

LCQ7: Promoting electric vehicles

Following is a question by the Dr Hon Kwok Ka-ki and a written reply by the Secretary for the Environment, Mr Wong Kam-sing, in the Legislative Council today (May 6):

Question:

The Financial Secretary has indicated in this financial year's Budget Speech that the Government will update the Clean Air Plan (the Plan) to, among others, examine the policy of further promoting electric vehicles (EVs), and will formulate Hong Kong's first roadmap on the popularisation of EVs. In this connection, will the Government inform this Council:

- (1) regarding the official vehicles allocated to the Chief Executive and the various Secretaries of Departments and Directors of Bureaux, of their brands, models, purchase prices and numbers of service years to date, as well as the number of EVs among such vehicles (set out in a table);
- (2) of the number of registered vehicles in the government fleet as at the end of March this year, and the number of EVs among such vehicles, with a tabulated breakdown by government department and type of vehicles;
- (3) whether, in order to gradually increase the proportion of EVs in the fleet, it will adopt the following policy: priority being given to purchasing EVs when fuel-engined vehicles in the government fleet are due for replacement; if so, of the details; if not, the reasons for that;
- (4) whether it knows the numbers of (i) parking spaces and (ii) public EV chargers, together with a breakdown by type (i.e. standard, medium and quick) in each car park under the MTR Corporation Limited and the Link Asset Management Limited (set out in a table);
- (5) whether it has studied, in respect of similar type of electric private cars and fuel-engined private cars achieving the same driving range, how the former's charging costs compare with the latter's fuel costs; if so, of the details; if not, whether the Government will, when updating the Plan, conduct such a study;
- (6) of the international crude oil prices, final retail prices of auto-fuels in Hong Kong, and the average electricity tariff per unit respectively in each of the past 24 weeks (set out in a table); how electric private cars compare with fuel-engined private cars in terms of energy expenditure as projected on the basis of such prices;
- (7) of the current number of fuel stations across the territory, and set out, by name of oil company in a table, the locations of the fuel stations and their site areas; whether the Government will require oil companies to provide charging facilities at existing fuel stations;

(8) whether it will draw up a timetable for completely phasing out fuel-engined private cars; if so, of the considerations and timetable; if not, the reasons for that;

(9) as it is learnt that the governments of certain places have, through offering economic incentives, achieved that zero-emission vehicles account for a certain proportion in the annual sales of vehicles by vehicle dealers, whether the Government will consider adopting a similar practice for vehicle dealers in Hong Kong; if so, of the details; if not, the reasons for that;

(10) whether it will, by making reference to the pro-EV practices adopted by certain countries in terms of road use (e.g. priority road use or reduced tolls), implement pro-EV measures on the roads, tunnels and bridges connecting the New Territories with the urban areas; if so, of the details; if not, the reasons for that; and

(11) as it has been reported that the United Kingdom has planned to introduce green number plates for EVs to facilitate the implementation of different traffic control measures for EVs and non-EVs by the authorities, whether the Government will consider adopting such a practice; if so, of the details; if not, the reasons for that?

Reply:

President,

My responses to the various parts of the question raised by the Dr Hon Kwok Ka-ki are as follows:

(1) The models of the government vehicles allocated to the Chief Executive, Secretaries of Departments and Directors of Bureaux include BMW 750LiA, Lexus LS460L, Infiniti Q70L Hybrid and Tesla Model S 85D (electric vehicle (EV)). Among them, one is EV. As at the end of March 2020, the service year of the vehicles concerned ranges from 1.8 years to 4.2 years, while the unit purchasing price of the vehicles ranges from \$350,000 to \$720,000.

(2) As at the end of March 2020, there were a total of 6 604 vehicles in the government fleet, of which 224 were EVs. The details are set out at Annex I.

(3) As at the end of March 2020, there were 224 EVs of various models in the government fleet, which were mainly small and medium cars accounting for 9.2 per cent of the total number of government cars, higher than the overall penetration of electric private cars (e-PCs) in Hong Kong (2.2 per cent). Whether government departments can use EVs depends mainly on the development of EV technologies (including vehicle performance, durability of batteries, the highest mileage sustained after a full charge, etc. and whether these can meet the daily operational needs of the departments). Currently, the driving range of electric cars has improved generally. As regards specialised vehicles (such as refuse collection vehicles), buses, medium and heavy goods vehicles, EV models suitable for departments' operational needs are still not

available in the market. For electric motorcycles, their battery performance is still unsatisfactory. For electric vans, since only few models are available for coping with uses with lower mileage and payload, they only account for about 1.6 per cent of the relevant type of government vehicles.

To support the policy of promoting wider use of EVs, the Government will keep abreast of the latest technological development of EVs and encourage departments to use EVs in replacing their retiring vehicles subject to the availability of suitable models in the market and the performance of EVs in meeting departments' operational needs.

(4) The respective number of EV chargers (including the EV chargers at the hourly and monthly parking spaces) installed at car parks managed by MTR Corporation Limited (MTRC) and Link Asset Management Limited (Link) as at the end of February 2020 are tabulated at Annex II.

(5) and (6) Regardless of whether it is an electric or fuel-propelled private car (PC), energy expenditure depends on a variety of factors, such as driving conditions, vehicle design and fuel efficiency of the vehicle, it is therefore difficult to project the expenditure for the two types of PC based on fuel prices alone and make an appropriate comparison. According to the Electrical and Mechanical Services Department's Energy Utilisation Index, using a petrol PC with engine cylinder capacity of 1 501-2 500 c.c. (i.e. the most dominant engine cylinder capacity class in Hong Kong) as an example, the fuel consumption of its internal combustion engine is about 11.6 litres per 100 km on average. Assuming a petrol price of \$17 per litre, such PC needs \$1.97 to travel one km on average. The most common e-PC model in Hong Kong consumes about 0.2 kWh per km on average. Taking an electricity tariff of \$1.3 per kWh, e-PCs need \$0.26 to travel one km on average, far lower than the cost incurred by a conventional vehicle.

The weekly average international crude oil price and retail prices of local auto-fuels in the past 24 weeks are tabulated at Annex III.

When making reference to the above data, it should be noted that crude oil and refined oil (such as unleaded petrol and motor vehicle diesel) are different products, hence changes in international crude oil price are not necessarily the same as changes in the prices of unleaded petrol and motor vehicle diesel. As for the electricity consumption of e-PCs, depending on which power company is the supplier, what kind of registered tariff account the charging facility is using, and how much electricity is consumed, the electricity tariff per unit would be different, and it is difficult to turn it into a simplified average price.

(7) Apart from the need to overcome fire and gas safety issues, the petrol filling stations (PFS) in Hong Kong are in general relatively small and the potential for adding chargers is not high. In addition, vehicles require more queuing time for electricity charging than that for petrol refilling, which will also affect nearby traffic, therefore PFS is in general not considered as suitable location to equip with chargers. We need time to process the number of PFS and related information and will provide it separately later.

(8) and (9) The Government is actively preparing to update the Clean Air Plan and formulate the roadmap on the popularisation of EVs to, among other things, further examine measures to improve air quality, as well as policy objectives and plans to promote the use of EVs, including the study on formulating the direction and roadmap to ban the sale of fuel-propelled vehicles.

The Government will actively study overseas experience in the formulation of policies and carefully examine the feasibility of applying such experiences to the local environment of Hong Kong.

(10) and (11) To promote the use of EVs, the Government has currently introduced a series of measures, including waiving in full the first registration tax (FRT) for electric commercial vehicles, electric motor cycles and electric motor tricycles, as well as offering FRT concession and "One-for-One Replacement" Scheme for e-PCs. Moreover, the 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. As regards tolls for tunnels and bridges or road pricing, they are implemented based on traffic management considerations, with a view to adjusting the traffic flow and alleviating traffic congestion for the public's convenience. In line with the said rationale, the Government currently has no plan to offer concessions in tolls for tunnels and bridges or road pricing, or introduce specific traffic management measures for EVs.