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Legislative Council Secretariat
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Central, Hong Kong
(Attn.: Ms Sophie LAU)
(Fax no.: 2978 7569)

31 October 2014
By Email and Fax

Dear Ms Lau,

**Legislative Council Panel on Transport
Meeting on 25 March 2014
Public lighting in Hong Kong**

Supplementary Information

At the Panel on Transport Meeting on 25 March 2014, some Members requested the Administration to provide supplementary information on the captioned discussion item. Our reply is as follows.

- (1) To consider the provision of electricity supply for public facilities, including public lighting, on Po Toi Island by means such as sustainable energy**

The public lighting on Po Toi Island has been provided by the Home Affairs Department (HAD) and maintained by it in light of actual circumstances. As regards the proposal to provide public lighting on Po Toi Island by means of sustainable energy (such as solar energy), the HAD will keep abreast of the results of the Highways Department (HyD)'s trials on adopting solar energy in public lighting.

In fact, the use of solar energy in public lighting is still at the trial stage. The HyD implemented a trial scheme in 2006, under which 17 solar road lights each with an individual photovoltaic (PV) panel and a battery were installed in Tuen Mun, Tsuen Wan and Yuen Long between 2006 and 2009. The results of the trial show that the use of solar energy in public lighting has some limitations with low performance of power supply and cost-effectiveness. To gain more operational experience about the use of solar energy in public lighting, the HyD has been implementing another trial scheme. Larger PV panels are installed at the top of the noise barriers along the section of Fanling Highway between So Kwun Po Road and MTR Fanling Station. The electricity so generated will be stored and used to power 16 road lights along a section of a cycle track in the vicinity. The trial scheme will commence in end 2014 for planned completion in 2016. The HyD will monitor and evaluate the effectiveness of the scheme.

(2) To address the concern on excessive lighting installations at the pedestrian footbridges (such as the one connecting Yat Tung Estate with the nearby petrol filling station)

The footbridge lighting systems maintained by the HyD are designed in accordance with its Public Lighting Design Manual. Appropriate lighting classes are selected based on factors such as footbridge design, pedestrian flow and ambient brightness. The HyD regularly monitors the lighting level of footbridges and adjusts it taking into account public views and physical environments. As regards the lighting system at the footbridge near Yat Tung Estate, the HyD has reduced its lighting level as a follow-up.

(3) To provide information regarding the details and outcome of the study conducted on the adoption of a remote control monitoring system to enhance the efficiency of maintenance of public lighting

The HyD has been implementing a public lighting control and monitoring system (“remote control monitoring system”) since 2008, with a view to enhancing the efficiency of public lighting maintenance and studying the effectiveness of the system. The remote control monitoring system consists of local control units installed at the roadside public lighting control cubicles in various districts. These units communicate via the cell phone network, such that the HyD’s contractors can receive fault reports promptly at the control centre to arrange repair works in a timely manner. At present, the system covers about 20,000 road lights in Hong Kong. The findings of the study are as follows –

1. the remote control monitoring system can only accurately detect the outage of two or more road light bulbs getting out of order concurrently that are connected to the same roadside control cubicle. However, according to the HyD's statistics, annually over 60 per cent of the cases on average about the outage of road lights managed by the HyD that get out of order involve a single road light bulb. As such, the effectiveness of the system is limited; and
2. the study also reveals that the remote control monitoring system has provided instant feedback to the HyD's control centre upon the outage of road lights getting out of order. Nonetheless, at the same time, the HyD's control centre has also received the relevant road light fault reports through other channels, including contractors' regular inspection and 1823 Integrated Call Centre, within a comparable period of time in many cases. Moreover, according to the HyD's experience, although the system can improve the detection time on the whole, its operating as well as maintenance costs are high and the cost-effectiveness is not satisfactory.

To conclude, the HyD will continue to keep abreast of technological developments with a view to further enhancing the effectiveness of public lighting maintenance.

Yours sincerely,

(Nicky NG)
for Secretary for Transport and Housing

c.c.
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