Indian Semiconductor Mission

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Why is in news? Gujarat govt unveils Semiconductor Policy (2022-2027)

The Gujarat government has unveiled the Semiconductor Policy (2022-2027).

This strategic initiative reflects the state's unwavering commitment to fostering accelerated and inclusive growth within the domestic semiconductor chip manufacturing sector.

Gujarat has achieved a pioneering milestone by **becoming the first state in India to introduce a dedicated Semiconductor Policy,** complementing the Central Government's vision of Aatmanirbhar India in the semiconductor sector.

The State government has also unveiled an IT/ITES (Information Technology and Information Technology Enabled Services) policy tailored to invigorate the information technology and semiconductor design domains.

During Prime Minister Narendra Modi's visit to the United States of America, President Joe Biden announced the **establishment of a state-of-the-art Semiconductor Assembly**, **Testing, Marking, and Packaging (ATMP) facility,** by Micron Technology Inc. in India

An MoU was executed between Micron Technology - a distinguished semiconductor manufacturing company, and the Government of Gujarat. The agreement, valued at over 22,500 crore rupees will lead to the establishment of a cutting-edge ATMP facility in Sanand, Gujarat.

Semiconductors:

Any of a class of **crystalline solids intermediate in electrical conductivity** between a conductor and an insulator. Eg, Silicon, Germanium, etc.

Semiconductors are employed in the **manufacture of various kinds of electronic devices**, including diodes, transistors, and integrated circuits.

Semiconductors have found wide application because of their compactness, reliability, power efficiency, and low cost.

As discrete components, they have found use in power devices, optical sensors, and light emitters, including solid-state lasers.

India Semiconductor Mission:

The ISM was **launched in 2021** with a total financial outlay of Rs76,000 crore under the aegis of the Ministry of Electronics and IT (MeitY).

It is part of the comprehensive program for the development of sustainable semiconductor and display ecosystems in the country.

It aims to **provide financial support to companies investing in semiconductors**, display manufacturing and design ecosystem.

ISM will **serve as the nodal agency for efficient, coherent and smooth implementation** of the schemes.

ISM has an advisory board consisting of some of the leading global experts in the field of semiconductors.

ISM has been working as nodal agency for the Schemes approved under Semicon India Programme.

The applications were received by ISM and are being appraised by ISM. ISM has also been engaging with various stakeholders of Semiconductors and Display ecosystem to attract the investments in India.

Objectives of ISM:

Formulate a comprehensive long-term strategy for developing sustainable semiconductors and display manufacturing facilities and semiconductor design eco-system in the country in consultation with the Government ministries / departments / agencies, industry, and academia.

Facilitate the adoption of secure microelectronics and developing trusted semiconductor supply chain, including raw materials, specialty chemicals, gases, and manufacturing equipment.

Enable a multi-fold growth of Indian semiconductor design industry by providing requisite support in the form of Electronic Design Automation (EDA) tools, foundry services and other suitable mechanisms for early-stage startups.

Promote and facilitate indigenous Intellectual Property (IP) generation.

Encourage, enable and incentivize Transfer of Technologies (ToT).

Establish suitable mechanisms to harness economies of scale in Indian semiconductor and display industry.

Enable cutting-edge research in semiconductors and display industry including evolutionary and revolutionary technologies through grants, global collaborations and other mechanisms in academia / research institutions, industry, and through establishing Centres of Excellence (CoEs).

Enable collaborations and partnership programs with national and international agencies, industries and institutions for catalyzing collaborative research, commercialization and skill development.

Four schemes have been introduced under programme:

'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.

'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.

'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' shall 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.

‘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.