

PARLIAMENT QUESTION: ENHANCING NUCLEAR POWER CAPACITY

प्रविष्टि तिथि: 04 DEC 2025 6:22PM by PIB Delhi

The Nuclear Energy Mission for Viksit Bharat is aiming to achieve nuclear power generation capacity of 100 GWe by 2047 to contribute significantly in achieving the target of NetZero by 2070. Its main features are to augment power production from nuclear energy with least carbon emission, provide reliable energy alternative for catering to the base load requirement which is currently provided by fossil fuel base power plants. Another objective of the Nuclear Energy Mission is to increase the share of nuclear energy in India's energy mix for Viksit Bharat, with emphasis on indigenous nuclear technology. To achieve the 100 GW target, India has two-pronged strategy with respect to nuclear energy;

1. Establishing large reactors such as 700 MWe indigenous pressurised heavy water reactors (PHWRs) and large capacity imported reactors at green field sites for rapid expansion.
2. The design & development of small reactors such as 200 MWe Bharat Small Modular Reactor (BSMR-200) and 55 MWe Small Modular Reactor (SMR-55), are underway for brown field sites, with objective of,
 - i. Repurposing of retiring fossil fuel-based power plants,
 - ii. Captive plants for energy intensive industries and
 - iii. Off-grid applications for remote locations.

Necessary technology for deployment of these reactors is available in the country and majority of equipment are within manufacturing capability of Indian industries with technological handholding by BARC

The roadmap for achieving goal of 100 GW of nuclear capacity by 2047, is jointly prepared by experts from Department of Atomic Energy, Government of India, Ministry of Power and Central Electricity Authority. In line with the roadmap, in addition to expediting projects presently under implementation, NPCIL has initiated actions for obtaining sanction for Pressurised Heavy Water Reactor based projects planned at existing and approved sites and locating potential new sites. NPCIL has also floated a Request for Proposal (RFP) for setting up Bharat Small Reactors (BSR) for decarbonisation of hard to abate industries and is working with BARC for development of Bharat Small Modular Reactors (BSMR). The last date for submission of proposal by industries has been extended upto 31st March 2026.

NKR/AK

