

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:5816  
ANSWERED ON:29.04.2015  
PROTOTYPE FAST BREEDER REACTORS  
Panda Shri Baijayant "Jay"

**Will the Minister of ATOMIC ENERGY be pleased to state:**

- (a) the status of the Prototype Fast Breeder Reactor and the two Fast Breeder Reactors;
- (b) the details of safety measures being taken for the Fast Breeder Reactors; and
- (c) the kind of fuel proposed to be used by these reactors?

**Answer**

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

(a) The Prototype Fast Breeder Reactor (PFBR) is under advanced stage of commissioning. The physical progress achieved as on 31/3/2015 is 97.64%.

It is proposed to construct two more Fast Breeder Reactors (FBR 1&2) of 600 MWe capacity each at Kalpakkam. Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI) has prepared the siting consent document and submitted to Atomic Energy Regulatory Board (AERB) for 'siting clearance' for proposed FBR 1&2 reactors.

BHAVINI has completed the "Environmental Impact Assessment" (EIA) studies and document made in line with the directives given by the Ministry of Environment and Forest (MoEF). The pre project activities like Geo-technical investigation of site and off-shore, hydrographic survey, have been completed.

(b) The safety standards followed in Fast Breeder reactors is at par with the international standards. The defence-in-depth approach has been adopted for safety of the reactor. Many inherent and engineered safety features ensure adequate safety of the reactor during unlikely events.

In order to take into account hypothetically postulated severe accident scenarios and to mitigate the effects of radiation release to public, Core Catcher and Containment system are provided.

(c) Mixed Oxide i.e Uranium Oxide and Plutonium Oxide (UO<sub>2</sub> + PUO<sub>2</sub>) fuel is used for PFBR. The same fuel material is also planned to be used for FBR 1&2.