

CONTROLLING OFFICER'S REPLY

THB(T)030

(Question Serial No. 3113)

Head: (60) Highways Department

Subhead (No. & title): (272) Electricity for public lighting

Programme: (4) Technical Services

Controlling Officer: Director of Highways (K K LAU)

Director of Bureau: Secretary for Transport and Housing

Question:

In 2015-16, the expenditure of the Government on electricity for public lighting is lower than that of the approved estimate. Please inform this Committee:

- (a) why is there a reduction in the expenditure for electricity for public lighting as compared to the original estimate?
- (b) what are the electricity expenditures of the Government on road lighting for the past three years?
- (c) regarding the pledge of the Highways Department (HyD) to implement a trial scheme in all districts across the territory to assess the performance and cost-effectiveness of light emitting diode (LED) road lights, please provide in a list the updated figures of road lights and low wattage LED road lights erected in the 18 districts of Hong Kong.

Asked by: Hon Gary FAN Kwok-wai (Member Question No. 46)

Reply:

- (a) Subhead 272 Electricity for public lighting covers the expenditure for electricity of all highways facilities, including public lighting, traffic signals, lifts and escalators for footbridges and subways, and ventilation systems for public transport interchanges. The decrease in the expenditure for 2015-16 is generally due to the one-off special fuel rebate by a power company in August 2015, decrease in tariff by both power companies in 2016, and lower than expected electricity consumption for the programmed upgrading of some ventilation equipment at public transport interchanges.
- (b) The electricity charges for road lighting in the past three years (2013-14 to 2015-16) is set out below –

	2013-14	2014-15	2015-16 (Estimate)
Electricity charges for road lighting (\$'000)	98,055	101,645	101,550

- (c) It was noted that LED road lights should have better colour rendering and higher reliability than high pressure sodium lamps (which are now widely adopted in Hong Kong), but their cost-effectiveness was low as the prices of LED road lights meeting the necessary certification (such as lighting test, safety and protection certification) were very high. Nonetheless, the HyD commenced a trial scheme in 2009 and has been closely monitoring the performance of a total of 171 LED road lights installed under the trial scheme in seven districts (i.e. the Eastern, Wan Chai, Kowloon City, Kwun Tong, North, Sai Kung and Sha Tin Districts). The findings of the trial so far have confirmed the same.

Under the latest market situation, the prices of low- and medium-wattage LED lights have dropped significantly, but are still higher than those of low- and medium-wattage high pressure sodium lamps. Despite the merits of energy saving due to better colour rendering, the cost-effectiveness of low- and medium-wattage LED lights is not significant enough to justify utilisation on a large scale at the moment.

On the other hand, only a few models of high-wattage LED lights are available in the market, and they are far more expensive than high-wattage high pressure sodium lamps. Utilisation of high-wattage LED lights is therefore not considered justifiable at the moment.

The HyD will continue to replace the aged lighting by installing more low- and medium-wattage LED lights as appropriate under the trial scheme with a view to further assessing the performance and cost-effectiveness of LED lights.

The geographical distribution of road lights and LED road lights installed under our trial scheme is as follows –

District	Number of road lights (rounded to nearest ten)	Number of LED road lights installed under the trial scheme
Central and Western	5 170	0
Eastern	4 420	24
Southern	4 420	0
Wan Chai	3 530	23
Kowloon City	4 740	8
Kwun Tong	5 150	55
Sham Shui Po	4 600	0
Wong Tai Sin	2 490	0
Yau Tsim Mong	5 040	0
Islands	7 980	0

District	Number of road lights (rounded to nearest ten)	Number of LED road lights installed under the trial scheme
Kwai Tsing	7 900	0
North	13 840	22
Sai Kung	9 740	30
Sha Tin	12 430	9
Tai Po	10 090	0
Tsuen Wan	7 700	0
Tuen Mun	9 140	0
Yuen Long	24 360	0

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