

GOVERNMENT OF INDIA
DEPARTMENT OF ATOMIC ENERGY
LOK SABHA
UNSTARRED QUESTION NO-3006
ANSWERED ON 11/03/2026

DEVELOPMENT OF SMALL MODULAR REACTORS

3006. SHRI APPALANAIDU KALISSETTI

Will the PRIME MINISTER be pleased to state :-

- (a) the details of the number of Small Modular Reactor (SMR) projects that have been approved granted in-principle clearance or are presently under examination by the Department of Atomic Energy;
- (b) the details of SMRs under development, including their present stage of progress, design and capacity-wise;
- (c) the details of financial allocations made for SMR research, development and demonstration during the last three Union Budget cycles along with the estimated cost of the BSMR-200 and other proposed demonstration units;
- (d) whether any public sector undertakings, private industrial entities or State Governments have expressed interest in hosting or partnering in SMR projects and if so, the details thereof;
- (e) the names of the States where feasibility studies for SMR deployment have been initiated;
- (f) whether any proposal has been submitted by the Government of Andhra Pradesh and if so, the details thereof; and
- (g) the expected timeline for commissioning the first SMR demonstration units and for scaling up to commercial deployment?

ANSWER

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

(a)(b)&(c) Under the Nuclear Energy Mission announced in the Union Budget 2025-26, a total budgetary provision of ₹20,000 crore has been made for the research, design, development, and deployment of Small Modular Reactors (SMRs). Bhabha Atomic Research Centre (BARC) has undertaken design and development works on SMRs namely,

- (i) 220 MWe Bharat Small Modular Reactor (BSMR-200),
- (ii) 55 MWe Small Modular Reactor (SMR-55), and

(iii) Up to 5 MWth High temperature gas cooled reactor meant for hydrogen generation. The lead units of these SMRs will be established at DAE sites for technology demonstration. The estimated utilisation of the allocated funds by BARC toward setting up SMRs is mentioned below:

Reactor	Cost Outlay (Rs Cr.)
Development and Construction of BSMR-200	5960
Development and Construction of SMR-55 (2 units)	7000
Design and construction of High Temperature Gas Cooled Reactor (HTGCR)	320
Design, engineering & development works for new reactors	800
Civil and General Infrastructure Development for reactors complex	452

The progress of these SMRs is as follows;

- i) BSMR-200: AEC in-principle approval has been received for the project. Proposal for administrative & financial sanction is cleared by Atomic Energy Commission (AEC) for submission of the proposal to the Cabinet Committee.
 - ii) SMR-55: In-principle approval has been received for the project.
 - iii) HTGCR: In-principle approval has been received for the project. Detailed Project Report (DPR) has been prepared. Siting consent has been received and Terms of Reference (ToR) for obtaining environmental clearances has been received from Ministry of Environment, Forest and Climate Change (MoEF&CC).
- (d) Lead units of these SMRs will be constructed by DAE at its existing sites. So far, PSUs like Engineers India Limited and Bharat Heavy Electrical Limited (BHEL) have been contacted for detailed engineering of SMRs.
- (e) Tarapur Atomic Power Station site, Maharashtra has been identified for lead units of BSMR-200 and SMR-55 whereas Vizag, Andhra Pradesh site of BARC is identified for High Temperature Gas Cooled Reactor (HTGCR).
- (f) At present no such proposal is received in Department of Atomic Energy (DAE).
- (g) Bharat Small Modular Reactor (BSMR) is being jointly designed and developed by BARC and Nuclear power Corporation of India Limited (NPCIL). Estimated time for construction of BSMR is 60 to 72 months from receipt of administrative & financial approval.
