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### **Environmental Protection Department**

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6 March 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 to meeting on 28 January 2019

At its meeting on 28 January 2019, the Panel on Environmental Affairs passed a motion under agenda item III on "Promoting the use of electric vehicles". Our response to the motion is 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.

Annex

Motion: To further improve air quality, this Panel urges the Government of the Hong Kong Special Administrative Region to draw reference from the strategies of other places for promoting the use of electric vehicles ("EVs"); set a timetable for phasing out petrol vehicles and targets on the take-up rate of EVs; and encourage the public to switch to EVs and hybrid vehicles through strategies such as offering additional tax concessions for EVs, providing partial tax concessions for hybrid vehicles, increasing substantially the number of public chargers and subsidizing the provision of chargers by private property owners, so as to reduce roadside emission and improve air quality.

# Timetable for phasing out petrol vehicles and targets on the take-up rate of EVs

To reduce the tailpipe emissions from vehicles, developing and using new energy vehicles, including EVs, has become a global trend. The Government will continue to encourage the public to use new energy vehicles in the hope that all newly registered private cars (PCs) in Hong Kong will ultimately become new energy vehicles in the long run. However, as Hong Kong's vehicles are all imported, we will consult stakeholders, including collating the timetable of various manufacturers and suppliers on the production of new energy vehicles and ceasing the production of conventional vehicles, for considering our next step. As the first step, we may consider ceasing the first registration of diesel PCs subject to consultation with stakeholders. Similarly, we will also consider whether the first registration of diesel motor cycles should be ceased.

The formulation of policies on promotion of EVs and the actual outcome of the measures would depend on various factors, including local conditions (e.g. climate and terrain conditions, local demand for vehicles, quantities of air pollutants emitted from different types of vehicles, the Government's environmental protection and transport policies), development of EVs and related technologies (e.g. operational performance and cost effectiveness of EVs, technologies of charging facilities), economic situations (e.g. vehicle owners' affordability) and market situations (e.g. EV prices, vehicle owners' preferences, availability of EV models and their supply) and so on. Hence, the Government has not set a target on the take-up rate of EVs.

## Tax concessions for EVs and hybrid vehicles

Commercial vehicles (CVs) account for 95% of the vehicular emissions of respirable suspended particulates and nitrogen oxides, both of which are major air pollutants. Hence, CVs have all along been a major target of the Government's measures to improve roadside air quality. EVs have no tailpipe emissions and are efficient in converting energy from the grid to power at the wheels. Replacing conventional vehicles, especially CVs, with EVs can help improve roadside air quality and reduce greenhouse gas emissions.

The Government has all along been committed to promoting the use of electric CVs (e-CVs). Measures taken include waiving the first registration tax (FRT) of e-CVs in full since 1994; putting in place since March 2011 a \$300 million Pilot Green Transport Fund (PGTF) to support the transport sector to try out green innovative transport technologies (including e-CVs); and subsidising franchised bus companies to test out electric buses.

As for electric private cars (e-PCs), the Government's standing policy is to encourage the public to use public transport as far as possible, and should they need to acquire PCs, choose e-PCs. The Government promotes the use of e-PCs in Hong Kong mainly through offering financial incentives such as tax concession and lower annual vehicle licence fee, and facilitating the development and enhancement of charging networks for e-PCs.

When drawing up the FRT concessions for e-PCs, the Government on one hand aims to avoid the overall growth of PCs causing traffic congestion and aggravating roadside air pollution; and on the other hand, hopes that the incentives could aptly encourage vehicle buyers to choose EVs as far as possible when there is a need to buy PCs. Taking account of these two factors, the technological development and market situation of EVs, as well as road traffic conditions and views of stakeholders, the Government decided to continue with the FRT concessions of up to \$97,500 for e-PCs from 28 February 2018 to 31 March 2021. For the same period, a new "One-for-One Replacement" Scheme (the Scheme) has also been introduced to allow eligible existing vehicle owners who buy a new e-PC and scrap their own eligible old PC to enjoy a higher FRT concession of up to \$250,000. In addition to the said FRT concessions, annual vehicle licence fees for e-PCs are far lower than those for conventional PCs, and the electricity tariffs incurred for running e-PCs are also less expensive than the fuel charges

incurred for running conventional PCs.

With ongoing technology development in e-PCs, there are currently a number of relatively more affordable e-PC models which are priced between \$240,000 and \$400,000 (FRT excluded) in the market, with their laboratory-tested driving range reaching 280 kilometers (km) to 400 km, thus meeting Hong Kong drivers' general needs of daily mileage of only a few tens of km. Currently, amongst the eight brands of e-PC available in the local market, seven of them already provide models that can enjoy full waiver of FRT under the Scheme. Besides, after considering the views of stakeholders on the Scheme since its introduction, the Government has relaxed the eligibility criteria of ownership period and licensed period of an old PC under the Scheme starting from 28 January 2019. The number of PCs meeting the relaxed eligibility criteria would be increased by 30% to more than 0.25 million.

The Government is of the view that the current arrangements represent a right balance of various relevant factors. The Government will, as scheduled, review the existing FRT arrangements for EVs before their expiry on 31 March 2021, and has no plan to revise the current arrangements at this stage.

Compared to conventional vehicles, hybrid-electric (hybrid) vehicles in general can offer better fuel efficiency, but they still have tailpipe emissions and their fuel saving depends on the driving modes. In comparison, EVs have no tailpipe emissions, and are more effective in improving roadside air quality in a high-density environment in Hong Kong. In the case of PCs, taking into account the Government's standing policy to promote the use of public transport, the Government considers that it is appropriate to grant FRT concession for e-PCs only. The Government currently has no plan to provide FRT concession for hybrid PCs.

As CVs have been a major source of roadside air pollution, the Government has been, apart from waiving e-CV's FRT in full, offering reduction in the FRT of newly registered environment-friendly commercial vehicles (EFCV) starting from 1 April 2008. The Environmental Protection Department (EPD) has been reviewing annually the qualifying emission standards for EFCVs under the scheme in the light of vehicle technological advancement and the prevailing statutory emission standards for newly registered vehicles such that the tax incentive is available only to CVs with an outstanding environmental performance. Currently, vehicles that meet the qualifying emission

standards for EFCVs already include some hybrid CVs.

# **Charging Facilities**

In response to the rapid changes in the use of e-PCs, the Government will allocate \$120 million to extend the public EV charging networks at government car parks. Over 1 000 additional public chargers are expected to be in place by 2022, bringing the total number of chargers to 1 700. We will also identify suitable on-street parking spaces to install EV chargers on a trial basis and explore suitable locations to set up pilot quick charging stations for EVs.

The policies and measures to promote the use of EVs reviewed by the Government are as follows:

#### Short to Medium Term Measures

- (i) Installing additional medium chargers at government car parks
- (ii) Providing charging facilities at on-street parking spaces as pilot
- (iii) Setting up public quick charging stations as pilot
- (iv) Enhancing the EV charging facilities requirement at new Government developments, extending the requirement to outdoor car parks
- (v) Stepping up publicity and education to promote the installation of charging facilities at private premises

# Long Term Measures

- (i) Setting up EV Charging Smart System
- (ii) Exploring practicable measures to encourage installation of charging infrastructure or chargers in existing and new private buildings

Details of the measures are stipulated in the discussion paper on "Promoting the use of electric vehicles" (LC Paper No. CB(1)487/18-19(03)) submitted for the Panel on Environmental Affairs meeting on 28 January 2019.