GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO.3776
TO BE ANSWERED ON 20.03.2013

NUCLEAR POWER PLANTS

3776. SHRI SOMEN MITRA:
SHRI SUVENDU ADHIKARI:
SHRI HARISHCHANDRA CHAVAN:
SHRI JAI PRAKASH AGARWAL:
KUMARI SAROJ PANDEY
SHRI JAYARAM PANGI:
SHRI RAVNEET SINGH:

Will the PRIME MINISTER be pleased to state:

(a) the number of Nuclear Power Plants (NPPs) functioning in the country along with their locations/State and installed capacity, plant-wise;

(b) the number of NPPs under construction along with location/State as well as power generation capacity and their present status, plant-wise;

(c) the number of NPPs proposed to be set up along with location/State as well as power generation capacity and their present status, plant-wise;

(d) whether the NPPs already functioning in the country are not generating power as per their installed capacity;

(e) if so, the reasons therefor along with the installed capacity and the actual power generation by each plant;

(f) the steps taken by the Government to ensure that power generation in these plants reaches the optimum level; and

(g) the funds allocated, released and spent for the under-construction and proposed to be constructed plants during each of the last three years and the current year?

ANSWER

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

(a) Nuclear power reactors in operation with installed capacity are as under:

Unit-Location	Installed Capacity (MWe)
TAPS-1 Tarapur, Maharashtra	160
TAPS-2 Tarapur, Maharashtra	160
RAPS-1 Rawatbhata, Rajasthan *	100
RAPS-2 Rawatbhata, Rajasthan	200
MAPS-1 Kalpakkam, Tamilnadu	220
MAPS-2 Kalpakkam, Tamilnadu	220
NAPS-1 Narora, Uttar Pradesh	220
NAPS-2 Narora, Uttar Pradesh	220
KAPS-1 Kakrapar, Gujarat	220
KAPS-2 Kakrapar, Gujarat	220
KAIGA-2, Kaiga, Karnataka	220
RAPS-3 Rawatbhata, Rajasthan	220
KAIGA-1Kaiga, Karnataka	220
RAPS-4 Rawatbhata, Rajasthan	220
TAPS-4 Tarapur, Maharashtra	540
TAPS-3 Tarapur, Maharashtra	540
KAIGA -3 Kaiga, Karnataka	220
KAIGA -4 Kaiga, Karnataka	220
RAPS-5 Rawatbhata, Rajasthan	220
RAPS-6 Rawatbhata, Rajasthan	220
Total	**4780**

**RAPS-1 shutdown from 09.10.2004 for review of continuation of operation.*

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(b) The details of nuclear power plants under construction are as under:

Project	Location	Capacity (MW)	Progress as of Feb 2013	Expected start of generation
KK -1&2	Kudankulam, Tamilnadu	2X1000	97.32 %	Unit-1 May 2013 Unit-2 Dec 2013
KAPP 3&4	Kakrapar, Gujarat	2X700	34.0 %	2016-17
RAPP 7&8	Rawatbhata, Rajasthan	2X700	21.4%	2016-17
PFBR	Kalpakkam, Tamil Nadu	500	94%	2015

(c) The XII Five Year Plan proposals envisage start of work on 19 new nuclear power reactors in the XII Five Year Plan. The details are:

Project	Location	Reactor Type	Capacity (MW)
Indigenous Reactors			
Gorakhpur 1&2	Gorakhpur, Haryana	PHWR	2X700
Chutka 1&2	Chutka, Madhya Pradesh	PHWR	2X700
Kaiga 5&6	Kaiga, Karnataka	PHWR	2X700
Mahi Banswara 1&2	Mahi Banswara, Rajasthan	PHWR	2X700
FBR 1&2	Kalpakkam, Tamilnadu	FBR	2X500
AHWR	Site to be decided	AHWR	300
LWRs with International Cooperation			
Kudankulam 3&4	Kudankulam, Tamilnadu	LWR	2X1000
Jaitapur 1&2	Jaitapur, Maharashtra	LWR	2X1650
Chhaya Mithi Virdi 1&2	Chhaya Mithi Virdi, Gujarat	LWR	2X1100
Kovvada 1&2	Kovvada, Andhra Pradesh	LWR	2X1500

Pre-project activities, comprising of land acquisition at new sites (Gorakhpur, Chutka, Mahi Banswara, Chhaya Mithi Virdi and Kovvada), obtaining statutory clearances and preparation of project proposals are in progress and at various stages at the above sites except at Kudankulam, where the pre-project activities have been completed and the project proposal is under consideration of the Government for accord of administrative approval and financial sanction.

(d)&(e) Out of 19 operating nuclear power reactors in the country with installed capacity of 4680 MW, ten nuclear power reactors with a capacity of 2840 MW namely Kaiga Generation Station Units 1 to 4 (4X220MW), Narora Atomic Power Station Units 1&2 (2X220 MW), Madras Atomic Power Station Units 1&2 (2X220 MW) and Tarapur Atomic Power Station Units 3&4 (2X540 MW) are fuelled with indigenous uranium, which is not available in the required quantity. These are accordingly being operated at lower power levels matching the fuel supply. The remaining 9 nuclear reactors with a capacity of 1840 MW are under International Atomic Energy Agency (IAEA) safeguards in accordance with the separation plan. These 9 reactors use imported uranium, which is available in required quantity, and are operating at rated capacity. The details of installed capacity and generation in the year 2011-12 are given below:

Location & State	UNITS	Capacity MW	2011-12	
			Gen (MU)	CF(%)
Tarapur, Maharshtra	TAPS-1	160	1371	98
	TAPS-2	160	1337	95
	TAPS-3	540	4325	91
	TAPS-4	540	2781	59

Rawatbhata, Rajasthan	RAPS-1	100	0	0
	RAPS-2	200	1821	104
	RAPP-3	220	1938	100
	RAPS-4	220	1645	85
	RAPS-5	220	1974	102
	RAPS-6	220	1764	91
Kalpakkam, Tamilnadu	MAPS-1	220	1240	64
	MAPS-2	220	1276	66
Narora, Uttar Pradesh	NAPS-1	220	1047	54
	NAPS-2	220	937	48
Kakrapar, Gujarat	KAPS-1	220	1919	99
	KAPS-2	220	1868	97
Kaiga, Karnataka	KAIGA-1	220	1270	66
	KAIGA-2	220	1381	71
	KAIGA-3	220	1231	64
	KAIGA-4	220	1330	69

(f) The government has made efforts to augment indigenous uranium supply by accelerating exploration efforts, opening new mines and processing facilities.

(g) NPCIL has not drawn any domestic budgetary support since 2005-06. The details of funds allocated and spent during the last three years and current year on under construction and proposed to be constructed projects in Rupees crore are as follows:

Project	2009-10		2010-11		2011-12		2012-13	
	BE	Exp.	BE	Exp.	BE	Exp.	BE	Exp. Upto Jan 2013
Projects under Construction								
Kaiga 3&4	18	133.45	233	139.40	-	-	-	-
RAPP 5&6	125	208.07	-	-	-	-	-	-
KK 1&2	855	1083.02	377	803.67	700	933.58	840	739.62
KAPP 3&4	400	150.08	344	352.89	1250	1077.38	1902	752.87
RAPP 7&8	200	166.49	103	287.71	700	545.73	1110	643.93
Projects Proposed								
KK 3&4	1	12.15	400	13.50	350	29.43	800	76.90
Gorakhpur 1&2	-	-	-	1.21	2	0.42	69	521.22
Chutka 1&2	-	-	-	1.05	2	0.5	5	0.8
Mahi Banswara 1&2	-	-	-	-	-	-	-	0.69
Kaiga 5&6	-	-	-	-	-	-	2	-
Jaitapur 1&2	30	4.11	105	9.40	250	18.12	250	18.71
Kovvada 1&2	-	-	200	4.56	100	1.94	15	2.68
Chhaya Mithi Virdi 1&2	-	-	200	4.21	125	2.84	5	1.18
Bhimpur 1&2	-	-	-	-	-	-	-	0.32
Haripur 1&2	-	-	-	0.35	3	0.29	3	0.33

Funds allotted, released and spent pertaining to BHAVINI for the last three years and current year for PFBR and FBR Units 1&2 are as follows:

₹ IN CRORES

Project	2009-10			2010-11			2011-12			2012-13		
	BE	Released	Exp.	BE	Released	Exp.	BE	Released	Exp.	BE	Released	Exp. (upto Jan 13)
PFBR	750	995.75	696.86	1275	330*	605.32	905	905*	31.33	600	174.67	386.22
FBR 1&2	-	-	-	125	15	1.24	50	-	1.10	100	-	2.83

*Note : * includes ₹30 crore equity from NPCIL during 2010-11 and 2011-12.*

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