

**WRITTEN ANSWERS TO UNSTARRED QUESTIONS****Commissioning of nuclear power plants**

2401. SHRI K. SOMAPRASAD: Will the PRIME MINISTER be pleased to state:

- (a) the details of nuclear power plants commissioned during 2014-15 to 2017-18;
- (b) the proposals for nuclear power projects that are pending for approval, State-wise; and
- (c) if so, the reasons for the pendency?

THE MINISTER OF STATE IN THE DEPARTMENT OF ATOMIC ENERGY (DR. JITENDRA SINGH): (a) During the period 2014-15 to 2015-16, two nuclear power plants Kudankulam Units 1&2 (2 X 1000 MW) were commissioned and commenced commercial operation.

- (b) There are presently no proposals for accord of administrative approval and financial sanction of nuclear power projects pending with the Government.
- (c) Does not arise.

**Proposals for new atomic power plants**

2402. SHRI VINAY DINU TENDULKAR:

SHRIMATI SHANTA CHHETRI:

Will the PRIME MINISTER be pleased to state:

- (a) the number of nuclear power plants proposed to be set up in the country during the next twenty years, State-wise;
- (b) the total estimated cost of each project along with their production capacity, State-wise;
- (c) the details of measures taken or proposed to be taken by Government for the installation and commissioning/operationalisation of these projects;
- (d) whether Government is considering to increase the capacity of the existing nuclear power plants; and
- (e) if so, the details thereof and if not, the reasons therefor?

THE MINISTER OF STATE IN THE DEPARTMENT OF ATOMIC ENERGY (DR. JITENDRA SINGH): (a) and (b) At present, there are nine (9) nuclear power reactors at various stages of construction, targeted for completion by 2024-25. In addition, twelve (12) more nuclear power reactors have been accorded administrative approval and financial sanction by the Government in June 2017. Thus, twenty one (21) nuclear power reactors, with an installed capacity of 15700 MW are under implementation, envisaged for progressive completion by the year 2031. The details are as follows:

(i) Nuclear Power Reactors under Construction:

State	Location	Project	Capacity (MW)	Sanctioned Cost (₹ crore)
Gujarat	Kakrapar	KAPP 3&4	2x700	11459*
Rajasthan	Rawatbhata	RAPP 7&8	2X700	12320
Tamil Nadu	Kudankulam	KKNPP 3&4	2 X 1000	39849
	Kalpakkam	PFBR&	500&	5677
Haryana	Gorakhpur	GHAVP 1&2§	2x700	20594

\* Under Revision

& Project being implemented by BHAVINI

§ Excavation commenced

(ii) Nuclear Power Reactors accorded administrative approval and financial sanction:

State	Location	Project	Capacity (MW)	Sanctioned Cost (₹ crore)
Haryana	Gorakhpur	GHAVP 3&4	2x700	
Rajasthan	Mahi-Banswara	Mahi Banswara 1&2	2X700	
		Mahi Banswara 3&4	2X700	105000
Karnataka	Kaiga	Kaiga 5&6	2X700	
Madhya Pradesh	Chutka	Chutka 1&2	2X700	
Tamil Nadu	Kudankulam	KKNPP 5&6	2X1000	49621

**Sites accorded 'In-Principle' approval:**

In addition, five sites, as given below, have been accorded 'in principle' approval by the Government for setting up more reactors in future.

State	Site	Capacity (MW)	In Cooperation with
Maharashtra	Jaitapur	6 X 1650	France
Andhra Pradesh	Kovvada	6 X 1208	United States of
Gujarat	Chhaya Mithi Virdi	6 X 1000*	America
West Bengal	Haripur	6 X 1000*	Russian Federation
Madhya Pradesh	Bhimpur	4X700	Indigenous PHWR

\* Nominal Capacity

Discussions on finalization of project proposals in respect of setting up large size Light Water Reactors in collaboration with France at Jaitapur site in Maharashtra and USA at Kovvada site in Andhra Pradesh are underway. The cost of reactors to be set up at these sites will emerge on conclusion of the techno-commercial discussions and formulation of their project proposals. These reactors will be launched after the accord of administrative approval and financial sanction by the Government. At the other 'In-Principle' approved sites, the pre-project activities are at various stages.

Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI), a PSU under Department of Atomic Energy, is currently constructing a 500 MWe Prototype Fast Breeder Reactor at Kalpakkam, Tamil Nadu. Further, it is proposed to construct a series of twin reactors as given below:

Proposed Fast Breeder Reactor	Capacity in MWe	Start of construction	Commercial operation	Location of plant
FBR-1	600	2021	2029	Kalpakkam, Tamil Nadu
FBR-2	600	2021	2031	
FBR-3	600	2025	2033	Site yet to be selected
FBR-4	600	2025	2035	

Cost estimation will be prepared on completion of the detailed engineering of the project.

(c) The Government has taken several measures to enable setting up of nuclear power reactors in the country. These include:

- (i) Resolution of issues related to Civil Liability for Nuclear Damage (CLND) Act and Creation of Indian Nuclear Insurance Pool (INIP).

- (ii) Amendment of the Atomic Energy Act-1962 (as amended from time to time) to enable Joint Ventures of Public Sector Companies to set up nuclear power projects in the country.
- (iii) Enabling agreements with the foreign countries for nuclear power cooperation including supply of fuel.
- (iv) Identification and addressing of the issues in implementation of the projects through Pro-Active Governance And Timely Implementation "PRAGATI" platform.

(d) No, Sir.

(e) The existing units are operating at their rated capacity. The unit size of indigenous Pressurised Heavy Water Reactors (PHWRs) has already been increased from 220 MW to 540 MW and then to 700 MW, which are now under construction. In addition, Light Water Reactors of 1000 MW have also been introduced with foreign cooperation.

#### **Non-release of funds to Sikkim for tourism projects**

2403. SHRI HISHEY LACHUNGPA: Will the Minister of DEVELOPMENT OF NORTH EASTERN REGION be pleased to state:

(a) whether it is a fact that 51 tourism projects of Sikkim are seriously affected due to non-release of Central financial assistance under the hundred per cent Centrally Sponsored Scheme of the Product/Infrastructure Development of Destination and Circuits;

(b) the amount of balance Central fund to be transferred to the State to complete these projects;

(c) whether the request for releasing the funds has been placed before the Ministry by the State Government on several occasions;

(d) if so, the reasons for delay in releasing the funds; and

(e) by when the funds would be released?

THE MINISTER OF STATE OF THE MINISTRY OF DEVELOPMENT OF NORTH EASTERN REGION (DR. JITENDRA SINGH): (a) As per the available records, there are 43 (forty three) projects under Product Infrastructure Development at Destinations and