GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 2331
TO BE ANSWERED ON: 17.12.2021

ESTABLISHMENT OF FABRICATION LABS

2331. SHRI VIVEK K. TANKHA:

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

(a) how many semiconductor manufacturing Startups are under Make in India project;
(b) whether Ministry has made any plans to capitalize growing demand of semiconductor chips in Indian market and across the globe to reduce dependence on China and other countries for procurement of semiconductor chips;
(c) whether Ministry has made any plans to procure Ferrosilicon (from sources other than China) for in-house production of semiconductor chips, if not, reasons therefor; and
(d) whether Ministry has taken steps to ensure availability of continuous supply of pure water, 24x7 uninterrupted electricity, skilled manpower and technical know-how to establish/operate fabrication labs in the country?

ANSWER

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

(a) and (b): Government is fully committed to building and developing a global standard semiconductor ecosystem in India. The Government is proposing a comprehensive INR 76,000 crore plan to develop the semiconductor and display manufacturing ecosystem in India which includes design, manufacturing, testing and packaging.

Semiconductor FABs are highly capital and resource intensive, and are at the cutting edge of manufacturing with rapidly changing technology cycles. Further, the semiconductor fabrication capability for leading / cutting edge technology nodes is available with only few companies globally.

Semiconductor wafer fabrication facilities are currently available in India in limited capacities for strategic applications at Semi-Conductor Laboratory (SCL), Mohali; Gallium Arsenide Enabling Technology Centre (GAETEC), Hyderabad and Society for Integrated Circuit Technology and Applied Research (SITAR), Bengaluru.

Government has approved the following projects in the area of semiconductors:

I. The project for "Establishment of Gallium Nitride (GaN) Ecosystem Enabling Centre and Incubator for High Power and High Frequency Electronics" to be implemented by Society for Innovation and Development (SID), under the auspices of Indian Institute of Science (IISc) at Centre for Nano Science and Engineering (CeNSE), Bengaluru at the total project cost of Rs. 298.66 crore.

II. An application for setting up of Assembly, Testing, Marking and Packaging (ATMP) of NAND Flash memory has been approved under the Production Linked Incentive (PLI) Scheme for large scale electronics manufacturing.

III. An application for discrete semiconductor devices, including transistors, diodes, thyristors, etc. and System in Package (SIP) has been approved under the Production Linked Incentive (PLI) Scheme for large scale electronics manufacturing.

IV. Following incentives are available to companies for setting up of Semiconductor Fabrication (FAB) facilities in India:

(i) A financial incentive of 25% on capital expenditure for setting up of semiconductor fabrication units under the Scheme for Promotion of manufacturing of Electronic Components and Semiconductors (SPECS). The capital expenditure inter-alia includes R&D expenditures subject to a ceiling of 20% of the total capital expenditure.

(ii) Capital goods for setting up of Semiconductor FAB are exempted from Basic Customs Duty (BCD).

(iii) Investment linked deduction under Section 35AD of the Income-tax Act.

(iv) Deduction of expenditure on research and development as admissible under Section 35(2AB) of the Income-tax Act.

(v) New domestic companies making fresh investment in manufacturing and starting operations before March 31, 2023 have an option to pay corporate income tax at reduced rate of 15%. Such companies will also not be liable to pay Minimum Alternate Tax (MAT).

(c): As per the information provided by semiconductor experts, Ferrosilicon's use in semiconductor industry is very limited. Government is encouraging the investment in commercial semiconductor fabs in India. Government is keen to facilitate and develop semiconductor supply chain, including raw materials, specialty chemicals, gases, and manufacturing equipment.

(d): States like Karnataka, Telangana, Tamil Nadu, Andhra Pradesh, Madhya Pradesh, Odisha, Tripura and UT of Dadra & Nagar Haveli and Daman & Diu have shown interest in facilitating setting up of semiconductor chip manufacturing facilities. These states have also indicated the availability of stable power supply and sufficient water supply for chip manufacturing facilities.
Ministry of Electronics and Information Technology (MeitY), Government of India engages with industry bodies and Institutes of National Importance on a regular basis to promote skilled manpower and technical know-how in the area of semiconductors. Some such collaborations of MeitY include the following:

i. Fabless Chip Design Incubator (FabCI) at Indian Institute of Technology, Hyderabad.
ii. Gallium Nitride (GaN) Ecosystem Enabling Centre and Incubator for High Power and High Frequency Electronics at Centre for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc) Bengaluru
iii. Microprocessor Development Programme with various Institutes of Higher Education
iv. Various state-of the-art ASICs / SoCs such as indigenous Microprocessors, NavIC Receiver, Bluetooth Transceiver, etc., have been designed and developed for societal and strategic applications. Under the Microprocessor Development Programme, a family of 32-bit / 64-bit SHAKTI, VEGA and AJIT processors have been designed and developed by IIT Madras, C-DAC and IIT Bombay, respectively, using Open Source ISA (Instruction Set Architecture).

Further, Government is open for any technological & financial collaborations and investments that would help India in developing semiconductor chip manufacturing ecosystem.

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