

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO.165
TO BE ANSWERED ON 08.12.2022

Status of three-stage nuclear power programme of the country

165 Dr. K. Keshava Rao:

Will the PRIME MINISTER be pleased to state:

- (a) the current status of the three-stage nuclear power programme of the country;
- (b) whether any of the nuclear power plants in the country has achieved the capacity for the second stage of its three-stage programme, if so, the details thereof; and
- (c) the problems faced by the country's nuclear power programme in terms of achieving the desired efficiency?

ANSWER

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

- (a) The first stage of the sequential three-stage nuclear power programme comprising of Pressurised Heavy Water Reactors (PHWRs) fuelled by natural uranium has achieved commercial maturity. There are presently 18 PHWRs in operation, 6 under construction and 10 under pre-project activities. The PHWRs in operation have been operating at their rated capacity.

Currently, the Fast Breeder Test Reactor (FBTR), flagship of the second stage nuclear power programme, is in operation at name plate capacity. The design, construction, criticality of FBTR in 1985 and its subsequent successful operation for the last 37 years, have been important milestones in demonstrating the technological viability of fast spectrum reactors.

Department of Atomic Energy (DAE) has set up and operated a number of facilities towards the research on fast reactors and associated fuel cycle and has emerged as one of the leaders in many of the research areas. A first-of-its-

kind 500 MWe Prototype Fast Breeder Reactors (PFBR) is in an advanced stage of commissioning at Kalpakkam.

- (b) Yes, Sir. The Fast Breeder Test Reactor (FBTR) has recently achieved its design power capacity of 40 MWt and turbo generator was synchronized to the grid generating 10 MWe. Around 2.91 million units of electrical energy was produced in October 2022.
- (c) The problem faced by the country's nuclear power programme in earlier period was due to the technology denial and international embargo regime that persisted from 1974 to 2008 and the constraints of availability of financial resources. The programme then had to depend solely on budgetary support and also the challenges posed by set of people primarily opposing nuclear power. However the earlier constraints have now been overcome and the nuclear power programme is poised for rapid expansion.
