

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
RAJYA SABHA
UNSTARRED QUESTION NO-2090
ANSWERED ON 07/08/2025

STATUS OF ELECTRICITY GENERATION THROUGH NUCLEAR ENERGY

2090. DR. M. THAMBIDURAI

Will the PRIME MINISTER be pleased to state:-

- (a) the present electricity generation capacity of the country through nuclear energy;
- (b) the total energy demand of the country vis-a-vis atomic energy;
- (c) the details of shortage of electricity generation in the country;
- (d) whether the Government is working on any indigenously developed technology to generate electricity through atomic energy;
- (e) if so, the details thereof;
- (f) whether it is a fact that there is dearth of fuel for producing atomic energy in nuclear power plants; if so the details thereof; and
- (g) whether Government is considering to increase supplies of fuel for atomic energy plants; if so, the details thereof?

ANSWER

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

- (a) to (c) The contribution of nuclear energy in the total electricity generation in the country is about 3%. In the year 2024-25, as against total electricity generation in the country of about 1830 Billion Units, nuclear power contributed about 56.7 Billion Units (~ 3.1%). The details of All India Energy Requirement and Energy supplied during the last three years and current year (up to June, 2025) are given as under:

Financial Year (FY)	Energy [in Million Unit MU)]			
	Energy Requirement	Energy Supplied	Energy not Supplied	
	(MU)	(MU)	(MU)	%
2022-23	15,13,497	15,05,914	7,583	0.5
2023-24	16,26,132	16,22,020	4,112	0.3
2024-25	16,93,959	16,92,369	1,590	0.1
2025-26 (up to June, 2025)	4,45,197	4,45,040	157	0.0

It may be seen from the above that the gap between Energy requirement and Energy Supplied has declined significantly from 0.5% during 2022-23 and almost 'Nil' during the current year. Therefore, the energy supplied in the country is commensurate to the requirement of electricity in the country. The energy supplied comprises of net generation of electricity from all sources including nuclear.

(d) & (e) Yes. Two types of Small Modular Reactors (SMR) technology for nuclear power generation are being designed and developed indigenously by BARC. These reactors are

- 200 MWe Bharat Small Modular Reactor.
- 55 MWe Small Modular Reactor

Lead units of these reactors are planned to be installed at DAE sites for technology demonstration. These plants are designed & developed considering deployment as captive power plant, repurposing of retiring fossil fuel-based plants and off-grid applications.

BHAVINI is currently commissioning the indigenously developed 500 MWe Prototype Fast Breeder Reactor (PFBR) project at Kalpakkam, Tamil Nadu.

(f) No / Not Applicable.

(g) Yes, the Government is making efforts to augment nuclear fuel supplies both from indigenous sources and through imports.
