

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO.956
TO BE ANSWERED ON 16.07.2014

NEW NUCLEAR REACTORS

956. SHRI JAYADEV GALLA:

Will the PRIME MINISTER be pleased to state:

- (a) the details of reactors of Nuclear Power Corporation of India Ltd. (NPCIL) fully operational across the country, plant wise and their capacity and output;
- (b) whether the Government had proposed to launch 16 new nuclear reactors during the 12th Plan and if so, the details thereof including the estimated cost of the reactors;
- (c) the present status/progress made in this regard, reactor/plant-wise; and
- (d) the time by which all these reactors are likely to achieve their full capacity?

ANSWER

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

- (a) The details are attached as Annexure-1.
- (b)&(c) NPCIL plans to start work on 16 new reactors during the XII Five Year Plan. Further, two fast breeder reactors [to be implemented by Bharatiya Vidyut Nigam Limited (BHAVINI)] and one Advanced Heavy Water Reactor (AHWR) are envisaged. The details are enclosed as Annexure-2.
- (d) These reactors are expected to be operational in the XIII / XIV Five Year Plan, based on their actual date of start.

Details of Reactors in Operation

Location & State	UNITS	Capacity (MW)	Generation in 2013-14 (MU) [§]
Tarapur, Maharashtra	TAPS-1	160	1322
	TAPS-2	160	806
	TAPS-3	540	3739
	TAPS-4	540	4017
Rawatbhata, Rajasthan	RAPS-1*	100	
	RAPS-2	200	1688
	RAPP-3	220	1946
	RAPS-4	220	1771
	RAPS-5	220	2041
	RAPS-6	220	1787
Kalpakkam, Tamil Nadu	MAPS-1	220	1354
	MAPS-2	220	761
Narora, Uttar Pradesh	NAPS-1	220	1490
	NAPS-2	220	1214
Kakrapar, Gujarat	KAPS-1	220	1862
	KAPS-2	220	1891
Kaiga, Karnataka	KGS-1	220	1587
	KGS-2	220	1740
	KGS-3	220	1758
	KGS-4	220	1454

* Owned by Govt. of India, DAE and operated by NPCIL, under extended shutdown since October 2004

[§] Generation figures are rounded off to nearest digit

In addition, KKNPP-1 (1000 MW) at Kudankulam, Tamil Nadu has also been connected to the grid on October 22, 2013 and is since generating infirm power. It has already reached full power on June 07; 2014. The unit generated 1106 MUs in 2013-14 and 1182 MUs during 2014-15 upto June 2014.

Status of projects to be launched by NPCIL/BHAVINI/Government during

XII Five Year Plan

Project	Location	Capacity (MW)	Planned FPC*	Planned Completion	Status
Indigenous PHWRs					
GHAVP 1&2	Gorakhpur Haryana	2 x 700	Jun 2015	Unit-1: Sep-20 Unit-2: Mar-21	Project was accorded financial sanction for Rs.20594 crore , Environmental clearance obtained. Procurement of Long delivery critical equipment initiated. Site infrastructure works started. Start of construction (First Pour Concrete) Scheduled in 2015.
CMAPP 1&2	Chutka, Madhya Pradesh	2 x 700	Jun 2015	Unit-1: Dec-20 Unit-2: Jun-21	Pre-project activities (Land acquisition, obtaining statutory clearances, site investigations) started. Public Hearing completed.
Mahi Banswara, 1&2	Mahl Banswara, Rajasthan	2 x 700	Jun 2016	Unit-1: Dec-21 Unit-2: Jun-22	Pre-project activities (Land acquisition, obtaining statutory clearances, site investigations) in progress. ToRs for EIA studies for Env. Clearance approved. Financial sanction not yet accorded.
Kaiga 5&6	Kaiga, Karnataka	2 x 700	Dec 2016	Unit-5: Jun-22 Unit-6: Dec-22	Land available, other pre-project activities initiated.
LWRs with International Cooperation					
KKNPP 3&4	Kudankulam, Tamilnadu	2 x 1000	June 2014	Unit-3: Mar-20 Unit-4: Nov-20	Project was accorded financial sanction for Rs.39,849 crore , statutory clearances obtained. Site made ready. General Framework Agreement signed with Atomstroy export of Russia .
JNPP 1&2	Jaitapur, Maharashtra	2 x 1650	Oct 2015	Unit-1: Apr-21 Unit-2: Apr-22	Land acquired, Environmental and CRZ clearances obtained, Site infrastructure and investigation works started. Discussions with M/s Areva, France to arrive at project proposal continue.
Kovvada, 1&2	Kovvada, Andhra Pradesh	2 x 1500	Jun 2016	Unit-1: Oct-21 Unit-2: Oct-22	Pre-project activities (Land acquisition, obtaining statutory clearances, site investigations) started. Discussions with GE Hitachi Nuclear Energy (GEH) to arrive at project proposal continue.
Chhaya Mithi Virdi 1&2	Chhaya Mithi Virdi, Gujarat	2 x 1100	Jun 2016	Unit-1: Dec-20 Unit-2: Dec-21	Public Hearing completed. Pre-project activities (Land acquisition, obtaining statutory clearances, site investigations) started. Preliminary contract for sharing technology details signed with Westinghouse Electric Company (WEC), discussions to arrive at project proposal continue.
FBR 1&2	Kalpakkam	2 x 500	Yet to be decided	Yet to be decided	Preparation of Detailed Project Report in hand.
AHWR	Yet to be decided	1 x 300	Yet to be decided	Yet to be decided	Design and development of nuclear systems completed. Engineering consultancy for the detailed engineering of major structures/systems/components (SSCs) awarded. Preparation of technical documents and specifications for design 3D CAD modelling, 2D layout drawings and stress & seismic analysis of SSCs continue. Selection of a Site under consideration of Standing Site Selection Committee.