

F. No. W-38/4/2020-IPHW
Government of India
Ministry of Electronics and Information Technology
(IPHW Division)

15.12.2020

EXPRESSION OF INTEREST
FOR SETTING UP / EXPANSION OF EXISTING SEMICONDUCTOR WAFER /
DEVICE FABRICATION (FAB) FACILITIES IN INDIA OR ACQUISITION OF
SEMICONDUCTOR FABs OUTSIDE INDIA

1. Introduction

1.1 The electronics industry is the world's largest and fastest growing industry with applications in all sectors of the economy. Semiconductors have been a key enabler in the advancement of electronics for the past 50 years and will continue to play an even greater role with the introduction of new technologies and applications including IoT, artificial intelligence, 5G, smart cars, smart factories, data centres, robotics, etc.

1.2 Semiconductor manufacturing is a complex and research-intensive sector, defined by rapid changes in technology which require significant and sustained investment. Semiconductors are also at the heart of electronic products and constitute a significant part of the total value of Bill of Material (BOM).

1.3 Electronics manufacturing in India has increased substantially over the last few years and is steadily moving up the value chain from Semi Knocked Down (SKD) to Completely Knocked Down (CKD) stage of manufacturing. However, domestic value addition is estimated to be in the range of 15% - 20% only, and growth in manufacturing so far has primarily been on account of final assembly / Printed Circuit Board Assembly (PCBA) using imported components / sub-assemblies, parts, etc. This is due to the lack of a robust electronic components and semiconductor manufacturing ecosystem in India despite the fact that the country has a thriving Fabless Design ecosystem.

1.4 The vision of National Policy on Electronics 2019 (NPE 2019) is 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 setting up of

Semiconductor FAB facilities and its ecosystem for design and fabrication of chips and chip components in India.

1.5 Government of India is keen to incentivize and attract investment in setting up of Semiconductor FABs in India. This assumes significance in view of the fact that India is poised to increase its share in global manufacturing of Mobile Phones, IT Hardware, Automotive Electronics, Industrial Electronics, Medical Electronics, IoT and other devices in the near future as it aspires to have USD 400Bn of electronics manufacturing by the year 2025.

1.6 Accordingly, the notice inviting Expression of Interest (Eoi) is being issued for setting up / expansion of existing Semiconductor wafer / device fabrication (FAB) facilities in India or acquisition of Semiconductor FABs outside India.

2. Notice Inviting Expression of Interest (Eoi)

2.1 The Ministry of Electronics and Information Technology (MeitY) invites Expression of Interest (Eoi) from companies / consortia desirous of setting up / expansion of existing Semiconductor wafer / device fabrication (FAB) facilities in India or acquisition of Semiconductor FABs outside India.

2.2 The information received in response of this Eoi may be utilized to formulate a Scheme for setting up / expansion of existing Semiconductor wafer/device fabrication (FAB) facilities in India or acquisition of Semiconductor FABs outside India.

2.3 The Expression of Interest (Eoi) is to be submitted within stipulated timeline at the following address:

Shri Saurabh Gaur

Joint Secretary

Ministry of Electronics and Information Technology (MeitY)

Room No. 4016, Electronics Niketan

6, CGO Complex, Lodi Road, New Delhi – 110003

Tel: +91-11-24301210; +91-11-24363071

Email: *fab.eoi-dit@meity.gov.in*

2.4 Submission of a proposal in response to this notice inviting Eoi shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions, and implications.

2.5

S. No.	Information	Details
1.	Eol No. and Date	W-38/4/2020-IPHW Dated 15.12.2020
2.	Last date for submission of Eol proposal	31.01.2021

3. Eligibility Criteria

	Description
Category A	<p>Well established Integrated Device Manufacturers (IDMs) OR Foundries OR Indian Company / Consortia with Indian Industry Partner</p> <ul style="list-style-type: none"> • Having state-of-art mainstream CMOS technology nodes for fabricating processors, memories, analog / digital / mixed signal Integrated Circuits • Desirous of setting up / expansion of existing Semiconductor FAB <u>in</u> India (preferably with a node size of 28nm or lower, wafer size of 300 mm and capacity of 30,000 WSPM or more)
Category B	<p>Well established Integrated Device Manufacturers (IDMs) OR Foundries OR Indian Company / Consortia with Indian Industry Partner</p> <ul style="list-style-type: none"> • Having state-of-art Compound Semiconductor based emerging technologies for fabricating High Frequency / High Power / Optoelectronics devices. • Desirous of setting up / expansion of existing Semiconductor FAB <u>in</u> India preferably with wafer size of 200 mm or more
Category C	Indian Companies / Consortia interested in acquisition of Semiconductor FAB <u>outside</u> India

4. Submission of Expression of Interest proposal: The Eol proposal may be submitted in the form of a *Preliminary Project Report (PPR)* detailing out the following:

4.1 Category A / B / C for which Eol is being submitted.

- 4.2 Proposed Location(s)
- 4.3 Land, Water and Power requirement
- 4.4 **Technology Specifications** including proposed process technology(ies), node(s), wafer size(s), products (processed wafers / ICs post ATMP / OSAT), provision to manufacture compound semiconductor devices, technology availability / proposed tie-ups for acquiring technology.
- 4.5 **Operational Details** including proposed capacity in terms of Wafer Starts per Month (WSPM), ramp-up timeline, and management structure.
- 4.6 **Financial Details** including proposed investment, sources of funding and ownership structure; projected P&L Statement, and key financial indicators (IRR, ROI, ROCE, EBIDTA and NPV with and without expected government support).
- 4.7 **Financial support desired from the Government of India**, including Grant-in-Aid (GIA), Viability Gap Funding (VGF) in the form of Equity and / or Long-Term Interest Free Loan (LIFL), tax incentives, infrastructure support, etc.
- 4.8 **Support desired from State Government** in terms of extent, value, and nature of land; availability and cost of provisioning water; and power tariff.
- 4.9 **Human Resources:** Requirement of trained manpower and feasibility / potential modalities / support for development of talent leveraging Indian Universities.
- 4.10 **Capital Goods:** Requirement of New / Refurbished Capital Goods (Plant, Machinery Utilities, Transfer of Technology, etc.)
- 4.11 **Raw Material:** Details regarding sourcing of Raw Materials, e.g., speciality gases and ultra-pure chemicals of semiconductor grade; Road map for developing the raw material manufacturing ecosystem in India.
- 4.12 **R&D Support:** Desired support for R&D and proposed mechanisms; Possible Indian R&D Counterpart or prospective agencies / organizations for research (if any).
- 4.13 **Market Feasibility:** Availability of market for FAB output, proposal for keeping the fab loaded to work at optimum capacity to serve the market.
- 4.14 **Relocation:** In case of Category C, indicate any plan to transfer the FAB to India.

5. Eol Proposal Preparation Costs and Related Issues

5.1 The applicant is responsible for all costs incurred in connection with participation in this process, including, but not limited to, costs incurred in preparation of proposal, participation in meetings / discussions. MeitY in no case will be responsible or liable for these costs, regardless of the conduct or outcome of the Eol process.

5.2 This Eol does not commit MeitY to award a contract or to engage in negotiations or further discussions. Further, no reimbursable cost may be incurred in anticipation of award or for preparing this Eol.

5.3 All materials submitted by the Applicants in response to this Eol will become the property of MeitY under mutually agreeable confidentiality agreement.

6. General Terms

6.1 In case of a consortium of partners, details need to be provided for each partner. An entity which owns the technology (process and product being proposed) can be termed as the Principal Technology Partner in such a consortium.

7. Supporting Documents: The following documents need to be submitted to support the Expression of Interest:

7.1 Covering letter

7.2 Preliminary Project Report (PPR) as detailed in paragraph 4 of this Notice.

7.3 Documentation exhibiting formation / intent of formation of the consortium (LoI / MoU / Any other documentation such as a letter from the authorized signatory of all the partners to form the consortium for purpose of this project is also acceptable)

7.4 Company Background including business profile, geographies of operations.

7.5 The documents as listed above shall be submitted to the address provided in this notice as a physical copy or through email.