



Detailed Project Report

For setting up Semiconductor Wafer FAB Facility in India

<NAME OF PRINCIPAL PROMOTER>

<<Date>>

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General Instructions

1. A power of attorney from the Board of Directors of the project SPV in favour of the signing authority (who signs all documents related to the demonstration of commitment, including this DPR) should be furnished.
2. All financials presented in this DPR should be quoted in INR using a conversion rate of INR 62.17 for 1 USD. However all costs/capex which are to be incurred in USD, should also be specified in USD.
3. All pages of the DPR should be initialled by the signing authority of the applicant.
4. The Department of Electronics and Information Technology reserves all rights to check the veracity of the supporting documents. This includes the right to call for original documents at any point in the appraisal process.
5. DeitY also reserves the right to ask for clarifications and/or additional documents/information providing of which within the specified timelines would be binding on the applicants.
6. All data points used in the DPR should be supported by reliable sources (cited in footnotes on same page) and copies of the relevant source page be appended to the document.
7. All assumptions used in the document should be supported by detailed justification and source for data as applicable.
8. As the submission is covered under the NDA signed between the applicant parties and DeitY, and therefore confidentiality may not be cited as the reason for withholding any information required. If so felt required, confidential information may be enclosed as a separate document and marked as such which would be handled with additional care (with proper referencing to the relevant section of the DPR).

1. Background and Broad Project Rationale

Suggested Page Length: 5 pages

- 1) Provide details of the project, including:
 - a) High level capital outlay
 - b) Technology proposed
 - c) Product lines proposed
 - d) Market segment proposed to be addressed.
- 2) Write up on how the proposed project will enhance the electronics manufacturing ecosystem in India.
- 3) Stakeholder Analysis (including partners, investors, GoI, strategic sectors for India, semiconductor ecosystem, customers, suppliers and affected population).
- 4) Plan for CSR, relief and rehabilitation of affected population.
- 5) Plan for compliance to good governance and ethical corporate practices (*this section has to be accompanied with an undertaking by the authorized signatory of the SPV to comply with the mentioned plan and other good governance and ethical practices in the operations and execution of the proposed project*).

2. Investment Outlay

Suggested Page Length: As required

2.1 Cost of Project and Means of Financing

- 1) Capital Outlay, Proposed Means of Financing and Capital Phasing
- 2) Assumptions for Financial Modelling (with summary justification and basis)
- 3) Details of equity already injected in project SPV (Supporting document to be provided in the form of auditor's certificate and/or RoC filing) including breakup by source
- 4) Details of Debt structure proposed (Supporting documents in form of In-principle approval letters from lenders) including breakup by source
- 5) Growth Capex plan and phasing (with justification and basis).

For the purposes of this DPR the following definition of capex and growth capex shall apply:

Capex: *Any and all investment (which is allowed to be capitalized as per Indian Accounting Standards) which has been incurred prior to declaration of Commercial Operation Date (for each phase individually).*

Growth Capex: *Any and all investment, including maintenance capex (which is allowed to be capitalized as per Indian Accounting Standards) which has been incurred subsequent to declaration of Commercial Operation Date (for each phase individually).*

Additionally for the purposes of this DPR appraisal, Total Project Cost (TPC) shall be defined as Capex + Growth Capex (for life of project, i.e. 25 years from CoD of phase I).

2.2 Bill of Materials/ Capex Details

Details of Capex (as admissible under M-SIPS) should be provided (with justification) under the following heads (sub-heads, as applicable to also be provided):

- a) Land and building (civil construction and land development costs) required for the project
- b) Plant, machinery and equipment, including cost of:
 - i) Erection and commissioning

- ii) Tools, dies, moulds, jigs, fixtures, and parts
- iii) Accessories
- iv) Components
- v) Spares
- c) Expenditure on leasing or hire and purchase of plant, machinery and equipment
- d) Expenditure on in-house and captive Research and Development including:
 - i) Software costs and software license fees
 - ii) Purchase of technology, IPRs, patents, copyrights etc.
- e) Utility machines
- f) Expenditure on captive power plant (if set-up exclusively to support the FAB)

For the purposes of BoM/ Capex details, equipment/item wise costing should be provided under the above broad heads and the following supporting document guidelines shall apply:

- a) For all item/equipment with unit cost over USD 10,000 or total cost of over 1% of TPC (as defined above), quotation to be provided.
- b) For all item/equipment with unit cost over USD 1 Million or total cost over 5% of TPC, at least 3 quotations to be provided.

If the requisite number of quotations for any item (as defined above) is not available, a detailed item-wise justification should be provided.

For intangible goods (such as Intellectual Property), Valuation Reports can be provided instead of Quotations.

2.3. Technology Fee Details:

The technology fee proposed (including any other payments, such as Royalty, Engineering Services Fees etc. to be made to other members of the consortia, as represented in various communications to GoI so far) should be accompanied with documentary evidence to justify the same (E.g. Agreement of previous transaction for transfer of similar/comparable technology to FABs in the recent past). This should additionally be accompanied with the following:

- a) Valuation reports of Intellectual Property proposed to be transferred

- b) Note on cost of manpower required for technology transfer (in sync with technology transfer plan)
- c) Justification of any other cost heads which are payable to either partners

3. Project Execution Strategy

Suggested Page Length: 5 pages

- 1) Institutional Framework (including details of vendors/contractors/partners identified for major activities) for project design, development and construction
- 2) Infrastructure details and strategy for securing/ implementing the same:
 - a) Land
 - b) Power
 - c) Water
 - d) Sewage disposal
 - e) Effluent Treatment Plant
- 3) Packaging, procurement and contracting strategy and framework
- 4) Project management framework and philosophy
- 5) Cost & Time overrun contingency measures and strategy

4. Technology Details

Suggested Page Length: 5 pages

- 1) Details of IP Ownership: List of Intellectual Property proposed to be transferred to the project SPV (from each technology partner) and documentary evidence of current ownership of the same.
- 2) Details of Technology Provider/s
- 3) IP Status of Technology Being Proposed
- 4) Valuation of Technology and IP (Along with Valuation Reports)
- 5) Technology Transfer Agreement (Final, non-conditional agreement, including performance guarantee clauses as deemed appropriate)
 - a) IP transfer
 - b) Knowledge Transfer mechanism (detailed note)
 - c) Capacity development mechanism
 - d) Details of process and product technology proposed (with detailed notes on each)
- 6) Sources of Product Design proposed
- 7) R&D Plan and Details (with note on IP proposed to be generated)
- 8) Detailed Technology Transfer Plan (Supported by technology transfer agreement as above), including personnel exchange/deputation, facilities and equipment sharing etc.

Technological Details should be supported by documents where necessary (Example: Documentary evidence of IP ownership, Technology Transfer Completeness, documentary evidence of similar transactions in the past etc.). A provision to assess the technology providers' facilities via site visits may also be incorporated.

5. Project Financials

Suggested Page Length: 5 pages

- 1) Financial Structuring
 - a) Debt Equity Ratio (including details of various sources of equity, sources of debt and other funds and sequencing of the same)
 - b) Treatment of incentives approved
 - c) Drawdown requirements including split by source
 - d) Loan schedule and DSCR analysis
- 2) Loan Ageing
- 3) Financial Indicators (NPV, EIRR, PIRR, DSCR, PAT, PBT, Breakeven period by Cash and EBITDA)
- 4) Financial Structuring including the Incentives as approved by GoI
- 5) Major Investments and Fund Raisings Planned (With supporting documents for funds required to be shown for demonstration of commitment)
- 6) Project Cash flow analysis
- 7) Taxation schedule (in line with applicable laws and standards)

The applicants are required to include a soft copy (editable excel file) of the financial model along with the DPR and an undertaking that the same is correct and in line with accounting standards, company law and taxation laws in India.

6. Implementation Details

Suggested Page Length: 5 pages

- 1) Project Phasing (Quarterly activity plan supported by detailed Gantt Charts) including major milestones
- 2) Project O&M Planning (including growth capex plans and assumptions)
- 3) Key Activities by quarter
- 4) Organization Structure proposed (with details of management team and role of partners) upto three levels (starting with CEO). Also append the profiles of the personnel proposed as well as the roles and responsibilities of each.
- 5) Procurement Details (including phasing, timing and sequencing, apart from overall procurement strategy)
- 6) Services and Service Levels proposed with implementation partners and contractors/ vendors
- 7) Outsourcing and Contractor details and scope of work envisaged
- 8) Details of permissions, clearances and fulfilment of other statutory requirements for the projects, accompanied by a detailed note on plans for fulfilment of each

7. Risk Impact Analysis

Suggested Page Length: 5 pages

- 1) Project Financial Viability and Going Concern viability analysis and details
- 2) Business Sustainability Plan
- 3) Risk Analysis (financial and business), along with financial impact estimation for top 10 risk factors (upside and downside)
- 4) Risk Mitigation Plan including costs associated with the individual plans
- 5) Detailed estimation of risk due to cost or time overruns and mitigation plans for the same
- 6) Mitigation plan for Forex exposure risk
- 7) Technology obsolescence risk assessment and mitigation plan

8. Business Case

Suggested Page Length: 5 pages

- 1) Production Plan (with justification)
- 2) Marketing Plan (Tie ups and Strategies)
- 3) Product Strategy (technology and demand analysis)
- 4) Market Feasibility Analysis (especially Strategic Sectors), including marketing mix proposed (split by domestic and export) and assessment of India market (government and private procurement)
- 5) Analysis with respect to strategic sector requirement
 - a) Aerospace
 - i) Product lines and applications proposed which may be useful in the sector
 - ii) Relevant R&D proposed
 - iii) Process technology proposed which may be relevant to the sector
 - b) Defence (including weapon systems)
 - i) Product lines and applications proposed which may be useful in the sector
 - ii) Relevant R&D proposed
 - iii) Process technology proposed which may be relevant to the sector
 - c) Atomic Energy
 - i) Product lines and applications proposed which may be useful in the sector
 - ii) Relevant R&D proposed
 - iii) Process technology proposed which may be relevant to the sector
 - d) Proposed protocol for participation in the proposed “Trusted Supply Chain for Microelectronics” of which the proposed FAB would be a part of
 - i) Proposed mechanism for development of a “Trusted” mechanism
 - ii) Proposed plan for development of an end-to-end ecosystem
- 6) Plan to develop and partner with upstream and downstream industries in India
- 7) Project Benefits Assessment:
 - a) Social Benefits (Appropriate Calculations including employment direct and indirect, GDP Multiplier etc.)
 - b) Cost Benefit Assessment

9. Plant Infrastructure Details

Suggested Page Length: 5 pages

- 1) Analysis including availability, requirement, gap analysis and mitigation plan for the following:
 - a) Water Supply
 - b) Power Supply
 - c) Sewerage
 - d) Solid Waste Management
 - e) Effluent Treatment Plant
 - f) Plant Safety Management, specially precautions against leakage of noxious gases
 - g) Drainage systems
 - h) Roads/Urban Transportation
 - i) Social Infrastructure
 - j) Logistics (Warehouse etc.)
 - k) Assembly Line Workflow

10. Environmental Impact Assessment

Suggested Page Length: 5 pages

- 1) Legal Framework and Standards
 - a) Statement of Need
 - b) Project Location and Scale
 - c) Project and Activity Descriptions
 - d) Project Status and Schedule
- 2) Environment, Impacts, Mitigation, Monitoring, and Risk Assessment
 - a) Environmental Components
 - i) Description of the Environment
 - ii) Environmental Impact Prediction and Evaluation
 - iii) Mitigation Measures
 - iv) Monitoring Program
 - b) Impacts, Mitigation, and Monitoring Summary
 - i) Mitigated Impacts
 - ii) Residual Impacts
 - c) Risk Assessments
 - i) Hazards and Effects Register
 - ii) Control of Major Accident Hazards Report
 - d) Environmental Management Framework
 - i) Environmental Management Program Objectives
 - ii) Roles and Responsibilities
 - iii) Training and Competence
 - iv) Communication
 - v) Monitoring and Reporting
 - vi) Audit and Inspection
- 3) Project Alternatives
- 4) Statement of Commitments

11. Details of Project SPV and Partners in the SPV

Suggested Page Length: as required

- 1) The following details (supported by relevant documents) should be furnished with respect to the Special Purpose Vehicle (SPV) to execute the project
 - a) Registration details with RoC, details of registered office and corporate office etc.
 - b) Registration with various tax authorities (Service Tax, PAN, Sales Tax etc.)
 - c) Memorandum of Association
 - d) Articles of Association
 - e) Constitution of the Board of Directors (including brief bios of each director, the roles envisaged for each of them, sitting fee proposed for each and letter of acceptance from each director) and details of related party directors (executive directors, and family members/ relatives/ nominees of the promoter group)
 - f) Details of authorized capital and paid up capital (supported with auditor certificates)
 - g) Details of bank accounts maintained for the company
 - h) Remuneration details for top management
- 2) The following details (supported by relevant documents) should be furnished for all partners holding equity stake in the SPV (including members of consortium proposed thus far in all communication to GoI)
 - a) Registration details with relevant authority in country of registration, details of registered office and corporate offices
 - b) Details of related party firms in business in India
- 3) Detailed notes on the proposed role of each partner in the project (supported by legal, binding agreements including performance guarantee clauses and fee arrangements)
- 4) Technology fee arrangements to be supported with detailed justification
 - a) Valuation report for IP
 - b) Effort estimation basis manpower commitment
 - c) Documents demonstrating fee for similar projects in the past (justifying fee levels)

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Appraisal Parameters for Detailed Project Report

- 1) Review of the overall contents of the DPR and map completeness with regard to the DPR template/format circulated.
- 2) Detailed review of all technical, financial and infrastructural details furnished in the DPR, including but not limited to:
 - a) Comparison of costs against global benchmarks for similar projects/ components/ equipment and tools.
 - b) Defining of applicable capex for M-SIPS.
 - c) Verification of credentials of the vendors/contractors/partners proposed.
 - d) Review of project plans for suitability and completeness.
 - e) Suitability of location proposed including seismic zone consideration.
- 3) Assessment of appropriateness of procurement, contracting and execution strategy proposed, with a special reference to cost effectiveness.
- 4) Due diligence of the IP proposed to be sourced from consortia partners and others.
- 5) Due diligence of the proposed Capex eligible for incentives as approved for the project.
- 6) Project viability in terms of NPV and EIRR.
- 7) Review of the appropriateness of funding structure and sources of funding.
- 8) Plan for environmental compliances.
- 9) Detailed legal and tax review of various aspects of the DPR.
- 10) Review of business plan (including marketing tie ups/plans) and comparison against consultant's view of global markets.
- 11) Capability of the project to meet strategic objectives of the GoI.
- 12) Framework for penalties for non-compliance with respect to milestones. (based on industry norms)

