

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 3041
TO BE ANSWERED ON 22.03.2018

UPGRADATION OF NUCLEAR POWER PLANTS

3041. SHRI TAPAN KUMAR SEN:

Will the PRIME MINISTER be pleased to state:

- (a) the details of nuclear power generation capacity added during the last three years including the current year;
- (b) the goal set for the current year and the progress made in this regard;
- (c) the quantum of funds spent on maintenance and upgradation of nuclear power plants during the last three years including the current financial year and the cost per unit of power generation; and
- (d) whether Government is planning to expand the capacity of existing and new plants to meet the growing energy needs 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) During the last three years, a nuclear power capacity of 2000 MW has been added by the start of commercial operation of the Kudankulam Units 1&2 (KKNPP-1&2 - 2X1000 MW) in December-2014 and March-2017 respectively. They have cumulatively generated about 24335 Million Units of electricity as on February, 2018.
- (b) Two nuclear power reactors, KAPS-1&2 (2 X 220 MW) at Kakrapar, Gujarat are currently under project mode for Enmasse Coolant Channel Replacement (EMCCR) and Enmasse Feeder Replacement (EMFR). KAPS-2 (220 MW) is targeted to be operational during the current year.
- (c) The details of capital expenditure incurred in operating stations for upgradation and maintenance and average tariff of Nuclear Power

Corporation of India Limited (NPCIL) during the last three years and the current year are as follows:

Year	2014-15	2015-16	2016-17	2017-18 upto February 2018 (Provisional)
Capital Expenditure (Rs. in crore)	78.09	78.93	93.78	153.61
Average Tariff of Nuclear Power (Rs. per Unit)	2.78	2.87	2.95	3.05

- (d) Yes, Sir. A capacity expansion is planned by setting up nuclear power reactors at existing sites where there is potential and at new green field sites. The details are as follows:

Projects under Construction

A capacity of 6700 MW comprising of nine (09) nuclear power reactors (including Prototype Fast Breeder Reactor (PFBR), 500MW being implemented by BHAVINI) is at various stages of commissioning / construction. The details are as follows:

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, Tamil Nadu	1 X 500

On the progressive completion of the above stated projects, the installed nuclear capacity will reach 13480 MW by the year 2024.

Projects Sanctioned & Under Pre-Project Activities

The Government has also accorded administrative approval and financial sanction for the following twelve (12) more reactors with a total capacity of

9000 MW in June-2017, which are scheduled to be completed progressively by the year 2031.

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
KKNPP– 5&6	Kudankulam, Tamil Nadu	2 X 1000

Together with the capacity being implemented by BHAVINI, the total nuclear power capacity will reach 22480 MW by the year 2031.

‘In Principle’ approved sites for locating future Nuclear Power Plants

Further to this, the Government has accorded ‘In-Principle’ approval for the following sites for setting up nuclear power projects in future:

Site	Location & State	Capacity (MW)
Bhimpur, Units- 1 to 4	Bhimpur, Madhya Pradesh	4 X 700
Jaitapur, Units- 1 to 6	Jaitapur, Maharashtra	6 x 1650
Kovvada, Units- 1 to 6	Kovvada, Andhra Pradesh	6 x 1208
Chhaya Mithi Viridi, Units- 1 to 6	Chhaya Mithi Viridi, Gujarat	6 x 1000*
Haripur, Units – 1 to 6	Haripur, West Bengal	6 x 1000*

**Nominal Capacity*
