adhere to such practices under the principles of reduction, reuse and recycling, so as to minimise the impact on the environment. The paper consumption in 2023 was 41,323 reams, reflecting a reduction of approximately 9% compared to 2022.

Consumption of Fuel

Staff of our Workshops & Transport Division and the Electrical & Mechanical Services Department conduct regular maintenance for our fire appliances and ambulances in order to keep them working at optimum mechanical efficiency, which in turn will avoid excessive fuel consumption.

Improving Air Quality

Staff of the Workshops & Transport Division conduct Vehicle Emission (Gases Analysis) tests / Diesel Vehicle Emission (Smoke Density) tests in routine maintenance and servicing of our vehicles to ensure that their emission is in full compliance with the legal requirements. Besides, all new fire stations and ambulance depots are fitted with fume exhaust systems to extract exhaust from engines of the fire appliances and ambulances therein, and this could help improve air quality in these workplaces.

Management of Wastes

Recycling

We encourage all of our staff to take part in recycling. In 2023, about 14,756 kg of papers were collected from our workplaces for recycling, which was equivalent to about 6,309 reams of papers or about 15.27% of our paper consumption for the entire year. Apart from collecting used papers that can be recycled from our workplaces, we also place waste separation bins in

Fire Services Headquarters Building, Cheung Sha Wan Fire Station and the Fire and Ambulance Services Academy (FASA) to facilitate our staff to separate the wastes for recycling.

Chemical Wastes

We have made proper arrangements with registered chemical waste collecting contractors for them to collect chemical waste produced in our operational units in compliance with the requirements pertaining to registered chemical waste producers in the Waste Disposal (Chemical Waste) (General) Regulation of the Waste Disposal Ordinance (Chapter 354).

Clinical Waste

We have made arrangements for having clinical waste generated during the delivery of ambulance and paramedic services by ambulance personnel temporarily stored in ambulance depots installed with Clinical Waste Storage Cupboard before being collected by designated contractors for proper disposal.

Major Environmental Initiatives

Green Procurement Policy

In support of the Government's green procurement policy, we have incorporated environmental requirements as far as practicable when it comes to the preparation of quotation / tender specifications. In addition, to ensure sustained emission reduction, most Fire Services vehicles in commission have met Euro V or above emission standards. We are also in the process of procuring fire appliances of Euro VI emission standards to replace the aged ones.

Indoor Air Quality Improvement

To tie in with the Government's policy on improving indoor air quality control, we have explored various options to enhance indoor air quality of our office premises. We have participated in the Indoor Air Quality (IAQ) Certification Scheme since 2006. As at 2023, a total of 20 FS premises have been certified with Excellent Class or Good Class. We will continue to arrange IAQ certification for other eligible premises so as to provide a more pleasant indoor working environment for our staff.

Green Building Features at Fire Services Premises

We have put in place green roofing systems in suitable fire stations and ambulance depots, supplemented by green planting at their balconies and entrances. Apart from beautifying the environment, the substrate soil and vegetation of the green roof can help reduce energy demand of these premises by providing direct shading and better insulation. This will also bring positive effect to urban climate change mitigation.

Throughout the years, there are several newly commissioned FS premises being granted the “Platinum” and “Gold” ratings under the Building Environmental Assessment Method (BEAM Plus) New Buildings. BEAM Plus is recognised as one of the world’s leading green building assessment tools and aims to drive sustainable building performance and helps the businesses to reduce operation costs in long term. In achieving ratings under BEAM Plus, the design, construction and energy performance of these new FS premises satisfy a comprehensive range of performance criteria on environmental sustainability issues.

The new Fire Services Department Pak Shing Kok Married Quarters was granted the highest rating of “Platinum” under BEAM Plus new Building Version 2.0 in 2022 and is also the first high-rise concrete building in Hong Kong constructed by adopting modular integration construction (MiC). This construction approach shortened the construction period and significantly reduced the waste, carbon emission, noise and water pollution from the construction site, e.g. amount of landfill was reduced by over 50%; on-site water and electricity consumption was around 70% lower than that in conventional construction practices, etc. In addition, photovoltaic panels and solar lamp poles are installed to generate renewable supply of electricity for common areas of this FS premises.



The adoption of MiC to the construction of Fire Services Department Pak Shing Kok Married Quarters



The photovoltaic panels installed in the quarters

With close collaboration with Architectural Services Department and Electrical and Mechanical Services Department, we have expanded the installation of Photovoltaic (PV) systems at our premises where it is technically feasible and practical. We will continue to explore opportunity for the adaptation of renewable energy at our premises to contribute to carbon neutrality.



The PV panels installed at Chek Lap Kok Fire Station



The PV panels installed at Physical Training Complex at Fire and Ambulance Services Academy

Green Transport

In order to facilitate the attainment of carbon neutrality within the same time frame and improve air quality concurrently, we have been gradually replacing the staff cars with low to zero-emission vehicles. Electric vehicles (EV) charging facilities have been installed at three fire stations/ambulance depots, namely Mong Kok Ambulance Depot, Sheung Wan Fire Station and Wong Tai Sin Fire Station. Charging facilities at the Fire Services Department Pak Shing Kok Married Quarters have also been installed for residents' use.



*The EV charger installed at
Sheung Wan Fire Station*

Food Wise Hong Kong Campaign

To support the Food Wise Hong Kong Campaign launched by the Environment Bureau, we have signed the Food Wise Charter since 2013 as an undertaking to reduce food waste. Staff are consistently reminded to reduce food waste in their daily lives.

Waste Reduction at Source

Avoidance of Use of Disposable Tableware

We encourage our staff to adopt a straw-less, plastic-free lifestyle, and cut down the use of disposable tableware where possible. We have stopped providing plastic straws and poly-foam food containers in the canteen of FASA. In addition, no disposable tableware is provided for dine-in food and drinks, neither will it be provided by default or in sets for take-away meals. We have also participated in the No Straw Campaign organised by the Ocean Park Conversion Foundation and undertaken not to distribute disposable plastic straws in the canteen of FASA. Furthermore, we have suspended the provision of these straws through all automatic vending machines on FS premises.

Avoidance of Use and Sales of Plastic Bottled Water & “Bring Your Own Bottle”

As another step in promoting waste reduction at source, we have avoided the use of plastic bottled water in our events and meetings. Furthermore, we have ceased the sales of plastic bottled water through all automatic vending machines on FS premises. We also promote the Government’s longstanding policy of “Bring Your Own Bottle” among our members.

Way Forward

We have made sustained efforts to initiate a number of energy-saving projects. Good progress has been achieved in meeting the Government's environmental management targets. To make further strides in environmental management and to promote a green culture, we will continue to put in place energy saving measures and identify potential energy management opportunities.

To be in line with the Hong Kong Climate's Action Plan 2050, we are taking an active role in the installation of renewable energy facilities at our new and existing premises and gradually increasing the use of electric vehicles within our staff car fleet in the coming years. EV charging facilities will be installed at more staff quarters to promote the use of EV.

Views and Suggestions

To save paper, we do not provide hard copy of this report. An electronic copy of this report is available at our website (https://www.hkfsd.gov.hk/eng/publications/environmental_report/). Your valuable comments on this report are most welcome. Please send them to us by email at hkfsdenq@hkfsd.gov.hk.