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**For Immediate release**

**Telecom Regulatory Authority of India**

**TRAI releases recommendations on ‘Promoting Networking and Telecom Equipment Manufacturing in India’**

**New Delhi, 22<sup>nd</sup> September 2023** – Telecom Regulatory Authority of India (TRAI) has issued its recommendations today on **‘Promoting Networking and Telecom Equipment Manufacturing in India’**.

Under *Digital India* program, electronics manufacturing is one of the key thrust areas. Further, *National Digital Communications Policy* 2018 (NDCP-2108) envisages to maximise India’s contributions to Global Value Chains, by focussing on domestic production, increasing exports and reducing the import burden in respect of networking and telecommunications equipment, called as NATE in short. Given fast-paced roll-out of advanced communications technologies as well as likely proliferation of data centres, edge data centres, IoT-based networks in Smart cities, the scope of indigenous equipment manufacturing has adopted the contemporary outlook.

2. In accordance with the objectives of NDCP-2018 and basis reference received from Department of Telecommunications (DoT) on certain aspects of manufacturing of NATE, Telecom Regulatory Authority of India (TRAI) has visited the topic in totality and has issued the recommendations on “Promoting Networking and Telecom Equipment Manufacturing (NATEM) in India”. Before issuing these recommendations, TRAI has done extensive consultation with stakeholders including Manufacturers, Service Providers, and Government departments/agencies involved.

3. The objective of these recommendations is to move forward from the concept of ‘increasing domestic production’ and to focus on *‘local value addition in global value chains’*. Some of the main focus areas covered in the recommendations include:

- (i) facilitate local value addition in participation with cross-country value chains;

- (ii) due emphasis on “Telecom software” as a separate product line in accordance with contemporary softwarization of network elements in New Generation Networks;
- (iii) facilitating exports from India
- (iv) nurturing entrepreneurship by promoting Micro, Small and Medium Enterprises (MSMEs) and Start-ups.
- (v) promote a robust component eco system in India

4. In context of PLI Scheme, TRAI has recommended that there should be a concurrent PLI-Scheme focussing over components and sub-assembly manufacturing to facilitate collaborated manufacturing activities. Further, the Scheme’s should imbibe local value addition norms in its future-format and higher incentives proportionate to value-addition should be available. The applicable thresholds relating to turnover and committed investment by a PLI-beneficiary should apply differentially in accordance with type of NATE products to make the Scheme more inclusive.

5. In respect of Preferential Market Access (PMA), TRAI has advocated a nudge approach and has recommended that telecom service providers (TSPs) should be provided with reduction in Applicable Gross Revenues against the volume of indigenous NATE procured in the respective networks. It shall widen market access for indigenous manufacturers. Besides, the recommendations have been made to enhance transparency in public procurement, check on deviations and time-bound grievance handling.

6. Keeping in view, various relative cost disability faced by the industry, it is recommended that a dedicated master fund, NATEDF - Networking and Telecommunications Equipment Development fund on the lines of Electronics Development Fund (EDF) should be established. It shall cater to financing requirements of the industry players including venture capital funding, interest subvention and financial assistance to Micro, Small & Medium Enterprises (MSMEs) to bridge current gaps.

7. TRAI has also recommended specific provision to extend financial support to the industry towards procurement of fixed assets, plant & machinery, for new production units or capacity augmentation of the existing units. To spur innovation, lower corporate income tax is also recommended to encourage industry’s drive towards beneficially owned resident Intellectual Property Rights (IPRs). This would apply if the

enterprise is continuously engaged in R&D driven manufacturing and attains half of its turnover based on IPRs owned. Further NATEDF should provide for venture capital funding in Public-Private Partnership mode to promising Start-ups in need of Accelerator support. Start-ups & MSEs should be provided with opportunities towards standard setting processes and reaching out to potential markets drawing support from Market Access Initiative (MAI). NATEDF should be used to provide pre-shipment and post-shipment credit facilities as well.

8. Due emphasis on optimal use of resources has been given, therefore, it is recommended that Telecom Products Development Clusters (TPDCs) should be established within the approved Electronics Manufacturing Clusters (EMCs) or nearby with host of common facilities.

9. To facilitate trade, the recommendations have been made to resolve identified issues and by extending benefits of the Advance Authorization and EPCG schemes for the exporter-manufacturers of NATE and Common Facility Centres in EPCs. Institutional authority to certify 'origin' of NATE products manufactured in India has been also recommended.

10. To leverage upon open-architecture of New Generation Networks, it is recommended to identify telecom software as an independent functional deliverable. Further, it is suggested to adopt policies that enable valuation of intangible assets such as software and open-up new financing options recognising IPRs already valued as collateral.

11. The salient features of the recommendations are placed as **Annexure**. The full recommendations have been placed on TRAI's website [www.trai.gov.in](http://www.trai.gov.in).

12. For any clarification/information, Shri Sanjeev Kumar Sharma, Advisor (Broadband and Policy Analysis) TRAI may be contacted at Tel. No. +91-11-23236119.

  
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Secretary, TRAI

**Salient points of TRAI's recommendation on Promoting Networking and Telecom Equipment Manufacturing in India**

**1) Production Linked Incentive (PLI) Scheme**

- a) In context of PLI Scheme, it is recommended that the Scheme should imbibe local value addition norms in its future-format and higher incentives proportionate to value-addition should be available.
- b) Further, there should be a concurrent PLI-Scheme focussing over components and sub-assembly manufacturing to facilitate collaborated manufacturing activities on the lines of Component Champion Incentive Scheme to boost domestic manufacturing of Advanced Automotive Technology (AAT) products. A detail product list that can be made part of the concurrent PLI Scheme has also been recommended. Basic eligibility, minimum new domestic investment criteria and the incentive-structure to be adopted for concurrent PLI Scheme has also been recommended.
- c) Under the Design-led PLI Scheme, in addition to already announced 1% additional benefit, another slab of additional 2% benefit be introduced for such product lines that yield minimum local value-addition of 75% wherein the components (other than semiconductor components and Bare PCBs of more than 8 layers) by value terms, used in the manufacturing of the specific end products must be manufactured in India.
- d) Since some of the product categories like customer premises, IOTs, sensors and enterprise segment equipment may not require large manufacturing facilities, it has been recommended that applicable thresholds relating to turnover and committed investment by a PLI-beneficiary should apply differentially in accordance with type of NATE products to make the Scheme more inclusive. Accordingly, different slabs have been recommended.

## **2) Preferential Market Access (PMA)**

- a) It has been recommended that Government should follow a nudge approach and Telecom Service Providers (TSPs) should be incentivised to deploy indigenously manufactured equipment by reducing their Applicable Gross Revenues on annual net basis, by an amount equivalent to the aggregate certified value of indigenous NATE deployed in respective telecom networks during a financial year. This shall widen market access for indigenous manufacturers.
- b) To further widen this access, it has been recommended that PMA/PMI should apply to all public procurements funded fully or partially by the Central Government under (a) USOF projects, (b) Participating State Government & bodies under their respective control, and (c) External Development projects aided by India.
- c) Certain measures have been suggested to enhance transparency in public procurement, check on deviations, online portal for mapping standard operating process for handling PMA/PMI related grievance and time-bound grievance handling.

## **3) Catering to Financing requirements**

- a) Keeping in view, various relative cost disability faced by the industry, it has been recommended that a dedicated master fund, NATEDF - Networking and Telecommunications Equipment Development fund on the lines of Electronics Development Fund (EDF) should be established. NATEDF should be managed and administered by a subsidiary of a bank. It shall cater to financing requirements of the industry players including venture capital funding, interest subvention and financial assistance to Micro, Small & Medium Enterprises (MSMEs) to bridge current gaps.
- b) On the lines of Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS), a new scheme with specific provision to extend financial support to the industry towards procurement of fixed assets, plant & machinery,

for new production units or capacity augmentation of the existing units has also been recommended. The salient features of recommended scheme include extending one-time support up to 25 % of the overall Capital expenses towards establishment of 'Plant & Machinery' for undertaking domestic production of telecom & networking equipment/ components. Slab-wise thresholds depending upon the type of manufacturing entity to avail scheme benefits have been recommended. In line with the central theme of maximizing local value addition, it has been recommended that the priority-list for selection of eligible applications should be based on entity's self-declaration regarding estimated increase in value-addition within its scope of manufacturing activities. To ensure that the entire scheme's budget outgo is not cornered by few big NATE manufacturers, it has been recommended that at least one-fourth of the scheme outgo should be to support applicant-beneficiaries that are drawn from such MSME entities where eligible planned investment during the entire tenure of the Scheme does not exceed Rs. 50 Crore.

#### **4) Tax relief as part of Fiscal incentives**

- a) To spur innovation and to encourage industry's drive towards beneficially owned resident Intellectual Property Rights (IPRs), lower corporate income tax has also been recommended. This would apply if the enterprise is continuously engaged in R&D driven manufacturing and attains half of its turnover based on IPRs owned. The objective, conditions and benefits of this scheme have been provided in detail as part of the recommendations.

#### **5) Promoting Entrepreneurship – Startups and MSEs**

- a) It has been recommended that NATEDF should provide for venture capital funding in Public-Private Partnership mode to promising Start-ups in need of Accelerator support. For the same, at least 15 % of NATEDF's total pool of Rs 10,000 crores should be earmarked

as Committed Public fund for Daughter fund(s) for innovation practice. The Target Corpus, in Public Private Partnership ratio of 1:1, should be kept around Rs. 3,000 Crore. Only Securities & Exchange Board of India (SEBI) registered Venture Capital fund should be entitled to participate. Venture Capital, both in equity and soft loan mode should be made available to an eligible Start-up, subject to maximum of Rs. 20 Crore during its entire innovation cycle.

- b) DoT should completely exempt MSE/Start-ups from paying renewal fees under Voluntary Certification Scheme.
- c) DCIS sponsored Ignition Grants for project-support should be enhanced from current cap of Rs. 40 Lakh per to Rs. 1 Crore for an eligible beneficiary.
- d) MSEs/ Start-ups should be provided with full reimbursement of membership fees towards Telecom Standards Development Organisation (TSDO) and others. Participating MSEs/Start-ups in standard setting forum, convened by relevant national Standard Setting Organisations (SSO) or international SSOs, should be provided appropriate support including financial assistance against actual expenses. The fund-support of about Rs. 50 Crore and Rs. 100 Crore should be earmarked for reimbursement of membership fees and participation expenses respectively, to be administered by Telecom Standards Development Society, India (TSDSI) through an online portal. TSDSI should facilitate participating MSEs/ Start-ups by providing an online portal where all eligible reimbursements are to be settled within 90 days once submitted through the portal.
- e) It has also been recommended that a dedicated Daughter fund for Interest Rate Subvention under NATEDF should be constituted. The maximum of subvention should be kept as 4 % in case of MSMEs for a tenure of 05 years. The maximum lending at reduced rates for Plant & Machinery should be capped to Rs. 25 Crore per entity.

- f) Start-ups & MSEs should be provided with opportunities towards standard setting processes and reaching out to potential markets drawing support from Market Access Initiative (MAI).
- g) To orient the students and make them aware towards various opportunities extended by Central/State Government & Industry in NATEM sector and for promoting entrepreneurs, it has been recommended that DoT should take-up with All India Council of Technical Education (AICTE) to introduce an elementary compulsory course (of minor-credit value) for final-year curriculum of graduating courses in technological fields. The course should cover information on such policies as well as on schemes to support Start-ups eco-system. Content support for the recommended course should be extended by Telecom Centres of Excellence (TCoEs)

#### **6) Telecom Products Development Clusters (TPDCs)**

- a) Due emphasis on optimal use of resources has been given, therefore, it is recommended that Telecom Products Development Clusters (TPDCs) should be established within the approved Electronics Manufacturing Clusters (EMCs) or nearby with host of common facilities.
- b) The facilities extended in any given EMC should be extended to the corresponding TPDC on mutatis mutandis basis. In addition, following benefits should also be extended to TPDCs:
- Provision of Power and water at reduced rates
  - Waiver of Electricity Duty
  - Reimbursement of stamp duty, conversion fee, transfer duty and registration fee
  - Providing free Right of Way for Telecom Service/Infrastructure including Indoor Building Solutions (IBS)
  - Time-bound single window clearance for Central and State level compliances



- State of the art testing labs with plug-n-play facilities and infra-support for R&D centre.

## **7) Support required for exporters of indigenous equipment**

- a) To facilitate trade, the recommendations have been made to resolve identified issues and by extending benefits of the Advance Authorization and EPCG schemes for the exporter-manufacturers of NATE and Common Facility Centres in EPCs. An enterprise engaged in manufacturing of NATE products and has met export volume of US \$ 15 million should be granted Self Ratification benefit under Advanced Authorisation Scheme (AAS) on deemed basis.
- b) Institutional authority to certify 'origin' of NATE products manufactured in India has been also recommended. DoT should notify Telecom Engineering Centre (TEC) as authority for certifying 'origin' (preferential and non-preferential) of domestic NATE products meant for exports, at the earliest.
- c) Pre-shipment and post-shipment credit facilities through NATEDF has also been recommended.

## **8) Trade facilitating measures affecting sectoral competitiveness**

- a) DoT should take-up, the need for adopting 12-digit HS Code across all sectors, with the Ministry of Commerce and DGFT.
- b) Automation tools based on Artificial Intelligence & Machine Language (AI/ML) should be developed to facilitate faster and more accurate procedural controls to serve end-to-end shipments.
- c) Centralised portal for filing online Grievances against mis-declaration of HS Code should be made available to trade community on immediate basis. This portal should facilitate online handling of grievances by making access available to the relevant Ministries so that appropriate remedial actions be decided and enforced.

- d) DoT should constitute a committee including representatives from M/o Commerce, DGFT for periodic update of HS Codes/ National Tariff Lines that have relevance to NATE.
- e) DoT should constitute a committee to identify industrial inputs (raw materials, components and industrial consumables) which are not sufficiently available in the domestic market and recommend rational duties to sustain domestic NATE manufacturing. This Committee should also identify industrial finished supplies which are sufficiently available in the domestic market and recommend duties including safeguard provisions to counter trade anomalies.

**9) Treating 'Telecom Software' as a separate product category**

- a) To leverage upon open-architecture of New Generation Networks, it is recommended to identify telecom software as an independent functional deliverable.
- b) A dedicated fund, Telecom Software Development Fund with initial committed corpus of Rs. 1000 Crore should be established under Public Private Partnership mode with Target corpus of minimum Rs. 3000 Crore by seeking participation from SEBI registered Venture Capital Funds.
- c) Appropriate policy, in consultation with Department of Financial Services, should be adopted to promote the use of beneficially owned intangible assets such as Telecom software and related IPRs as collateral to secure financial support from the nationalized banks/financial institution against capital requirements of enterprises. Software valuation norms based on residing Intellectual Property Rights (IPRs) should also be specified on priority so as to facilitate funding/ credit facility.
- d) TEC should be tasked to finalize testing/certification norms for Telecom software products for publications at the earliest and facilities for the same be established/earmarked.
- e) DoT notified list of eligible telecom products under PPP-MII Order should be appropriately extended to include relevant telecom

software on the lines of entries in Table-A & C against SDN Software controllers, NVF and CNF Software.

- f) Commercially accepted telecom software products should be brought in scope of DoT notified design-led PLI Scheme, where local content, as per invoice value, is not below 50%. Priority may be given to provider of telecom software with higher local content (if it becomes necessary while selecting beneficiaries).
- g) The scope of Digital Communication Innovation Square(DCIS) Scheme should be modified to include Telecom software as independent deliverable. Fund for DCIS's remaining tenure should be appropriately augmented so that at least 25% of overall grant is towards software innovations.

#### **10) Developing skillset for NATEM in India**

- a) Government should identify top 10 AICTE affiliated advanced technical institutions that are offering advanced courses in electronics design, fabless products design & VLSI engineering and offer one time grant for resource mobilization to these institutes. This grant should be minimum Rs 20 Crore per eligible institution for 5 years' period and should be subject to certified completion of post-graduation or Doctoral fellowship course by minimum 40 students each year in electronics design, fabless products design & VLSI engineering.

#### **11) Institutional arrangements at Government/Department level for promoting NATEM**

- a) The Authority has also re-iterated its earlier recommendation of 2018 that "the progress of indigenous telecommunication equipment manufacturing in the country should be monitored in Department of Telecommunications (DoT) at least at the level of Member, Telecom Commission. For time bound progress, a dedicated unit in DoT should be made responsible for facilitation and monitoring of telecommunication equipment design, development, and manufacturing in the country".

- b) On lines of the Technology Development Board (TDB), working under the Chairmanship of Secretary, Department of Science and Technology, Government of India, a multidisciplinary Telecommunication Equipment Development Board (TEDB) should be constituted in the DoT, for faster and coordinated decisions relating to funding of incentives for design, development and manufacturing of telecommunication equipment in the country. It should be responsible for facilitating innovation, R&D, testing and certification and manufacturing in the telecom sector in the country.
- c) This board would be responsible for administration and disbursal of funds from TTDF and from TRDF (If TRDF is created in line with TRAI's earlier recommendation of 2018). Immediate corrective action may be taken to withdraw any such related responsibility from C-DOT to avoid conflict of interest.

TRAI has recognised semiconductor fabrication as one of the key-manufacturing activity in context of indigenous manufacturing of electronics products including NATE. TRAI's Recommendations of 2011 had already recommended the establishment of cutting-edge fabrication facility by providing Government's fund support up to 75 %, where equity is capped at 49% and rest as debt. TRAI acknowledges the high priority attention of the Government to catalyse establishment of domestic Semiconductor fabs. Since Government is already making lot of efforts in this direction, therefore, the Authority has not made any specific recommendations in this regard.

The Authority has also noted the concerns expressed regarding lack of Access to Trials/ Validation / testing etc. which ultimately hampers the commercialization process of new age telecom products. A Consultation Paper on '*Encouraging Innovative Technologies, Services, Use Cases, and Business Models through Regulatory Sandbox in Digital Communication Sector*' has been issued on 19 June 2023.

On the issues related to Research & Development essential to indigenous manufacturing for telecom as well as broadcasting sector, the Authority is initiating a separate consultation process for '*Encouraging Research & Development in Telecom & Broadcasting sector*' wherein consultation with the stakeholders would be initiated on key aspects such as Standards, Research & Development, Patents, Testing & Certification. Recommendations in this regard shall be issued separately.

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