



Clean Air Charter

We are determined to take every small step to support the clean air initiatives to reduce air pollution.

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 emission and energy consumption.

ENERGY SAVING IN PUBLIC LIGHTING

The “Hong Kong’s Climate Action Plan 2030+” outlined the medium and long term work against climate change and carbon reduction objectives, with an aim to reducing Hong Kong’s carbon emission by 65% to 70% by 2030 using 2005 as the base. To cope with the objectives of reducing carbon intensity with the vision on further enhancing the energy efficiency of public lighting in Hong Kong, we launched the Light Emitting Diode (LED) public lighting replacement programme in 2017 to replace the conventional road lights, floodlights of directional and gantry signs and fluorescent tubes of subways and footbridges with LED luminaires. As compared with conventional High Pressure Sodium lights, LED lights are of more energy-saving, durable, environmentally friendly and higher colour rendering. In addition to savings in operating and maintenance costs, LED lights could improve the performance and reliability of public lighting, and provide road users with a more reliable and high quality lighting environment.

Under the current programme, we target 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. In 2020, we have replaced about 26,600 lighting points which are well above our annual target.

We will continue to monitor the latest development of LED luminaires and other new lighting technologies, and to optimize 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 at Man Tung Road in Tung Chung



▲ Same location after replacement with LED lights

PROMOTING THE USE OF RENEWABLE ENERGY ON HIGHWAY STRUCTURES

The Government has put in considerable efforts to promote energy efficiency and the use of renewable energy to restrain the rise in energy demand for sustainable development. As announced in the 2019 Policy Address, the Government has set a 5-year Green Energy Target of 6% improvement in the use of energy within the whole Government by 2025. The Green Energy Target covers not only government buildings but also infrastructures, and requires not only saving in the consumption of electricity but also the adoption of greener forms of energy (e.g. liquefied petroleum gas). Renewable energy projects can contribute to achieving improvement in energy performance.

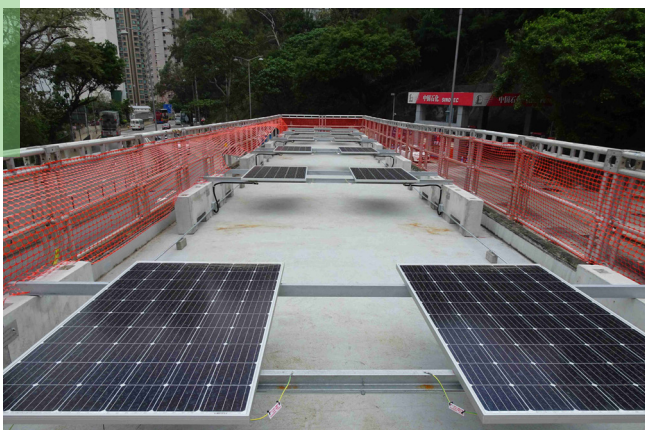
We are fully in support of the initiatives on combating climate change and achieving the Green Energy Target. We have identified potential highway structures at noticeable locations for the installation of photovoltaic (PV) systems to promote the use of renewable energy on the one hand and to raise public awareness of the benefits of renewable energy on the other. PV panels are installed on the roof of selected new and existing highway structures, such as noise barriers/enclosures, footbridges and subways, in order to make best use of the open spaces and maximize the efficiency of radiation absorption.

The PV systems on highway structures will be connected to the electricity grid. In case of any deficiency in energy generation due to inadequacy or absence of sun radiance, the power supply would be topped up by the grid instantaneously to maintain the reliability of power supply. On the other hand, should more energy be generated than the need of the structure concerned, the surplus would be returned to the grid for utilization by other users.



▲ PV system on an existing subway in Kwai Fong

With the promotion of renewable energy technologies, we endeavour to raise our contribution in meeting the Green Energy Target and enhance the energy performance of the highway structures. We will continue to identify further possible carbon reduction opportunities, with an aim to provide high quality and sustainable services to the public.



▲ PV system on an existing subway in Pok Fu Lam

ENERGY SAVING IN OFFICE

Electricity consumption in 2020 with corresponding indirect gas emission figures:

Offices ¹	Electricity (kWh) [comparison with 2019]	Indirect gas emissions (kg)		
		SO ₂	NO _x	RSP
Ho Man Tin Government Offices	835,753 [↑2.87%]	1,596.29	969.47	50.15
North Point Government Offices	167,534 [↓6.58%]	319.99	194.34	10.05
Trade and Industry Tower	607,298 [↑3.64%]	1,159.94	704.47	36.44
Nan Fung Commercial Centre	372,174 [↑14.01%]	710.85	431.72	22.33
Grand City Plaza	25,296 [↑5.46%]	48.32	29.34	1.52
Cheung Sha Wan Plaza	7,246 [↓31.70%]	13.84	8.41	0.43
MG Tower	18,914 [↓2.67%]	36.14	21.94	1.13
The Harbourfront Tower 1	69,536 [↑3.91%]	132.81	80.66	4.17
The Harbourfront Tower 2	14,643 [↑8.41%]	27.97	16.99	0.88
Spectrum Tower ²	41,315	78.91	47.93	2.48

Energy Saving Measures

To enhance energy saving in offices, Energy Wardens are appointed to monitor the usage of lighting equipment and to keep the illumination level to the minimum but acceptable level. We also regularly review the illumination level to suit the prevailing usage of the rooms, 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 of our offices 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

¹ Only offices with individual electricity metres installed are included.

² Offices in Spectrum Tower started operation only in Spetember 2020.

CONTRIBUTION TO REDUCING EMISSION

Environmentally Friendly Vehicles

To support Government’s policy on using environmentally friendly vehicles for improving roadside air quality and reducing greenhouse gas emission, we have replaced 14 vans by environmentally friendly vehicles of model types approved by the Environmental Protection Department, for meeting the qualifying standards of being environmentally friendly. The new vehicles would have lower emissions than the existing ones. Moreover, we have adopted one electric saloon car with a driving range of over 200 km which produces zero direct emission. The hybrid saloon car currently in the vehicle fleet would also be replaced by electric vehicle in the near future.



▲ Environmentally friendly vehicle in use

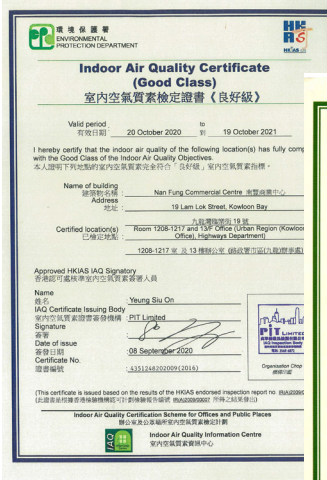
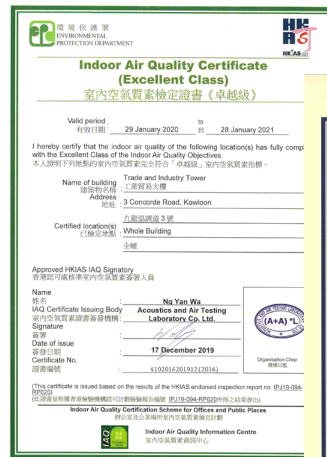
Special Measures to Cope With Poor Air Quality

To increase staff awareness on air quality, we reminded our staff when the Air Quality Health Index has reached or is 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 were provided with the reminders. The measures include conducting risk assessment of outdoor work for workers performing heavy manual work and measures to reduce outdoor physical exertion and time of staying outdoor, especially in areas with heavy traffic.

Indoor Air Quality Certification

In 2003, EPD launched the Indoor Air Quality (IAQ) Certification Scheme to promote and commend good IAQ management practice.

We have all along been fulfilling our commitment under the “Clean Air Charter”. Up to 2020, Ho Man Tin Government Offices have been awarded the “Good Class” IAQ Certificate consecutively for 17 years. In 2020, North Point Government Offices and Trade and Industry Tower attained “Excellent” class of IAQ, while Cheung Sha Wan Government offices and our offices in Nan Fung Commercial Centre attained “Good” class IAQ.



▲ IAQ certificates of our offices