

First Japanese reactor restarts

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Unit 3 at the Tomari nuclear power plant on Japan's northern Hokkaido island has resumed operation after a periodic inspection. It is the first reactor to be restarted in the country since the 11 March earthquake and tsunami.

In response to the accident at the Fukushima Daiichi plant following the natural disasters, the Japanese government ordered all 35 reactors that had been shut down for regular safety inspections to remain offline. In addition, units subsequently entering such inspections would also have to remain shutdown until given permission to restart.

This would come after successfully completing the initial step of 'stress tests', while all units would be subjected to more comprehensive tests in a second stage.

In the first step, utilities are required to examine the safety margin of important pieces of equipment in accordance with guidelines to be set by the country's Nuclear and Industrial Safety Agency (NISA) and Nuclear Safety Commission. Based on the results of these initial tests, the government decides whether a reactor shut for inspections can or cannot resume operation, although additional approval from prefectural governors is customary.

Step two will involve a comprehensive safety assessment of all reactors and will be conducted to enhance the reliability of safety checks. These tests will be similar to the stress tests proposed by the European Union.

Hokkaido Electric Power Co announced that it has now restarted its Tomari 3 reactor. The 912 MWe pressurized water reactor (PWR) entered into a periodic inspection on 5 January 2011. It was allowed to start test operation on 7 March, just four days before the earthquake and tsunami. Hokkaido Electric said that it completed the first stage of the two-phase stress test on 10 August and was issued with a certificate for completing its periodic inspection today. Having received permission from the governor of Hokkaido, Harumi Takahashi, the utility said that the unit re-entered normal operation today after final approval was given by the Ministry of Economy, Trade and Industry.

Hokkaido Electric said that it now plans to conduct an evaluation of the unit under the second stage of the stress test and will report its findings to NISA by the end of 2011.

Construction of Tomari 3 began in 2003. The three-loop Mitsubishi Heavy Industries unit is the last second-generation nuclear reactor to be built in Japan. The reactor reached criticality on 3 March 2009 and test operations followed on 20 March. It was connected to the grid in December 2009. The unit's next period inspection is scheduled for spring 2012. There are also two 550 MWe PWRs at the Tomari site. Unit 1 remains shut down for its periodic inspection, while unit 2 is currently operating but due to be shut down for inspection later this month.