

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO-3202
ANSWERED ON 21/08/2025

PROTOTYPE FAST BREEDER REACTOR

3202. SHRI NARAYANA KORAGAPPA
SHRI MAYANKKUMAR NAYAK
SHRI NARHARI AMIN

Will the PRIME MINISTER be pleased to state:-

- (a) the current operational status of the Prototype Fast Breeder Reactor (PFBR) and the timeline for achieving criticality and full power generation;
- (b) the expected contribution of PFBR to Bharat's nuclear capacity and the advantages it brings under Bharat's closed fuel cycle strategy;
- (c) whether there are any collaborative research or international knowledge exchange efforts associated with PFBR technology?

ANSWER

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

- (a) BHAVINI is currently commissioning a 500 MWe Prototype Fast Breeder Reactor and as per the present progress the expected timeline for achieving criticality of PFBR is by March 2026 and the expected timeline for full power generation is by December 2026.
- (b) Upon attaining full power generation, PFBR will add 500 MWe capacity in the country's nuclear energy contribution in the National Grid. PFBR follows a closed fuel cycle regime to optimally utilize India's limited uranium resources and to exploit its large thorium reserves for long term energy security. It involves the recovery and recycling of fissile and fertile material from Spent Nuclear Fuel (SNF), rather than disposing it of as waste. This approach enables enhanced utilization of nuclear material resources, improves energy security, and minimizes high-level radioactive waste volumes.
- (c) No. PFBR technology is completely indigenous and hence no foreign collaborative research or international knowledge exchange efforts were envisaged.
