GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO-4306
ANSWERED ON 18.03.2026

ENHANCEMENT OF INDIGENOUS CAPACITY IN NUCLEAR FUEL CYCLE

4306. SHRI RAHUL SINGH LODHI

Will the PRIME MINISTER be pleased to state:-

(a) whether the Government has taken initiatives to enhance indigenous capacity in nuclear fuel cycle activities such as uranium mining, fuel fabrication and waste management;

(b) if so, the details of the initiatives undertaken in this regard during the year 2024-25;

(c) whether these measures have led to an improvement in the availability of fuel for domestic reactors; and

(d) if so, the details of the improvements achieved in this regard?

ANSWER

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

(a)&(b) Yes. Uranium Corporation of India Ltd. (UCIL), a Public Sector Undertaking (PSU) under Department of Atomic Energy (DAE) mandated to mine and process uranium ore in the country, has undertaken initiatives to enhance indigenous capability of Uranium mining. UCIL has planned to take up new uranium mining projects in line with the vision of Viksit Bharat @2047 and has undertaken initiatives to establish mine and mill with a capacity of 2,500 TPD at Rohil in Sikar District Rajasthan and another at Jajwal Uranium Project, Chhattisgarh which are under various stages of obtaining statutory clearances.

Nuclear Fuel Complex (NFC), a Constituent Unit under Department of Atomic Energy, undertakes fabrication of fuel assemblies indigenously for Nuclear Power Corporation India Limited (NPCIL) which operates Pressurized Heavy Water Reactors (PHWRs) and Boiling Water Reactors (BWRs) with uranium as raw material sourced from UCIL and imports. NFC has undertaken initiatives and augmented its fuel production facility from time to time, as per the reactor deployment program of NPCIL and supplies from UCIL.

Bhabha Atomic Research Centre (BARC), the Research and Development unit and Nuclear Recycle Board (NRB) under Department of Atomic Energy are constructing large capacity integrated nuclear recycle facilities at Integrated Nuclear Recycle Plant (INRP) Tarapur and Fast Reactor Fuel Cycle Facility (FRFCF) Kalpakkam for recycling & waste management of spent fuel from domestic sources and fabrication of fuel for fast reactor. The facilities are expected to enhance the indigenous capacity for fuel fabrication and waste management in the country.

(c)&(d) Yes. The initiatives undertaken in mining and fuel fabrication domains and on commissioning of integrated nuclear facilities will result in enhanced production of fuel for PHWRs and continuous availability of mixed oxide (MOx) fuels for fast breeder reactors. The new fuel fabrication plants, which are part of nuclear recycle facilities at Tarapur and Kalpakkam will ensure availability of fuel for fast reactors.

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