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5 June 2020

Panel on Environmental Affairs  
Legislative Council Secretariat  
Legislative Council Complex  
1 Legislative Council Road  
Central, Hong Kong

[Attn: Mr Derek LO, Clerk to Subcommittee to Study Issues Relating to the  
Development of Electric Vehicles]

Dear Mr LO

**Legislative Council Panel on Environmental Affairs - Views on Hong Kong's  
Policies on Electric Vehicles**

Regarding the captioned subject, the Institution is pleased to provide herewith our  
views and suggestions for your consideration.

Thank you for your attention.

Yours sincerely



Ir Ringo S M YU  
President  
The Hong Kong Institution of Engineers

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RSMY/SW

**Enclosure**

**Legislative Council  
Panel on Environmental Affairs**

**Views from the Hong Kong Institution of Engineers on Hong Kong's Policies on  
Electric Vehicles**

The Hong Kong Institution of Engineers (HKIE) supports the Administration's initiatives to promote the use of electric vehicles (EVs) to lower tailpipe emissions and carbon emission in order to progressively improve the roadside air quality.

2. The HKIE notes that the adoption of EVs in Hong Kong is not only an environmentally friendly initiative, but can also lead to a large-scale transformation of both public and private business models of the transport industry. Therefore, a more comprehensive approach with forward-thinking measures is required to achieve a smooth transformation. In view of the aforementioned considerations, we would like to put forth our suggestions in the ensuing paragraphs for consideration.

**INCENTIVES FOR EV BUYERS**

3. The HKIE notes that the effective period of the First Registration Tax Concessions Scheme will expire in March 2021 and recommends extending it. Noting the fact that the cost of electric private cars (e-PCs) is still high after tax concession, it is suggested to further enhancing tax concession, as well as adding other financial incentives, such as electricity charges subsidy and rebate for e-PC owners who perform daily charging, in order to encourage the switching to e-PCs.

4. The HKIE is aware of the continuous growth of the number of private cars (PCs) in Hong Kong. In pursuance of the effective containment of the rising number of PCs, the Administration may consider to revise the current tax rate and licensing policy of conventional PCs. Furthermore, to prevent overly congested road traffic, a hybrid incentive scheme of differentiated charges under the future Electronic Road Pricing Scheme should be considered by the Administration. It is suggested to allow e-PC users to enjoy a discounted congestion charge as their idling air pollutant emission is much lower than that of conventional vehicles.

**EV CHARGING NETWORK**

5. Whilst not all EV owners are able to install home chargers, a significant proportion of EV owners will still rely on the public charging network. The HKIE suggests expanding the public EV charging network which is a critical factor for successful EV adoption.

6. The charging speed of public chargers should be much faster than that of home chargers for quicker top-up and improvement of the turnover rate as the number of charging spaces is limited. A higher turnover rate could help alleviate the "charging anxiety" issue.

7. To facilitate the public to access to the status of the government's public charging facilities, the Administration is recommended to develop the EV charging network with smart city initiatives and expedite the development of an online EV charger information portal, which would share the government's public charger status for third-party Application Programming Interface.

8. Referring to the \$2 billion pilot subsidy scheme for the installation of the EV charging-enabling infrastructure in car parks of existing private residential buildings, the HKIE opines that the application procedures should be simple in order to facilitate the application process. In addition, technical support is recommended to be offered to the applicants, especially to those incorporated owners of single-block buildings with no in-house technical support.

9. The HKIE supports the full exemption of underground car parks in new private buildings with EV charging-enabling infrastructure from the calculation of gross floor area. The Administration is also recommended to urge the management offices or incorporate owners to install load management system and central monitoring system so as to facilitate monitoring, booking payment, remote control of the charging facilities, and optimise the charging loads during simultaneous charging of multiple EVs respectively.

10. The Administration is also recommended to review and relax the restrictions of the terms of the land use on government lease regarding the use of carparks in order to permit private business operations on EV charging facilities.

11. As the new generation of EV models would have larger battery capacity, we support the Administration's plan of the installation of medium chargers at the government car parks which would improve the charging speed and subsequently increase the usage frequency of the charging facilities. Regarding the dedicated EV charging plug/socket for the medium speed charging, IEC62196 Type 2 is recommended.

12. The HKIE believes that the grasp of the latest charging technology (e.g., ultra-fast high-power chargers with power of 350 kW) will place Hong Kong in an advantageous position in the global EV market and attract the prompt appearance of the latest generation of EV models in Hong Kong market, which is crucial for boosting the number of EVs in Hong Kong.

13. Incentives are critical in attracting the private sector to participate in public charging services. Hence, the Administration is recommended to take this into consideration in its study of public charging services.

## **ROADMAP OF VEHICLE REPLACEMENT & EMISSION REDUCTION TARGET**

14. The Administration is recommended to take reference from other countries and set up a clear electric transportation roadmap of phasing out fossil fuel vehicles with corresponding quantifiable targets of emission reduction, such as carbon intensity and air pollution control. Prior public consultations and studies can be conducted to determine a reasonable and achievable pace for the work plan. By setting the

timetable in phasing out fossil fuel vehicles in the local market, it would give a clear message to manufacturers for establishing their business plans of developing various EV models including electric lorries to replace conventional fossil fuel trucks which are noisy and emit more pollutants to suit the Hong Kong market. On the other hand, the identified benefits of EV adoption in terms of both carbon reduction and air quality improvement could be articulated to the public so as to promote the awareness of environmental protection. In addition, the Administration is recommended to update its procurement strategy to phase out the purchase of conventional vehicles, and to demonstrate the Administration's determination to embrace a sustainable development strategy started with the EV adoption in Hong Kong.

## **EV ADOPTION OF PUBLIC TRANSPORT**

15. The operation modes of various types of public transport are relatively unique and we recommend establishing a unified charging standard among various electric public transport and commercial EVs in order to achieve a synergy effect of, a better interoperability on, and higher utilisation rate of the charging infrastructure.

16. The HKIE supports the Administration's two-year trial of electric buses. In view of the fact that Hong Kong's public bus services mainly rely on double-decker buses, the Administration is suggested to take a proactive approach on the development of double-decker electric buses and plug-in hybrid electric buses.

17. Apart from the electric bus, the HKIE suggests the Administration to explore new business models for the electric taxi, such as flexible shift which allows a more even dispersal of charging schedule and avoids long queuing time for charging during the shift period. For promoting the use of EV, the Administration is recommended to explore the opportunity of incentivising/incubating the shared mobility business in Hong Kong. This approach could help promoting the smart city at the same time.

18. It is considered that the taxi and the public light bus (PLB) operators may not be able to acquire sufficient in-house technical staff to support the electric PLB and electric taxi initiatives. We suggest the Administration to provide more attention and support for the development to them.

## **TALENT CULTIVATION AND RESEARCH AND DEVELOPMENT (R&D)**

19. The HKIE supports the Administration to collaborate with the Vocational Training Council and other institutions for strengthening EV-related training. However, the current curricula of the engineering courses offered by local institutions have limited coverage of electric automotive engineering. In order to encourage the growth of the electric automobile business and the industry in Hong Kong, more talents and professionals in EV-related field should be cultivated. We recommend the Administration to take lead and foster collaboration with related institutions to review the market needs and consider including more automobile elements in the engineering and science curricula. In addition, the Administration is suggested to provide more funding for R&D to support the development of electric automobile products, services and technologies.