GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO-488
ANSWERED ON 04/12/2025

INDIGENEOUS NUCLEAR POWER GENERATION CAPACITY

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Will the PRIME MINISTER be pleased to state:-

(a) the total installed nuclear power generation capacity in the country as of November 2025;
(b) the current progress of 700 MW PHWR units presently under construction;
(c) the status of Small Modular Reactors (SMRs) development in the country;
(d) the contribution of nuclear power to India's clean-energy goals; and
(e) the timeline for achieving the target of 22 GW nuclear capacity by 2031?

ANSWER

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

(a) The present installed nuclear power capacity is 8780 MW (excluding RAPS-1).

(b) Three 700 MW PHWR units i.e. RAPS-8 (700 MW) at Rawatbhata in Rajasthan and GHAVP-1&2 (2 x 700 MW) at Gorakhpur in Haryana are presently under active construction. In addition, ten reactors of 700 MW each are at various stages of pre-project activities – two each at Kaiga in Karnataka, Chutka in Madhya Pradesh & Gorakhpur in Haryana and four at Mahi Banswara in Rajasthan.

(c) BARC has initiated design and development works on SMRs namely,

  (i) 200 MWe Bharat Small Modular Reactor (BSMR-200),
  (ii) 55 MWe Small Modular Reactor (SMR-55), and
  (iii) Up to 5 MWth high temperature gas cooled reactor meant for hydrogen generation.

  It is proposed to construct the lead units of these reactors at DAE site for technology demonstration. The demonstration reactors are likely to be constructed in 60 to 72 months after receipt of project sanctions

  BSMR-200 and SMR-55 can be deployed as captive power plants for energy intensive industries such as aluminum, steel, metal etc., repurposing of retiring fossil fuel-based power plants and for providing energy for remote as well as off-grid locations. Whereas,

hydrogen produced from high temperature gas cooled reactors can be utilized as a clean fuel in transport sector and process industries. Thus, these SMRs are positioned as key contributors for decarbonisation of power, energy intensive industries and transport sector and for clean energy generation in the coming decade.

(d) Nuclear power is a clean and environment friendly source of base load power which is available 24X7. Nuclear power has so far averted release of about 822 Million Tons of CO2 equivalent emissions into the environment. The Nuclear Energy Mission envisages reaching 100 GW nuclear power capacity by 2047 which will contribute significantly to India's clean energy transition towards Net Zero by 2070.

(e) The present nuclear power capacity is expected to increase from of 8780 MW (excluding RAPS-1) to 9480 MW by 2025-26, 11480 MW by 2026-27, 13480 MW by 2029-30 and 21880 MW by 2031-32, on progressive completion of projects under implementation. In addition, a 500 MW unit of Prototype Fast Breeder Reactor (PFBR)by BHAVINI is under advanced stage of commissioning.

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