

Press Release
20 April 2023

Power Interruption Triggered by a Spare Cable

A fault in HK Electric's power system in the early morning of 19 April 2023 resulted in power interruption to some customers in many parts of Hong Kong Island. From the Company's preliminary investigation, it is believed that the incident was related to an unrecorded spare cable and on-site operation procedures. This cable was accidentally connected to the power system after switchgear maintenance causing a short circuit. This triggered the automatic protection mechanism in the power supply system to operate and affected electricity supply.

The power interruption took place at 00:49 and the power supply was fully restored in 48 minutes.

The generating units in Lamma Power Station also experienced voltage fluctuation but resumed normal operation shortly.

HK Electric's Operations Director, Mr. Francis Cheng, pointed out that HK Electric all along has been delivering world-class supply reliability, and there has been no major power interruption for more than twenty years. This incident is most regrettable, he said.

Mr. Cheng explained that the incident was a rare one involving a "spare cable". HK Electric is taking the incident seriously and is conducting a thorough investigation. Meanwhile, the Company has immediately taken a series of precautionary measures to prevent similar incidents. He sincerely apologised again for the inconvenience caused to customers.

The incident happened during circuit maintenance at the Cyberport Switching Station in the early hours of yesterday. The power supply equipment in the Switching Station is a core part of the 275,000-volt (275-kV) transmission system.

At the time HK Electric's engineering personnel were carrying out equipment maintenance. During the course of re-commissioning of the concerned switchgear, they accidentally connected a "spare cable" to the system, causing short circuit and substantial voltage fluctuation which triggered the self-protection mechanism of the power supply system. It took a longer time to isolate this cable, which did not have its individual protection device, hence causing chain reactions in the system and affected the power supply to some customers in a number of districts on Hong Kong Island.

HK Electric's General Manager (Transmission & Distribution), Mr. Ip Sung-tai, noted that just like many other power companies in the world, HK Electric's power supply system has a self-protection mechanism designed to immediately isolate any faulty equipment from the grid in order to protect the entire power supply system and other important electric supply facilities.

Preliminary investigations revealed that the relevant cable became a "spare cable" after a network reconfiguration many years ago. For over ten years it was connected to the system but remained in a de-energised state. Both the circuit diagram and site identification labels did not indicate the presence of such spare cable, hence the commissioning procedures did not take this cable into account. As a result, during the re-commissioning test, the spare cable was accidentally energised resulting in a short circuit.

Mr. Ip pointed out that it has all along been the Company's practice to carry out commissioning work of the power supply system at night, when the power consumption is relatively low, in order to minimise any impact to the general public in case of an incident. Under the supervision of the system control centre, our maintenance team had carried out risk assessment and followed the commissioning procedures prior to commencing the relevant works.

He also said that upon an initial investigation, there was another "spare cable" in the same station and all related maintenance works has been suspended immediately. HK Electric's engineering team will confirm the accuracy of the circuit diagram and add remarks on the information of the "spare cables" to alert other engineering personnel in future works. On-site notices will also be placed.

Following this incident, HK Electric has taken various measures immediately, including deployment of additional manpower to ensure the stability and reliability of power supply, and a comprehensive review of the circuit diagrams of HK Electric's power supply system for accuracy. The Company will also review the preparatory measures and procedures for maintenance work to prevent similar incidents from happening in the future.

HK Electric is fully committed to the review of this incident. A detailed report to the government will be submitted in 4 weeks as required, and improvements and preventive measures will be proposed for the future.