LCQ6: Measures for alleviating congestion at road tunnels

Following is a question by the Hon Gary Zhang and a reply by the Secretary for Transport and Logistics, Mr Lam Sai-hung, in the Legislative Council today (February 21):

Question:

In order to alleviate the problem of congestion at road tunnels, the Government launched the HKeToll, the "633" fixed toll plan (the "633" plan) and the time-varying toll plan respectively last year. In this connection, will the Government inform this Council:

(1) of the respective average daily total vehicular flows of each of the three road harbour crossings (the three RHCs) before and after the implementation of the "633" plan and the time-varying toll plan; whether it has studied if the travelling modes of members of the public have changed due to the implementation of these two plans;

(2) of the respective average percentages of the vehicular flows of each of the three RHCs during the morning and evening peak hours to the daily total vehicular flow before and after the implementation of the "633" plan and the time-varying toll plan; whether it has assessed if the effectiveness of these two plans on diverting the traffic has met the policy objectives and expectations; and

(3) whether it has assessed if the actual vehicular flows and traffic speeds of various road tunnels have increased after the implementation of HKeToll; if it has assessed and the outcome indicates that they have increased, of the details; if they have not increased, the reasons for that?

Reply:

President,

To rationalise cross-harbour traffic and better utilise the tunnel capacity, the Government adjusted in phases in 2023 the toll levels of the three road harbour crossings (RHC), namely the Western Harbour Crossing (WHC), the Cross Harbour Tunnel (CHT) and the Eastern Harbour Crossing (EHC), such that motorists would be able to adapt to the toll adjustments in a gradual manner. The Transport Department (TD) has been closely monitoring the traffic condition following the implementation of the new tolls. With adjustments to commuting patterns made by motorists in a co-operative manner, the new tolls have been shown to be effective and the overall traffic queue and congestion at the portals of the RHCs have been alleviated.

My reply to the question raised by the Hon Gary Zhang is as follows:

(1) Upon the takeover of the WHC on August 2, 2023, the Government

implemented, as the first step, the "633" fixed toll plan at the three RHCs, i.e. the toll for private cars using the WHC was reduced by 20 per cent to $60 and those for the CHT and the EHC were adjusted to $30; while an all-day uniform toll of $25 was charged for cross-harbour taxis. The "633" fixed toll plan was an interim measure with a view to reducing the toll differentials among the three RHCs, allowing motorists to progressively adapt to the new tolling arrangement. After the implementation of the "633" fixed toll plan, the weekday daily cross-harbour traffic flow was maintained at about 260 000 vehicles (two-way), which was similar to the traffic flow prior to its implementation. The distribution of traffic at the three RHCs is as follows: the traffic flow at the WHC increased by approximately 18 per cent to about 79 000 vehicles (two-way); those at the CHT decreased by approximately 6 per cent to about 105 000 vehicles (two-way); and those at the EHC remained more or less the same at about 76 000 vehicles (two-way). The outcome is in line with the Government's expectation. Details are at Appendix 1.

Following the further resumption of normalcy of social and economic activities, the weekday daily cross-harbour traffic flow at the RHCs rose to about 270 000 vehicles (two-way) in December 2023, which was comparable to the level before the pandemic (i.e. 2019). In the next stage, the Government has implemented time-varying tolls since December 17, 2023 in order to suppress and divert cross-habour traffic during peak periods, thereby further improving the cross-harbour traffic.

Under time-varying tolls, the tolls for private cars and motorcycles vary according to the time slots. On weekdays, the tolls for private cars range from $20 to $60. Taxis continue to be charged an all-day uniform toll of $25 while other commercial vehicles, including goods vehicles and buses, are charged an all-day uniform toll of $50.

After the implementation of time-varying tolls, the weekday daily cross-harbour traffic flow in January 2024 maintained at about 270 000 vehicles (two-way), which was on par with the level prior to its implementation. The distribution of traffic at the three RHCs is as follows: the traffic flow at the WHC increased by 12 per cent to about 100 000 vehicles (two-way), while those at the CHT and the EHC decreased by 11 per cent to about 95 000 vehicles (two-way) and by 8 per cent to about 73 000 vehicles (two-way) respectively. Details are at Appendix 2.

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The above situation is in line with the Government's expectation of making more efficient use of the tunnel capacity of the three RHCs and rationalising the uneven distribution of cross-harbour traffic due to the toll differentials in the past.

(2) According to our data, the proportions of the peak period traffic flow to the daily traffic flow of the three RHCs before and after the implementation of "633" fixed toll plan as well as after the implementation of time-varying tolls were as follows: 41 per cent, 41 per cent and 39 per cent for the WHC; 31 per cent, 31 per cent and 33 per cent for the CHT; and 38 per cent, 39 per cent and 40 per cent for the EHC respectively. Among them, the increase in the proportion of peak period traffic at the CHT and the EHC was mainly due to a different base with greater reduction in off-peak traffic for both

tunnels. Previously, the whole-day traffic (including during off-peak hours) at the CHT and the EHC remained at a high level, whereas the capacity of the WHC outside the peak periods was not fully utilised. The new tolls have started to rationalise the unevenly distributed traffic among the three RHCs in the past.

To further evaluate the effectiveness of time-varying tolls, the TD has analysed the overall cross-harbour traffic volume and the queue length during peak periods. In January 2024, the overall traffic at the three RHCs during peak periods decreased by about 3 per cent on average. During the half-hour time span immediately before or after the peak periods, the overall cross-harbour traffic was up about 4 per cent on average. This shows that some motorists have chosen to commute outside the peak periods, in other words, opting to cross the harbour at a lower toll level.

â€‹As regards traffic queues, during peak periods, the queues at the CHT and the EHC reduced by more than 1 kilometre and 0.5km respectively. Outside peak periods, which accounted for nearly 80 per cent of the time of a day, the traffic at the three RHCs was generally smooth (including the CHT where congestion used to occur very often). Non-cross-harbour traffic near the portals of the RHCs has also significantly improved.

The above preliminary data show that the new tolls have achieved the policy objectives of rationalising the cross-harbour traffic and better utilising the tunnel capacity, and thus bringing benefits to private car motorists, the public transportation trade, the commercial vehicle trade, cross-harbour bus passengers, and the community as a whole.

(3) The HKeToll free-flow tolling service enables motorists to pay tolls remotely using toll tags, without having to stop or queue up at toll booths for payment. This saves time and efforts for motorists, hence delivering a smoother driving experience for them, whilst reducing weaving near the toll booths and thus improving the general traffic around the toll plazas.

The overall tunnel traffic flow after the implementation of HKeToll remained generally the same as before. For tunnels with traffic demand exceeding their capacity during peak periods, generally speaking, there has not been any significant change in the overall car journey speed as a result of the implementation of HKeToll.

Thank you, President.