Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways

MTR Kwun Tong Line Overhead Power System Failure on 8 December 2008 and Recent Railway Incidents

Purpose

This paper sets out the preliminary assessment on the overhead power system failure of the Kwun Tong Line (KTL) on 8 December 2008 and briefs Members on the Government's monitoring of railway safety and service performance in the light of the railway incidents in the past six months.

Government's Monitoring of Railway Safety and Service Performance

2. The Government attaches a great deal of importance to the maintenance of safety and reliability of our railway services. The Electrical and Mechanical Services Department (EMSD) and the Transport Department (TD) are responsible for monitoring the safety and service performance aspects of railway services provided by the MTR Corporation Limited (MTRCL) respectively.

3. EMSD monitors the safety of the railway systems and ensures that the railway corporation has addressed all safety issues in the design, construction, operation and maintenance of the railway systems. It is the responsibility of the railway corporation to demonstrate to the satisfaction of EMSD that their railways are safe for use and their design standards are in line with industry standards internationally and are

appropriate for the situation in Hong Kong. MTRCL makes use of safety cases and risk assessment in their design process. Currently, the design standards and safety management system of MTRCL is compatible with international standards. EMSD also monitors the safety of operating railways including conducting inspections of the railway systems to ensure that they are operating well; investigation of railway incidents as well as assessment and following up on the improvement measures adopted by MTRCL.

4. TD is responsible for monitoring the service performance of MTRCL. In this regard, the railway corporation is required to comply with the service standards stipulated by the Government. There are three major criteria for measuring railway service performance, namely train service delivery (actual train trips), train punctuality (the percentage of trains completing their journeys on time) and passenger journeys on time (the percentage of the total number of passengers arriving at their destinations on time and without experiencing a delay of more than 5 minutes). These service standards are adopted internationally. Other performance indicators include add value machine reliability, ticket issuing machine reliability, ticket gate reliability, escalator reliability and passenger lift reliability. TD oversees whether the railway corporation meets the requirements of the above service standards by examining the returns submitted by MTRCL on its service performance, monitoring railway services and investigating the complaints received about rail services. TD also ensures that the services of all railway lines comply with the required standards. If MTRCL fails to meet any requirement, TD will demand the railway corporations to take remedial measures immediately.

5. In case of railway incidents, TD and EMSD will follow up with MTRCL and request for an incident report. They will conduct investigations, provide advice to MTRCL for preliminary identification of the cause of the incident and the immediate action required. EMSD and TD will monitor the progress made by MTRCL in identifying the cause and implementing improvement measures.

Overhead Power System Failure of MTR Kwun Tong Line

6. At 7:23 pm on 8 December 2008, the overhead power system of the Kwun Tong to Tiu Keng Leng section (about 2.8 km) of the KTL broke down, causing suspension of power supply and three trains remained in the tunnel of that railway section. The Operations Control Centre (OCC) had tried to resume the power supply of the incident section according to procedures and the trains had to be activated one by one in order to arrange for them to proceed to the platform to let passengers alight safely. When MTRCL staff subsequently inspected that section, it was found that the overhead wire had broken and immediately arranged for maintenance staff to carry out repair works. The work included cutting the damaged wire, wire replacement and adjustment and inspection to ensure that all equipment functioning properly before resuming power supply and train services. As a result, the train services between Kwun Tong and Tiu Keng Leng were suspended for about three hours. According to experience, repair works for broken wire usually take four hours. As MTRCL managed to finish the works in about three hours, EMSD considered the recovery time reasonable.

7. After the incident, EMSD immediately liaised with MTRCL to understand the situation. Staff was sent to conduct site investigation to examine the section of overhead power system and the train concerned, in order to ensure that the incident would not affect train safety and that MTRCL had handled the incident and resumed train services according to the established safety procedures. Given the "fail-safe" design of the railway system, the safety protection device was automatically activated during the incident when the power system failed, cutting off the electricity supply and stopping the train to ensure safety. EMSD has been liaising closely with MTRCL after the incident to oversee its incident investigation and inspection of similar isolators and overhead wires in areas of overlapping overhead wires. MTRCL has examined similar devices used in all its other railway lines and found that they are functioning properly. EMSD agrees in principle with the cause of the incident and the measures for improvement proposed by MTRCL. EMSD will carefully examine the report submitted by MTRCL and follow up on the details of the improvement measures by MTRCL and provide advice to MTRCL if necessary.

8. According to the Operating Agreement (OA), MTRCL is required to notify TD all incidents affecting passenger services according to established procedures and to have a contingency plan in place to deal with service disruptions or emergencies. The Government and MTRCL have also drawn up a set of procedures for notification of incidents so that in case of emergencies, TD could co-ordinate with other transport operators to enhance their services and divert passengers, having regard to the extent of service disruption.

9. In the light of the overhead power system failure of the KTL on 8 December, TD and MTRCL have reviewed the notification procedures, dissemination of information, emergency feeder bus services and crowd control and made recommendations for improvement. In dealing with the incident, MTRCL had notified the Emergency Transport Co-ordination Centre of TD immediately according to the established procedure, so that TD and the parties concerned could make the necessary preparation. MTRCL had also issued service disruption warnings to the public in accordance with established procedure and arranged for feeder buses according to the contingency plan to carry affected passengers.

10. As for the dissemination of information, we consider that MTRCL has room for improvement in terms of the locations for relevant notices and the frequency of broadcasts in the stations. We have made reference to reports of passengers complaining about confusing messages and lack of directions to change to other transport modes in the stations on 8 December. We propose that MTRCL should, in case of emergencies, enhance the communication with passengers; disseminate the latest information on service disruption; and to provide information on feeder bus services and other alternative transport arrangements to passengers within a reasonable period of time. The Corporation should also enhance the dissemination of information at the affected stations and post relevant information at conspicuous places at the station entrances and concourse, so that passengers can plan their journey at the earliest opportunity and the inconvenience and losses caused by service delay can be minimised. Moreover, the Corporation should post additional signs for emergency feeder bus stops and deploy more staff to assist passengers.

11. Regarding the provision of emergency feeder bus services, we noted that MTRCL had increased the number of emergency feeder buses to a total of 40 buses, making over 150 trips and carrying around 8 000 passengers. In terms of crowd control, the Emergency Transport Co-ordination Centre of TD had maintained close contact with the Police and MTRCL during the incident. It was noted that the situation at the MTR stations concerned was kept under control and that MTRCL had also deployed staff from its Bus Division to help maintain order at the feeder bus stops.

Railway Incidents in the Last Six Months

12. EMSD has been monitoring the railway incidents and their trend. Of the incidents that occurred in railway premises and had safety implications, most of them involved escalators, platform screen doors/train doors and platform gaps. These incidents are mainly caused by passenger behaviour and EMSD has strengthened the publicity of railway safety. Overall speaking, the number of incidents is not on the rise and the safety level of Hong Kong railway services remains high.

13. As far as railway safety is concerned, MTRCL has a very good record among developed economies. In 2007, pre-merger MTRCL and Kowloon-Canton Railway Corporation were ranked first and sixth respectively in terms of safety by two international railway rating agencies (i.e. CoMET and NOVA), which are comprised of railway organisations of major international cities.

14. TD and MTRCL have also conducted a comprehensive review on the notification procedures and the dissemination of information in the light of recent incidents. With regard to the notification procedures, we are of the view that MTRCL has notified TD according to the existing notification mechanism. MTRCL had also issued service disruption warnings to the public when train services were expected to be seriously disrupted. Messages about service disruption and information about alternative transport arrangements have been provided to the passengers within a reasonable period of time. Although MTRCL has room for improvement in terms of incident handling procedures and follow-up actions (for instance, enhance the dissemination of information at affected stations and post relevant information at conspicuous places at the station entrances and concourse, etc.), it has generally met the requirements stipulated by the Government in the OA.

15. Record shows that our railway services are safe and reliable. The performance level of our railways remains high by international standards when compared with other metro systems in major cities such as New York, London, Paris, and Tokyo with good performance. The services of MTRCL since rail merger have also been maintained at a high level as illustrated by the figures as at September 2008 set out below:

	MTR Urban Lines	Airport Express Line	East Rail	West Rail	Light Rail
Train Service Delivery	99.9%	99.9%	99.9%	99.9%	99.9%
Passenger Journeys on Time	99.9%	99.9%	99.9%	99.9%	Not applicable
Train Punctuality	99.8%	99.9%	99.8%	99.8%	99.9%

Conclusion

16. The Government and MTRCL attach a lot of importance to the safety and reliability of railway services. We agree, in principle, with the improvement measures put forward by MTRCL. We also welcome MTRCL's plan to deploy, as soon as possible after an incident occurs, more staff to assist passengers in the stations; to enhance its dissemination of information at the affected stations and to post additional signs to direct passengers to the emergency feeder bus stops. The Government will continue to monitor closely the safety and performance of MTRCL as well as the improvement measures adopted in the light of recent railway incidents and take follow up action as appropriate.

Transport and Housing Bureau
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