

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO. 276
TO BE ANSWERED ON: 27.11.2024

SEMICONDUCTOR MANUFACTURING ECOSYSTEM

276. DR. BHOLA SINGH:
SHRI DINESHBHAI MAKWANA:
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Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

- (a) the specific measures taken by the Government to enhance India's semiconductor manufacturing ecosystem including initiatives to attract investment and promote local production;
- (b) the partnerships or collaborations established with international companies or organizations to support semiconductor manufacturing;
- (c) the incentives provided for research and development in semiconductor technology; and
- (d) the progress made in achieving self-reliance in semiconductor production and the future goals set by the Ministry in this regard?

ANSWER

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

(a): Government has approved Semicon India programme with a total outlay of Rs 76,000 crore for the development of semiconductor and display manufacturing ecosystem in the country for:

1. Setting up of Semiconductor Fabs in India which provides for a fiscal support of 50% of the project cost on *pari-passu* basis for setting up of Silicon CMOS based Semiconductor Fabs in India.
1. Setting up of Display Fabs in India which provides for a fiscal support of 50% of Project Cost on *pari-passu* basis for setting up of Display Fabs in India.
2. Setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab / Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India which provides for a fiscal support of 50% of the Capital Expenditure on *pari-passu* basis for setting up of Compound Semiconductors / Silicon Photonics (SiPh) / Sensors (including MEMS) Fab/ Discrete Semiconductor Fab and Semiconductor ATMP / OSAT facilities in India.
3. Providing incentives on design through 'Design Linked Incentive (DLI) Scheme' which provides "Product Design Linked Incentive" of up to 50% of the eligible expenditure subject to a ceiling of ₹15 Crore per application and also "Deployment Linked Incentive" of 6% to 4% of net sales turnover over 5 years subject to a ceiling of ₹30 Crore per application.

Government has also approved modernisation of Semi-Conductor Laboratory, Mohali to enhance efficiency and cycle time.

(b): To further support semiconductor manufacturing and creating a semiconductor ecosystem in the country, Government has entered in Memorandum of Understanding (MoU) with USA, European Union, Japan and Singapore.

Further, Government is also actively working in collaboration with world class players in semiconductor ecosystem. Applied Materials has announced to set up a collaborative engineering centre in Bengaluru with an investment of 400 million dollar over 4 years. As part of this, India Validation Centre has already been set up in Bengaluru by AMAT. This engineering centre is focused on development and commercialisation of technologies for semiconductor manufacturing equipment.

India Semiconductor Mission (ISM) has also entered in to an MoU with LAM Research for skilling of engineers in semiconductor manufacturing.

AMD has established its largest global design center, AMD Technostar, in Bengaluru. This centre is focused on the design and development of semiconductor technology including 3D stacking, artificial intelligence, and machine learning.

(c): Under the Semicon India Programme, up to 2.5% of the outlay of the scheme has been earmarked for meeting the R&D, skill development and training requirement.

(d): India is well on its path to create a robust semiconductor ecosystem in the country. Presently, India is already one of the most important players in the designing of semiconductor chips and provides for almost 20% of design engineers (Industry reports).

Government has approved five (5) semiconductor projects with cumulative investment of around Rs. 1 lakh 52 thousand crore. Further, 15 semiconductor design companies have also been approved under the Design Linked Incentive Scheme to design chips for Indian products. Additionally, 41 semiconductor design companies have been approved for access of the tools required for designing the chips (called EDA tools) which is being made available by National EDA Tool Grid setup at ChipIN Centre at C-DAC Bengaluru.

To create the skilled manpower for chip design, Government has launched the Chips to Startup ('C2S') programme which plans to train 85 thousand specialized workforce at about 113 participating institutions in VLSI and Embedded System Design.

Further, Government has been implementing following programs focused on development of electronics manufacturing:

- (i) **Production Linked Incentive (PLI) Scheme for Large Scale Electronics:** So far, incremental investment of Rs 9,349 Crores had been made under this PLI scheme. This has led to production of more than Rs 6 Lakh Crores.
- (ii) **PLI scheme for IT hardware:** So far, incremental investment of Rs 501 Crores has been made under this PLI scheme. This has led to production of more than Rs 10,245 Crores.
