GOVERNMENT OF INDIA
ATOMIC ENERGY
LOK SABHA

UNSTARRED QUESTION NO:2239
ANSWERED ON:18.12.2013
NUCLEAR POWER GENERATION IN THE COUNTRY
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Will the Minister of ATOMIC ENERGY be pleased to state:

(a) the installed capacity and the actual power generation by the Nuclear Power Plants (NPPs) functioning in the country, plant-wise;

(b) whether energy generation and capacity utilization of the atomic plants is not at par with world average and if so, the details thereof, plant-wise and reasons therefor;

(c) the steps taken/proposed to be taken by the Government to enhance power generation in these plants;

(d) the number of NPPs under construction and proposed to be setup with a view to increasing power generation/ meeting power requirement in the country; and

(e) the location where the said plants are being setup/likely to be setup along with plant- wise power generation capacity?

Answer

THE MINISTER OF STATE FOR PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND PRIME MINISTER'S OFFICE (SHRI V. NARAYANASAMY) :

(a) There are 20 nuclear power plants with installed capacity of 4780 MW. Of these, 19 reactors, with an installed capacity of 4680 are currently operating. One reactor, RAPS-1(100 MW) is under extended shutdown for techno-economic assessment for continued operation.

The details of actual generation of these reactors in 2012-13 are given below:

Location & State	UNITS	Capacity MW	Generation in 2012-13 (MU)
Tarapur, Maharashtra	TAPS-1	160	577
	TAPS-2	160	1007
	TAPS-3	540	4373
	TAPS-4	540	3866
Rawatbhata, Rajasthan	RAPS-1#	100	
	RAPS-2	200	1584
	RAPP-3	220	1757
	RAPS-4	220	1926
	RAPS-5	220	1760
	RAPS-6	220	1819
Kalpakkam, Tamil Nadu	MAPS-1	220	1485
	MAPS-2	220	1257
Narora, Uttar Pradesh	NAPS-1	220	1226
	NAPS-2	220	1315
Kakrapar, Gujarat	KAPS-1	220	1832
	KAPS-2	220	1639
Kaiga, Karnataka	KAIGA-1	220	1464
	KAIGA-2	220	1270
	KAIGA-3	220	1447
	KAIGA-4	220	1259

#RAPS-1 under extended shutdown since October 2004

(b)&(c) No, sir. The present overall capacity utilisation of Indian nuclear power reactors is comparable to the world average of 80 percent, for the year 2012.

The capacity utilisation of Indian nuclear power plants was low in the past due to demand supply mismatch of indigenous fuel. However, following the efforts of the Government in augmenting indigenous fuel supply and international cooperation enabling use of imported fuel in reactors under IAEA Safeguards, the capacity utilisation has steadily improved from about 50% in 2008-09 to 80% in

the current year .

(d)&(e) There are seven nuclear power reactors at various stages of construction/ commissioning, of which one reactor, Kudankulam Nuclear Power Project (KKNPP) Unit-1 (1000 MW) has already been connected to the grid in October 2013 and generating infirm power since then.

The details in respect of other reactors under construction / commissioning are given below:

Project	Location	Capacity (MW)	Status
KKNPP 2	Kudankulam, Tamil Nadu	1 X 1000	Under Commissioning
KAPP 3&4	Kakrapar, Gujarat	2 X 700	Under Construction
RAPP 7&8	Rawatbhata, Rajasthan	2 X 700	Under Construction
PFBR	Kalpakkam, Tamil Nadu	500	Under Construction

In addition, XII Plan proposals envisage start of work on nineteen new reactors with a capacity of 17400 MW. The details are as under:

Project	Location	Type	Capacity (MW)
Indigenous Reactors			
GHAVP 1&2	Gorakhpur, Haryana	PHWR	2 x 700
CMAPP 1&2	Ch Chutka, Madhya Pradesh		2 x 700
Mahi Banswara, 1&2	Mahi Banswara, Rajasthan		2 x 700
Kaiga 5&6	Kaiga, Karnataka		2 x 700
FBR 1&2	Kalpakkam, Tamil Nadu	FBR	2 x 500
AHWR	Location to be decided	AHWR	300
Reactors with Foreign Cooperation			
KKNPP 3&4	Kudankulam, Tamil Nadu	LWR	2 x 1000
JNPP 1&2	Jaitapur, Maharashtra		2 x 1650
Kovvada, 1&2	Kovvada, Andhra Pradesh		2 x 1500
Chhaya Mithi Virdi, 1&2	Chhaya Mithi Virdi, Gujarat		2 x 1100

Legend: PHWR - Pressurized Heavy water Reactor
FBR - Fast Breeder Reactor
AHWR - Advanced Heavy Water Reactor
LWR - Light Water Reactor