

LCQ7: Loading of trains of West Rail Line

Following is a question by the Hon Leung Che-cheung and a written reply by the Secretary for Transport and Housing, Mr Frank Chan Fan, in the Legislative Council today (May 8):

Question:

In 2015, the loading of trains on the busiest section of the West Rail Line (WRL) (i.e. the section between Kam Sheung Road Station and Tsuen Wan West Station) was 104 per cent (calculated on the basis of a passenger density of four persons (standing) per square metre within train compartments). During the period from 2016 to 2018, the MTR Corporation Limited (MTRCL) gradually increased the number of train cars of WRL from seven to eight, resulting in an increase in the carrying capacity of each train by about 14 per cent. While the loading of trains on the aforesaid section dropped slightly to 99 per cent in 2016, it rebounded to 101 per cent in 2017 and 2018. In this connection, will the Government inform this Council if it knows:

- (1) whether MTRCL has drawn up targets and plans for reducing the loading of trains on the busiest section of WRL; if MTRCL has, the details of that;
- (2) whether MTRCL made prior estimations on the changes that the increase in the number of train cars would bring to the loading of trains on the busiest section of WRL in 2017 and 2018; if MTRCL did, the relevant data, and whether the actual loading met the estimated loading;
- (3) whether MTRCL has studied the reasons for the rebound in the loading of trains on the busiest section of WRL in 2017;
- (4) whether MTRCL has estimated the loading of trains on the busiest section of WRL in the coming decade; if MTRCL has, the details of that;
- (5) the current actual and designed maximum train frequencies of WRL during (i) peak and (ii) non-peak hours respectively; whether MTRCL will immediately increase the train frequency of WRL;
- (6) regarding the Tuen Mun South Extension and the Hung Shui Kiu Station proposed to be constructed, whether MTRCL has estimated the impacts of their commissioning on the loading of trains on the busiest section of WRL; if MTRCL has, the details of that; and
- (7) the latest progress of the Shatin to Central Link project; whether MTRCL has estimated the impact of the railway line's commissioning on the loading of trains on the busiest section of WRL; if MTRCL has, the details of that?

Reply:

President,

My reply to the various parts of the Hon Leung Che-cheung's question is as follows:

(1) to (3) Hong Kong's community development and population growth have brought about rising traffic volumes. According to the MTR Corporation Limited (MTRCL), the daily patronage of the MTR network on weekdays increased from around 5.56 million passenger trips in 2015 to around 5.88 million passenger trips in 2018, representing a growth of nearly 6 per cent within three years. In particular, the rapid development of the community of North-west New Territories has brought about a continuous rise in both its population and transport demand. Regarding the West Rail Line (WRL), the patronage per direction in the busiest hour during the morning peak for its critical link increased from 36 400 in 2015 to 40 400 in 2018, representing a gain of more than 10 per cent.

When calculating the loadings of the railway lines, the MTRCL takes into account the current carrying capacities of trains on the respective lines, assuming a passenger density of either six or four persons (standing) per square metre (ppsm). The passenger density of six ppsm was the industry standard design adopted at the time of the construction of the railway lines. Nevertheless, it has been observed in recent years that, in actual operation, trains running on the busiest corridors during the busiest hours achieved a passenger density of only around four ppsm. Thus, the MTRCL uses these two passenger densities to calculate the corresponding loadings. A loading based on six ppsm will be lower than one based on four ppsm given the same patronage and carrying capacity.

To dovetail with the "East West Corridor" project (i.e. Tuen Ma Line) of the Shatin to Central Link (SCL), the number of cars of WRL trains has been progressively increased from seven to eight since 2016. With the conversion completed in end-May 2018, the maximum carrying capacity (based on six ppsm) has increased from 49 200 (in 2015) to 56 200, representing a gain of 14 per cent.

The MTRCL has been closely monitoring the passenger demand as a reference for service planning. However, the loading of the line is dependent on both the carrying capacity of the trains and the patronage. When the growth in patronage surpasses that in carrying capacity, the loading increases. Thus, since the carrying capacity of the WRL trains increased by 8 per cent in 2018 compared with that in 2016 but the patronage rose by 10 per cent during the same period, there was a slight increase in loading. The carrying capacity, patronage and loading per hour during the morning peak for the critical link of the WRL from 2015 to 2018 are set out in the Annex.

(4) & (5) In order to enhance the carrying capacity and operating efficiency of the overall railway network, the MTRCL has been taking various measures to ease passenger flows during peak hours, including increasing train frequency

where practicable, and enhancing platform management at stations to facilitate on-time departures. Currently, the train frequencies of the WRL in the morning and evening peaks are around 3 minutes and 3.5 minutes respectively for trips between Tuen Mun and Hung Hom. During the busiest period of the morning peak hours, the MTRCL additionally provides a regular special train trip departing from Tin Shui Wai Station for Hung Hom. The above measures were observed to effectively alleviate crowdedness at the busiest sections during the said period. The MTRCL will continue to closely monitor the loading of the railway line, and will review and consider proposals from time to time to cope with demand generated by future patronage.

In addition to the basic growth in passenger flow, the patronage for the WRL in the years to come will depend on a number of factors, including the developments along the railway lines and the patronage upon the completion of new railway projects. Based on the data for the previous years from 2013 to 2017, the average daily passenger flow of the WRL generally grows in the range of 0.6 per cent to 2.3 per cent every year. In taking forward individual development project, the relevant bureaux and departments will examine the impact of the proposed development on the existing transport network and formulate the corresponding strategies in order to determine the feasibility of the project. Upon completion and the initial stage of commissioning of new railway projects, it will take time for the passenger traffic to stabilise. Therefore, it is normal for the Government to continuously monitor the passenger traffic after commissioning and re-assess future patronage forecast.

(6) In planning the Tuen Mun South Extension, the Transport and Housing Bureau (THB) had, having regard to the indicative implementation window recommended in the Railway Development Strategy 2014, invited the MTRCL to submit a proposal for the implementation of the Tuen Mun South Extension. The MTRCL submitted a proposal for this railway project to the Government in end December 2016. The THB, the Highways Department and relevant bureaux/departments have evaluated the proposal and requested the MTRCL to provide additional information and supplement details. In carrying out the evaluation, our main focus is to ensure that the proposal is practically feasible and can bring maximum benefits to the community. Due to the tight housing supply and the potential housing supply that may be brought about by railway development, the Government is also reviewing the proposal submitted by the MTRCL in this light. Based on the MTRCL's forecast, the WRL would be capable to cope with the additional passenger flow brought about by the Tuen Mun South Extension upon its commissioning. At the detailed planning and design stage, the MTRCL will further review the patronage of the Tuen Mun South Extension and its impact on the WRL in the light of the latest planning data.

For planning of Hung Shui Kiu Station, its implementation is targeted to tie in with the planned population intake of Hung Shui Kiu New Development Area. Subject to the pace of development of the area concerned, the Government will invite the MTRCL to submit a proposal for the project in a timely manner. When preparing the proposal, the MTRCL will assess the

patronage of Hung Shui Kiu Station and its impact on the WRL in the light of the latest planning data.

In accordance with the established procedures, we will consult the public, including the Legislative Council and the District Council, on the details of the project before finalising any new railway scheme.

(7) The "Tai Wai to Hung Hom Section" under the SCL is originally scheduled for commissioning in mid-2019. In view of the concern on the works quality of the Hung Hom Station and other stations, the target commissioning date is subject to further review. Meanwhile, the planned commissioning date for the "Hung Hom to Admiralty Section" under the SCL remains to be 2021.

Upon commissioning of the "Tai Wai to Hung Hom Section" under the SCL, it will connect the existing Ma on Shan Line to the existing WRL to constitute the "Tuen Ma Line". Passengers will be able to travel directly from Wu Kai Sha Station to East Kowloon, Hung Hom, New Territories West and Tuen Mun, providing more direct and convenient railway services.

After the commissioning of the Tuen Ma Line, the MTRCL can provide services at a maximum frequency of 24 train trips per hour per direction by procuring more trains and enhancing signalling system, thus increasing the carrying capacity of WRL by approximately 37 per cent as compared with that in 2015. Based on MTRCL's estimation, the above arrangement can cope with the post-commissioning passenger demand. Upon commissioning of the Tuen Ma Line, the Government will require MTRCL to continue monitoring passenger traffic and, if needed, consider the feasibility of further increasing train frequency to enhance the services of the WRL.