GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 1497
TO BE ANSWERED ON: 12.12.2025

WORKFORCE TRAINING UNDER INDIA SEMICONDUCTOR MISSION

1497. SHRI SANJAY SINGH:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

(a) number of skilled semiconductor manufacturing trainees trained under Government-led programs annually since 2022 and target numbers for next five years;
(b) the quantum of investments attracted so far through Production Linked Incentive Scheme (PLI) for electronics and semiconductor manufacturing, and data on domestic manufacturing growth and export increases attributable to this scheme;
(c) under DLI scheme, the number of Startups and Micro Small and Medium Enterprises (MSMEs) that have received financial support so far, details of total amount disbursed under the scheme;
(d) the expenditure on Research and Development (R&D) within ISM-supported projects; and
(e) number of patents or indigenous technologies related to semiconductor manufacturing that have been developed and commercialized?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI JITIN PRASADA)

(a) to (e): The semiconductor development strategy is inspired by Hon'ble Prime Minister's vision of Atmanirbhar Bharat and Make in India, Make for the World.

Given the foundational nature of semiconductor industry for the economy, the Government launched the 'Semicon India Programme' to develop a complete ecosystem ranging from design, fabrication, assembly, testing and packaging.

Following investments have been received under semicon India Programme and PLI schemes for electronics sector:

- Under Semicon India Programme, ten (10) units have been approved with an investment of Rs 1.6 Lakh Cr which include Silicon fab, Silicon Carbide fab, advanced packaging, memory packaging, etc.
  These would cater to chip requirements of sectors such as consumer appliances, industrial electronics, automobiles, telecommunications, aerospace, and power electronics etc.
  Few of the approved proposals are using indigenous technology for assembly, testing and packaging of semiconductor chips.

- Government launched Production Linked Incentive scheme (PLI) for large scale electronics manufacturing of mobile phones and certain specified components. The scheme has attracted investment of Rs 14,065 Cr. up to October 2025.
- To target manufacturing of IT Hardware, Government launched PLI for IT Hardware for promoting manufacturing of laptop, tablets, server and ultra small form factor (USFF) devices.
  PLI for IT hardware have attracted investment of Rs 846 Cr till October 2025.

As a result of these policy efforts, electronics manufacturing has grown almost six (6) times in last 11 years. It has increased from Rs 1.9 lakh Cr in 2014-15 to Rs 11.32 lakh crore in 2024-25.

Electronics exports have grown eight (8) times from Rs 38 thousand Cr in 2014-15 to Rs 3.26 lakh Cr in 2024-25. Electronics is now the third largest export category.

Promoting design ecosystem

To leverage India's strength in chip design, Government launched Design Linked Incentive (DLI) Scheme.

Support has been provided for 23 companies (24 designs) for designing chips and SoCs for the products in satellite communication, drones, surveillance camera, Internet of Things (IoT) devices, LEDs driver, AI devices, telecom equipment, smart meter, etc.

Further, as infrastructure support, free design tool (EDA) access has been provided to 94 startups enabling 47 lakh hours of design tool usage

Development of Semiconductor Talent Pipeline

Government has adopted a comprehensive approach for building talent pipeline in semiconductors:

1. Chips to Start-up (C2S) Programme**:** To encourage India's young engineers, Government is providing latest design tools (EDA) to 397 universities and start-ups.
   a. Using these tools, chip designers from more than 46 universities have designed and fabricated 56 chips at Semiconductor Laboratory (SCL), Mohali.
   b. Training in chip design has also been provided to more than 67,000 students, and researchers so far.
2. All India Council for Technical Education (AICTE) has launched the following courses:
   a. B. Tech in Electronics Engineering (VLSI Design)
   b. Diploma in Integrated Circuit (IC) manufacturing, and
   c. Minor Degree in Electronics Engineering (VLSI Design and Technology)
3. A Skilled Manpower Advanced Research and Training (SMART) Lab has been setup in NIELIT Calicut with an aim to train 1 lakh engineers nation-wide. More than 62 thousand engineers have already been trained.
4. ISM has also partnered with Lam Research for conducting a large-scale training programme in nanofabrication and process-engineering skills. These would further augment skilled workforce for ATMP and advanced packaging. The program aims to generate 60,000 trained manpower in next 10 years.

FutureSkills PRIME program is a collaborative initiative of MeitY and National Association of Software and Service Companies (NASSCOM) aimed at making India a cutting-edge digital talent nation. Key features are:

- Skilling, reskilling, and upskilling in emerging technologies such as Semiconductors.
- Courses are developed in the consultation with industry to align with actual employment needs
- Portal can be accessed anytime-anywhere to earn skill certificates in line with their aptitude and aspirations
- Accessible online at https://futureskillsprime.in.

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