

**GOVERNMENT OF INDIA  
ATOMIC ENERGY  
LOK SABHA**

UNSTARRED QUESTION NO:1154  
ANSWERED ON:02.08.2006  
NUCLEAR POWER PROGRAMME STRATEGY  
Pradhan Shri Dharmendra

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

:

- (a) Whether the Government has made any Nuclear Power Programme based on indigenous nuclear fuel resources;
- (b) If so, the details thereof; and
- (c) The present status thereon?

**Answer**

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE (SHRI PRITHVIRAJ CHAVAN)

(a) Yes Sir. A three-stage nuclear power programme to utilize large thorium reserves in the country for electricity generation has been envisaged since the inception of nuclear power programme in the country.

(b) The three stages of the programme are :

Pressurised Heavy Water Reactors, (PHWR) in the first stage, based on natural uranium available in the country.

Fast Breeder Reactors (FBR) utilising plutonium-uranium fuel cycle, in the second stage.

Reactors for utilisation of our vast resources of thorium, in the third stage.

The three stages have important fuel cycle linkages and have to be gone through sequentially.

(c) At present there are 16 (14 PHWRs and 2 Boiling Water Reactors) power reactors in operation with a total capacity of 3900 MWe. In addition, four Pressurised Heavy Water Reactors (PHWRs) and two Light Water Reactors (LWRs) are under construction.

A beginning to the second stage programme has been made with the start of construction of 500 MWe Prototype Fast Breeder Reactor (PFBR) at Kalpakkam, Tamil Nadu.

A technology demonstration project for utilization of Thorium on a large scale is currently under pre-licensing review. A small research reactor Kalpakkam Mini Reactor (KAMINI) which runs on Uranium 233 derived from Thorium is already in operation.