

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 2725
TO BE ANSWERED ON 03.01.2018

TECHNICAL FAULT AT KNPP

2725. SHRI KODIKUNNIL SURESH:

Will the PRIME MINISTER be pleased to state:

- (a) whether the Government has taken note of various technical issues arising at Kudankulam Nuclear Power Plant (KNPP) and if so, the details thereof;
- (b) whether the unit I and II of the said plant has been experiencing technical failure on several occasions and if so, the details thereof and the reasons therefor along with the steps taken by the Government in this regard;
- (c) whether the two units of the plant produced 2089 MW at their peak on 28th November, 2017 as per a southern regional load dispatch centre report and if so, the details thereof and the risk associated with the said incident; and
- (d) whether the Government has conducted any detailed examination of the said power plant to ensure rigorous compliance of the safety norms and total safety of the said plant and if so, the details and the outcome thereof and if not, the reasons therefor?

ANSWER

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (Dr. JITENDRA SINGH):

(a)&(b) Kudankulam Units 1&2 (2x1000 MW) set up in cooperation with the Russian Federation are VVER 1000 type Light Water Reactors. These units have the distinction of being the highest capacity units in the country. The VVER 1000 is a safe and robust technology and VVERs are in safe operation in several countries like Russian Federation, Ukraine, China, Iran, etc. They have advanced, state of the art safety features like four safety trains, Passive Heat Removal system, Core catcher etc.

The first unit was shutdown in June 2015 for refueling for the first time after generating about 6875 Million Units of electricity. During the first refueling shutdown, in parallel with refueling, detailed inspections, surveillance tests, mandatory checks and routine maintenance works were carried out.

Thereafter the unit was reconnected to the grid in January 2016. Apart from the long refueling shutdown of Unit-1, there have been some instances of unit trips. Each of the instances have been investigated, the root cause determined and necessary measures taken in consultation with the Russian experts and the Atomic Energy Regulatory Board (AERB). In none of these instances the safety of plants was challenged.

- (c) The Kudankulam Units 1&2 are each of capacity 1000 MW (rated electrical output). This is corresponding to the rated reactor power. Even as the unit operates at the rated reactor power, the electrical output may at times exceed 1000 MW on account of enhanced efficiency due to favorable environmental conditions (like cooling water temperature), condenser vacuum etc.

Nuclear power plants are operated strictly in line with laid down procedures and technical specifications approved by the AERB and in no case the rated reactor power has been exceeded. On November 28, 2017, at no point the reactor power exceeded the rated power.

- (d) Yes, Sir. Periodic safety audit of all atomic power plants in India is carried out by the Atomic Energy Regulatory Board (AERB). All Nuclear Power Projects (NPP) undergo an elaborate in-depth safety review during all stages, viz. siting, construction, commissioning and operation. After satisfactory review during project state, AERB issues operating licence to an NPP for a period of five years. During the project stage of a power plant, quarterly regulatory inspections and during operation of a power plant, regulatory inspections are carried out by AERB once every six months. A consolidated safety assessment of the plant is undertaken while renewing the operating licence after every five years. Further, all plants are required to undergo a comprehensive Periodic Safety Review (PSR) as per the established guidelines, where the safety of the plant is assessed considering cumulative effects of ageing, plant modifications, operating experience as well as comparison with the current safety standards/practices. The recommendations made in all these reviews are appropriately addressed.
