

Energy Saving in Public Lighting

Despite the addition of 8,700 lighting points to the road light inventory due to opening of new roads etc., the territory-wide public lighting electricity consumption decreased to 131,855,765 kWh in 2015, being 1,160,469kWh (0.87%) less than the consumption in 2014. The corresponding reduction in indirect emission was 2,216kg of Sulphur Dioxide (SO₂), 1,346kg of Nitrogen Oxides (NO_x) and 70kg of respirable suspended particulates (RSP).

We implemented various energy saving measures for public lighting such as use of electronic ballasts at road lights and LED lights at footbridges and subways in 2015 and we will continue to implement these measures in coming years. Moreover, we also commenced trials for use of LED lights at public transport interchanges, tunnels and roadside traffic signs. Preliminary assessment reveals that the use of LED lights at traffic signs can reduce consumption by 450kWh/year for each sign.



LED lights at footbridges



Trials for use of LED lights at public transport interchanges



LED lights at subways



Trials for use of LED lights at roadside traffic signs

Energy Saving in Office

Offices ¹	Electricity (kWh) [comparison with 2014]	Indirect gas emissions (kg)		
		SO ₂	NO _x	RSP
HMTGO	1,027,471 [\.19%]	1,962.47	1,191.87	61.65
NPGO	189,026 ²	361.04	219.27	11.34
TI Tower	400,202 ³	764.39	464.23	24.01
NFCC	592,239 [+1.07%]	1,131.18	687.00	35.53
GCP	29,425 ²	56.20	34.13	1.77
CSWP	12,379 [↓ 15%] ⁴	23.64	14.36	0.74
MG Tower	23,465 ²	44.82	27.22	1.41

Electricity consumption in 2015 with corresponding indirect gas emission figures:

Energy Saving Measures

The following measures have been promulgated to enhance energy saving in offices:

- appoint Energy Wardens in every office/ division to monitor the usage of light and to keep the illumination level to the acceptable minimum level;
- review the illumination level arising from the change of room use;
- maintain air-conditioning not lower than 25.5°C in hot seasons;
- switch off lights during lunch or when staff are away for long hours;
- switch off computer equipment and electric appliances when not in use;
- encourage the use of staircase for interfloor traffic;
- use automatic low flow water taps in toilets; and
- monitor the electricity consumption of different floors by individual meters installed on each floor of HMTGO.

Contribution to the Air Quality

Environmentally Friendly Vehicles

We have been striving to reduce greenhouse gas emission of vehicles through the use of environmentally friendly vehicles and promulgation of internal guidelines to remind motor drivers of the green driving habits. We have adopted an electrical car which greatly reduced greenhouse gas emission at tail pipe to zero. Together with the earlier introduction of two hybrid vehicles in 2011, the travel distance covered per litre of petrol consumed was 18km in December 2015, much better than that of the other vehicles adopting unleaded petrol only. Furthermore, following the procurement of the environmentally friendly vehicles approved by the Environmental Protection Department (EPD) for all saloon type contract vehicles for all new major works contracts, we have also started adopting these types of contract cars extensively in our road maintenance term contracts.

Special Measures to Cope With the Air Quality

To increase staff awareness on air quality, we issued email reminders to our staff when the Air Quality Health Index (AQHI) reached or was forecasted to reach the "very high" or "serious" health risk categories. A set of precautionary measures for front-line staff and their supervisors was also attached to the reminders. The guidelines covered assessment of risk of outdoor work for workers performing heavy manual work and measures taken to reduce outdoor physical exertion and time of staying outdoor, especially in areas with heavy traffic.

Indoor Air Quality Certification

The indoor air measurement was conducted by the Electrical and Mechanical Services Department (EMSD) in October 2015. HMTGO was awarded the "Good Class" Indoor Air Quality Certificate for 2015. The indoor air quality of HMTGO has been fully complied with the Good Class of the Indoor Air Quality Objectives since 2003.

¹ Only offices of HyD with individual electricity metres installed are included.

 $^{^2\,}$ Relevant data is available with effect from January 2015.

³ Relevant offices have been relocated to TI Tower in June 2015.

⁴ Some offices have been relocated to TI Tower in June 2015.