

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

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UNSTARRED QUESTION NO. 2200
ANSWERED ON 06.08.2026

Contribution of BioE3 Policy

2200. SMT. SANGEETA YADAV

Will the **Minister of Science and Technology** be pleased to state:-

- (a) whether DBT has identified priority sectors and States for establishing Biomanufacturing Hubs, Bio-foundries and Bio-AI Hubs under the BioE3 Policy;
- (b) the criteria adopted for their selection;
- (c) the estimated direct and indirect employment likely to be generated during the next five years, particularly in Tier-II and Tier-III cities;
- (d) whether any incentives have been approved for start-ups, MSMEs and private industry to promote indigenous bio-manufacturing; and
- (e) the expected contribution of the Policy towards achieving the target of a \$300 billion bioeconomy by 2030?

ANSWER

**MINISTER OF STATE (INDEPENDENT CHARGE) FOR THE MINISTRY OF
SCIENCE AND TECHNOLOGY & MINISTRY OF EARTH SCIENCES
(DR. JITENDRA SINGH)**

(a) Yes, the Department of Biotechnology (DBT) has identified six thematic verticals in the BioE3 (Biotechnology for Economy, Environment and Employment) policy for establishing Biomanufacturing Hubs and Biofoundries. They are as follows:

- i. Bio-based chemicals, Bioplastics, Active Pharmaceutical Ingredients (APIs), and Enzymes
- ii. Functional Foods and Smart Proteins
- iii. Precision Biotherapeutics (monoclonal antibodies, mRNA therapeutics, cell & gene therapy)
- iv. Climate resilient agriculture (agri-biologicals)
- v. Biofuels and Carbon capture
- vi. Futuristic marine and space research

Five priority sectors are identified for establishment of Bio-AI hubs:

- i. Ayurveda
- ii. Agriculture Innovations
- iii. Genome Diagnostics
- iv. Synthetic Biology
- v. Biomolecular Design

(b) The Bioenablers which include Biomanufacturing Hubs, Biofoundries and Bio-AI hubs are established after rigorous multi-tier evaluation of proposals received in response to the nationwide call for proposals through advertisements. Following criteria have been adopted for selection:

- i. Letter of Intent /Proposals invited through national calls.
- ii. Screening of the proposals done through ‘Screening Committee’ based on the defined eligibility criteria. The proposals are selected based on Technical evaluation followed by Financial Evaluation.
- iii. The ‘Selection Committee’ evaluated the technical aspects of the proposals taking into consideration the experts comments and the presentation.
- iv. The ‘Financial Evaluation Committee (FEC)’ evaluated the proposals w.r.t financial mechanisms/modalities such as co-funding/equity financing & management/royalty sharing, etc.
- v. Selection of proposals with defined objectives/milestones, deliverables, duration, total cost, funds disbursement mechanisms/modalities, etc. are recommended by the Apex Committee

(c) The implementation of the BioE3 Policy is expected to generate approximately 1500 direct and indirect employment opportunities over the next five years in Tier-II and Tier-III cities.

(d) Yes, to promote indigenous bio-manufacturing and encourage participation of start-ups, MSMEs, and private industry, under BioE3 policy, financial assistance of up to 70% of the project cost is provided, while the remaining 30% of the project cost is expected to be contributed by the private sector.

(e) The BioE3 Policy is expected to significantly contribute towards achieving the target of a \$300 billion bioeconomy by 2030 by fostering innovation-led growth, strengthening indigenous bio-manufacturing capabilities, and expanding the biotechnology ecosystem.

The policy aims to promote high-performance biomanufacturing by establishing Biofoundries and Biomanufacturing hubs for enabling scale-up and validation of bio-based technologies of various start-ups, innovations and industries. So far, over 600 beneficiaries have availed these facilities. In addition, a pipeline of discovery led and bridging the gap research and development across thematic verticals including bio-based chemicals and enzymes, functional foods and smart proteins, precision biotherapeutics, climate-resilient agriculture, carbon capture and utilization, and marine and space biotechnology is also being implemented. Together these will foster Make-in-India initiative for the Biotech sector and contribute to the bioeconomy growth. The initiative has so far mobilized investment commitment from private sector to the tune of Rs. 602.09 Cr.
