GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO-1282
ANSWERED ON 31/07/2025

NUCLEAR ENERGY PROGRAMME AND ITS IMPLEMENTATION

1282. SHRI MILIND MURLI DEORA

Will the PRIME MINISTER be pleased to state:-

(a) the total current installed capacity of nuclear energy in India and the extent of contribution from international partnerships, particularly with Russia;

(b) whether India is implementing the three-stage nuclear power programme as envisioned by Dr. Homi Bhabha, and the present status of each stage;

(c) whether any delay has been observed in critical projects such as the Prototype Fast Breeder Reactor (PFBR), Advanced Heavy Water Reactor (AHWR), and Indian High Temperature Reactor (IHTR); and

(d) if so, the reasons therefor?

ANSWER

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

(a) Presently, the installed nuclear power capacity in the country comprises of 24 reactors with a total capacity of 8780 MW (excluding RAPS#1-100 MW which is under extended shutdown). Of this 2000 MW i.e. KKNPP-1&2 (2 x 1000 MW) has been setup in cooperation with the Russian Federation and 320 MW i.e. TAPS-1&2 (2 x 160 MW) with the USA.

(b) Yes. The first stage of the country's sequential three stage programme comprising of the Pressurized Heavy Water Reactors (PHWRs) has attained maturity. For realization of second stage of nuclear power programme, Fast Breeder Test Reactor and other facilities were established for material research and proof of design concepts. The 500 MWe Prototype Fast Breeder Reactor (PFBR) is at advanced stage of commissioning at Kalapakkam, implemented by BHAVINI. The third stage of the programme for utilizing the vast resources of thorium reserves of the country is presently under development.

(c) & (d) Delay in completion of the Prototype Fast Breeder Reactor (PFBR) project is mainly due to first of a kind technological issues being faced in the integrated commissioning phase of the project. These issues are being solved systematically in close co-ordination with the designers. The design validation of Advanced Heavy Water Reactor (AHWR) is on-going along with peer review of the design. The project for establishment AHWR is not formally launched hence, no delay has incurred. Molten Salt Reactor is a version of Indian High Temperature Reactor (IHTR). The establishment of reactor technology as part of proof in design concept is being carried out, hence no delay has incurred.

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