

## LCQ4: Railway safety

Following is a question by the Hon Michael Tien and a reply by the Secretary for Transport and Housing, Mr Frank Chan Fan, in the Legislative Council today (December 9):

Question:

The Chief Executive indicated in the 2019 Policy Address that, in order to strengthen the Government's capabilities to monitor and certify railway projects, the Government will study the setting up of a new department specifically tasked to handle and supervise railway planning and delivery matters. However, no progress has been heard so far. In recent years, railway incidents have occurred one after another in Hong Kong. On March 18 last year, two trains collided on a track between the Central Station and the Admiralty Station during the testing of the new signalling system on the Tsuen Wan Line (TWL). As pointed out in the relevant investigation report, the new signalling system adopted primary, secondary and tertiary zone controllers (ZCs), and the incident was caused by an error made by the contractor during rectification of the tertiary ZC. Besides, between September and November this year, the media had successively uncovered several incidents of trains "taking the wrong routes" and the system mistakenly showing trains "passing a signal at danger" during the testing of the signalling system of the East Rail Line (EAL). Some members of the public have said that they have totally lost confidence in the MTR Corporation Limited (MTRCL). In this connection, will the Government inform this Council:

(1) as the MTRCL announced in 2015 that it would replace by phases the signalling systems of seven railway lines, whether it knows the progress of the works concerned, and the progress of the rectification work for the tertiary ZC of TWL;

(2) as I have learnt that the MTRCL has, upon the aforesaid incidents involving the new signalling system of EAL, requested the contractor of the signalling system to rectify the software concerned, whether it knows if the relevant work has been completed; if such work has not been completed, whether it has assessed if such situation will render the MTRCL unable to meet the target of commissioning the Hung Hom to Admiralty Section of the Shatin to Central Link in the first quarter of 2022; and

(3) of the progress of the study on setting up a new department?

Reply:

President,

After consulting Electrical & Mechanical Services Department (EMSD), Transport Department (TD), Highways Department (HyD) and MTR Corporation Limited (MTRCL), my reply to the respective parts of the Hon Michael Tien's

question is as follows:

(1) The Government and the MTRCL reported to the Legislative Council Subcommittee on Matters Relating to Railways on the latest progress in upgrading the signalling systems of the seven urban lines on June 5 this year, in particular on a series of improvement measures implemented by the MTRCL, based on the recommendations of the independent Investigation Panel after the occurrence of the Tsuen Wan Line new signalling system testing incident on March 18, 2019.

Under the monitoring of the MTRCL, the contractor of the new signalling system (the Contractor) has completed the new development process and work instructions for the software and proceeded to conduct a comprehensive inspection of the new signalling system software functions based on the new work instructions. Over the past half year, the Contractor has continued to inspect and conduct safety analysis on the new signalling system software to ensure its safety and reliability. When the new signalling system is being certified by the Independent Safety Assessors appointed respectively by the MTRCL and the Contractor, and with the EMSD's endorsement, the MTRCL would, under the premise of ensuring safety, gradually resume on-site train testing on the new signalling system. The MTRCL still aims to complete the signalling system upgrade of Tsuen Wan Line in 2023.

As for other railway lines, the MTRCL is also carrying out the installation of infrastructure and hardware equipment, as well as other preliminary planning works. Currently, the hardware installation works for Island Line and Kwun Tong Line are almost completed, and the design of the new signalling system and related planning works for the remaining lines are also in progress. Upon the completion of the signalling system upgrade of Tsuen Wan Line, the MTRCL will draw on relevant experience and apply it to the testing of the new signalling system of other appropriate railway lines.

(2) During the tests of the new signalling system for the East Rail Line (EAL) conducted by the MTRCL on May 11, 2020, there were system reliability related abnormalities which might cause a train to enter an incorrect route and an incorrect station. In response to this incident, the EMSD requested MTRCL to submit a technical investigation report to explain in detail the causes of the incident and to propose remedial measures. The MTRCL announced the establishment of an investigation panel for this incident on September 13, 2020. The MTRCL's investigation panel is drafting the report. Upon the submission of the reports, the EMSD, in collaboration with the TD and other departments, will review the reports. The Government will only approve the commissioning of the new EAL signalling system upon further confirmation of the technicalities and service reliability of the system.

The MTRCL conducted new signalling system tests at the EAL during the non-traffic hours in October and November 2020 to ascertain the root cause of the incident relating to service reliability on May 11, 2020. During the tests, the scenario of the May 11 incident was simulated. In fact, there was no test train entering incorrect route or signal passed at danger (SPAD). The false SPAD is what may happen before the new signalling system issue is

resolved. The MTRCL has notified the EMSD of the relevant testing conditions before the tests. The allegations have no factual basis.

Regarding the target commissioning date for "Hung Hom to Admiralty Section" of the Shatin to Central Link project, i.e. the first quarter of 2022, the HyD and other relevant government departments are requesting the MTRCL to provide more information for assessing the implication on the commissioning date.

(3) To strengthen the Government's capability in supervising and monitoring the planning and delivery of new railway projects, the Government is studying the establishment of a new department specifically tasked to handle supervision of railway planning and project delivery as well as regulation of railway safety. The Government has also commissioned a consultancy to examine enhancements to the Government's monitoring and control strategies for new railway projects. Making reference to local and overseas experience, targeted measures in relation to safety, quality, programme and cost control would be implemented. The Government is studying the roles, responsibilities and structure of the new department in depth with reference to the consultancy's recommendations. With the new railway projects under the Railway Development Strategy 2014 entering planning and design stage progressively, we will expedite the progress of the above work to ensure that the new monitoring and control strategies would be implemented before the new railway projects enter the construction stage, so as to enhance the public's confidence in the quality of railway projects.

Thank you, President.