

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2806
TO BE ANSWERED ON: 24.03.2023

SEMICONDUCTOR INDUSTRY

2806. DR. SONAL MANSINGH:

Will the Minister of Electronics and Information Technology be pleased to state:

- (a) the steps taken to encourage semiconductor and display manufacturing industry in the country;
- (b) the expected growth of business in the sector for the next ten years;
- (c) whether shortage of semiconductor chips affects manufacturing sector;
- (d) if so, the details thereof;
- (e) details of proposals of Production Linked Incentive (PLI) and fiscal support for a design linked initiative (DLI) for the sector; and
- (f) details of challenges faced by chip production sector in the country?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI RAJEEV CHANDRASEKHAR)

(a): Government is very focused on its important objective of building the overall semiconductor ecosystem and ensure that, it in-turn catalyses India's rapidly expanding electronics manufacturing and innovation ecosystem. Government has approved the Semicon India programme with a total outlay of INR 76,000 crore for the development of semiconductor and display manufacturing ecosystem in the country. The programme has further been modified in view of the aggressive incentives offered by countries already having established semiconductor ecosystem and limited number of companies owning the advanced node technologies. The modified programme aims to provide financial support to companies investing in semiconductors, display manufacturing and design ecosystem. This will serve to pave the way for India's growing presence in the global electronics value chains. Following schemes have been introduced under the aforesaid programme to provide financial support to new business unit or expansion of capacity / modernization and / or diversification of an existing unit in India:

- i. **'Modified Scheme for setting up of Semiconductor Fabs in India'** for attracting large investments for setting up semiconductor wafer fabrication facilities in the country to strengthen the electronics manufacturing ecosystem and help establish a trusted value chain. The Scheme extends a fiscal support of 50% of the project cost on *pari-passu* basis for setting up of Silicon CMOS based Semiconductor Fab in India.
- ii. **'Modified Scheme for setting up of Display Fabs in India'** for attracting large investments for manufacturing TFT LCD or AMOLED based display panels in the country to strengthen the electronics manufacturing ecosystem. Scheme extends fiscal support of 50% of Project Cost on *pari-passu* basis for setting up of Display Fabs in India.
- iii. **'Modified Scheme for setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab / Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India'**

extends 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.

- iv. **‘Semicon India Future Design: Design Linked Incentive (DLI) Scheme’** offers financial incentives, design infrastructure support across various stages of development and deployment of semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design. The scheme provides “Product Design Linked Incentive” of up to 50% of the eligible expenditure subject to a ceiling of ₹15 Crore per application and “Deployment Linked Incentive” of 6% to 4% of net sales turnover over 5 years subject to a ceiling of ₹30 Crore per application.

In addition to the above schemes, Government has also approved modernisation of Semiconductor Laboratory, Mohali as a brownfield Fab.

India Semiconductor Mission (ISM) has been setup as an Independent Business Division within Digital India Corporation having administrative and financial autonomy to formulate and drive India’s long-term strategies for developing semiconductors and display manufacturing facilities and semiconductor design ecosystem. Envisioned to be led by global experts in the Semiconductor and Display industry, ISM is serving as the nodal agency for efficient, coherent and smooth implementation of the programme for development of semiconductor and manufacturing ecosystem in India.

(b): As per the industry report, Global semiconductor market was estimated USD 572 Bn in 2022 and is estimated to reach US\$ 1.2 Trillion by 2030. Indian Semiconductor Market is estimated to be ~USD 30 Bn in 2023 and is expected to reach USD 59 Bn by 2026 and USD 109 Bn by 2030.

(c) and (d): Semiconductor chip shortage has impacted many industries worldwide with auto and electronics industries among the most affected sectors. The shortage first emerged after the Covid-19 pandemic, due to lockdowns and restrictions. The supply side problem transformed into a demand side problem as economies started recovering which increased the consumption of electronic products across various segments. Some key reasons behind the global chip shortage were supply chain disruptions, geographic concentration of electronic manufacturing, rise in demand for digital and electronic products and digital adoption across the world. As per various industry reports, the situation of shortages of semiconductors has already started easing out.

(e): Total Thirty-Two (32) applications have been received under the Programme for Development of Semiconductors and Display Manufacturing Ecosystem in India. Three (3) applications under ‘Scheme for setting of semiconductor Fabs in India’; two (2) applications under ‘Scheme for setting up of Display Fab in India’; four (4) applications under ‘Scheme for setting up of compound & ATMP facilities in India’, have been received. The applications received are under appraisal. Twenty-Three (23) applications have been received under Design Linked Incentive Scheme out of which 3 applications have been approved.

(f): Semiconductor manufacturing is very complex and technology intensive industry with huge capital investments, high risk, long gestation and payback periods, and rapid changes in technology requiring significant and sustained investments.
