GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO. 1922
TO BE ANSWERED ON 06.08.2015

THIRD STAGE OF NUCLEAR PROGRAMME

1922. DR.V.MAITREYAN :

Will the PRIME MINISTER be pleased to state:

(a) whether Government is very keen to implement the third stage of Indian Nuclear Power Programme and if so, the details thereof and its salient features;

(b) the list of nuclear power projects initiated during the last five years and to be initiated in near future; and

(c) the amount earmarked for this programme and the estimated power production to be generated?

ANSWER

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

(a) The Government is committed to implement the third stage of Indian Nuclear Power Programme, after an adequate nuclear installed capacity has been reached based on Fast Breeder Reactors to be set up in the second stage. On account of non-existence of any fissile isotope in naturally occurring Thorium (unlike that existing in Uranium), commercial utilisation of Thorium, on a significant scale, can begin only when abundant supply of either Uranium or Plutonium resources are available. Upon the launch, followed by a significant growth of a thorium based nuclear programme in this manner, it could be possible to maintain the achieved level (without much further growth) of nuclear power programme with thorium alone, without additional demands on uranium or plutonium resources. Therefore, considering the meager domestic uranium resources in the country, it is feasible to start a significant

commercial level Thorium based reactor programme in our country only after an adequate inventory of Plutonium becomes available from our Fast Breeder Reactors, comprising the second stage of Indian nuclear programme. Accordingly, the utilisation of Thorium as a practically inexhaustible energy source has been contemplated during the third stage of the Indian nuclear programme, which can be reached after a few decades.

Substantial work has been carried out in the areas of research on technologies for utilisation of thorium in nuclear fuel cycle, and on the development of an Advanced Heavy Water Reactor (AHWR), to serve as a technology demonstrator for use of thorium based fuel on a large scale.

(b)&(c) The details of Projects initiated in the last five years along with amount earmarked and estimated power production are given below:

Project	Location	Capacity (MW)	Completion cost (Rs.crore)
Kakrapar Atomic Power Project Units 3&4 (KAPP 3&4)	Kakrapar, Gujarat	2 X 700	11459
Rajasthan Atomic Power Project Units 7&8 (RAPP 7&8)	Rawatbhata, Rajasthan	2 X 700	12320

The details of projects accorded financial sanction and being readied for launch are :

Project	Location	Capacity (MW)	Completion cost (Rs.Crore
Gorakhpur Haryana Anu Vidyut Pariyojana (GHAVP 1&2)	Gorakhpur, Haryana	2 x 700	20594
Kudankulam Nuclear Power Project (KKNPP 3&4)	Kudankulam, Tamil Nadu	2 x 1000	39849

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