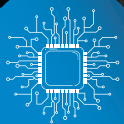




Government of Odisha

ODISHA SEMICONDUCTOR MANUFACTURING & FABLESS POLICY



Electronics & Information Technology Department,
Government of Odisha



**ODISHA TECHNOLOGY CENTER
BHUBANESHWAR**

MOHAN CHARAN MAJHI
CHIEF MINISTER, ODISHA



FOREWORD

Odisha today stands at a defining moment in its journey of growth and transformation. With a strong vision and renewed determination, the State is poised to lead India into a new era of technological excellence, powered by semiconductors and advanced electronics. The world is entering an age where innovation drives prosperity, and Odisha is ready to emerge as a centre of this global renaissance from the heart of eastern India.

The semiconductor industry is the backbone of the digital economy. It is the foundation upon which breakthroughs in artificial intelligence, renewable energy, next-generation healthcare, national security, smart manufacturing, etc. are built. By fostering this sector, Odisha is not only addressing vital national priorities but also contributing meaningfully to realize the vision of our Hon'ble Prime Minister for *Atmanirbhar Bharat @ 2047 and a Viksit Odisha @ 2036*.

The recent approval of landmark projects such as "SicSem" and "Heterogeneous Integration Packaging Solutions" under the India Semiconductor Mission reflects Odisha's immense potential and growing prominence on India's semiconductor map. These recognitions are a testament to the State's conducive ecosystem, strong policy framework, and its ability to attract world-class investment and innovation.

Odisha has taken bold steps to create an enabling environment where global technology giants, start-ups, and domestic innovators can collaborate and set new benchmarks. The revised Odisha Semiconductor Manufacturing and Fabless Policy is not just a framework of incentives; it is a clear declaration of intent, Odisha's visionary leadership, robust infrastructure, a highly skilled workforce, and a deep talent pool—making it a trusted global hub in this sunrise sector.

The journey holds transformative opportunities for our youth. It will generate high-value jobs, stimulate cutting-edge research, and enable Odisha to integrate firmly into the global semiconductor value chain. More importantly, it will inspire confidence among future generations that Odisha can dream big, take bold strides, and lead from the front in areas of strategic importance.

Together, we can shape a future where Odisha not only drives India's technological advancement but also stands tall as a beacon of innovation, excellence and progress for the world.

(MOHAN CHARAN MAJHI)

DR MUKESH MAHALING

MINISTER OF ELECTRONICS &
INFORMATION TECHNOLOGY



FOREWORD

It gives me immense pleasure to present the Odisha Semiconductor Manufacturing and Fabless Policy, a forward-looking framework designed to position Odisha as a premier hub for the global semiconductor ecosystem.

This policy has been comprehensively restructured to provide one of the most attractive and holistic incentive packages in the country for semiconductor manufacturing units, OSAT/ATMP facilities, semiconductor park developers, and fabless chip design companies. The amendments are the outcome of multiple stakeholder consultations with industry leaders, semiconductor associations, policy makers, and prospective investors, as well as feedback from ongoing projects, benchmarking with other leading state policies, and insights from roadshows held across major Electronics System Design and Manufacturing (ESDM) clusters in India.

This policy offers special incentives aimed at catalysing investment and promoting a complete semiconductor value chain in Odisha. These include a generous 50% fiscal support on capital expenditure for the first five projects in compound semiconductor/OSAT facilities and the first three projects each in semiconductor fabs and display fabs; relocation benefits for experienced semiconductor professionals joining Odisha-based companies; skill development support for engineering students pursuing semiconductor-related courses alongside upskilling support for professionals in the sector; R&D grants for semiconductor units and collaborative research projects in academia, including support for validation labs; incentives for developers of common water and effluent treatment facilities to ensure sustainable industrial infrastructure; and logistics and warehousing incentives for supply chain units, including those dealing with specialty chemicals and industrial gases.

Our vision is to create an enabling environment that accelerates innovation, attracts large and meaningful investments, develops skilled talent, and builds a resilient semiconductor ecosystem in Odisha. This policy goes beyond fiscal incentives and, it offers world-class infrastructure, single-window clearances, operational flexibility, and strong institutional support.

invite global and domestic semiconductor companies, technology providers, park developers, and investors to explore the immense opportunities Odisha offers. Together, we can shape the future of electronics and semiconductors from the heart of Eastern India.

Mukesh Mahaling
(Dr Mukesh Mahaling)

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This version of the "Odisha Semiconductor Manufacturing and Fabless Policy" is a consolidated document prepared for the convenience and easy reference of investors, industry professionals, entrepreneurs, and all other stakeholders. It incorporates the following notifications issued by the Electronics and IT Department, Government of Odisha:• EIT-DEV-II-HWSW-0001-2023/3698/E&IT, dated 01/09/2023, PT1-EIT-DEV-II-HWSW-0001-2023/1172/E&IT, dated 13/03/2024, PT1-EIT-DEV-II-HWSW-0001-2023/4192/E&IT, dated 01/08/2025 For any discrepancies or errors identified in this document, please report them to md.ocac@odisha.gov.in.

1. Introduction

Electronics and Semiconductors have emerged as critical elements of economic growth and strategic security for any country. While India steadfastly marches towards the USD 5 Trillion economy aptly supported by USD 1 Trillion Digital economy, it is imperative that India develops a self-reliant and sustainable electronics and semiconductor dependent upon them. Industry estimates indicate that the ecosystem within the country.

In recent years, the ICT and Electronics sector has experienced significant growth, largely driven by escalating demand from emerging market economies. A noteworthy shift in manufacturing locales has also been observed, with a move away from Europe and North America towards Asia. Presently, China is the predominant global destination for ESDM, with its electronics production accounting for nearly 40% of global output and 30% of global electronics exports. Furthermore, South East Asia, particularly Vietnam, and Indonesia, has emerged as a prominent global hub for electronics manufacturing. This is attributed to a combination of factors, including lower labor costs, proximity and cultural affinity to China, and attractive incentives.

The global electronics market is currently valued at around USD 2 trillion and is expected to grow significantly due to the increasing penetration of emerging technologies such as 5G, IoT, Artificial Intelligence, Robotics, Smart Mobility and Smart Manufacturing.

Semiconductors are the building blocks of electronic devices and are used to power a vast array of electronic devices ranging from smart phones and cloud servers to modern cars, industrial automation, critical infrastructure, and defence systems.

The National Policy on Electronics 2019 (NPE 2019) aims to position India as a global hub for Electronics System Design and Manufacturing (ESDM) and create an enabling environment for the industry to compete globally. One of the main strategies of NPE 2019 is to facilitate the setting up of semiconductor wafer fabrication facilities and its eco-system for the design and fabrication of chip components.

The COVID-19 pandemic, geopolitical situation, and rising demand from emerging market economies have created an acute shortage of semiconductor chips worldwide. It has severely impacted domestic manufacturing in the electronics and other allied industries dependent upon them. Industry estimates indicate that the global semiconductor shortage has led to a production loss of minimum 5-7% in the country.

To increase India's share in the global value chain of the electronics sector and set up global export hubs for electronic components and electronics manufacturing services across India, the Government of India has envisioned to promote and widen electronics manufacturing and develop a robust and sustainable Semiconductor and Display ecosystem in the country. The government intends to reduce dependency on the import of electronic goods by focusing on skill, technology, scale. and the global market.

To achieve this objective, the Government of India has set up the India Semiconductor Mission (ISM) and launched four schemes, namely 'Scheme for setting up of Display Fabs in India', 'Scheme for setting up of Compound Semiconductors/Silicon Photonics/Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP)/ OSAT facilities in India' and 'Design Linked Incentive (DLI) Scheme' for strengthening the ESDM ecosystem in the nation and making Electronics Manufacturing qualitatively competitive.

Odisha being a prominent industrial state, is embarking upon its journey to attract Semiconductor value chain investments in the state.

2. Vision & Objectives

2.1 Vision

The Odisha Semiconductor manufacturing and Fabless Policy envisions developing an end-to-end semiconductor ecosystem in Odisha. The program aspires to contribute to the national semiconductor ecosystem development objectives and aims to transform Odisha into a leading centre of semiconductor design and manufacturing, a startup hub for semiconductor R&D and design companies, and the primary repository of the semiconductor design talent in the country.

2.2 Objective of this Policy

The primary objectives of Odisha Semiconductor Manufacturing and Fabless policy are:

- To create a semiconductor design and manufacturing ecosystem in Odisha which can contribute to the state's economic growth, its culture of innovation, create jobs for the people, and help India increase its self-reliance in an area of strategic importance.
- To create state-of-the-art infrastructure with cutting-edge design and testing tools which can enable startups, companies, and academic institutions to collaborate and fulfil their true potential.
- To build a conducive fabless ecosystem in the state and attract a minimum of 100-120 chip design companies and startups in the next 7 years.
- To create a minimum of 5,000-6,000 high end jobs in the chip design space in the next 7 years.
- To create a pipeline of industry ready talent pool by fostering linkages between industry and academia, by regularly updating electronics curriculum taught in universities and technical institutions, and by enabling industry and academic institutions to undertake skill-building workshops.
- To empower the semiconductor ecosystem, deliver at least two full-fledged chip designs every year catering to the national and international markets.
- To create an environment in the medium to long term that is developed and conducive for

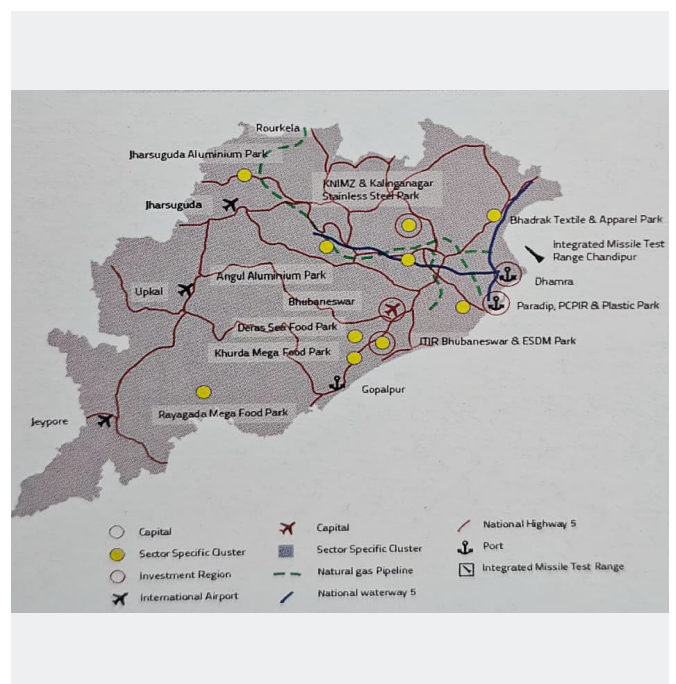
eventual establishment of fabrication units in the state and promotes higher value addition in semiconductor design and manufacturing.

3. Odisha - Salient features of the state

Odisha is strategically located in the east of India as a gateway to the ASEAN region, with easy access to 50% of the world economy and 100 cities with a population of over 1 million. The state's economy has been growing at 10.4%. The State has a robust infrastructure, including 106 industrial estates and 1,25,000 acres of industry-ready land. It has a well-developed railway network spanning over 2,500 km, connecting all major industrial areas and ports. Out of the two major ports in the State, Paradip is the largest port in India in terms of average output per ship berth-day, while Dhamra is the largest private port in Eastern India in terms of cargo handling capacity.

Odisha has a surplus of power, with an installed capacity of more than 7807 MW. Odisha has a mineral production of INR 41,621 crore (USD 6.2 bn) accounting for 13.88% of India's total value of minerals. It is the highest producer of Aluminium, Steel and Stainless steel in the country.

Odisha is endowed with an average annual rainfall of approximately 1500 mm and is intersected by several rivers such as the Mahanadi, Brahmani, Baitarani, Subamarekha, Budhabalanga, Rushikulya, Bansadhara, Nagabali, Salandi, and Indrabati. The state also boasts a lengthy coastline of 485 km along the Bay of Bengal.



The state has made significant investments in skill development, with the establishment of the Odisha Skill Development Authority (OSDA). OSDA facilitates skill development ensuring that the state has a globally competitive workforce to suit the needs of industries. The state has established India's first World Skill Centre (WSC) in Bhubaneswar spreading over 5 Lakh sq. ft. to provide skill development courses.

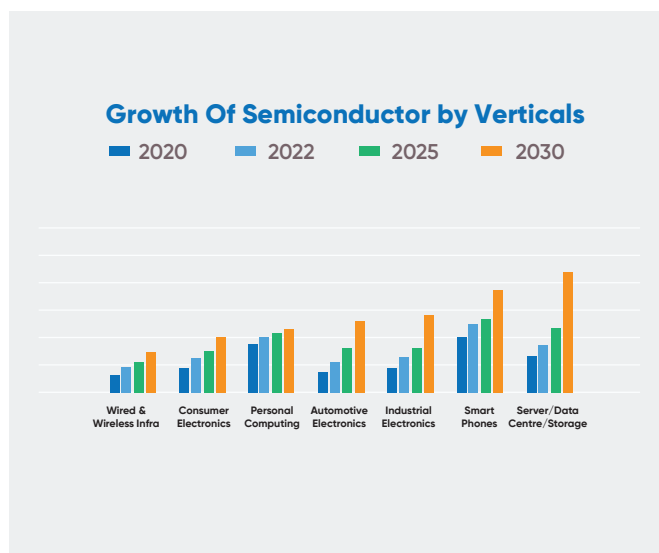
Odisha has globally recognized institutes of higher learning and research in the domain of engineering, medicine, plastics technology, and management. It has 300+ Technical/Engineering colleges providing Diploma, Graduate and Post graduate courses producing over 40,000 technical and management professionals every year.

The state government has laid out many progressive policies to attract investment in various sectors.

Further information on natural and resource advantages of Odisha is provided in Annexure I of this policy.

4. Need for creating a Semiconductor ecosystem

Semiconductor technology is most crucial to all modern electronic products driving growth of all the important sectors of economy including Automobiles, Telecommunication, Digital & Physical Infrastructure, Defence/Aerospace, Computing, Consumer Electronics, Medical, Agriculture, Education and many more. The advent and very fast-paced growth of AI/ML, Autonomous Vehicles, 5G, Sensors & IoT Technologies are accelerating the pace of growth for semiconductor driven electronics products.



The semiconductor market globally stood at USD 580 billion in 2022 and expected to grow to USD 1 Trillion by 2030 with a CAGR of approx. 7%. The key sectors fuelling this growth are Computing, Communication, Automobile, Industrial, and Consumer Electronics as shown in Chart below:

As per a recent IESA's report, the Indian semiconductor market was valued at \$27 billion in 2021 and is expected to grow at a healthy CAGR of 16 per cent from 2019 to 2026 to reach \$64 billion in 2026, representing 22 per cent of the total end-equipment revenues.

Only 9 per cent of India's semiconductor requirements were sourced locally last year. The government's 'Make in India' and product-linked incentive (PLI) policies for Semiconductors are expected to be a game-changer for the space, driving local sourcing further and local procurement will grow by over 17 per cent by 2026. According to the report, some of the primary growth drivers include accelerated digitisation, dependence on complex electronic systems to process vast amounts of data, and the increasing use of technologies like artificial intelligence (AI).

80 per cent of the total revenue in the Indian semiconductor industry stemmed from mobile phones, smart wearables, IT, and other industrial components. Additionally, with the telecom industry preparing to rollout 5G technology by deploying cloud networks, the demand for semiconductors is expected to skyrocket.

The semiconductor industry in India is primarily focused on design and development rather than manufacturing, and Indian companies have developed expertise in areas such as chip design, embedded systems, and semiconductor IP. The Government of India has introduced several policies to support the electronics and semiconductor industry, including the PLI Policy, the National Policy on Electronics, the Electronics Manufacturing Clusters scheme, and most importantly, the India Semiconductor Mission.

Under its Chips to Startup (C2S) Program, the Ministry of Electronics & IT aims to create 85,000 skilled manpower over 5 years in VLSI and Embedded System Design and inculcate the culture of System-on-Chip (SoC)/System Level Design at Bachelor, Masters and Research level, and act as a catalyst for the growth of start-ups involved in the fabless design.

4.1 Key Pillars of Semiconductors Ecosystem:

Semiconductor design and manufacturing is very complex and for building a holistic ecosystem for self-reliant and Sustainable semiconductor supply chain following are the key pillars which have to be built through partnership between Industry, academia and government.

Semiconductor Manufacturing	Semiconductor Products / IPs	Semiconductor Talent / R&D	Semiconductor Supply Chain
FABS Silicon Memory Compound Analog, / Sensors	Fabless Chips Compute Communication Auto / EV RISC V	VLSI Design Architecture Design Verification Layout	Supply Chain Equipment Gases Chemicals Raw Wafers
Packaging ATMP OSAT	IPs Building Blocks Cores	Manufacturing Fab Technicians Process Engineering	Infrastructure Ultra-Pure Water Quality Power

4.2 Semiconductor Manufacturing

Semiconductor manufacturing refers to Fab Plants on the front-end and ATMP/OSAT plants on the back end. These fabs are generally characterized by type of the technology, feature size and wafer size

(i) Semiconductor Wafer Fabs:

a) Silicon logic Fabs (Foundries) Technology Nodes: 180nm to 2nm

- Wafer Sizes: 6 Inch (150 mm), 8 Inch (200 mm), 12 Inch (300 mm)
- Applications: Digital, Analog, Mixed Signal

b) Memory Fabs

- Advance Technology Nodes,
- Wafer sizes: 8 Inch (200mm), 12 Inch (300 mm)
- Application: DRAM, Flash, SSD

c) Compound Semiconductor Fabs

- Technology Node: Medium Complexity

- Wafer Sizes: 6 Inch (150 mm), 8 Inch (200mm) GaN, Silicon Carbide, Photonics

d) Sensors

- Advanced Technology uNodes
- Wafer Size: 6 Inch (150 mm), 8 Inch (200mm),
- 12 Inch (300 mm) CMOS Image sensors, Mems, Light, Finger Touch etc.

ii) Semiconductor Packaging

a) ATMP (Assembly, test, Mark and Package)

b) OSAT (Out-Sourced Assembly and Test)

c) Simple DIP, BGA, FCBGA

d) Multi-Chip Modules, System in Package, 3D Integration, Chiplets, Interposer

4.3 Semiconductor Products & IPs (Fabless)

Semiconductor Products or Chips are typically made by types of companies, IDMs (Integrated Device Manufacturers) and Fabless companies.

DM's are vertically integrated where they design and manufacture their own products and sell them in their own brands. Their products are predominantly made in their own Fabs.

Fabless companies design their own chips and sell them in their own brand names but get them manufactured by outside semiconductor Fabs typically known as Foundries and get them packaged by ATMP/OSAT companies in contract manufacturing model.

- IDMS: Intel, Texas Instruments, NXP, Infineon etc.
- Fabless Companies: Qualcomm, Broadcom, AMD, NVIDIA, Mediatek etc.
- Foundries: TSMC, Global Foundry, UMC, PSMC, SMIC, Tower-Zazz

Companies like Samsung play the role of IDM as well as Foundry.



Fabless companies are the primary drivers for foundry business and lot of innovation in Chip design and are very important for Indian ecosystem as there is very good talent base of Fabless design of semiconductor chips. Most of the captive design centers of MNCs as well as semiconductor start-ups fall into the category of Fabless semiconductor design.

The IP companies also play a critical role in Semiconductor Products as today's Chips use 70-80% predesigned blocks, like processors, interfaces (DDR, USB, PCI-E) and embedded SRAM, Embedded Flash, High-speed Serdes. Other than large IP companies like ARM, Cadence and Synopsys there are many other small and medium companies and India has a good chance to play an important role in this.

4.4 Semiconductor Talent, Research and Skilling

Semiconductor Chip Design, Technology Development and manufacturing operations require large number of talented engineers, researchers and skilled workers to meet India's need in this domain and also support the global ecosystem. Looking at the domestic and global requirements the following are the expected requirements in various categories:

i. VLSI Design Engineers for Chip Design: 2.5 Lakhs in next 5-6 Years

Current: 1.25 Lakhs, Gap: 1.25 Lakhs

ii. Skilled Manpower for Semiconductor Manufacturing: 20,000

Current <1,000; Gap: 19,000

iii. Researcher and Ph.Ds: 5,000

Current <500; Gap 4,500

4.5 Semiconductor input supply chain

Semiconductor manufacturing requires very robust and high-end supply chain of raw materials, consumables, equipment, spare parts, efficient logistic support and engineering project execution expertise. Details of key elements of the supply chain are:

- Bulk Gases and Specialty Gases
- Chemicals and Acids
- Other Raw Materials
- Raw Wafers
- Mask sets
- Ultra-Pure Water
- Uninterrupted and Quality Power Supply Effluent treatment & disposal.
- Connectivity to Airport which can land large cargo plane.
- Quality road from Airport suitable for transporting sophisticated equipment.
- Ease of customs and ease of doing business in terms of clearances etc.

4.6 Odisha has a well-developed ESDM ecosystem (as elaborated at Annexure II to this policy), which will significantly complement the evolution of a semiconductor ecosystem in the state.

5. Title & Commencement

i. The "Odisha Semiconductor Manufacturing and Fabless Policy" 2023 will come into force from the date of its notification.

ii. This policy will remain in force from the date of its notification till 31st December 2030 or till substituted by another policy. The State Government may at anytime amend any /or all provision(s) of this policy.

iii. Doubts relating to interpretation of any term and/or dispute relating to the operation of any provision under this policy will have to be referred to the E& IT Department Government of Odisha for clarification /resolution and the decision of the Government in this regard will be final and binding on all concerned.

iv. Execution of various provisions covering the incentives concessions etc will be subject to the issue of detailed operational guidelines/statutory notifications, wherever necessary in respect of each item by the concerned Department.

6. Definitions of key terms in the Policy

a. "MSME" - Micro, Small, and Medium Enterprises (MSMEs) in ESDM shall be construed as per the definition in the MSME Act, 2006 of the Government of India as amended from time to time.

b. "New Unit" New Unit means a unit which has commenced commercial production services during the effective period of this Policy or has taken up expansion/modernization / diversification. during this policy period, with due acknowledgment of the competent authority.

c. i. "Mega Project in Semiconductor manufacturing" - means any project with an investment of more than INR 5,000 Crores for Semiconductor Fabs (Silicon).

ii. For Display Fab Units, Mega projects are defined as a project with an investment of more than INR 5000 crores

iii. For Other Compound Fabs / ATMP Units, Mega projects are defined as a project with an investment of more than INR 500 crores.

d. "Mega Project in Semiconductor Fabless" means any project with an investment of more than INR 100 Crores for Semiconductor Fabless companies. This could include any product or IP development subsidies that they get from other schemes of Government of India like DLI.

7. Eligibility

Eligibility of semiconductor projects /units which would come under the purview of this policy is indicated below. However, eligibility to avail specific incentives would be spelled out in detail in the operational guidelines of the policy.

7.1 General Eligibility criteria:

i. All new units falling under "Semiconductor Manufacturing and Fabless Design" are entitled for benefits under this policy unless specifically stated otherwise in the provisions of the policy.

ii. Existing units which take up Expansion/ Modernization Diversification (E/M/D) will be eligible for specific incentives as specified in the Policy or its Operational Guidelines.

iii. Existing semiconductor units which take up expansion/ modernization diversification (E/M/D) will be eligible for specific incentives as applicable for new industrial units.

iv. New semiconductor units which have commenced commercial production during the effective period of this Policy, taking up expansion modernization / diversification (E/M/D) during this policy period shall be eligible for admissible incentives for additional investments towards the same.

v. Eligible industrial units shall be allowed to take up phase-wise commissioning of the total approved plant capacity within the overall prescribed time limit of 3 years for MSMEs and 5 years for Large Industries from the date of first fixed capital investment and avail applicable incentives in a phased manner.

7.2 Special Eligibility Criteria

These special eligibility criteria as described below will apply to units over and above the general eligibility criteria.

7.2.1 Semiconductor Manufacturing Units approved under ISM Scheme or any such scheme of the Government of India:

A project by any company/consortia/joint venture which has been qualified under any of the following schemes of India Semiconductor Mission of Government of India shall be eligible under this policy.

i. Scheme for setting up of Semiconductor Fabs in India

ii. Scheme for setting up of Display Fabs in India

iii. Scheme for setting up of Compound Semiconductors/ Silicon Photonics Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) OSAT facilities in India

iv. Any other such scheme of the Government of India.

Types of manufacturing units which come under this category are as follows:

- Semiconductor Fabs: Any Wafer size; Any Technology Node

- Display Fabs; TFT-LCD (Gen-8 and above); AMOLED (Gen-6 and Above)

- Compound Semiconductor Fabs; Silicon Photonics Fabs; Sensor Fabs, ATMP/OSAT Units

7.2.1.1 The above units are eligible for fiscal support as per the criteria defined below:

i. In the case of Semiconductor Fabrication projects, fiscal support shall be provided on Project Cost as defined in Section 2.12 of File "Guidelines for Modified Scheme for setting up of Semiconductor Fabs in India", No. W-38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

ii. In the case of Display Fabrication projects, fiscal support shall be provided on Project Cost as defined in Section 2.12 of File "Guidelines for Modified Scheme for setting up of Display Fabs in India", No. W- 38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

iii. In the case of Compound Semiconductors/ Silicon Photonics/ Sensors Fab and Semiconductor Assembly Testing / Marking & Packaging (ATMP)/ Outsourced Semiconductors Assembly & Test (OSAT) facilities, fiscal support shall be provided on Capital Expenditure as defined in Section 2.11 of File "Revised Guidelines for effective functioning of the Modified Scheme for setting up of Compound Semiconductors/ Silicon Photonics/ Sensors Fab/Discrete Semiconductors Fab and Semiconductor Assembly. Testing. Marking and Packaging (ATMP)/ Outsourced Semiconductor Assembly and Test (OSAT) facilities in India", No. W-38/21/2022-IPHW dated 30.06.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

7.2.2 Semiconductor Manufacturing Units not-approved under or not routed through ISM Scheme or any such scheme of the Government of India:

A project by any company/consortia/joint venture for setting up of Display Fabs, Compound Semiconductors/Silicon Photonics Sensors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP)/OSAT in Odisha.

Types of manufacturing units which come under this category are as follows:

- Semiconductor Fabs; Any Wafer size; Any Technology Node

- Display Fabs; TFT-LCD (Gen-8 and above); AMOLED (Gen-6 and Above)

- Compound Semiconductor Fabs; Silicon Photonics Fabs; Sensor Fabs, ATMP/OSAT Units.

7.2.2.1 The above units are eligible for fiscal support as per the criteria defined below:

In the case of Semiconductor Fabrication projects, fiscal support shall be provided on Project Cost as defined in Section 2.12 of File "Guidelines for Modified Scheme for setting up of Semiconductor Fabs in India", No. W-38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

In the case of Display Fabrication projects, fiscal support shall be provided on Project Cost as defined in Section 2.12 of File "Guidelines for Modified Scheme for setting up of Display Fabs in India", No. W- 38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology. Government of India and as amended from time to time.

In the case of Compound Semiconductors/ Silicon Photonics/ Sensors Fab and Semiconductor Assembly/ Testing / Marking & Packaging (ATMP)/ Outsourced Semiconductors Assembly & Test (OSAT) facilities, fiscal support shall be provided on Capital Expenditure as defined in Section 2.11 of File "Revised Guidelines for effective functioning of the Modified Scheme for setting up of Compound Semiconductors/ Silicon Photonics Sensors Fab/Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP)/ Outsourced Semiconductor Assembly and Test (OSAT) facilities in India", No. W-38/21/2022-IPHW dated 30.06.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

7.2.3 Semiconductor Product/IP Companies (Fabless Companies):

a) Fabless company refers to a company that designs and markets hardware (or simply designs hardware) while outsourcing the manufacturing of that hardware to a third-party partner. Fabless companies extensively use software, EDA and systems tools to design hardware including Integrated Circuits (ICs) and systems. The tape-out is the final result of the design process for integrated circuits before they are sent for manufacturing. The end product of fabless design is a chip (IC). The term fabless company is commonly used in relation to advanced chip designers, who hold the intellectual property (IP) for the chips they sell.

b) Project qualifying under the Govt's Design Linked Incentive Program or any such scheme of the Government of India.

Type of Semiconductor Product/IP Companies which come under this category are as follows:

- Semiconductor product Fabless Companies/Fabless Companies which have Chip as product
 - Semiconductor IP Companies which have Soft or Hard IP as product
- c) Project not approved under the Govt's Design Linked Incentive Program or any such scheme of the Government of India.

Type of Semiconductor Product/IP Companies which come under this category are as follows:

- Semiconductor product Fabless Companies/Fabless Companies which have Chip as product
- Semiconductor IP Companies which have Soft or Hard IP as product

7.2.4 Semiconductor Input Supply Chain & Raw Materials

Projects approved under the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECES) of Government of India.

8. Fiscal Support for Semiconductor Manufacturing

Eligible projects/ units shall be entitled to following fiscal support subject to fulfillment of all conditions mentioned in this policy, as amended from time to time and other legal Provisions

8.1 Fiscal Support (For projects qualifying under Provision at 7.2.1)

The State of Odisha provides for an additional 50% (Fifty Percent) of the fiscal support given by the Government of India. This will be applicable only to the projects approved under India. Semiconductor Mission and as per the eligibility as given in section 7.2.1.1 of the policy document.

This fiscal support will be released subject to the GOI's portion of fiscal support being released by them, and in 'Pari Pasu' of the same.

8.2 Fiscal Support (For projects qualifying under Provision at 7.2.2)

8.2.1 The State of Odisha shall provide:

a. In the case of Semiconductor Fabrication projects, fiscal support shall be provided on 30% of the Project Cost, where Project Cost is as defined in Section 2.12 of File "Guidelines for Modified Scheme for setting up of Semiconductor Fabs in India", No. W-38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

For the first 3 (Three) units under this category, fiscal support shall be provided on 50% of the Project Cost where Project cost is as defined in Section 2.12 of File "Guidelines for Modified scheme for setting up of Semiconductor Fabs in India", No. W-38/21/2022-IPHW dated 29.05.2023 issued by MeITY, Govt and as amended from time to time.

b. In the case of Display Fabrication projects, fiscal support shall be provided on 30% of the Project Cost, where Project Cost is as defined in Section 2.12 of File "Guidelines for Modified Scheme for setting up of Display Fabs in India", No. W-38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

For the first 3 (Three) units under this category, fiscal support shall be provided on 50% of the Project Cost where Project cost is as defined in Section 2.12 of File "Guidelines for Modified scheme for setting up of Semiconductor Fabs in India", No. W-38/21/2022-IPHW dated 29.05.2023 issued by MeITY, Gol and as amended from time to time.

c. In the case of Semiconductors/ Silicon Photonics/ Sensors Fab and Semiconductor Assembly / Testing / Marking & Packaging (ATMP) / Outsourced Semiconductors Assembly & Test (OSAT) facilities, fiscal support shall be provided on 30% of the Capital Expenditure, where Capital Expenditure is as defined in Section 2.11 of File "Revised Guidelines for effective functioning of the Modified Scheme for setting up of Compound Semiconductors/ Silicon Photonics/ Sensors Fab/Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking & Packaging (ATMP) / Outsourced Semiconductor Assembly and Test

(OSAT) facilities in India", No. W-38/21/2022-IPHW dated 30.06.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

For the first 5 (Five) units under this category, fiscal support shall be provided on 50% of the Capital Expenditure is as defined in section 2.11 of File "Revised Guidelines for effective functioning of the Modified Scheme for setting up of Compound Semiconductors/ Silicon Photonics/ Sensors Fab/Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking & Packaging (ATMP) / Outsourced Semiconductor Assembly and Test

(OSAT) facilities in India", No. W-38/21/2022-IPHW dated 30.06.2023 issued by Ministry of Electronics and Information Technology, Government of India and as amended from time to time.

8.2.2 This fiscal support will be disbursed on a 'pari- pasu' basis as given below:

i. In the case of Semiconductor Fabrication projects, Disbursal of Fiscal Support as described in Section 9 of File No. W- 38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India as amended from time to time.

ii. In the case of Display Fabrication projects, Disbursal of Fiscal Support as described in Section 9 of File No. W- 38/21/2022-IPHW dated 29.05.2023 issued by Ministry of Electronics and Information Technology, Government of India as amended from time to time.

iii. In the case of Compound Semiconductors/ Silicon Photonics/Sensors Fab and Semiconductor Assembly/ Testing/ Marking & Packaging (ATMP)/ Outsourced Semiconductors Assembly & Test (OSAT) facilities, Disbursal of Fiscal Support as described in Section 9 of File No. W-38/21/2022-IPHW dated 30.06.2023 issued by Ministry of Electronics and Information Technology, Government of India as amended from time to time.

8.3 Land-related incentives

The state of Odisha has identified a large chunk of industrial land parcels, which will be earmarked for Semiconductor projects.

i. Subsidy for Land procurement IDCO (Industrial Infrastructure Development Corporation) provides land at subsidized IPR rates. This Land to be available on long term lease (99 years). The Ground Rent @ 1% and Cess @ 0.75% of the land value to be paid.

a. For the first five mega projects (as defined under 6.c.(i)) where the investment is in excess of INR 5000 Cr, the government will provide land at 25% discount over the prevailing IPR rate.

b. For each Mega Project investment (as defined under 6.c.(i)) subsequent to the first five, 10% subsidy for first 200 acres on the prevailing IPR rate will be considered. For each non-mega Project investment, 5% subsidy for first 50 acres on the prevailing IPR Rate will be considered.

ii. Stamp Duty exemption

The Government shall extend 100% exemption of stamp duty on lease/ sale agreement of land or built up space allotted by Government/ IDCO designated development authorities to eligible projects/units under this policy. The eligible projects/units will also be entitled to get 100% reimbursement of conversion fee for its transaction.

8.4 Incentive on Power supply

i. The State of Odisha will offer a reimbursement of INR 2/Unit of the Industrial Electricity rates for a period of 10 years starting from COD (Commercial Operations Date) of the Semiconductor Project.

ii. Units shall also be 100% exempted from Electricity Duty and Electrical Inspection fees for a period of 10 years.

8.5 Provision for Water supply & Incentives

i. The State Government shall provide/facilitate, uninterrupted potable water supply to Semiconductor projects at the 'Project site'.

ii. The government will provide water in the required quantities at the rate of INR 7.65/cubic meter for the first 10 years of operation.

8.6 Interest Subsidy

a. Unit shall be entitled to Interest Subsidy, for timely payment at the rate of 5% per annum up to a maximum limit of INR 25 crores per annum, on term loans availed from Public Financial Institutions / Banks, for a period of 7 years from the date of commencement of production.

b. For mega projects as defined under 6(c)(i), 6(c)(ii) & 6(c)(iii), Unit shall be entitled to Interest Subsidy, for timely payment up to a maximum limit of INR 25 crores per annum, on term loans availed from Public Financial Institutions / Banks, for a period of 7 years from the date of commencement of production.

8.7 State goods and Service Tax (SGST) Reimbursement

New industrial units shall be eligible for reimbursement of 100% of net SGST paid, overall limited to 200% of the cost of plant and machinery, provided that the SGST reimbursement shall be applicable only to the net tax paid towards the state component of GST, after the adjustment of input tax credit against output tax liability.

8.8 Production Linked Incentives (PLI)

Units can avail Production Linked Incentive (PLI) at a reducing rate of 5% in year 1, 4% in year 2, 3% in year 3, 2% in year 4 and 1% in year 5 of Net Sales

Turnover (Gross Sales Turnover – Credit Notes (raised for any purpose) – Discounts (including but not limited to cash, volume, turnover, target, or for any other purpose) – applicable taxes) starting from the year of commencement of production, for 5 years subject to eligibility conditions to be notified later.

Further, PLI benefits can be availed for any contiguous 5-year period within a window of 7 years starting from the year of commencement of production subject to fulfilment of conditions to be notified later.

9. Non-fiscal incentives for Semiconductor Manufacturing

9.1 Single window clearance

There shall be a 3-tier Single Window Clearance Authority (SWCA) for clearance of Electronics and Semiconductor projects as enumerated below

(i) Investment up to Rs. 50 crore – Special Single window Clearance Committee (SSWCC) shall be constituted under the chairmanship of Secretary, Electronics & IT; Govt. of Odisha.

(ii) Investments above Rs.50 crore and up to Rs.1000 crore – State Level Single Window Clearance Authority (SLSWCA) members as constituted under the Odisha Industries Facilitation Act, (OIFA) 2004.

(iii) Investment above Rs 1,000 crore – High Level Clearance Authority (HLCA) headed by the Chief Minister with members as constituted under the Odisha Industries Facilitation Act, (OIFA) 2004.

OCAC will provide secretarial assistance to the SLSWCA. The SLSWCA shall have the power to direct concerned departments or authorities to issue required clearances within the specified time limit, subject to compliance of the provisions of the applicable Acts and rules or orders and instructions in force.

The SSWCC or SLSWCA shall carry out the following functions:

(i) Issue approvals of projects as required under the appropriate rules as and when necessary.

(ii) Issue deemed approvals as provided in OIFA as and when necessary.

(iii) Review and monitor the processing of applications cleared earlier and sent to Competent Authorities

The Government of Odisha has developed the online Single Window portal, GO SWIFT i.e. Government of Odisha – Single Window for Investor Facilitation and Tracking, to transform the B2G interface through the entire investment lifecycle. GO SWIFT is a key business reform undertaken by the state government with the objective to provide all requisite information/clearances to investors in a hassle-free and paper-less manner. The portal is a “Onestop Solution” for information on clearances required; land banks available; application, payment, tracking & approval of G2B services; risk-based synchronized inspection by regulatory agencies; incentive administration; post land allotment services; grievance redressal; and dovetailing CSR activities with the developmental goals of the State.

9.2 Self-Certification

A suitable self-certification system will be devised to declare domestic value addition by the company. The system will also provide for checks by Standardization, Testing and Quality Certification (STQC) and other testing laboratories accredited by the Department of Information Technology. In cases of incorrect declarations, suitable penalties will be imposed by the STQC.

9.3 Preferential Market Access

In accordance with the Preferential Market Access (PMA) policy of the Government of India, the Government of Odisha aims to provide advantages to companies and entrepreneurs based within the state. The government intends to implement the necessary modifications to its procurement policy to require all its departments and public sector undertakings (PSUs) to procure from locally-based Semiconductor and ESDM (Electronics System Design and Manufacturing) companies in Odisha, aligning with the Government of India's policy. Furthermore, the procurement process conducted by state departments and PSUs will incorporate relaxed standards, allowing MSMEs (Micro, Small, and Medium Enterprises) and start-ups to participate. The PMA policy will be applicable to all departments and their affiliated agencies for semiconductor and electronic products procured for government use.

10. Special consideration for Mega Projects

Mega Projects, as defined under Provision 6 (c) & (d) of this policy, may be given a special package of incentives over and above what has been enumerated in this policy on a case-to-case basis as determined by the State Cabinet, on recommendation of a High-Level Committee constituted under the Chairmanship of the Chief Secretary.

11. Semiconductor Fabless & Design Incentives

Semiconductor products (Chips) and IPs are the lifeline of the semiconductor industry. These semiconductor chips drive both semiconductor manufacturing and innovation in Electronics product space. India has been designing Chips for the world through the captive design centers of the Global semiconductor product companies. For a thriving semiconductor ecosystem, it is very critical to have semiconductor product companies (also known as Fabless companies) have a strong presence in the state of Odisha.

11.1 Creation and Set-up of a Centre of Excellence (COE): O-Chip Program

The State of Odisha is setting up some special facilities for the Fabless companies as mentioned below:

The State Government of Odisha will set up a Centre of Excellence, which has been conceptualized to adopt a more focused approach towards chip design and manufacturing. The O-CHIP program has been provided an initial outlay of Rs 30 crores in the first year, and as part of it, a Government supported CoE (Centre of Excellence) with representation from top industry associations and foremost research institutions will be created. Adequate budgetary support will be provided in the subsequent years. This program will create an environment for research, design, testing and manufacturing under one umbrella, and lead to the creation of more than 5000 high end jobs in near future. This program will also include dedicated manpower development in the following areas:

- Silicon Design, Front-end: architecture, microarchitecture, design, verification, FPGA
- Silicon Test-end: Design for Testability (DFT)

- Silicon Physical-end: Physical Design
- Functional Domain Expertise:
 - Training in Embedded Processors, RISC-V and ARM
 - Training in Interface Protocols, PCIe, USB, CXL, UCIe

11.1.1 Built up Space:

The facility will have a 20,000-30,000 sq.ft. initially in the first year which will be ramped up to 2,00,000 sq. ft. period over a period of 4 to 5 years. The built up space will cater to the Advanced EDA tools lab, Hardware and T&M Labs, Conference Hall, Board room, Meeting rooms, Auditorium, Training & Skill Development facilities, Pantry, Office space, Common facilities area, stores, Cafeteria, Gym and recreation facilities, Corridors, co-working spaces, dedicated cubicles for Start-ups, researchers and mentors, dedicated spaces for partner organizations and collaborators and to meet additional requirements that would come up as the operations of the SPV grows over the years.

11.1.2 Services to be offered:

a. In the COE, a Chip Centre will be created, which will provide Design Infrastructure Support to participating entities such as start-ups, companies, academic institutions, researchers, and designers. The support will include:

- Access to EDA tool grid. including remote access
- Access to Foundry for fabrication in MPW mode
- Maintaining IP Core Repository
- Fab compliance validation of designs, design flow and the Fab PDK
- Chip Packaging support
- Testing and Characterization support

b. Training workshops for skill development will be organized in collaboration with industrial associations and academic institutions. These workshops will provide industry relevant skills at all levels, from students in B.Tech, M.Tech, and PhD programs to researchers and designers working for start-ups and companies. These workshops will also provide Industry relevant skills @ ITI / Diploma levels; specifically created for manufacturing ecosystem.

c. Fellowship will be provided to start-ups, students, and researchers for participation in technological events, seminars, and webinars such as Vision Summit and Semicon India and relevant similar. overseas international events.

d. Facilitating start-ups, companies, and designers in availing incentives available under Government of India schemes such as Chips2Startups.

11.2 Fiscal incentives for Fabless companies:

The following Fiscal incentives will be available to Fables companies under different categories

11.2.1 Incentives for Semiconductor Product/IP Companies (For projects qualifying under Provision at 7.2.3.b) in addition the GOI-DLI scheme benefits

- i. 10% of the cost of development as seed money
- ii. 10% of the cost of development as reimbursement on achieving milestones
- iii. Cap of INR 20 Crore for each project or each company of which 7.5Cr is for PoC (Proof of Concept) and 12.5Cr is for productisation
- iv. For the first 5 Mega (SOC/ASIC/Processor Class of Products) projects registered by Companies in Odisha, an additional grant of INR 10 Crores for Productization.

11.2.2 Incentives for Semiconductor Product/IP Companies (For projects qualifying under Provision at 7.2.3.c) not covered under Gol-DLI scheme benefits

- i. 10% of the cost of development as seed money
- ii. 10% of the cost of development as reimbursement on achieving milestones
- iii. Cap of INR 20 Crore for each project or each company of which 7.5Cr is for PoC (Proof of Concept) and 12.5Cr is for productization
- iv. For the first 5 Mega (SOC/ASIC/ Processor Class of Products) projects registered by Companies in Odisha, an additional grant of INR 10 Crores for productization

v. Additional benefits to the extent of 30% on the eligible expenditure as defined in Section 2.5 of File No. EE- 9/5/2021 R&D-E dated 30th December 2021 issued by Ministry of Electronics and Information Technology, Government of India, as amended from time to time.

11.2.3 The fabless and semiconductor design companies will be entitled to incentives mentioned only under provisions 11.1, 11.2.1, 11.2.2, 12, 13 & 14 of this policy. Further, they are entitled to all benefits under the Odisha IT Policy 2022 unless it amounts to availing a benefit under both the policies.

12. Semiconductor and ESDM Validation Lab

The Government of Odisha will support the set-up of a Semiconductor & ESDM Validation & Characterization lab once a sizeable number of companies are set up in the state in Fabless Design as well as Semiconductor & ESDM manufacturing. In the meantime, the Government of Odisha will provide 100% Opex support towards Lab usage fees up to 50 hours of lab time for Validation & Characterization used in an approved lab that will be listed separately.

13. Patent registration incentive

The cost of filing of successful patents shall be reimbursed up to INR 5 Lakhs for domestic and INR 10 Lakhs for international patents, on actual basis (75% given when patent is filed, rest 25% when it is granted).

14. R&D Grants

The Government of Odisha will support R&D initiatives undertaken by research bodies, academic institutions, and semiconductor manufacturing and design units for research projects undertaken by them in the domain of semiconductors. These initiatives need to be recognized by Council of Scientific & Industrial Research (CSIR)/ Department of Scientific and Industrial Research (DSIR).

14.1 The State of Odisha will provide the following R&D incentives for a period of 5 years:

a. R&D Grants up-to INR 2 Cr per company per year linked to specific Semiconductor R&D Technology outcomes from the companies which will need to be listed out separately. The grant shall be provided in the form of reimbursement (covering capital and operational expenditure

only for R&D) capped maximum up to INR 5 Crores in the span of 5 years

b. The eligible companies and startups for this R&D Grant can be located/ co-exist/ incubated at any recognised technical institutes or any government institute within Odisha as well as recognised private universities in the State, provided such private universities are within the Top-50 in National Institutional Ranking Framework (NIRF) ranking in the same year or the preceding year in which the application is made.

14.2 For mega projects as defined under 6.C(i), (ii) & (iii), the State of Odisha will provide the following R&D incentives:

R&D Grants up-to INR 2 Cr per company per year for 10 years linked to specific Semiconductor R&D Technology and products outcomes from the companies which will need to be listed out separately. The grant is subject to satisfying the following conditions:

i. The relevance and necessity of the R&D to the company's product line has to be validated by a Government of India Agency like Council of Scientific & Industrial Research (CSIR)/ Department of Scientific and Industrial Research (DSIR) National Research Development Corporation (NRDC) or any other nationally / internationally acclaimed third party agency engaged by the E&IT Department, Government of Odisha. The fee charged by CSIR/DSIR/NRDC or the third party agency mentioned here in above for preparing its due diligence report will be treated as a part of the R&D grant to the company seeking the same.

ii. If the said R&D expenditure is eligible for reimbursement under any scheme of the Government of India, the company will be required to file its application for the same and the quantum of the expenditure sanctioned by the Government of India against the application will be deducted from the annual grants committed by the Government of Odisha.

15. Semiconductor Parks

The State Government shall encourage and support the establishment of Semiconductor Industrial Parks in the State, through world-class developers with experience in developing Semiconductor Parks.

The following incentives shall be provided to the first 3 (three) Semiconductor Parks:

I. Land at 25% discount over the prevailing IPR rate

II. Capital Subsidy of 25% of the Capital Expenditure, up to a Maximum ceiling of INR 400 Crore. Capital Expenditure will include core infrastructure, common infrastructure and common facility centres.

a) The Government of Odisha invites companies to establish Public-Private Partnership (PPP) ventures for the development of Common Facilities Centres (CFCs) in the state. These CFCs shall include advanced infrastructure for Tooling, Instrumentation, Testing, and Captive Effluent Treatment Plants (ETPs), among other critical facilities.

b) Captive Effluent Treatment Plant (ETP) (Capacity of 1 MLD): The Government of Odisha will provide a subsidy for setting up Captive Water Treatment & Recycling Plants at the company level. The subsidy is designed to promote sustainable water management practices and align with national benchmarks.

c) Waste Management Facilities: Companies will receive financial subsidy on the costs associated with the procurement and operation of vendor-supplied solutions for sludge treatment, disposal, and incineration within a 50 km to 100 km radius from the site.

d) Hydrogen-Based Energy Storage Systems (ESS): Financial subsidy will be offered for the implementation of Hydrogen-Based Energy Storage Systems (ESS). This subsidy is intended to foster the adoption of clean energy technologies while keeping in line with global energy transition trends.

The above incentives under 15(ii) (a) to (d) can be availed by all eligible semiconductor Manufacturing units and the Semiconductor/ESDM Park developers (including Government, Private and PPP Projects). These incentives may also be availed by eligible manufacturing units from India Semiconductor Mission (ISM) or under this policy.

Note:

Project Eligibility: To qualify for these incentives, companies must demonstrate compliance with international environmental standards (ISO 14001) and commit to periodic audits and reporting on the performance of the subsidized systems.

Sustainability Metrics: Companies benefiting from these subsidies will be required to achieve specific sustainability milestones: 30% reduction in water consumption and a 20% reduction in carbon emissions within three years of the project's initiation.

III. Interest Subsidy of 5% per annum on term loans for a period of 7 years from the date of commencement of operations, up to a maximum limit of INR 50 Cr per annum

IV. Reimbursement of 100% of net SGST paid, overall limited to 100% of the cost of development of the Park, provided that the SGST reimbursement shall be applicable only to the net tax paid towards the state component of GST, after the adjustment of input tax credit against output tax liability.

V. 100% exemption of stamp duty on lease/sale agreement of land. This will be applicable for 3 transactions by the developer with each unit in the Park.

VI. 100% reimbursement of conversion fee for Change of Land Use

VII. Incentives on Power Supply as per Clause 8.4 of this policy

VIII. Incentives and Provisions for Water Supply as per Clause 8.5 of this policy

The total outflow towards fiscal subsidy (inclusive of capital subsidy and other incentives) for any Semiconductor Park, under this policy, shall not exceed INR 600 Crores.

Note: The Semiconductor Parks must

(i) be setup during the operative period of this policy,

(ii) become operational within 3 years from setup date and

(iii) achieve minimum 80% capacity within 5 years.

16. Relocation support:

In recognition of the critical need to attract and retain talent in the semiconductor manufacturing sector, Odisha will provide relocation support to semiconductor companies (both manufacturing and design companies) to ensure the seamless onboarding of experienced personnel.

Relocation Reimbursement by Experience:

a. Companies will be eligible for reimbursement of relocation expenses for engineering personnel in three slabs based on their experience for a period of three years. The reimbursement of personnel will be in the ratio of 1:3:6 for sub-points i, ii, and iii respectively, as follows:

- i. 10+ years of experience: 20% of the annual CTC.
 - ii. 5-10 years of experience: 25% of the annual CTC.
 - iii. 2-5 years of experience: 30% of the annual CTC.
- b. Engineering Professionals eligible:
- i. For mega projects as defined under:
 - a. 6.C(i), first 3 units capped at INR 3.5 Cr per unit,
 - b. 6.C (ii), first 3 units capped at INR 3.5 Cr per unit &
 - c. 6.C (iii), first 10 units capped at INR 3 Cr per unit

Note:

This will be applicable to first 50 engineering professionals (on permanent rolls) in each unit and each of the above three categories within 3 years from the date of first employee onboarded For Fabless design - First 10 units capped at ₹7 Cr per unit: first 100 engineering professionals (on permanent rolls) in each unit within 2 years from the date of first employee onboarded.

17. Semiconductor Trained Manpower & Skilling

The Semiconductor Industry worldwide is going through a talent crunch right now both in Chip Design and Semiconductor manufacturing space. For India alone there is a requirement of 1.25 Lakh VLSI Design engineers and 5,000 Semiconductor Manufacturing professional in the next 5 years. It is envisaged that this demand will grow further in coming years.

Odisha has a fantastic education infrastructure both at Engineering level and skilling level (ITI). For leveraging and producing world class VLSI

Design engineers & Skilled manpower the following is proposed for following for Odisha.

The Government of Odisha, in association with the industry, will create an internship program for the benefit of students with a diploma/degree in Semiconductors/ Electronics, especially for those from rural and semi-urban areas. As part of a new initiative, eligible students holding diplomas or degrees in Semiconductors / Electronics, particularly those from rural and semi-urban areas, will be offered internship opportunities through a digital platform facilitated by the Odisha Government and industry partners.

Some specific incentives are being offered to Academic and Research Institutions and units (companies) to improve the Semiconductor Skills and Talent development activities in Odisha as given below:

17.1 For Academic and Research

- a. Support undergraduate program in Electronics and VLSI Design in 25 Institutes.
 - INR 10 Lakh Budget per institute for 5 years: Total of INR 2.5 Crores
- b. Start and strengthen M. Tech program in VLSI Design in 25 Institutes
 - INR 10 Lakh Budget per institute for 5 years; Total of INR 2.5 Crores
- c. Create a centralized EDA tools grid for supporting all academic institutions and Skilling Service Providers of The COE.
 - Common EDA Tools and Cloud Compute access with a budget of INR 10 Crores
- d. Faculty training / technical workshops / awareness programs/ expert lectures
 - INR 60 Lakhs per year for 5 years, (maximum up to 10 lakhs per institution per year) total of INR 3.0 Crores
- e. Internship support for B.Tech & M.Tech Graduates
 - 500 Students per year for 5 years; each student will be supported for a period of 6 months with a ceiling of INR 15,000 per student per month.

17.2 For Units (companies)

Skilling support for manufacturing:

- a. For units (companies) skilling support for manufacturing will be extended not exceeding INR 2.00 Cr per unit per year for 5 years

17.3. Skilling Support (Amended Clause, Para 17 of the Policy)

Recognizing the talent gap in the semiconductor sector and the need for advanced skill development, the state of Odisha will implement comprehensive skilling programs aimed at fostering industry-ready talent. The following provisions are proposed:

a. State-Led Skilling Initiative:

Odisha, competing with established talent hubs such as Bangalore and Hyderabad, will implement unique skill development programs specifically designed for the semiconductor sector, covering both design and manufacturing.

b. Strategic Timeline for Skilling:

Given that manufacturing units will begin operations approximately 18 months after signing MOUs with the Government of Odisha and India, skilling efforts will commence immediately to meet workforce demand.

c. For Recent Graduates:

Graduates from the past 2-3 years will be provided with industry-relevant training, through identified training partners, to become job-ready in semi-conductor industry (both Fab and Fabless). 450 graduates (in 3 batches) for a 6-month course in which State Government will bear 80% of the course fee; the total course fee not exceeding INR 2,00,000 per student per course.

d. Elective Curriculum for Engineering Students:

Engineering students successfully completing at least two electives on semiconductor design and/or semiconductor manufacturing during their degree period will be eligible for one-time incentive of INR 10,000 from the State Government, capped at 1,000 students per year for 5 years

18. Assistance to existing Semiconductor Fabless Companies in Odisha

For Fabless Semiconductor Companies already registered and operational in Odisha, a special incentive scheme as below will be provided:

- i. Access to Design Tools & design infrastructure under the O-Chip Program of Government of Odisha

- ii. Access to Silicon Validation & Characterization Labs under the O-Chip Program of Government of Odisha

19. Incentives for Semiconductor Input Supply Chain & Raw Material projects /units (For projects qualifying under Provision at 7.2.4)

19.1 Odisha has a leading position in mineral and industrial products in the country. As semiconductor manufacturing requires specialized gases, chemicals, and raw wafer, it a natural fit for making these raw materials which are essential for semiconductor manufacturing and supply them to Indian Fabs/ATMP units and also supply them to global FADS/ATMP units.

19.2 Government of India Incentives for raw materials and supplies for the FABS/ATMP and other semiconductor manufacturing units are given under its SPECS scheme.

19.3 Government of Odisha will provide 10% of capital expenditure in addition to the government of India's financial incentive of 25% of capital expenditure for raw materials and supply chain products under the SPECS scheme of Government of India.

19.4 In addition to the fiscal incentives mentioned under provisions 19.3 above, these units will be entitled to all other benefits under the Odisha Industrial Policy Resolution 2022 unless it amounts to availing a benefit under both the policies.

19.5 Warehouse Development for Industrial Gases and Specialty Chemicals: Incentives will be extended for the development of warehouses dedicated to the storage of materials critical to semiconductor manufacturing, such as industrial gases and specialty chemicals sourced from global markets. The benefits are as specified for Warehousing and Logistics facilities in IPR 2022.

20. Regulatory Approvals:

a. The semiconductor fab & fabless units shall be declared as public utility services under the provisions of the Industrial Disputes Act, 1947 to exempt them from the disruption caused by general strikes and bandhs.

b. The semiconductor fab & fabless industries are serving Global customers on 24x7x365 basis. Government shall facilitate granting of permission to work on 24X7 model given the nature of work of in this industry including women employees. These units may be either exempted from certain provisions of the Shops and Establishment Act or given special consideration under section 5(1), 7(1), 7(2) and 10(b)

c. Semiconductor fabrication units and semiconductor input supply chain and raw materials units, by virtue of the nature of their operations, may fall under the hazardous factory/establishment category, and therefore, will be subject to regular inspection under various labour acts of the State Government.

However, semiconductor fabrication units and semiconductor supply chain and raw material units, which claim to fall under the category of non-hazardous factory/establishment and Fabless Semiconductor units may seek voluntary compliance under the "Voluntary Compliance Scheme of industries & commercial Establishments notified under Resolution LL-II-FM-15/2015-4870/LESI dated 30/05/2015.

On the other hand, fabless startup units may seek for self-certification under the scheme notified in OGE No.470 dated 27/03/2018 of the Government of Odisha in L&ESI Department".

d. The units availing the benefits of the policy should also comply with the e-waste management rules 2022& its amendments as outlined by OSPCB(Odisha State Pollution Control Board).

21. Governance Mechanism

a. An "Apex Committee", chaired by the Chief Secretary, will be constituted to oversee the implementation of the Odisha Semiconductor Manufacturing and Fabless Policy. This committee will monitor policy implementation, project progress grievance redressal and approval of incentives on a quarterly basis, as well as have powers to

condone delay for time overrun in implementation of projects.

b. Doubts relating to interpretation of any term and/or dispute relating to the operation of any provision under this policy shall be referred to the E&IT Department for clarification / resolution. The decision of Government in this regard shall be final and binding on all concerned.

c. A "Policy Advisory Committee" will be constituted for the Semiconductor and Electronics sector, comprising of industry experts and senior representatives from various departments. This group will provide advice and direction to the Semiconductor and Electronics sector in the state.

d. The Odisha Computer Applications Centre (OCAC) will be the Nodal Agency responsible for the implementation and monitoring of various activities under this Policy on behalf of the Electronics & Information Technology Department.

e. The Electronics & Information Technology Department will periodically review the implementation of the policy for facilitation and mid-course correction

f. The IT and Electronics Promotion Cell at OCAC will act as the Project Implementation Unit (PIU) and Project Management Unit (PMU) for the Odisha Semiconductor and Fabless policy

g. Operational guidelines and statutory notifications issued by the Electronics & Information Technology Department/OCAC will govern the implementation of provisions covering incentives, concessions, and competent authority. OCAC will administer the disbursement of incentives, ensuring that they do not exceed the capital investment made by entrepreneurs/companies.

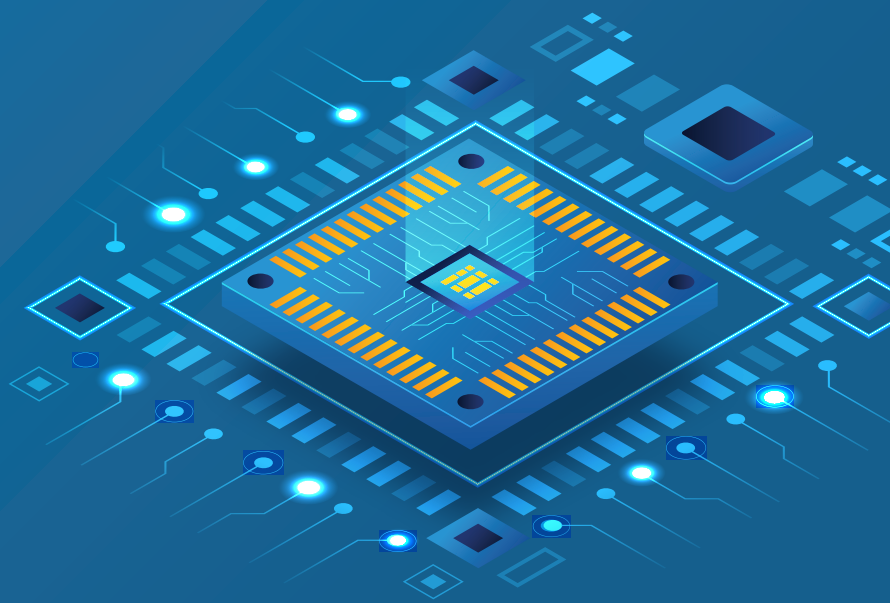
h. Incentive disbursement by the implementing agency will follow a chronological order of approved claims, and the date of commercial production for availing incentives will be determined by a competent authority notified in operational guidelines.

Abbreviations

- AI-Artificial Intelligence
- ASEAN-Association of Southeast Asian Nations
- ASIC-Application-Specific Integrated Circuit
- ATMP-Assembly, Testing, Marking and Packaging
- CSR-Corporate Social Responsibility
- C2S-Chips to Startup
- CoE-Centre of Excellence
- DSIR-Department of Scientific and Industrial Research
- DLI Design Linked Incentive
- DRAM-Dynamic Random Access Memory
- EC-Empowered Committee
- EMC-Electronics Manufacturing Cluster
- EDA-Electronic Design & Automation
- ESDM-Electronic Systems Design & Manufacturing
- ETP-Effluent Treatment Plant
- E&IT - Electronics & Information Technology
- ESDM-Electronics Systems Design and Manufacturing
- FCI - Fixed Capital Investment
- GOI-Government of India
- GST-Goods & Services Tax
- IDCO-Odisha Industrial Infrastructure Development Corporation
- IoT-Internet of Things
- IP-Intellectual Property
- IPR-Industrial Policy Resolution
- IT-Information Technology
- ISM-India Semiconductor Mission
- Meity-Ministry of Electronics & Information Technology
- MSME-Micro, Small & Medium Enterprises
- NPE National Policy on Electronics
- OCAC-Odisha Computer Application Centre
- OSAT-Outsourced Assembly & Test
- OSDA-Odisha Skill Development Authority
- PIU-Project Implementation Unit
- PLI-Production Linked Incentive
- PMU-Project Management Unit
- SoC-System On Chip
- SEZ-Special Economic Zone
- SGST-State Goods & Services Tax
- SPECS-Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors
- SSD-Solid State Device
- VLSI-Very Large Scale Integration
- WTP-Water Treatment Plant



ANNEXURES



Annexure-1: Odisha-Salient features

i. Industrialization in Odisha

Odisha, a state in eastern India, has been making significant progress in industrialization over the past few years. The state's strategic location, abundant natural resources, and investor-friendly policies have made it an attractive destination for businesses to set up their operations.

Odisha is rich in minerals such as iron ore, bauxite, manganese, and coal, which are essential raw materials for various industries. The state government has made efforts to develop infrastructure, such as ports, airports, and industrial parks, to facilitate the movement of goods and services.

The state's focus on innovation and technology has led to the establishment of a number of research and development centers, such as the International Institute of Information Technology, Bhubaneswar, and the National Institute of Science Education and Research. These centers have been instrumental in fostering innovation and building a skilled workforce.

Furthermore, the state government has also launched several initiatives to promote entrepreneurship, such as the Startup Odisha initiative, which aims to create a conducive ecosystem for startups to flourish. The state has also implemented the MSME Development Policy 2020 to support the growth of micro, small, and medium-sized enterprises.

Overall, Odisha's efforts to promote industrialization have yielded positive results, with the state attracting significant investment and generating employment opportunities. With a focus on innovation, technology, and entrepreneurship, the state is poised to become a leading industrial hub in India.

ii. Connectivity and logistics infrastructure

Odisha has made significant strides in improving its connectivity and logistics infrastructure in recent years. The state's strategic location on the east coast of India, coupled with its abundant natural resources, has made it an attractive destination for businesses looking to set up operations.

The state government has invested heavily in improving its road, rail, and air connectivity, which has facilitated the movement of goods and services. Odisha has a well-developed road network, with National Highways and State Highways connecting major cities and towns. The state has also undertaken several infrastructure development projects, such as the construction of the Biju Expressway, which aims to connect the western and coastal regions of the state.

Odisha has also invested in improving its rail infrastructure, with the state being home to the second-highest number of railway stations in India. The state government has also proposed the development of a dedicated freight corridor, which would facilitate the movement of goods between the ports of Paradip and Dhamra.

The state's air connectivity has also seen significant improvements, with the expansion of the Biju Patnaik International Airport in Bhubaneswar and the construction of a new airport in Jharsuguda. The airports have facilitated the movement of people and cargo, and have boosted tourism and trade in the state.

Overall, Odisha's focus on improving its connectivity and logistics infrastructure has made it an attractive destination for businesses to set up operations. The state's strategic location, coupled with its well-developed infrastructure, has helped boost economic growth and create employment opportunities.

iii. Stable industrial climate

Odisha provides a stable industrial climate that has been attracting businesses to the state for many years. The state's government has been proactive in providing an enabling environment for businesses, with policies and initiatives aimed at facilitating investment, promoting ease of doing business, and enhancing infrastructure.

The state government has been providing a range of incentives to businesses, such as tax holidays, subsidies, and exemptions, to encourage investment in the state. The government has also simplified the regulatory process and streamlined procedures, reducing the time and cost required for businesses to set up operations.

Odisha's strategic location on the east coast of India, coupled with its abundance of natural resources, has made it an attractive destination for various industries, such as steel, aluminum,



petrochemicals, and textiles. The state has also prioritized the development of sectors such as electronics manufacturing, food processing, and tourism, providing opportunities for businesses to diversify their operations.

Overall, the stable industrial climate in Odisha, coupled with the government's proactive approach towards promoting investment, has made it an attractive destination for businesses looking to set up operations and expand their presence in India.

iv. Abundant Water and Mineral resources

Odisha is known for its abundant water and mineral resources, which have been instrumental in driving the state's economic growth. The state is home to several large rivers, such as the Mahanadi, Brahmani, and Baitarani, which provide ample water resources for various industries.

In addition, Odisha is rich in mineral resources, with significant reserves of coal, iron ore, bauxite, chromite, and manganese. The state accounts for a significant portion of India's mineral production, with mining being a major contributor to the state's economy.

The availability of abundant water and mineral resources has made Odisha an attractive destination for various industries, such as steel, aluminum, power, cement, and chemicals. The state has also prioritized the development of downstream industries, such as food processing, textiles, and electronics manufacturing, to promote value addition and job creation.

Overall, the abundance of water and mineral resources in Odisha has been a key factor in driving the state's industrial growth and economic development. The state government has been proactive in leveraging these resources to promote investment and job creation, making Odisha an attractive destination for businesses looking to set up operations.

v. Strong power infrastructure

Odisha has a robust power infrastructure, with a diverse mix of thermal, hydro, and renewable energy sources. The state has a total installed capacity of over 7807 MW. The state government is also promoting the development of renewable energy sources, such as solar and wind power, to meet the growing energy demands of the industrial sector while reducing carbon emissions. The state's focus on ensuring reliable and affordable power supply is a key factor in its attractiveness as an industrial destination.

Annexure-2:

ESDM Sector ecosystem overview in Odisha

In alignment with the national vision, Odisha has taken a slew of concrete steps and initiatives to become a leading hub of electronics technology and innovation. Odisha's Electronics Policy 2021 is one of the most competitive electronics policies nationally in terms of the depth and breadth of incentives on offer and is anticipated to bring substantial investments into the State.

Odisha is one of the best destinations for building all the 4 pillars of semiconductor ecosystem namely:

- Semiconductor Manufacturing
- Semiconductor product & IP development
- Semiconductor Talent development & skilling
- Semiconductor raw materials input supply chain

With a progressive & stable government, proactive and stable policies, ease of doing business and abundant natural resources in terms of electricity and water, it is an attractive proposition for any investor to look at Odisha to build all the 4 of the essential pillars of semiconductor ecosystem.

The Government of Odisha has taken several initiatives to promote the Electronics System Design and Manufacturing (ESDM) sector in the state. Some of the government bodies involved in promoting and dealing with ESDM in Odisha are:

Odisha Computer Application Centre (OCAC): OCAC is the nodal agency for implementing e-Governance initiatives in the state. It is responsible for the implementation of the National e-Governance Plan (NeGP) and the State e-Governance Plan (SeGP) in Odisha. OCAC is also involved in promoting the ESDM sector in the state.

Electronics and IT Department, Government of Odisha : The Electronics and IT Department of the Government of Odisha is responsible for formulating policies and implementing programs for the development of the IT and ESDM sectors in the state. The department is also involved in creating a favorable environment for the growth of the ESDM industry.

- Industrial Infrastructure Development Corporation (IDCO): IDCO is responsible for the development of industrial infrastructure in Odisha. It provides land, water, and power supply to industries in the state. IDCO is also involved in setting up electronics manufacturing clusters in Odisha. It has set up several industrial parks and special economic zones (SEZs) to attract investment in the ESDM sector.

- Centre of Excellence in ESDM (CoE-ESDM)* Electro preneur Park (EP), Bhubaneswar: CoEESDM is a joint initiative of the Government of India and the Government of Odisha. It is aimed at promoting the ESDM sector in the state by providing training and skill development programs to the workforce. CoE-ESDM also provides technical support and consultancy services to the ESDM industry in Odisha. EP- BBSR is equipped with state-of-the-art advanced Lab, plug & play facilities for incubatees in the COE. EPBBSR brings in a pool of mentors, academicians, investors & consultants in market intelligence with the major focus on patenting, converting ideas into successful products. This will help in accelerating innovation, enabling industry-oriented research and development of the talent pool in the ESDM domain. The Centre of Entrepreneurship (CoE) in ESDM space Electropreneur Park at Bhubaneswar aspires to contribute to the ESDM growth story in India.

- Fablab at STPI with support from E & IT Department has established the 1st FAB Lab in Eastern Region at Bhubaneswar which is set up with support from FAB Foundation, USA. The STPIFAB Lab Program offers a vibrant ecosystem for creating a maker culture among the young techno-entrepreneurs, who want to develop their innovative technology idea into a product prototype with fine design functionalities.

These government bodies are working towards creating a conducive ecosystem for the growth of the ESDM industry in Odisha.

Odisha has also built a dedicated electronics infrastructure besides taking very bold steps as enumerated below which continue to play a vital role in strengthening the ecosystem.

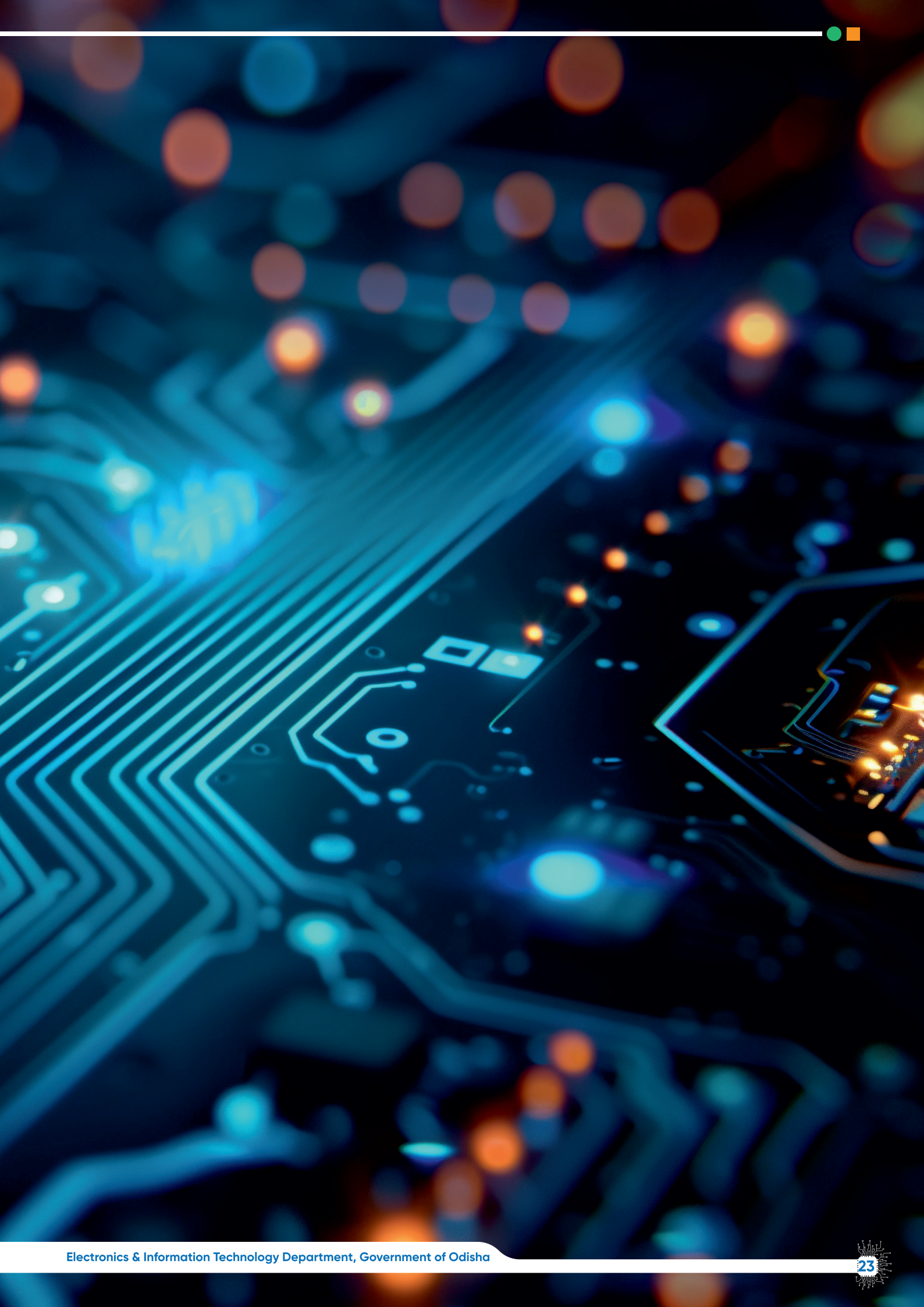
The Government has set up a greenfield Electronics Manufacturing Cluster (EMC) at the Info valley SEZ, wherein 216 acres is carved for electronics manufacturing. The investment outlay is over US\$ 155 Million. The park provides

Electronics & Information Technology Department, Government of Odisha²³ Electronics & Information Technology Department, Government of Odisha plug-n-play infrastructure, hostels and dorms for workers, and a common facility centre with testing, measuring, and prototyping facilities.

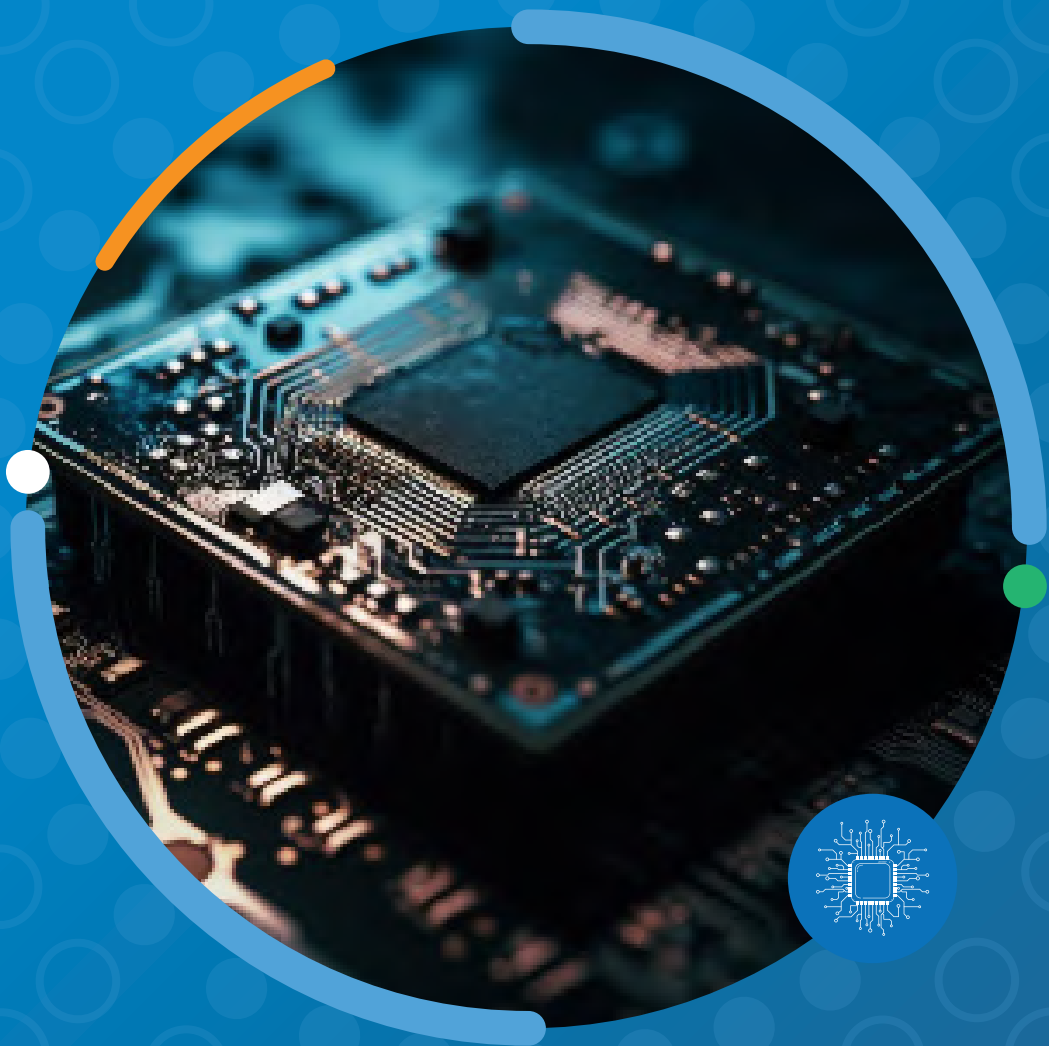
Odisha has a state-of-the-art ESDM Incubation Centre called Electropreneur Park Bhubaneswar located in the STPI building with funding support from the State Government. It has been functional since 3 years and more than 20 electronics startups are being incubated here. Most of these have been well funded and have launched their products in the market. There are more than 10 companies including nationally reputed names like VVDN, Marquee, Sankalp, ASIC Zen are working exclusively in chip design for clients in India and overseas.

Odisha has a vibrant Startup ecosystem with more than 1600 startups from different sectors including ESDM & chip design. A good percentage are incubated in some 30 well equipped incubators, both in government and private sector including those in Tier-II & III locations.

The 2 edition of Make In Odisha (MIO-2022) Conclave held in Dec. 2022 was a roaring success. Investors from across the world converging in the State Capital witnessed the array of opportunities in various sectors including electronics and ESDM. MoUs signed with global leaders like Intel, Oracle, Global Foundry are being implemented on fast forward mode. While these overarching measures and developments have benefited the electronics sector in Odisha, the State now needs to develop a winner program that will be strategically conceptualized, singularly focused, comprehensively designed, and targeted towards a vital segment viz. semiconductor design and manufacturing.







Government of Odisha

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