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Subject: TRAI Consultation Paper - Promoting NATEM in India

Dear Sir

After perusing the consultation Paper on promoting NATEM in India, I suggest a strong institutional framework for attaining the objective of net zero imports and promote local base for promoting NATEM in India.

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Promoting Networking and Telecom Equipment Manufacturing in India

India is the world's second-largest telecommunications market and has registered strong growth in the last decade. Salient milestones are:

- The country has mobile subscriber base of around 1.16 billion as of November 2021 which is expected to touch 1.42 billion by 2024.
- The number of broadband subscriber base has increased to 801.6 million³ in November 2021 which is expected to touch 900 million by 2025.
- India's data consumption is around 12 GB per Month/user and is likely to touch 25GB5 per Month/User by 2025.

Telecommunication industry is enabled by a complex value chain that includes service providers, equipment vendors and users. As the world gets more and more technologically advanced, most of the emerging technologies would ride on the telecom networks leading to tremendous market opportunities in the sector. The unprecedented growth and rapid digitization in the sector have become the key factors to drive growth of the networking and telecom equipment (NATE) market.

The huge exponentially increasing market, propelled by the emerging 5G technology, provides tremendous opportunities for equipment manufacturers to grow into a potent player in the telecom universe. It becomes necessary for a country to have an agile manufacturing setup for NATE so that value addition to the economy can be maximized.

The NATEM market may be subdivided into finished goods, sub-assemblies, and components on one hand and supporting software on the other. The components manufacturing in India is comparatively nascent. The localization at the component level is much lower when compared to sub-assembly level. The components such as chipsets, PCBs etc are not manufactured in India. Such components are being imported presently to locally manufacture the finished product in India. The import of telecom products includes the import of Integrated Circuits (ICs) and discrete electronic components. The fabrication of ICs involves huge capital investments, so components are being imported due to the inability of domestic production to meet manufacturers' requirements.

Semiconductors will be key to the Fourth Industrial Revolution, with 5G, AI and Edge computing transforming and revolutionizing every aspect of our lives. The market is thriving in countries like the USA, China, Taiwan, South Korea, and Japan. The production of Semiconductors consists of three relatively distinct steps: chip design (fables), fabrication (Foundry, IDM¹²) and assembly and test (ATM/OSAT¹³). The strongly interdependent and complex set up of such a market structure creates challenges in terms of ensuring equitable access to all foreign players thereby preventing restrictive powers in the hands of select few countries. The Covid pandemic has made many global giants re-evaluate their manufacturing strategy and they are actively looking for countries like India to spread their risks.

Through the Production Linked Incentive scheme for semiconductor manufacturing aiming to minimize the import of ICs and discrete electronic components, the government has invited world leaders in manufacturing of ICs and discrete electronic components and offered fiscal support/ incentives for establishing their units for designing and fabrication of ICs in India. A significant incentivization has been offered to the technology companies to build these components locally, rather than importing and assembling them domestically. This will strengthen the electronics manufacturing ecosystem and establish a trusted value chain. The

growth of the domestic Networking and Telecom Equipment manufacturing (hereinafter referred as NATEM) would create various forward and backward linkages and expand demand for other electronic components and align with Government of India's vision of an Atmanirbhar-Bharat.

Recommendations of TRAI

- The 2011 Recommendations focused primarily on Telecom and network equipment Manufacturing Policy as an integral part of the New Telecom policy. It emphasized the need to reduce the share of imports or Low Value-Added Products in total equipment manufacturing. It also specified fiscal incentives to help the domestic equipment manufacturers. Authority had recommended limiting Excise Duty and VAT on domestic manufactured products. The need to provide tax deferment to new players and tax holiday window for domestic manufacturing was emphasised.
- The Recommendations strongly focused on creation of funds to cater to the requirement of local players and upcoming entrepreneurs. TRAI stated that 'TRDC should set up Telecom Research and Development Fund (TRDF) with a corpus of Rs 10,000 crore which should be invested in secure deposits and bonds and the interest accruals should be used for financing R&D projects.'
- The Recommendations cited the need to create a Telecom Manufacturing Fund (TMF) for providing venture capital to indigenous manufacturing and formation of a Telecom Research and Development Corporation (TRDC).
- The Authority has also recommended identification of ten telecom manufacturing clusters to promote the TEM and stated that 'A Telecom Research and Development Park should be established with the purpose of facilitating research, innovation, IPR creation and commercialisation for fast and sustainable growth of the telecom industry.'
- In 2018, the Authority, extending over its 2011 Recommendations, further recommended that 'India should aim to achieve the objective of 'net zero imports of telecommunication equipment' by 2022.' The Recommendations also touched upon the need for local telecom development clusters. It stated that "Telecom Product Development Clusters (TPDC) within the Electronic Manufacturing Clusters (EMC) should be established. The Government should extend suitable incentives to the TPDCs so as to attract talent and investments into these clusters.

Need for present consultation

Department of Telecom (DoT) vide letter dated 08th October 2020, has intimated that most of the TRAI's recommendations dated 03.08.2018 have been considered by the government and has sought further details on certain recommendations such as financing options to telecom operators, incentives to telecom service providers for deployment beyond the quantities mandated in PMA, and creation of a portal for Standard Essential Patents (SEP).

The Consultation paper intends to take views of stakeholders on existing concerns in NATEM. The growth of the domestic NATEM industry depends a lot on R&D activities. The investment

in such activities is mandatory to fulfil the dream of a self-reliant India, boost economy, and make India a global R&D hub for the world. Since financial incentives and fiscal/non-fiscal incentives for broadcasting equipment will also be similar to those that will be offered for NATE, for the sake of this paper it is clarified that use of the term “networking and telecom equipment” will also include equipment related to broadcasting and satellite communication.

Institutional Framework for attaining the objectives of Network and Telecom Equipment Manufacturing (NATEM) in India – Suggestion

As outlined in the Consultation Paper, the need for Consultation with stakeholders has arise due to following issues:

- (i) Department of Telecom (DoT) vide letter dated 08th October 2020, has intimated that most of the TRAI’s recommendations dated 03.08.2018 have been considered by the government and *has sought further details on certain recommendations such as financing options to telecom operators, incentives to telecom service providers for deployment beyond the quantities mandated in PMA, and creation of a portal for Standard Essential Patents (SEP).*
- (ii) The Consultation paper intends to take views of stakeholders on existing concerns in NATEM. The growth of the domestic NATEM industry depends a lot on R&D activities. The investment in such activities is mandatory to fulfil the dream of a self-reliant India, boost economy, and make India a global R&D hub for the world. Since financial incentives and fiscal/non-fiscal incentives for broadcasting equipment will also be similar to those that will be offered for NATE, for the sake of this paper it is clarified that use of the term “networking and telecom equipment” will also include equipment related to broadcasting and satellite communication.

After going through the whole gamut of issues, it is felt that a strong institutional framework need to be put in place for focused direction on policy initiatives by the Government, coordination among all the agencies working in the area and onboard even the private sector companies, industry associations like NASSCOM/CII/FICCI/ASSOCHAM.

For a strong institutional framework, it is suggested that steps need to be taken to set up “**Telecom Research and Development Corporation**” as suggested in the Paper. The Corporation can either be created by an Act of Parliament like Commodity Boards or a Trust facilitated by the Ministry of Electronics and Information Technology (MeitY) with TRAI as Settlor.

The objectives of setting up of the Corporation may be outlined as under:

- (i) Net zero imports of telecommunication equipment by a mutually agreed time-frame.
- (ii) Effective steps like creation of Telecom Manufacturing clusters within the Electronic Manufacturing Clusters (EMC), Telcom R&D Park with the objective of facilitating Research, innovation, IPR creation and commercialization for fast and sustainable growth of Telecom industry.
- (iii) A corpus of Rs.10,000 crore as suggested in the Paper or more need to be earmarked which can be parked in Public Accounts of GOI offering 8% interest as applicable to small deposits like PPF. The interest accrual of Rs.800 crore on a corpus of Rs.10,000 crore may be utilised for R&D projects of the Telecom Sector.

- (iv) Like Commodity Boards, IT and other tax exemptions may be extended to the Corporation for flexibility in its working.
- (v) All GOI's policy initiatives like PLI Scheme for large scale Electronics manufacturing, IT hardware, Semiconductors and Display System, National Policy on Software Products, Preferential Market Access Scheme, National Digital Communications Policy, National Policy on Electronics, Electronic System Design and Manufacturing (ESDM) may be studied by the Corporation and appropriate initiatives may be taken to implement those policies towards attainment of the objective of net zero imports.
- (vi) For creation of "Telecom Product Development Clusters (TPDC) within the Electronic Manufacturing Clusters (EMC)", financing options like Rural Infrastructure Development of NABARD and SIDBI Cluster Development Fund (SCDF) which are very concessional carrying 2.75% ROI as at present may be used.
- (vii) Electronic Development Fund (EDF) is already in place to participate in "Daughter Funds" for risk capital to start ups in ESDM and IT.
- (viii) A part of the interest accrual on the corpus of the suggested TRDC may also be used as venture capital Fund for promoting start-up eco-system.
- (ix) Specific Schemes for supporting MSME enterprises and being operationalised through SIDBI like SMILE, ARISE, UBHARTE SITARE, Covid 19 Special Relief Package and others.
- (x) For offering advice to GOI for creating a conducive and appropriate ecosystem relating to tax deferment, tax holidays and similar other incentives for the sector.

TRDC may be operationalized by Board of Directors consisting of representatives:

- (i) TRAI
- (ii) Ministry of Electronics and Information Technology (MeitY), GOI
- (iii) National Association of Software and Service Companies (NASSCOM)
- (iv) Industry Associations like CII/FICCI/ASSOCHAM
- (v) SIDBI/NABARD
- (vi) Ministry of MSME, GOI

Chairman, TRAI may be the ex-officio Chairman of TRDC.

A High Powered Committee (HPC) with wider representation from all the stakeholders may be constituted to deliberate, review and suggest policy initiatives which may be considered appropriate towards attaining the objectives.

All the stakeholders may become members of TRDC