

Clean Air Charter



To support the clean air initiatives, we are committed to enhancing energy efficiency and abating air pollution in every aspect of our works.

The Hong Kong Special Administrative Region Government has endorsed and signed the Clean Air Charter, a project launched by the Hong Kong General Chamber of Commerce and the Hong Kong Business Coalition on the Environment aiming to engage the whole community in tackling air pollution. The Highways Department continued to support the Charter by taking various measures to reduce harmful emission and energy consumption.

Air Purification System in the Central-Wan Chai Bypass Tunnel

The Central-Wan Chai Bypass tunnel commissioned in late February 2019. It is the first road tunnel in Hong Kong equipped with air purification system. Exhaust from the vehicles inside the tunnel, driven by the ventilation fans, will pass through the motorized dampers and be conveyed to the air purification system for treatment. Each air purification system plant consists of electrostatic precipitators and de-nitrification filter for removal of respirable suspended particulates and nitrogen dioxide. The air purification system can effectively remove at least 80% of the respirable suspended particulates and nitrogen dioxide in the vehicle exhaust.



Electrostatic precipitators



De-nitrification filter

Energy Saving in Public Lighting

We have been implementing various measures to further enhance the energy efficiency of public lighting in Hong Kong. We launched the large scale Light Emitting Diode (LED) public lighting replacement programme in 2017. As compared with conventional High Pressure Sodium lights, LED lights are more energy-saving, durable and environmentally friendly. With LED light's higher colour rendering, actual colour of surrounding objects can be revealed.

We are actively implementing the LED public lighting replacement programme in all districts of Hong Kong. Starting from 2019, we have sped up the replacement of LED lights and targeted to replace 6,500 road lights and 1,500 fluorescent tubes at footbridges and subways with LED lights each year, and replace all the 4,500 directional sign and gantry sign lights in 5 years. It is expected that the greenhouse gas emissions will be reduced by about 12,500 tonnes per year. In 2019, we have replaced about 14,000 lighting points which are well above our annual target.

We will continue to monitor the development of LED and other lighting technologies and to optimise the design standards as well as operational and maintenance works of public lighting systems. We aim to provide safe, high quality, reliable and sustainable public lighting services to the public.



Conventional High Pressure Sodium lights near Po Lam Estate in Tseung Kwan O



After replacement with LED lights

Energy Saving in Office

Electricity consumption in 2019 with corresponding indirect gas emission figures:

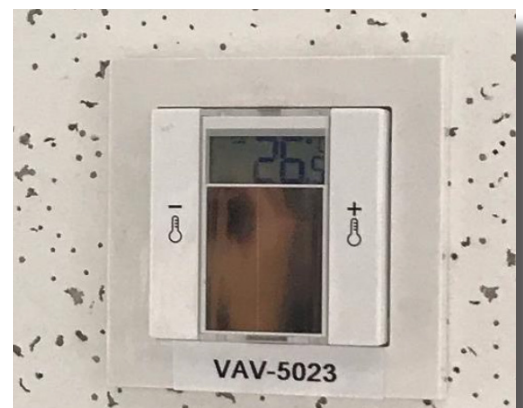
Offices ²	Electricity(kWh) [comparison with 2018]	Indirect gas emissions (kg)		
		SO ₂	NO _x	RSP
Ho Man Tin Government Offices	812,412 [↓14.70%]	1,551.71	942.40	48.74
North Point Government Offices	179,342 [↓2.42%]	342.54	208.04	10.76
Trade and Industry Tower	585,943 [↓7.26%]	1,119.15	679.69	35.16
Nan Fung Commercial Centre	326,451 [↓24.63%]	623.52	378.68	19.59
Grand City Plaza	23,987 [↓8.88%]	45.82	27.82	1.44
Cheung Sha Wan Plaza	10,609 [↓8.42%]	20.26	12.31	0.64
MG Tower	19,432 [↓11.57%]	37.12	22.54	1.17
The Harbourfront Tower 1 ³	62,146	118.70	72.09	3.73
The Harbourfront Tower 2 ³	13,507	25.80	15.67	0.81

Energy Saving Measures

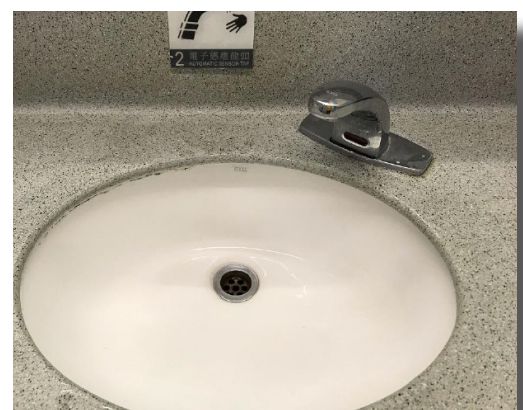
To enhance energy saving in offices, Energy Wardens are appointed in every office to monitor the usage of light and to keep the illumination level to the minimum acceptable level. We also regularly review the illumination level to suit the prevailing room use, and maintain air-conditioning not lower than 25.5°C in hot seasons to reduce electricity consumption.

Our staff are encouraged to switch off lights, computer equipment and electric appliances during lunch or when they are away for long hours. We also encourage our staff to use staircases for inter-floor traffic.

Automatic low flow water taps are adopted in toilets to save water. To monitor our electricity consumption, individual electricity meters are installed for various offices.



Maintaining air-conditioning not lower than 25.5°C



Adopting automatic low flow water tap

² Only offices with individual electricity metres installed are included.

³ Two new sub-offices set up in February and July 2018. The full-year data for 2018 is therefore not available for comparison with the electricity consumption of 2019.

Contribution to Reducing Emission

Environmentally Friendly Vehicles

To support the Government's policy on introducing electric vehicles in the government fleet for improving roadside air quality and reducing greenhouse gas emission, we have currently adopted one electric saloon car with a driving range of over 200km for long journey travelling. In 2019, we upgraded the electric vehicle charger by installing a 32A medium charger. As a result, the charging time of the electric vehicle was significantly reduced. This enabled a more efficient utilisation of the electric vehicle to meet operational needs. Moreover, we would replace one hybrid saloon car by electric vehicle and the procurement was under way.



Electric saloon car with upgraded charger

Special Measures to Cope With the Air Quality

To increase staff awareness on air quality, we have issued reminders to our staff when the Air Quality Health Index had reached or was forecasted to reach the "very high" or "serious" health risk categories. A set of precautionary measures for reference by front-line staff and their supervisors was provided with the reminders. The measures include conducting risk assessment of outdoor work for workers performing heavy manual works and measures to reduce outdoor physical exertion and time of staying outdoor, especially in areas with heavy traffic.

Indoor Air Quality Certification

Indoor air quality measurement was conducted by the Electrical and Mechanical Services Department in December 2019. Ho Man Tin Government Offices were awarded the "Good" Class Indoor Air Quality Certificate for 2019. The indoor air quality of Ho Man Tin Government Offices has fully complied with the "Good" Class of the Indoor Air Quality Objectives since 2003. The indoor air quality of our offices at Cheung Sha Wan Government Offices, North Point Government Offices, Nan Fung Commercial Centre and Trade and Industry Tower have also attained the "Excellent" or "Good" Class.



Indoor Air Quality Certificates of our offices