

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO-485
ANSWERED ON 23/07/2026

ENHANCING NUCLEAR ENERGY GENERATION

485. SHRI PRADIP KUMAR VARMA

Will the PRIME MINISTER be pleased to state:-

- (a) whether Government is taking special initiatives to enhance nuclear power generation capacity with the aim of securing the country's long-term energy security and clean energy generation;
- (b) if so, the details of nuclear power projects installed, under construction and approved during the last ten years and the total generation capacity thereof;
- (c) whether Government is encouraging the development and expansion of indigenous technology based nuclear power plants; and
- (d) if so, the details thereof?

ANSWER

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

(a) & (b) Yes.

- Parliament has enacted The Sustainable Harnessing and Advancement of Nuclear Energy for Transforming India (SHANTI) Act, 2025, focused on the Nuclear Energy Mission of the Government of India, to achieve a target of 100 GW by 2047. This Act enable a wider participation of both public and private sectors.
- During the last ten years, thirteen reactors totaling to a capacity of 10600 MW have been at various stages of construction/commissioning. Of these, four reactors with total capacity of 3100 MW have commenced commercial operation. The details are as under:

State	Location	Project	Capacity (MW)
Tamilnadu	Kudankulam	KKNPP-2	1 X 1000
Gujarat	Kakrapar	KAPP-3&4	2 X 700
Rajasthan	Rawatbhata	RAPP-7	1 X 700

- The remaining nine reactors with a total capacity of 7500 MW are at various stages of construction. The details are as under:

State	Location	Project	Capacity (MW)
Rajasthan	Rawatbhata	RAPP-8	1 X 700
Tamilnadu	Kudankulam	KKNPP*-3&4	2 X 1000
		KKNPP*-5&6	2 X 1000
Karnataka	Kaiga	KAIGA-5&6	2 X 700
Haryana	Gorakhpur	GHAVP-1 & 2	2 X 700

- During the last ten years, the Government has accorded administrative approval and financial sanction for ten indigenous Pressurised Heavy Water Reactors to be set up in fleet mode and two units i.e. KKNPP-5&6 (2X1000 MW) which are being set up in cooperation with Russian Federation. The details are as under:

State	Location	Project	Capacity (MW)
Karnataka	Kaiga	Kaiga-5&6	2 X 700
Haryana	Gorakhpur	GHAVP- 3&4	2 X 700
Madhya Pradesh	Chutka	Chutka-1&2	2 X 700
Rajasthan	Mahi Banswara	Mahi Banswara-1&2*	2 X 700
		Mahi Banswara-3&4*	2 X 700
Tamilnadu	Kudankulam	KKNPP*-5&6	2 X 1000

** Mahi Banswara-1&2 and Mahi Banswara-3&4 being implemented by ASHVINI, a Joint Venture of NPCIL and NTPC.*

**Projects being implemented in co-operation with Russian Federation.*

(c) & (d) Yes.

- Government has announced Nuclear Energy Mission (NEM), outlined in the Union Budget 2025-26, with an aim to achieve nuclear power generation capacity of 100 GWe by 2047 to increase the share of nuclear energy as reliable base load energy in India's energy mix.
- Bhabha Atomic Research Centre (BARC) has undertaken the design and development of pressurised water reactor (PWR) technology based Small Modular Reactors (SMRs), namely,
 - 220 MWe Bharat Small Modular Reactor (BSMR-200),
 - 55 MWe Small Modular Reactor (SMR-55),
 - Up to 5MWth High Temperature Gas Cooled Reactor (HTGCR) meant for hydrogen generation.
- The 500 MW Prototype Fast Breeder Reactor commissioned by BHAVINI at Kalpakkam, Tamil Nadu is designed with indigenous technology. Government of India has also approved the pre-project activities of 2 x 500 MW FBR 1 & 2, to be built with the same design as of PFBR at Kalpakkam.
