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24 June 2019

Chief Council Secretary(1)1
Council Business Division 1
Legislative Council Secretariat
Legislative Council Complex,
1 Legislative Council Road, Central
Hong Kong
(Attn: Ms Angel SHEK)

Dear Ms SHEK,

**LEGISLATIVE COUNCIL
PANEL ON ENVIRONMENTAL AFFAIRS**

Follow-up Actions Required

At its meetings on 28 January 2019, the Panel on Environmental Affairs of the Legislative Council discussed matters relating to “Promoting the use of electric vehicles”, and Members requested the Government to provide supplementary information on the policies on electric vehicles (EVs) and related matters. Our responses to the requests are at the **Annex** for Members’ information.

For enquiries, please contact me on 2594 6401.

Yours sincerely,

(MAK Shing-tat)
for Director of Environmental Protection

Encl.

(a) examples of the green transport technologies for commercial vehicles that were tested out under the Pilot Green Transport Fund and found to be suitable for adoption locally

As at the end of April 2019, the Pilot Green Transport Fund (PGTF) approved 83 trials of electric commercial vehicles (e-CVs), covering a total of 115 vehicles (including three taxis, three light buses, 21 single-deck buses, 87 light goods vehicles and one medium goods vehicle (tractor)).

Results of the trials have reflected that high production cost, limited service life and long charging time of batteries, etc. are the key constraints for e-CVs to become popular. Therefore, the existing e-CVs technologies are yet to be able to cope with the operational needs of local taxis, light buses and single-deck buses. All the 3 electric taxis previously on trial under the PGTF have been re-registered as private cars after the completion of the trial programme because taxis generally run almost nonstop for whole day and under normal operation cannot spare four hours a day for battery charging. Electric light buses and single-deck buses have also experienced similar problems. Both of them, even after a full charge taking four hours, could not support the daily mileages of a typical public light bus and a typical public bus. As for electric medium goods vehicle (tractor), the trial is expected to commence in July 2019.

In comparison, electric light goods vehicles (e-LGV) are more likely to gain popularity and are suitable for operators who require relatively lower daily mileage and payload because batteries of these vehicles can be topped up outside operation hours. e-LGVs however might not be suitable for transport trades requiring higher mileage and payload. It is also noted that the e-LGV technology is still advancing. Two brands tested under the PGTF have lately introduced new e-LGV models with more promising driving performance. Compared with the old models, the driving range of the two new models (results under laboratory test cycles) increases by 59% (from 170 km to 270 km) and 92% (from 165 km to 317 km) respectively. The payloads of these new models are some 650 kg and 630 kg respectively which are lower than the payload of a typical conventional diesel light goods vehicle (some 850 kg). A new brand of e-LGV has also entered into the market recently. Its vendor advised that the e-LGV could also have driving range up to 350 km with a payload not lower than 870 kg which is more or less the same as that of a typical conventional diesel light goods vehicle. As the trial of this new model has only started since February 2019 under the PGTF, the trial result is not yet available at this moment. With the advancement of e-LGV technology, we would anticipate more e-LGV models with higher driving range and payload, and at competitive price, will be introduced to Hong Kong.

We have organised experience sharing workshops dedicated for the transport

sectors suitable for adopting e-LGV to promote its wider use. We will continue to keep in view the development of e-CV technology and encourage the transport sectors to make use of the PGTF to try out other green innovative transport technologies and other suppliers to introduce more products to the local market.

- (b) of the 4 788 old private cars ("PCs") that met the requirements of the "One-for-One Replacement" Scheme and were de-registered after being scrapped from February to December 2018, how many owners concerned have bought a new petrol/diesel PC to replace the old one;**
- (c) whether the Administration has studied the reasons why the PC owners referred to in (b) above have not chosen electric PCs for replacing their old PCs despite the first registration tax concession offered during the period, and if yes, the findings**

Based on the estimation by the Transport Department (TD), among the concerned 4 788 PCs^[1], 1 108 of them were replaced by newly registered petrol/diesel PCs^[2]. Despite the first registration tax (FRT) concession offered for electric PCs (e-PCs), the PC owners will take into consideration different factors, including development of EVs and related technologies (e.g. operational performance of e-PCs, cost effectiveness and technologies of charging facilities), economic situations (e.g. vehicle owners' affordability) and market situations (e.g. e-PCs' prices, owners' preferences, availability of e-PC models and their supply) before making the final decision. The Government does not have the information and data on this matter.

- (d) a list of issues considered by the Steering Committee on the Promotion of Electric Vehicles since its establishment, and a summary of its deliberations and conclusions (if any) on those issues**

The Steering Committee on the Promotion of Electric Vehicles (the Committee), established in 2009 and chaired by the Financial Secretary, advises the Government on strategies and initiatives in promoting the use of EVs. So far the Committee has convened a total of 19 meetings. Items discussed include measures to facilitate the installation and enhancement of charging facilities, the setting up of the PGTF to test out green transport technologies, promotion of the use of EVs in public transport, government procurement of EVs, measures to encourage the public and the transport sectors to purchase or try

¹ A total of 4 788 PCs de-registered (after being scrapped) from 28 February 2018 to 31 December 2018 met the age and ownership period requirements under the "One-for-One Replacement" Scheme before 28 January 2019 (i.e. the old PC had been first registered for six years or more and its owner had owned the PC for three years or more without interruption).

² The 1 108 PCs replaced by new petrol/diesel PCs are estimated by the following criteria: (i) the replacement PC is defined as a PC transferred to the owner within a period of 90 days before or after the de-registration date of the scrapped PC; (ii) in cases where there were more than one PC transferred to the owner during the above period of the criterion (i), the first transferred PC was counted as the replacement PC; and (iii) new petrol/diesel PCs refer to those that have not been registered in Hong Kong before.

out EVs. The strategies and measures discussed by the Committee and the Government's progress on implementing relevant measures are as follows:

Strategies discussed by the Committee	Government's progress on implementing relevant measures
Facilitation of the installation and enhancement of charging facilities including technical support	The Government decided in 2012 to first install 500 EV chargers at the government car parks managed by the TD and the Government Property Agency and to continue to install and enhance government charging facilities subsequently.
Setting up of the PGTF to encourage the testing of green innovative transport technologies	A \$300 million PGTF has been put in place since 2011 to encourage the public transport sectors, goods vehicle operators and non-profit-making organisations to test out green innovative transport technologies (including e-CVs). The Government will complete the review on the PGTF within 2019, with a view to further facilitating the wider use of green innovative transport technologies by the transport sectors.
Promotion of the use of EVs in public transport	The Government is fully subsidising the franchised bus companies (FBCs) to acquire 36 single-deck electric buses (including 28 battery-electric buses and 8 supercapacitor buses) and related charging facilities for trial run on different routes to assess their operational efficiency and performance in local conditions. Currently, 26 battery-electric buses and 6 supercapacitor buses have commenced the two-year trials. The FBCs will arrange the remaining electric buses to commence the trial programme progressively.
Government procurement of more EVs	Taking into account the operational needs of the departments and the supply of EV models in the market, the Government has taken the lead to adopt using more EVs since 2009. As at the end of April 2019, there were 246 EVs in the government fleet.
Provision of financial incentives to promote	The Government has waived the first registration tax (FRT) ^[3] for EVs since 1994; and allowed enterprises

³ The current FRT concession arrangements for EVs are as follows:

- (a) e-CVs (including goods vehicles, buses, light buses, taxis and special purpose vehicles), electric motor cycles and electric motor tricycles: their FRT continues to be waived in full from 1 April 2018 to 31 March 2021.
- (b) e-PCs: A tiered structure is implemented:
 - i. except for eligible PC owners (see (b) ii. below), FRT for e-PCs continues to be waived up to \$97,500 from 1 April 2018 to 31 March 2021, as at present.
 - ii. a new "One-for-One Replacement" Scheme is launched from 28 February 2018 to 31 March 2021 (both

the use of EVs	which procure EVs to have full profit tax deduction for the capital expenditure on the vehicles in the first year of procurement since 2010.
Organisation of the International Competition on Second Life for Retired Batteries from EVs	The International Competition on Second Life for Retired Batteries from EVs was organised in June 2017.
Promotion and publicity	The Government has organised a number of promotion and publicity activities since 2009. The Environmental Protection Department (EPD) also established in 2011 a dedicated team and a service hotline to provide information and technical support on installation of charging facilities. Besides, to encourage existing private housing estates to install EV charging facilities, the EPD organised 5 seminars in the past 5 years to encourage building owners, property management companies and owners' corporations to support installation of EV charging facilities in existing buildings. The Government will continue to strengthen its efforts in communication, publicity and education, and provide technical assistance to relevant stakeholders regarding the installation of EV charging facilities.

dates inclusive), allowing PC owners who arrange to scrap and de-register their own eligible old PC (PC with an internal combustion engine or e-PC) and then first register a new e-PC to enjoy a higher FRT concession up to \$250,000.