

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO. 5377
TO BE ANSWERED ON 28.03.2018

CONSTRUCTION OF PHWR

5377. SHRI C. MAHENDRAN:

Will the PRIME MINISTER be pleased to state:

- (a) whether the Government is planning to construct ten indigenous pressurised heavy water nuclear reactors;
- (b) if so, the details thereof including total capacity of the said reactors;
- (c) the separate details of operational and under construction nuclear power plants in the country;
- (d) the details of places selected for the proposed plants; and
- (e) whether the design and development of this project is a testament to the rapid advances made by the country's nuclear scientific community and industry and if so, the details thereof?

ANSWER

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

- (a) Yes, Sir.
- (b) Four indigenous Pressurised Heavy Water Reactors (PHWRs) each of 700 MW capacity are under construction at Kakrapara in Gujarat and Rawatbhata in Rajasthan. In addition to this, the Government has accorded administrative approval and financial sanction in June 2017 for setting up ten indigenous 700 MW Pressurised Heavy Water Reactors (PHWRs) in Fleet Mode with a total capacity of 7000 MW (10 x 700MW) and also accorded sanction for construction of Kudankulam Units 5&6 (2x1000 MW) in cooperation with Russian Federation at the existing site of Kudankulam.
- (c) The details are given as Annexure.
- (d) The details of locations of the ten PHWRs are as follows:

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

- (e) Yes, Sir. India has achieved comprehensive capabilities in all aspects of commercial nuclear power reactor technologies of indigenous PHWRs including associated fuel cycles.

Nuclear Power Reactors in Operation

State	Location	Unit	Capacity (MW)
Maharashtra	Tarapur	TAPS-1	160
		TAPS-2	160
		TAPS-3	540
		TAPS-4	540
Rajasthan	Rawatbhata	RAPS-1 [@]	100
		RAPS-2	200
		RAPS-3	220
		RAPS-4	220
		RAPS-5	220
		RAPS-6	220
Tamil Nadu	Kalpakkam	MAPS-1	220
		MAPS-2	220
	Kudankulam	KKNPP-1	1000
		KKNPP-2	1000
Uttar Pradesh	Narora	NAPS-1	220
		NAPS-2	220
Gujarat	Kakrapar	KAPS-1 [§]	220
		KAPS-2 [§]	220
Karnataka	Kaiga	KGS-1	220
		KGS-2	220
		KGS-3	220
		KGS-4	220

[@] RAPS-1 is under extended shutdown for techno-economic assessment

[§] KAPS-1&2 units are under long shutdown for Enmasse Coolant Channel Replacement (EMCCR) and Enmasse Feeder Replacement (EMFR)

Nuclear Power Projects under Construction

Project	Location & State	Capacity (MW)
KAPP-3&4	Kakrapar, Gujarat	2 x 700
RAPP-7&8	Rawatbhata, Rajasthan	2 X 700
KKNPP- 3&4	Kudankulam, Tamil Nadu	2 X 1000
GHAVP-1&2*	Gorakhpur, Haryana	2 X 700
PFBR [#]	Kalpakkam, Tamilnadu	1 X 500

*Work commenced, excavation to start soon

[#] Prototype Fast Breeder Reactor (PFBR) being implemented by BHAVINI