

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
STARRED QUESTION NO – 52
ANSWERED ON 04.12.2025

INCREASING NUCLEAR ENERGY GENERATION

*52. SHRI TEJVEER SINGH

Will the PRIME MINISTER be pleased to state:-

- (a) the new policies or projects that have recently been initiated in the country to enhance generation of nuclear energy;
- (b) whether these projects are promoting the use of indigenous technology and local resources; and
- (c) whether the Government is implementing any new safety measures or guidelines to ensure the secure use of nuclear energy?

ANSWER

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

(a) to (c) A statement is laid on the Table of the House.

Government of India
Department of Atomic Energy

STATEMENT REFERRED TO IN REPLY TO PARTS (A) TO (C) IN RESPECT OF
RAJYA SABHA STARRED QUESTION NO.52 FOR REPLY ON 04.12.2025
REGARDING INCREASING NUCLEAR ENERGY GENERATION ASKED BY SHRI
TEJVEER SINGH.

(a)&(b) Nuclear Energy constitutes one of the sources of energy that is under consideration along with other clean sources of energy to achieve our Net-Zero transition goals. The Government is actively exploring all pathways to achieve the targets including generation of 100 GW of nuclear power by 2047 as part of the energy mix, with greater private participation supported by an enabling legal and regulatory framework.

During the Budget 2025 announcement the Government had launched a Nuclear Energy Mission with an outlay of Rs. 20,000 crore for research and development of Small Modular Reactors (SMRs).

The specific measures outlined to reach this goal involve a multi-faceted approach, leveraging both indigenous development and international collaboration. Key strategies include the continued deployment of Indigenous Pressurized Heavy Water Reactors (PHWRs), building upon the 24 reactors in operation with 8780 MW capacity (excluding RAPS-1 which is under long term shutdown). There are also 8 reactors under construction contributing 6600 MW, which include indigenous 700 MW PHWRs like RAPP 8 and GHAVP 1&2, alongside the Indigenous Fast Breeder Reactor (FBR) PFBR, and Light Water Reactors (LWRs) with foreign cooperation such as KKNPP 3&4 and KKNPP 5&6. Furthermore, 10 reactors are at the pre-project activities stage (sanctioned), set to add another 7000 MW, encompassing PHWRs like Kaiga 5&6, GHAVP 3&4, Chutka 1&2, and Mahi Banswara 1&2 and 3&4. With the progressive completion of these projects, the nuclear power capacity in India is projected to reach 22480 MW by 2031-32.

Presently the two PSUs of DAE viz. NPCIL and BHAVINI are engaged in setting up nuclear power plants in the country. While NPCIL is mainly engaged in nuclear power generation from PHWRs and LWRs, BHAVINI is engaged in setting up FBRs. As a road map the 58 GW capacity is expected to be implemented by NPCIL, BHAVINI and Joint Ventures of NPCIL/PSUs, and the 42 GW is expected to come largely with private sector participation.

Future plans also emphasize the development of Indigenous Fast Breeder Reactors (FBRs), which align with India's unique three-stage nuclear power program designed

for optimal utilization of its modest uranium and abundant thorium resources through a closed fuel cycle. Additionally, the strategy includes the deployment of Bharat Small Reactors (BSR) for decarbonisation of hard to abate industries, development of Bharat Small Modular Reactors (SMRs), including indigenous SMRs of varying capacities. Enhanced international cooperation is also envisioned, particularly concerning SMRs and fuel, services, and supplies.

- (C) India has a robust system of implementation of Nuclear Safety in Nuclear Power Plants. Currently, the responsibility for ensuring the safety of civilian nuclear facilities in India lies solely with AERB. AERB is fully authorised to carry out its functional requirement independently to regulate as well as enforce the safety measure in the nuclear and allied facilities and same is being implemented. The existing safety protocols and oversight mechanisms followed by the AERB are already aligned with international recognized standards and established codes of practice. In view of this, the need for any further review of this mechanism is not presently anticipated.

The amendment of Atomic Energy Act, 1962 process is in the advanced stage and all the policy interventions will be adopted to advance of nuclear sector including robust implementation of safety, security and safeguards.
