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Hong Kong Nuclear Investment Co. Ltd

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## **HKNIC Clarifies Media Report on Equipment Replacement at Daya Bay**

In response to a certain media report concerning the replacement of the reactor pressure vessel heads (RPVHs) at the Daya Bay Nuclear Power Station (Daya Bay) in 2003 and 2004, the Hong Kong Nuclear Investment Company Ltd. (HKNIC) would like to provide more information to facilitate a better understanding of the issue among the media and members of the community.

### **Reason for the Equipment Replacement**

Daya Bay replaced the RPVHs of Unit 2 and 1 in February 2003 and October 2004 respectively. **Before the replacement work, the vessel heads were in normal operation with no defects detected.**

The replacement was conducted as international industry experience showed that some of the RPVHs of the same model might develop cracks after a prolonged use of more than 10 years. **As a prudent and preventive measure, Daya Bay decided to replace the RPVHs for both of its nuclear units even though the RPVHs in use at that time were still in good condition. This was meant to ensure the safe operation of the reactor pressure vessels before any potential cracks were to be developed at vessel heads. The act has nothing to do with the ageing of the equipments and the plant as claimed in the media report.** The replaced RPVHs had a “Anti Stress-Corrosion Alloy Lining”, and was designed and manufactured by the French company which supplied the original equipment. HKNIC has informed members of the HKNIC Board about the relevant replacement work.

As the replacement of the RPVHs is a preventive measure to ensure safe operation, which did not involve any Licensing Operational Events or safety issues at the power station, therefore the information was not included in the HKNIC website.

The typical life span for a nuclear power station adopting the technology of pressurized water reactor is about 40 years. Since its commissioning in 1994, which is about 17 years ago, Daya Bay has operated according to international best practice and established robust systems and procedures in managing its safe operation and staff training. As such, the power station has been maintaining an excellent record in terms of plant reliability, performance and safe operation over the years.

## **Radiation Dosage Level Received by Workers**

Furthermore, the power station had been undertaking safety review and 10-year major maintenance in phases between 2003 and 2006. In general, the collective dosage level received by workers will vary with the total number of workers as well as the nature and duration of the work involved. During the above exercise, the collective dosage level was closely monitored to ensure that each individual dosage had not exceeded the limit of 20 mSv per annum, and no radiation leakage was involved.

Daya Bay puts safety management for radiation protection as top priority, and has set a stringent annual limit for the level of radiation dosage received by workers. Apart from close monitoring of the dosage level, the power station also carefully plans and monitors the work schedule of individual workers and conducts health checks to make sure the dosage received by any worker will not exceed the set annual limit of 20 mSv adopted by Daya Bay and that there is no adverse impact to their health. Among other counterparts of the World Association of Nuclear Operators (WANO), the radiation protection performance of Daya Bay is in an advanced level.

## **Hong Kong Nuclear Investment Company Limited (HKNIC)**

HKNIC is a wholly owned subsidiary of CLP Holdings Ltd. founded in 1983. It is an investor in the Guangdong Nuclear Power Joint Venture Company Ltd., which owns the Guangdong Daya Bay Nuclear Power Station located in China's Guangdong Province. Daya Bay supplies 70% of its annual output to meet about 25% of the power demand in Hong Kong, contributing to CLP's excellent power services with high supply reliability, outstanding environmental performance and affordable tariffs.

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