6/6/2022

Ease of Doing Business - Improving the Testing and Certification Landscape in India

A Report by MAIT

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1. Background of the Testing Landscape in India:

There are a number of mandatory regulatory requirements on IT and Telecom products in India. For any OEM to get a market access in India, it is essential to comply to these regulatory requirement. These include:

Compulsory Registration Order 2012 (Under MeitY): To address the safety concerns of Indian consumers and to curb the inflow of sub-standard electronic products in the country, the "Electronics and Information Technology Goods (Requirements for Compulsory Registration) Order, 2012 (CRO)" was notified by Ministry of Electronics and Information Technology (MeitY) on 3rd Oct 2012 under the provision of Compulsory Registration Scheme (CRS) of BIS Act, 1986.

Scope of CRO: As per the Order, no person shall manufacture or store for sale, import, sell or distribute goods that do not conform to the Indian Standard specified in the Order. Manufacturers of these products are required to apply for registration from the Bureau of Indian Standards (BIS) after getting their products tested from BIS-recognized labs. Bureau of Indian Standards (BIS) then registers the manufacturers under its registration scheme who are permitted to declare that their articles conform to the Indian Standard (s). The registered manufacturers are then allowed to use the Standard Mark notified by the Bureau.

MeitY has issued five phases of the CRO so far and identified 77 Product Categories that majorly cover Consumer Products, ICT Products, Office Equipment, etc.

Testing & Certifications (under DoT): Telecommunication Engineering Center (TEC) under the Department of Telecommunication (DoT) announced the ***Mandatory Testing and Certification of Telecommunication Equipment (MTCTE)*** in 2017, to test Telecommunication Products that has a capability to connect to the Indian telecom network. Since its inception, TEC has notified four phases covering over 160+

product variants and updated Testing Parameters & Standardization with the aim of checking quality, safety & technical requirements of the Telecom Products.

Wireless Planning and Coordinating Wing [WPC] (Under DoT): The Wireless Planning and Coordination Wing (WPC) of the Department of Telecommunications (DoT), is the National Radio Regulatory Authority responsible for frequency spectrum management, including licensing, and caters to the needs of all wireless users.
As per WPC guidelines, all wireless products working in delicensed frequency bands require Equipment Type Approval (ETA) from WPC. ETA is issued on a per-model basis. The application can be filed by Indian manufacturers or an Authorized Indian Representative in the case of a foreign manufacturer and an ETA is issued on basis of a self-declaration as per the international test report for radio frequency parameters.

National Centre for Communication Security [NCCS] (Under DoT): NCCS – a Centre under Department of Telecommunications (DoT) – is responsible for implementation of the Communication Security Certification Scheme (ComSec)which aims to meet the following objectives:

- Develop country-specific standards, processes, and specifications.
- Develop testing and certification ecosystem.
- Ensure that Telecom network elements meet security assurance requirements.
- Ensure compliance with regulatory requirements pertaining to security testing

The scheme mainly comprises of development of Security Standards called **Indian Telecom Security Assurance Requirements (ITSAR)** for every Telecom equipment in scope of MTCTE and requires third-party Telecom Security Test and certification to be done by the OEMs.

National Cyber Security Coordinator (NCSC)'s Trusted Source approval: The National Security Directive on Telecommunication Sector (NSDTS) was framed keeping in mind the national security. Under the provisions of NSDTS, the government declares a list of trusted source and trusted products for installation in the country's telecom network. The Telecom Service Providers are required to fill in information pertaining to the their business ownership, stakeholder details, etc to get the trusted source approval from NCSC for carrying out deployment work in the Indian Telecom Network.

The hardware manufactuer is also required to submit these information and are mandated to be approved as trusted source.

In addition to the above mandatory regulatory requirements, there are also many voluntary requirements that exists on ICT and telecom products, like:

Trusted Electronic Value Chain Compliance Scheme by STQC (under MeitY): MeitY introduced the TEVC compliance scheme for IT products with an aim to facilitate improvement of national cyber security profile and control its supply chain across National Defense (like Military, Intelligence, Space) and Critical National Infrastructure (like Power Grid, Communication networks, digital economy, etc). STQC Directorate has been appointed by MeitY for providing this quality assurance service. The compliance scheme envisions to certify the process that applies to Hardware and Software throughout the entire product life cycle and is aligned with the Secured Supply Chain Activities [technically equivalent to Open Trusted Technology Provider Standard (OTTPS)].

Common Criteria Certification for by Standardization Testing and Quality Certification (STQC): This certification was introduced by MeitY for ICT Products with an aim of supporting industry and trade and protecting consumer interest in the electronic and IT sector by providing customer-centric, accredited quality assurance services as per international standards for global acceptance.

Cyber Security in Power Sector Guidelines: The Ministry of Power directed the Central Electricity Authority (CEA) to prepare a regulation on Cyber Security in Power Sector. Subsequently, in 2021, CEA issued the guideline which mandates the System Integrators, Equipment Manufacturers, Suppliers/Vendors, Service Providers, IT Hardware and Software OEMs engaged in the Indian Power Supply System to get their products tested in the country to check for any kind of embedded malware/trojans/cyber threat and for adherence to Indian Standards. All such testings shall be done in certified laboratories that will be designated by the Ministry of Power (MoP).

2. Present Compliance Landscape:

The existence of multiple regulatory bodies spread over multiple ministries which provide regulatory control over the ICT Industry results in regulatory inertia which has a negative impact on the Industry. There is a regulatory overlap on products and also overlap on testing parameters covered under various regimes covered in Chapter -1.

An Overview of the Product Regulatory Framework: The Table below gives an overview of the Product regulatory framework existing for ICT products in India. As is evident there are multiple regimes which are existing and these have overarching control on the industry.

Regulation	Ministry/ Department	Domain	Product Categories
CRO (BIS)	MeitY, BIS, MoCA	Safety (IS 13252, IEC 60950, IS 616 etc.)	ICT products
Trusted Electronic Value Chain Compliance Scheme (TEVC)	MeitY, STQC	Trusted Supply Chain (ISO/IEC 20243 O-TTPS Standard)	ICT products
ETA (WPC)	DOT (WPC)	Radio Conformance (ETSI EN 300 328 and ETSI EN 301 893 standards)	Telecom products in the delicensed band
MTCTE	DOT (TEC)	- Safety (IS 13252, IEC 60950, IEC 62368) - Radio Conformance (ETSI EN 300 328 & ETSI EN 301 893 standards) - EMC/EMI - ECR/EP - Technical Parameters	All telecom /ICT products
ComSec	DOT (NCCS)	Communication Security	Telecom Products
NSDTS	Ministry of Home Affairs (National Cyber Security Coordination Centre)	Trusted Source and Trusted Product	Telecom products

Regulatory Overlap: Multiple regimes spread across multiple ministries lead to inherent challenges for manufacturers seeking testing and certification of products.

While the consumer and national security concerns are paramount, there is definitely a need for streamlining and simplifying the existing product regulatory regimes. There is also a constant tussle on product jurisdiction and there is no clear framework to define new products under particular regimes with each ministry trying to increase the product portfolio under its jurisdiction. The constant ambiguity is best avoided and is certainly not in the best interest of Ease of Doing Business.

Product	CRO	MTCTE	WPC	**ComSec**	NSDTS	BEE	TEVC
Automatic Data Processing Machine (Server)	Yes	No	No	Yes	Yes	No	Yes (Latent)
Mobile Phones	Yes	No	Yes	Yes	No	No	Yes (Latent)
Smart Watches	Yes	No	Yes	Yes	No	No	Yes (Latent)
Point of Sale Terminals	Yes	No	Yes	Yes	No	No	Yes (Latent)
Printers	Yes	No	Yes	No	No	No	Yes (Latent)
Smart Camera	Yes	No	Yes		No	No	Yes (Latent)
Plasma/LCD/LED Television of Screen Size 32”	Yes	No	No	No	No	Yes	Yes (Latent)
STB	Yes	Yes	Yes	No	No	No	Yes (Latent)

Product Overlap: The Electronics and Telecom manufacturing industry is a very dynamic in nature. New models of consumer electronic products are launched every 2-3 months by companies. There is constant competition prevailing amongst manufacturers to launch new products to garner consumer share. This short pre-market time available has to be examined against the backdrop of elongated testing and certification timelines. The Products overlap hangover across multiple ministries acts as a dampener to speedy product launch and thus adversely affects business. The table given below gives a brief overview of this overlap for a sample of products existing in the market. The listed products are under regulation across both MeitY and DoT. Details of Products with Regulatory Overlap is attached as **Appendix-D.** A sample representation on the same is given below:

Products	MeitY	DoT
PABX	Yes	Yes
Conferencing Equipment	Yes	Yes
Cordless telephone	Yes	Yes
STBs	Yes	Yes

Some basic examples of product regulatory overlap are given below:

(a) **Example-I**: To check the product with Hardware/functionality testing of a Telecom Product, the MTCTE Scheme has five different tests i.e., EMI/EMC Test, Safety Test, Security Test, Technical Requirement, & Other Requirements (IPV6, Energy Consumption Rating or Energy Passport, SAR, etc) mentioned in their Essential Requirements (ERs). Some of these tests are already existing in the Compulsory Registration Order as Safety Testing and the remaining tests also exist there as Indian Standards (IS).

(b) **Example-II**: Telecommunication Products have to follow MTCTE guidelines and also the rules notified by Wireless Planning Coordination (WPC) with Equipment Type Approvals (ETA) with licensing of Telecomm Equipment. The standard followed by WPC for issuing an ETA is ETSI EN 300 328 and ETSI EN 301 893 standards, which is same as that referred by TEC under its MTCTE. While WPC issues an ETA on basis of international test report and self declaration from the OEM, TEC insists for in-country testing of the same products and for same standards.

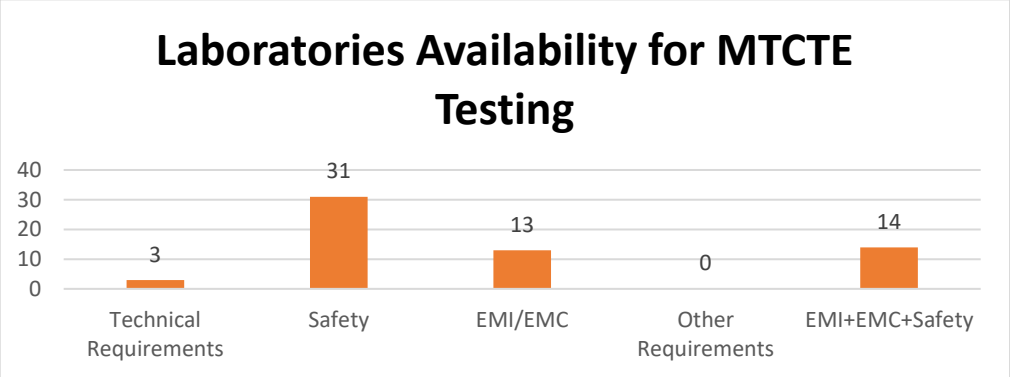
(c) **Example-III**: In some cases, the Bureau of Energy Efficiency (BEE) also requires a Star Rating Test to check the consumption of electricity by Electronics Products. TEC is also coming up with their own Energy consumption rating scheme for telecom products.

3. Challenges in the testing & certification regime:

The present Testing and Certification regime in India suffers from the following challenges:

(a) **Lack of clear demarcation across ministries:** There is a lack of clear demarcation of products across DoT and MeitY which results in a lack of clarity on compliance and resolution of contentious cases. This lack of product ownership leads to the industry challenges remaining unaddressed or being addressed belatedly.

(b) **Limitations in In-country Testing infrastructure:** TEC-approved test laboratories have limited capability to test ICT Products under the MTCTE regime. An overview of the existing laboratory capacity in India for different types of testing is given below:



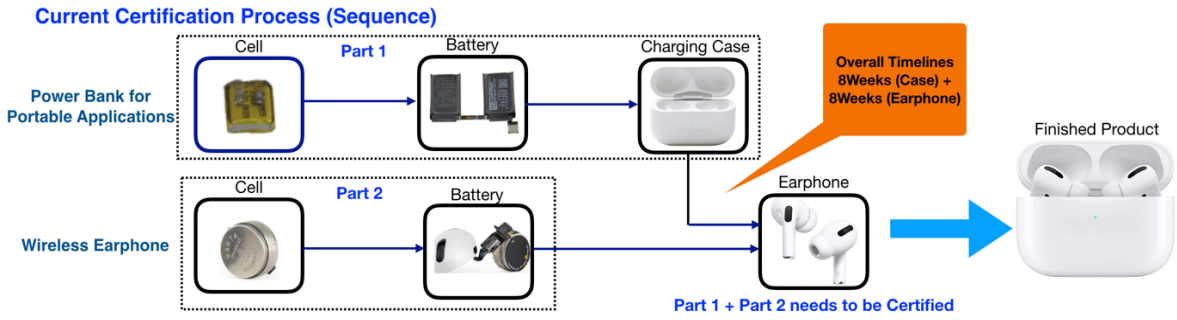
Though the table above shows 3 labs for technical requirements, the ground reality is that out of these 3 labs only 1 lab has the capability to test the entire Technical Requirements. The rest two labs do have TEC accreditation to perform even the entire Technical Requirement testing. This is a bottleneck that delays the testing process.

(c) **Requirement of Multiple Samples**: To get an MTCTE Certificate, the ICT Industry has to test one Model of a Product across five different Tests i.e., EMI/EMC Testing, Safety Testing, Security Testing, Technical Requirement, & Other Requirements (Energy Consumption Rating or Energy Passport). The main challenge is that TEC has no laboratory with End-to-End Testing for all these parameters. In order to achieve a quick turnaround, the industry has to send more than two samples at a time to different testing laboratories so as to telescope the time required for testing. Another challenge is that there are tests that are destructive in nature and hence the equipment is destroyed during the testing process. This is especially applicable for tests under MTCTE which requires Safety Tests

and EMI/EMC Tests. Both these tests are destructive tests. These samples add an additional cost burden to the product manufacturer and the end consumer since costs invariably get loaded onto consumers in the end.

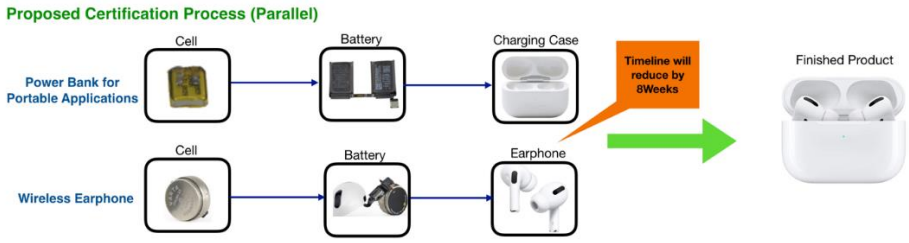
(d) **Limited capacity of Labs to undertake simultaneous testing of samples**: Presently Indian labs have the capacity to test only two samples simultaneously. This essentially leads to extended waiting times and never-ending deadlines. The products being new and state of the art have to be set up by the manufacturer in the lab which results in additional resource allocation with each product. The delays can best be understood from the information that in many cases, products registered for testing in January are still awaiting tests after more than two months. In an era of rapid product launches and shifting consumer tastes, this delay and high turnaround time has emerged as a major dampener for business.

(e) **CRO/CRS: Case for Parallel testing:** Audio products like Wireless earphones with Charging case is a single product. The Charging case is dedicated to charge only the earbuds supplied along with the product, In this case, sequential testing of the charging case as Power bank and then testing the wireless earphones is time consuming and complicates the safety certification of product. Further, we would like to highlight that the cells & batteries in the Charging case are separately BIS certified as per prevailing BIS regulations and guidelines. The whole sequential testing & certification process is taking around 16 weeks as depicted in the schematics below:



The current methodology being followed by labs for products involves sequential testing. This is taking longer time for end product approval adding to launch delays and time to market.

The proposed parallel testing & certification process reduces the overall timelines by around 8 weeks as depicted in the schematic below. The parallel testing in no way circumvents the registration scheme of the end product(s).



(f) **High & Arbitrary Testing Costs quoted by labs:** Each TEC accredited lab is charging a different and arbitrarily high testing fee. There is no regulation on testing costs and any check on defined service levels of the accredited labs. Hardly any lab has displayed testing costs/fees on their portals in a transparent manner. The high testing costs are also having a major effect on the margins of companies. There is a specific need to reduce the cost burden on companies which ultimately gets loaded on to the consumers.

(g) **Lack of Testing Equipment with Labs:** The TEC accredited labs have been asking for capital equipment from Product manufacturers and brands for testing their products when these have to be catered for by the labs themselves. Capital equipment such as Traffic Generators costs approximately $100,000. No where in the world the labs ask for such kind of capital equipments for testing..

(h) **Aggressive timelines for implementation of MTCTE regime:** MTCTE regime was launched in 2017. Since then, 4 phases of the scheme covering 3000+ ICT models under its ambit have been operationalized. To sell any ICT product model in India, MTCTE certification and testing have been made essential. The number of models is growing by the day and the implementation timelines have been very aggressive. The timelines have also not taken into account the limited capacity of labs and the negative effect of this capacity constraint on routine business. It is therefore essential that the implementation timelines be extended to July 2023. There is also a need to define a benchmark SLA of 6-8 weeks for testing each equipment in India & not more than two weeks for certification.

(i) **Delay in finalizing Highly Specialize Equipment (HSE) & End of Life (EOL) equipment exemptions:** As per MTCTE procedure version 2.1, HSE is exempted from testing requirements. The industry has submitted detailed definitions for considering equipment as HSE however so far DoT has not defined HSE thus equipment that should have been exempted continues to attract the Testing requirements. There is also a long-pending Industry asking for exempting EOL equipment from testing requirements. MAIT has submitted a detailed note on these aspects and the same are attached **as Appendices A to B**. This practice has already been followed in BIS Certification Scheme since 2013.

(j) **Lack of Skilled Testing manpower in Labs**: Today product technologies are changing rapidly. This requires Skilled Testing Engineers at labs to test products. Presently labs are unable to understand and configure product models for testing. Constant hand-holding is required from the product manufacturers/brands which have to assign R&D team members and engineers for this task on a regular basis.

(k) **Chip Shortages and Supply Chain woes due to COVID:** COVID constraints across the globe have caused supply chain disruptions across the globe. The movement of a sample, its timely arrival, its certification, and timely launch has been a challenge for the last two years. Positioning of teams for assisting in today's scenario due to the geopolitical issue and the chip shortage across the globe, it's very tough for the industry to test its products within the defined timelines, causing discontinuation of some models after prioritizing the models for testing.

(l) **Multiple Labelling on ICT Products:** Each testing regime is insisting on having its own test label on the products. Thus, products have a BIS label, a MTCTE label besides labeling requirements under MoEF&CC, Legal Metrology (Packaged Commodity Rules), etc. This plethora of labeling requirements are adding to the compliance burden besides supply chain issues for product manufacturers/brands.

(m) **High Cost & Time for Evaluation of Test Report by TEC:** After testing any ICT Product, the different regulators require time to evaluate the test report. There is also an additional cost burden on the industry. This additional cost and time burden leads to higher production cost and delays. MAIT recommends that the cost for evaluation and the delay need to be addressed urgently. There is a need to cap the cost of testing & certification/registration combined to not more than 0.5% of the equipment cost.

(n) **Custom duty on Samples for testing**: Presently samples imported for testing and certification are attracting custom duty. The samples are not meant for sales and in many cases, these are destroyed during the testing processes (destruction testing as part of EMI/EMC and Safety testing). While the duty is to be claimed back once the sample is returned back to the country of origin however since the sample is destroyed during the testing process, the duty becomes unclaimable. It is therefore imperative that duty on samples imported for testing should be waived off. A detailed note on this is attached as **Appendix C**.

4. Testing and certification review - Best practices across the globe:

Across the Globe, there is one regulating body that is developing the standards to follow by ICT Industries. The United States of America has its own regulating body The Federal Communications Commission (FCC). The aim of this regulator is to harmonization of technical compliances in the countries considering the Global Standards for ICT Products.

Country	Scope of Testing	Referred Standards	Certification Body	Accepted Test Reports
INDIA	1. EMI/EMC (MTCTE) 2. Safety (MTCTE/BIS) 3. Technical Requirements (Interface & Protocol Conformance) (MTCTE) 4.Radio(MTCTE/WPC) 5.Security (ComSec) 6.Energy efficiency (ECR/EP)	CISPR, IEC, ETSI, FCC, RFC, IEEE, etc.	TEC, NCCS, BIS, WPC, etc.	In-Country Test Reports
CHINA	1. EMI/EMC 2. Safety 3. Telecom 4. Radio 5. Security 6. Energy efficiency	GB4943/GB4793- safety, GB9254/GB18268- EMC, MIIT-Radio, MIIT NAL-Telecom, CEL- Energy	CCC CCC, NAL SRRC MOPS CEL	Mostly In-Country Test Reports or 3rd party testing
USA*	1. EMI/EMC 2. Safety 3. Telecom 4. Radio 5. Security 6. Energy efficiency	FCC/ANSI 63.4- EMC, ANSI & UL 60950- Safety, US CFR 47-Telecom, FCC C1PC C2PC-Radio, California Energy Commission (CEC)-Energy, NIST FIPS/ISO/IEC19790/19791/ 15443/ 15446 etc- Security	FCC NRTL FCC FCC CISA DoE, CEC	No in-country testing
EU*	1. EMI/EMC 2. Safety 3. Telecom 4. Radio 5. Energy efficiency 6. Security	GOST IEC60950-1/62368-1: safety, GOST IEC61000 series/GOST CISPR: EMC, EN300328/EN300330/ EN301489/EN301809: Radio, EN62623/ErP Lot-Energy, ISO/IEC15408/Regulation (EU) 2019/881-Security	DofC or CAB CB DofC or CAB CAB DofC	No in-country testing
INDONESIA*	1. EMI/EMC		SNI/SDPPI	

	2. Safety 3. Telecom 4. Radio	Indonesia SNI 04-6253-2003-safety, Indonesia SDPPI – EMC, Indonesia SDPPI - Radio/telecom		In-country lab test or MRA lab test report
JAPAN*	1. EMC	1.VCCI-CISPR 32:2016	VCCI, METI, MIC	1.VCCI - In-house testing at VCCI registered lab
	2. Safety	2.Electrical Appliance and Material Safety Law (also known as PSE law).		2.PSE - METI authorized CAB
	3. Telecom	3.DSPR Gray Book 2000, DSPR Technical Condition 2004, DSPR Technical Requirement 2005		3.Telecom - MIC authorized CAB (in-house testing from certified lab)
	4. Radio	4.ARIB STD-T70, ARIB STD-T71, ARIB STD-T66, RCR STD-33, ARIB STD-T108		4.Radio - MIC authorized CAB (in-house testing from certified lab)
	5. Security	5.DSPR-15.2(7)E2 (Crypto) Article34.10		5.Security - MIC authorized CAB (in-house testing from certified lab)
VIETNAM*	6. EMI/EMC 7. Safety 8. Telecom 9. Radio	QCVN 101- safety, QCVN 118/TCVN 7189-EMC, QCVN 54/55/65/74/127-Radio, Vietnam MEPS- Energy	PTQC/MIC	In-country lab test or MRA lab test report
SOUTH KOREA*	1. EMI/EMC	EMC and Radio standards listed here: KN 22/24/32-EMC, KN301/KS X3123/KS X3142/ KS X3270/ KS X3271- Radio4G 5G	KCC/RRA	In-country lab test or MRA lab test report
	2. Safety	KC62368-1/KC62133-safety	KC safety	
	3. Telecom		KMEPS	
	4. Radio 5. Environmental	KC safety 62368 required December 2022		

Note:- * shows the Testing is voluntary in the country

5. Final Recommendations for achieving Ease of Doing business and safeguarding consumer interests

In the previous chapters, MAIT has endeavored to aggregate challenges that exist in the testing and certification regimes in India. There is a need to optimize the testing processes, lab capacity, and compliance costs, clearly demarcate ownership across ministries, and redefine aggressive timelines to complement the ease of doing business in India. With this as the background, MAIT is making the following recommendations for the consideration of the Government:

I. ***Single window system for testing***: In India to comply with different rules and regulations, different Ministries/Departments published standards through different Regulatory bodies. To sell, a product in India Industry/OEM has to fulfill the Technical Regulations. In this context, Industry wants a Single Window System from which they can apply for their n number of tests.

II. ***Single Ministry to monitor the testing compliances of ICT Products:*** To comply with different rules and regulations implemented by different ministries and departments Industry wants Single Ministry to channel the different Ministries to check multiple issues like Fast Testing, Harmonizing the Testing Fee, Taxation, etc.

III. ***Self-Certification for products***: There should be a defined time period for testing and certification of products. As a selling life of any Electronic Gadget is approximately SIX Months. Due to the lack of laboratories, chip shortage, etc., it is very tough to match the time period. For this, we required a Self-Certification of Product for sale in India if time-lapsed beyond the defined time period for testing and certification. Case in point- Introduce Self certification for ETA certification for de-licensed products alongwith provision for ensuring Confidentiality of the product by allowing applicants to chose date of publication of the Certificate in the regulator portal.

IV. ***Extend the timlines for Phase 3 and Phase 4:*** DoT to evaluate the lab capacity viz volume of products to be tested before announcing an implementation date. For comparison purpose, MeitY while notifying an ICT product under its CRO gives industry on an average one (1) year for testing and certification. The CRS products are tested for just one parameter (i.e., safety). On the other hand, under MTCTE

the product is required to be tested for multiple requirements including safety, EMI/EMC, technical requirements (i.e., functional testing, radio conformance testing), and other requirements (i.e., IPv6 testing). Therefore, we request the timelines of Phase 3 and Phase 4 of MTCTE be extended till July 1, 2023.

V. ***Exempt end of life whole unit warranty replacement products***: TEC has exempted spare parts and components from the requirement of MTCTE certification. Allow whole unit products towards warranty, After Sales Service repair without going through the MTCTE certification process based on OEM self-declaration for such products/models.

VI. ***Publish the Criteria for Highly Specialised Equipment***: TEC in its MTCTE procedure has specified that "Highly Specialized Equipment (HSE), as notified by Government from time to time are not covered by MTCTE" (Point 4.6)". The MTCTE procedure defines a Highly Specialized Equipment as "…those Telecom/ related ICT Equipment, which have specialized power, cooling, storage or handling requirements, and limited import / sale" [Point 2.1 (xii)]. Industry appreciates TEC for provisioning the Highly Specialised Equipment in the MTCTE procedure and excluding them from the scope of mandatory testing and certification requirements. However, the criteria for HSE are pending for a long time. We request TEC to consider the criteria proposed by MAIT and release them at the earliest.

VII. ***Point to Point Testing Status for each ICT Product***: After applying for testing and certification of any product, the Industry requires remote monitoring of testing through the online portal of the Test Laboratory.

VIII. ***Skilled Test Engineers in each laboratory:*** To match the deadline Industry applies to test their products. This requires skilled Test Engineering availability from the test laboratory side. In general, Industries have to assign their R&D Team or Engineers to the configuration for the product and fast testing, this is a wastage of their manpower of Industries.

IX. ***End-to-End capacity of Test Laboratories***: Instead of many laboratories, we must look to build the capacity of labs to conduct end-to-end testing. That will

make it easier for Stakeholders. As on today, none of the test lab is having complete ER parameter testing.

X. ***Stakeholder Consultation:*** Consultation with the Key Stakeholder to define the deadline and any amendment in the implementation of the schemes.

XI. ***Relaxation on Custom Duty for the Sample to Testing:*** Industry requires E-Waiver of duties on sample, duty refund once product is tented, a full duty drawback under Section 74 of Custom Act. A detailed note on this is attached as **Appendix C**

XII. ***Regular Interaction with Foreign Laboratories to know best practices:*** To fulfill the Industry requirement and synchronize with the latest technology and implementation of the testing procedure, Industry wants regular interaction with Foreign Laboratories about their best practices.

XIII. ***Deemed Approvals of Electronic Product***: Clearly define SLAs required for testing & certification. If not adhered to, the product is deemed to be approved.

XIV. Frequent release of TEC notification with change in MTCTE requirement which is troublesome for registration planning for manufacturer. Eg. ILAC test report relaxation removal.

XV. ***Simplify testing procedures to ensure quick certification timelines***. Example -Allow Parallel testing for CRO products in place of the cumbersome and lengthy Series (Sequential) testing.

XVI. ***Accept ILAC and Common Criteria reports from accredited labs globally***. The MRA agreements need to be extended to other partner countries especially those with which India has strategic relations.

XVII. ***Certification for new models only:*** Whenever a product category is incorporated under a certification scheme or change over to a new standard, only new models that are introduced in the market after the date of notification should come under the purview. Example: For IS-62368-1 for ICT

products, testing and certification to apply for new models only and should not apply retrospectively to existing models

XVIII. ***Give sufficient time for certification for new products:*** Ensure that a time period of at least 12-18 months for complying with the certification requirements from the date of notification whenever a new product category is included under a certification scheme.

6. Conclusion:

To streamline the registration and compliance process, and boost the ease of doing business that has been a focus of the Government of India for the last few years, it is essential to undertake a comprehensive review of Regulatory Compliances for its simplification and harmonization. Periodic review is generally an integral element for improving the effectiveness of any policy.

The study makes pointed recommendations that a comprehensive review is conducted, focusing on Compliances Overlapping, Stakeholder Consultation while drafting regulations, allowing parallel testing of components, product inclusion to be based on a safety risk-based approach, and the pre-defined gestation period for any policy change/ amendment and query management and manpower planning at in Regulations.

Appendix-A

Proposal for Highly Specialised Equipment Criteria

The Context

The Department of Telecommunication in September 2017 amended the Telegraph Rules and mandated all telegraph which is used or capable of being used with any telegraph established, maintained or worked under the licence granted by the Central Government to undergo prior mandatory testing and certification in respect of parameters as determined by the telegraph authority from time to time. Subsequently, TEC published the procedure for Mandatory Testing and Certification of Telecom Equipment (MTCTE), which describes the procedure and related framework for its implementation. The TEC has revised the MTCTE procedure a couple of times over the years and the current procedure, i.e. version 2.1 (TEC 93009:2021) specifies that "*Highly Specialized Equipment (HSE), as notified by Government from time to time are not covered by MTCTE"* (Page 15, Point 4.6). The MTCTE procedure also defines a Highly Specialized Equipment as "…*those Telecom/ related ICT Equipment, which have specialized power, cooling, storage or handling requirements, and limited import / sale"* [Page 11, Point 2.1 (xii)].

Industry is thankful to TEC for provisioning the Highly Specialised Equipment in the MTCTE procedure and excluding them from the scope of mandatory testing and certification requirements. This paper aims to draw TEC's attention on the proposed criteria for HSE and requests TEC to kindly publish the industry proposed HSE criteria at the earliest.

What is Highly Specialized Equipment?

Certain telecom products are highly configurable, and their specifications are such that either their power requirement is very high, or the products are too heavy. These products are called Highly Specialised Equipment. Because of the product's highly configurable nature, complex product designs and logistical challenges associated with the product movements, the customer demand of such products is quite low. The import quantities of such products are usually less than 100 units in a year. Due to the limited import volumes in the country, industry believes that the HSE would not have any major impact on the performance of existing network; or would cause any safety hazard or pose any radio frequency emission risks to the end-use. The costs of these products are also quite high and

may range between USD 40,000 (~INR 30 Lakh) to USD 100,000 per model (~INR 75 Lakh) and even more.

Few examples of HSE are listed below:

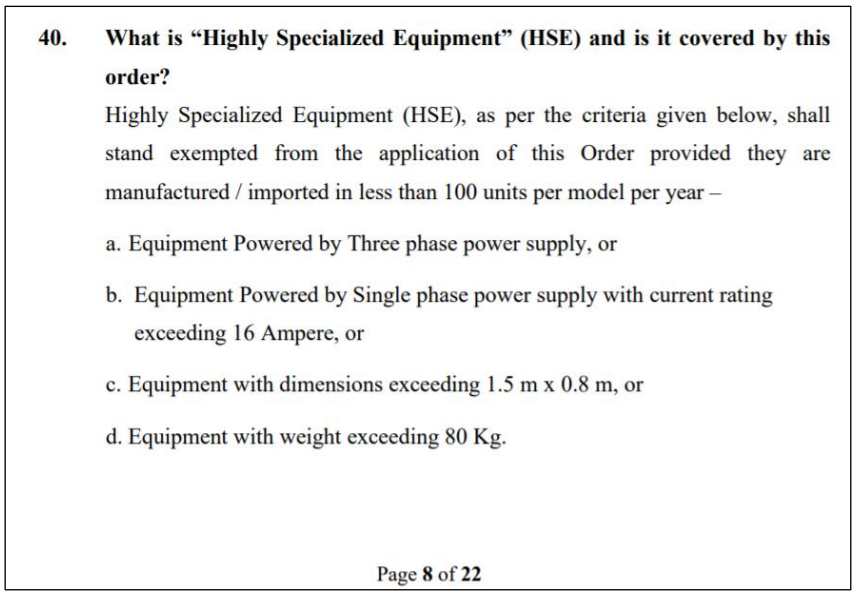
Product Category: Switches			
1.		Power Supply	4 PSU (Input Current: 100-240Vac; 13A; **Total 1800W**
		Physical characteristic	Height: 5U Product weight: **71.2kg**
2.		Input Voltage	100-120/ 200-240Vac
		Input Current	16 / 60 A
		Output	2000 W
		No. of Power Supplies required	12 PSU
		Total Power	**24000 W**
		Physical characteristic	**Height: 23U Weight: 258.6 Kg**
3		Input Voltage	100-240Vac
		Input Current	16 A
		Output	2400 W

		No. of Power Supplies required	16 PSU
		Total Power	**34800 W**
		Physical characteristic	**Height: 21U Weight: 86.1Kg**
4.		Input Voltage	100-120Vac **200-240Vac**
		Input Current	16/60 A
		Output	2000 W
		No. of Power Supplies required	8 PSU
		Total Power	**16000 W**
		Physical characteristic	**Height: 21U Weight: 251.2 Kg**

Product Category: Routers			
1.	1	Input Voltage	**200-240VAc; 50-60Hz**
		Input Current	**16A**
		Output	**33,600 W (DC) 48,000 W (AC)**
		No. of Power Supplies required	**16**
		Total Power	**70,400 W (DC) 72,000 W (AC)**
		Physical characteristic	**Height: 44RU (Ht: 77 in. Width:17.60 in) Weight: 290.7 kg**
2.		Input Voltage	**200-240VAc; 50-60Hz**
		Input Current	**16A**
		Output	**16,800 W (DC) 24,000 W (AC)**
		No. of Power Supplies required	**12**
		Total Power	**52,800 W (DC) 54,000 W (AC)**
		Physical characteristic	**Height: 30 RU (HT :52.5 in. Width: 17.60 in) Weight: 177.07 kg**

The Ministry of Electronics and Information Technology (MeitY) also acknowledges the concept of the Highly Specialised Equipment and have exempted the HSE from the requirement of testing and certification under the Compulsory Registration Order 2012. MeitY has published a Frequently Asked Question (FAQ) on its website: https://www.meity.gov.in/writereaddata/files/Modified_FAQs.pdf which confirms the exemption and lists down the criteria for HSE for IT equipment.

Please see below the screenshot of the MeitY FAQ w.r.t to HSE exemption:



40. **What is "Highly Specialized Equipment" (HSE) and is it covered by this order?**

Highly Specialized Equipment (HSE), as per the criteria given below, shall stand exempted from the application of this Order provided they are manufactured / imported in less than 100 units per model per year –

a. Equipment Powered by Three phase power supply, or

b. Equipment Powered by Single phase power supply with current rating exceeding 16 Ampere, or

c. Equipment with dimensions exceeding 1.5 m x 0.8 m, or

d. Equipment with weight exceeding 80 Kg.

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HSE exemption in other countries

Many countries have exempted HSE from the provision of their testing and certification requirements. We have listed down some countries' HSE criteria for your kind reference:

1. **Mexico**: The Mexican Government in September 2020 published the draft "PROY-NOM-019-SE-2020 – Information Technology Equipment and its associated equipment, as well as office equipment – Safety requirements." In the draft, the Mexican regulators have exempted the Networking products that meet the following HSE criteria:
    - *i. Network equipment for business and non-residential use, such as network switches, network routers, network hubs, network access control or security unit, or some combination of the above, which must meet the following characteristics, are exempted:*
        - *i. Data bus equal or greater than 100 Mbps,*
        - *ii. Its construction allows its installation or not in a rack;*
        - *iii. That are configurable or programmable or both;*
        - *iv. That they are scalable,*
        - *v. That they have modular ports, and*
        - *vi. that they have 2 or more communication protocols.*

    The final NOM-019 Standard for Mexico is expected to be published in the coming weeks.

2. **Argentina:**

    The regulatory framework of the electrical safety discipline in Argentina is the Res. 169/2018, that every manufacturer, importer and distributor need to comply with when importing and commercializing goods in Argentina. It applies to low voltage electrical equipment, and power supplies, chargers and converters that operate between 50v and 1000v for alternating current, and between 75v and 1500v for direct current.

The Argentina norm defines *"Exceptions for PROFESSIONAL USE*." Although not explicit definitions in the norm, there is sufficient jurisprudence regulating the matter. These goods would not require mandatory certification, i.e., S-Mark. *Thus, the "professional use" defines the use of electrical equipment by a person who has the aptitude and necessary technical knowledge, to use it without causing damage to himself and/or third parties, and/or property, and provided that said electrical equipment is not available to those who do not have such aptitude and technical knowledge.* Furthermore*, Art. 13 specifies the exception to product safety certification and the use of declaration of conformity*.

The electrical equipment falling under professional use, along with its spare parts or supplies, are exempted from proving compliance with the essential safety requirements through the S-Mark certification provided in Article 8. The manufacturer or the importer is required to submit an affidavit to the Commercial Loyalty Department, and will be subject to the following rules:

a) It will be presented through the Remote Procedures Platform (TAD) or the digital system that will replace it in the future.
b) The affidavit of conformity will be adjusted to what the Commercial Loyalty Department determines, such as:
    i. A detailed description of the electrical equipment and its technical specifications.
    ii. A statement that the electrical equipment will be given a suitable use, and by whom; or the spares if applicable.
    iii. The establishment of a physical and electronic address where all notifications will be valid, and which must be kept updated through the SINGLE REGISTRY OF THE MINISTRY OF PRODUCTION (R.U.M.P.), or the one that replaces it in the future.
c) When preparing the affidavit of conformity, the manufacturer and/or the importer will assume unlimited liability and, where appropriate, joint responsibility, for the conformity of the electrical equipment with the safety objectives referred in the resolution.
d) With the presentation made by the manufacturer or importer, the Commercial Loyalty Department will issue a proof of presentation with which the declared electrical equipment will be released by the General Customs Directorate, if applicable, and may be marketed in the market.

3. **China**: Under the China Compulsory Certification, if a Switch or Router meets the below criteria, they are exempted from the certification scheme:
    i. Operating Voltage with 220Vac (including external AC/DC adapter), and
    ii. Non-pluggable (fixed) Communication I/O ports, and
    iii. Communication I/O are one of the four Ethernet ports: 10/100Base-T, 10/100/1000Base-T, 1000Base-LX/SX, 10GBase-X

Industry Ask

The industry is fully committed to comply with the requirements of TEC as listed in the MTCTE procedure. MAIT assures TEC that its member companies whose products have already been notified in the MTCTE have already started submitting samples to the Indian Labs and the testing is in progress. The industry is also diligently putting its best efforts to comply with the MTCTE requirements. However, the challenge lies with the testing and certification of Highly Specialised Equipment. As mentioned in the above sections due to the complex product designs/high power requirements/heavy

size, the sample cost of these products is extremely high. And since under the MTCTE, the products are tested for a plethora of test cases (including Safety, EMI/EMC, functional, interface, radio frequency, IPV6, etc), multiple samples are required to be submitted to the lab. This leads to a multi-fold increase in the compliance cost. To add to the industry's vows, since the volume of import of these HSE are very low (less than 100 units in a year), the margin on these products is either zero or in some cases even goes negative. Therefore, we request TEC to accept the below industry proposal on HSE criteria:

A product would be classified as HSE if a telecom equipment requires

1. If the import number of any telecom equipment is below 100 units in a year OR
2. In cases of products like Switches and Routers, a product would qualify as HSE if:
    a. It requires 3 phase power supply OR
    b. Operates in Single Phase current ≥16A (in total) OR
    c. Weight >80Kg

The OEM can submit a self-declaration to the customs authority for clearance of their HSE. The same practice is followed for the HSE covered under the CRO. If additional verification/ validation is required by the customs authority, the OEM can also provide the technical specifications of the product to confirm it meets the HSE criteria.

Conclusion

Industry request TEC to kindly consider the above HSE criteria and publish them at the earliest. This would considerably reduce the burden of the compliance costs on the OEMs and promote ease of doing business for companies.

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Appendix – B

Exemption of End-of-Life whole unit warranty replacement products under MTCTE

The context

The Department of Telecommunication in September 2017 amended the Telegraph Rules and mandated all telegraph which is used or capable of being used with any telegraph established, maintained or worked under the licence granted by the Central Government to undergo prior mandatory testing and certification in respect of parameters as determined by the telegraph authority from time to time. Subsequently, TEC published the procedure for Mandatory Testing and Certification of Telecom Equipment (MTCTE), which describes the procedure and related framework for its implementation. The TEC has revised the MTCTE procedure over the years and the current procedure – version 2.1 (TEC 93009:2021) states that "Spare cards or faulty cards after repair" are not covered under the MTCTE and do not require to be tested and certified by TEC (Page 39, Point 1 of the Note).

This paper aims to draw TEC's attention and requests for a similar exemption for End of Life whole unit warranty replacement telecom products from the MTCTE regime.

What constitutes End of Life (EOL) /End of Sales (EOS) /End of Support (EoST) telecom equipment?

A product is called End of life (EOL) when the company which manufactures and sells the product decide to phase it out and discontinue the sales of the same. EOL is the end phase of a product's life cycle which is characterized by specific timelines as illustrated in table below *(the timelines mentioned here are just for reference purpose. Every Brand/OEM have their EOL policy, which are available in the public domain)*

Milestone	Definition	Timelines
End-of-Life (EOL) Announcement Date	The date when Brand/OEM announces the End of Sale and End of Support for a given product to the general public. The EOL announcement is also posted on the Brand's End of Life Products web page.	Day
End-of-Sale (EOS) Date	The last date to order the product through OEM point-of-sale mechanisms. The product is no longer for sale after this date.	Usually after 3 to 6 months after EoL announcement date

End of Support (EOSL)	The last date to receive support from the Brand/OEM. After this date, all support services for the product are unavailable, and the product reaches End of Life. Access to product software downloads and documentation may be discontinued after this date. License management may also be discontinued after this date.	Varies from brand to brand. Normally ranges between 5 to 10 years after EoL announcement date. In few cases, Brands may offer life-time warranty or cover the product till the End of Support (EOSL)
End of SW Maintenance Releases Date: HW	The last date that OEM may release any final software maintenance releases or bug fixes. After this date, OEM will no longer develop, repair, maintain, or test the product software.	The timeline may vary between 1 to 2 years from after EoL announcement date

OEM : Original Equipment manufacturer *HW = Hardware* *SW = Application Software*

As highlighted above, after the End of Sale of the product, the company undertakes to support the product under warranty or a maintenance agreement up to the Last Date of Support (LDOS) which normally ranges between 5 to 10 years from the End of Sale Date. Manufacturing of the EOL product will be stopped a few months after the last order is booked. Therefore, to support the product for the 5 to 10 year period, it is necessary to plan and procure the inventory in advance once the EOL announcement is done. This bulk procurement for support (product or its parts) is called the Last Time Buy (LTB). The inventory of these LTB EOL products is very limited and is meant for warranty replacements in different countries.

Deployment of EOL products by OEM

There are three scenarios under which an OEM provides service to a customer:

1. Entire Whole unit replacements

When a product is deemed defective in a customer network, it is made functional by replacing the faulty part of the product when the product has multiple parts or sub-assemblies. However, for modular products, the replacement may be at the product level, which means the whole unit is replaced for faster restoration and ease of maintenance. Majority of OEMs/Brands follow the whole unit replacement policy.

2. Product exported, repaired, and brought back

Service inventory normally consists of fresh parts (New Buy from Manufacturing) and Repaired parts. When parts are replaced in a customer network, the defective is taken back and if it is physically in good condition, it is sent for repairs to an OEM approved repair facility. In several instances, the repair facility may be outside the country requiring the export and re-importation. This process is called Temporary Export for Repair (TEFR). We understand that TEC in its MTCTE procedure (version 2.1) has mentioned that these spare parts are not covered in the MTCTE procedure and do not require in country testing and TEC certification.

Industry Ask

The OEMs support legacy telecom equipment running some of India's most critical infrastructures. Majority of the telecom products have production cycle of around 5 years and end-of-life varies between 5 to 10 years depending upon the customers' service support needs. The OEMs have a legal obligation to provide the support to the customer even after the product reaches the end of their manufacturing and sales' life. The after-sales-service customers for the EOL whole units warranty replacement are limited. All forms of EOL whole unit warranty replacements would **not** be imported for sales. The EOL whole unit warranty replacements would be imported exclusively for service supports, and the invoice/ Bill of material, which would accompany these shipments, will clearly mention that the imported product is meant for warranty replacement and is not intended for sales.

The industry is fully committed to certify all its active MTCTE products (which are being offered for Sales in India) tested and certified from TEC. The challenge is only for the products which has reached End of life before the MTCTE implementation date and needs to be serviced.

Industry recommendations

The industry requests TEC to release an order stating that the products which have reached end of life before the MTCTE implementation date are exempted from the MTCTE regime. The OEM can submit a self-declaration to the customs authority for clearance of their End-of-life whole unit replacements. For verification/ validation purposes, the OEM can also provide the official public announcement of the product's end of life policy to the customs authority.

For example, Routers were announced as part of Phase IV of MTCTE for mandatory certification as on July 1, 2022. It is requested that all Routers declared End of Life before July 1, 2022, be exempted from testing and certification.

The end-of-life (EoL) whole unit warranty replacements for products under support shall also be imported on separate invoices to differentiate from products for sale.

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Appendix-C

Customs Relaxation on Import of Products under MTCTE

The context

The Mandatory Testing and Certification of Telecom Equipment (MTCTE) scheme was notified in September 2017 for implementation by the Telecommunication Engineering Centre (TEC). The current procedure states that the scope of certification covers all types of Telecom/related ICT Equipment to be sold in India for being connected or capable of being connected to Indian Telecom / Communication Network[1].

The aim of this appendix is to seek customs' relaxations on product samples imported into the country for the purpose of such testing and certification.

Rationale for Customs' Duty Waiver for Test Samples

Some of the reasons for industry's request for customs' relaxations include:

1. **Product Destruction:** Testing under MTCTE, if done sequentially (Technical followed by EMC/EMI and Safety) leads to marginal destruction of the product, deeming it unfit for further use or re-export.

2. **Long testing duration:** If an OEM/importer wishes to leverage customs duty waiver on the tested samples, they are required to send back the samples to the country of export/ other location within a stipulated timeframe. However, under MTCTE, a product is to be tested for a range of test requirements which includes Safety, EMI/EMC, functional, interface, radio frequency, IPV6, etc. The time required to test a sample for all the above listed parameters is quite long. In such cases the product imported for testing cannot be sent back within the specified time frame.

[1] https://tec.gov.in/pdf/MTCTE/MTCTE%20PROCEDURE%20ver%202.1%20Release%20May%202021.pdf

3. **High logistics/freight cost for returning the tested samples to the country of origin:** As mentioned above**,** if an OEM/importer wishes to leverage customs duty waiver on the tested samples, they are required to send back the country of export/ other location. Once a product is tested, the product cannot be used for any commercial purposes. The tested samples do not have any economic value. The cost incurred for returning such tested samples to the country of origin would cost the OEM more money than the customs duty paid while importing the sample.
4. **Sole purpose of testing:** The products imported are not meant for sale and will be in most cases scrapped once the intended purpose is achieved. A product once used for testing cannot be sold to any consumer as it would result in consumer dis-satisfactions and may damage brand reputation.

5. **High cost to OEMs:** The quantum of products that are and will be covered under multiple MTCTE phases significantly contribute to the high costs, which include product, testing, certification, freight, and relevant import duties.

Industry Ask

For ease of facilitation of product samples entering India for testing, we request the following:

Option 1:

a. **E-Waiver of duties on samples** that enter India for MTCTE testing and certification purpose. When an OEM imports a sample for such testing, the Bill of Entry filed for such sample would explicitly state the purpose of import differentiating it from other imports. The OEM can also provide a self-declaration clearly stating the purpose of the import. We request the import to be allowed "duty free." Currently, there is no provision under Customs Law basis available notifications and circulars to allow duty free imports of samples for such testing/ certification. The procedure for obtaining waiver of all import duties (BCD, SWS, IGST) should be simple and not subject to any interpretation.

Option 2:

b. Allow a provision in the law, where the OEM can claim for **duty refund** once the product is tested and the OEM/ Importer submits documentary proof of scrapping the tested sample from a Pollution Control Board authorized recycler. The OEM/Importer will submit the requisite document (like the destruction/recycling certificate from an authorized recycler) to the local Customs office to claim the duty refund.

Option 3:

c. For products imported on a permanent basis for such testing and certification, **a full duty drawback** under Section 74 of Customs Act should be allowed at the time of re-export once

applied by the importer. We request the Government to not limit any timeframe for re-exporting such products while claiming the full duty drawback.

Option 4:

d. Since the import of samples for testing would be carried out only by the OEMs/ Brand Owners, **the customs duty waiver could be given granted only to the OEMs** or their authorized agents in the country

Precedence in Indian law:

a. MTCTE procedure already exempts TEC certification for equipment being import for R&D or as samples for testing or for demonstration purpose (Section 4.3 of MTCTE procedure V-2.1)
b. There are few precedence in the customs' laws such as for products that enter India for the purpose of R&D (Customs Notification 52/2003), SEZ Rules 2003
c. Other custom notification includes
    i. 153/94 - temporary import for repairs
    ii. 134/93 read together with Section 65 of Customs Act – temporary import for testing, recalibration, preprocessing in bonded warehouse
    iii. 157/90 under ATA Carnet

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Appendix-D

S No	Scheme	Sub-Category from a Industry Perspective	List of Product/ Variants	Scheme ->	CRO/ CRS	STQC-S	STQC IC3S	STQC Prod Fn	STQC-TEVCS	STQC-IoTSCS	MTCTE-EMI	MTCTE-Safety	MTCTE-Security	MTCTE-TR	MTCTE-ECR	WPC/ ETA	NSDTS	BEE	MoP-CCC*
1	BIS	Audio System	Amplifiers with Input Power 2000 W and above		Yes	Yes Latent													
2	BIS	Audio System	Electronic Musical Systems with Input Power 200W and above		Yes	Yes Latent													
3	BIS	Audio System	Electronic Musical System with input power below 200 Watts		Yes	Yes Latent													
4	BIS	Audio System	Smart Speakers (with and without Display)		Yes	Yes Latent										Yes			
5	BIS	Audio System	Bluetooth Speakers		Yes	Yes Latent													
6	BIS	CE	Sealed Secondary Cells/Batteries containing Alkaline or Other Non-Acid Electrolytes for use in Portable Applications		Yes														
7	BIS	UPS	Storage battery		Yes	Yes Latent													
8	BIS	ITE	Laptop/Notebook/Tablet		Yes	Yes Latent			Yes Latent									Yes- Voluntary	Yes
9	BIS	ITE	Automatic Data Processing Machine (Server)		Yes	Yes Latent			Yes Latent						Yes		Yes		Yes
10	BIS	CE	Electronic Games (Video)		Yes	Yes Latent													
11	BIS	Audio System	Optical Disc Players with built-in Amplifiers of Input Power 200W and above		Yes	Yes Latent													
12	BIS	White Goods	Plasma/LCD/LED Televisions of Screen size 32" and above		Yes	Yes Latent		Yes Latent	Yes Latent									Yes	
13	BIS	CE	Set Top Box		Yes			Yes Latent	Yes Latent		Yes	Yes	Yes	Yes	Yes	Yes			
14	BIS	CE	Power Banks for use in portable applications		Yes	Yes Latent		Yes Latent	Yes Latent									Yes	
15	BIS	Retail	Smart Card Reader		Yes		Yes									Yes			
16	BIS	Mobile	Mobile Phones		Yes	Yes Latent			Yes Latent							Yes			
17	BIS	Luminary	Self-Ballasted LED Lamps for General Lighting Services		Yes													Yes	
18	BIS	Luminary	Fixed General Purpose LED Luminaries		Yes													Yes	
19	BIS	Mobile	Indian Language Support for Mobile Phone Handsets		Yes			Yes Latent											
20	BIS	Luminary	Recessed LED Luminaries		Yes													Yes	
21	BIS	Sec & Surv	CCTV Cameras/CCTV Recorders		Yes	Yes		Yes Latent	Yes Latent							Yes			
22	BIS	SMPS	Adapters for household and similar electrical appliances		Yes	Yes Latent													
23	BIS	CE	Smart watches		Yes	Yes Latent										Yes			
24	BIS	White Goods	Induction Stove		Yes													Yes	
25	BIS	Audio System	Wireless Headphone and Earphone		Yes	Yes Latent			Yes Latent							Yes			
26	BIS	Audio System	Wireless Microphone		Yes	Yes Latent										Yes			
27	BIS	CE	Digital Camera		Yes			Yes Latent	Yes Latent							Yes			
28	BIS	IE	Electronic Clocks with Mains Power		Yes	Yes Latent		Yes Latent	Yes Latent										
29	BIS	Luminary	DC or AC Supplied Electronic Controlgear for LED Modules		Yes														
30	BIS	UPS	UPS/Inverters of Rating <= 5KVA		Yes													Yes	
31	BIS	UPS	UPS/Inverters of rating <= 10kVA		Yes													Yes	
32	BIS	Switch Gear	Low - Voltage switchgear and controlgear: Circuit - Breakers		Yes														
33	BIS	Switch Gear	Low - Voltage switchgear and controlgear: switches, disconnectors, switch disconnectors and fuse - Combination units		Yes														
34	BIS	Switch Gear	Low - Voltage switchgear and controlgear: electromechanical contactors and motor - Starters		Yes														
35	BIS	Switch Gear	Low - Voltage switchgear and controlgear: a.c semiconductor motor controllers and starters		Yes														
36	BIS	Switch Gear	Low - Voltage switchgear and controlgear: a.c. semiconductor motor controllers and contactors for non - Motor loads		Yes														
37		Switch Gear	Low - Voltage switchgear and controlgear: electromechanical control circuit devices		Yes														

CE- Conumer Electronics/ IE- Industrial Equipment/ OE- Office Equipment/ AITT- Appliance IT Telecom/ PT- Passive Telecomm/ SC- Satellite Communication/ ITE- IT Equipment/ RT- Radio Telecom/AITT- Appliance IT Equipment

Appendix-D

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38	BIS	Switch Gear	Low - Voltage switchgear and controlgear proximity switches		Yes														
39	BIS	Switch Gear	Low - Voltage switchgear and controlgear: electrical emergency stop devices with mechanical latching function		Yes														
40	BIS	IE	Ortho Phosphoric Acid		Yes	Yes Latent													
41	BIS	Luminary	LED Luminaires for Road and Street lighting		Yes	Yes												Yes	
42	BIS	Luminary	LED Flood Lights		Yes	Yes												Yes	
43	BIS	Luminary	LED Hand lamps		Yes	Yes												Yes	
44	BIS	Luminary	LED Lighting Chains		Yes	Yes												Yes	
45	BIS	Luminary	LED Luminaires for Emergency Lighting		Yes	Yes												Yes	
46	BIS	Luminary	Lighting Chain (Rope Lights)		Yes	Yes												Yes	
47	BIS	Luminary	Dimmers for LED products		Yes	Yes												Yes	
48	BIS	OE	Printers, Plotters		Yes											Yes			
49	BIS	OE	Scanners		Yes														
50	BIS	OE	Telephone Answering Machines		Yes			Yes Latent											
51	BIS	ITE	Wireless Keyboards		Yes				Yes Latent							Yes			
52	BIS	Retail	Cash Registers		Yes	Yes Latent		Yes Latent	Yes Latent										
53	BIS	OE	Copying Machines/Duplicators		Yes			Yes Latent											
54	BIS	Authenticatio n	Passport Reader		Yes	Yes Latent		Yes Latent	Yes Latent										
55	BIS/STQC	Retail	Point of Sale Terminals		Yes	Yes Latent		Yes Latent	Yes Latent							Yes			
56	BIS	OE	Mail Processing Machines/Postage Machines/Franking Machines		Yes														
57	BIS	CE	Power Adaptors for Audio,Video & Similar Electronic Apparatus		Yes														
58	BIS	ITE	Power Adaptors for IT Equipments		Yes	Yes Latent			Yes Latent										
59	BIS	Authenticatio n	USB driven Barcode readers, barcode scanners, Iris scanners, Optical fingerprint scanners		Yes	Yes Latent		Yes Latent	Yes Latent										
60	BIS	ITE	Keyboard		Yes														
61	BIS	Retail	Automatic Teller Cash dispensing machines		Yes	Yes Latent		Yes Latent	Yes Latent										
62	BIS	ITE	USB Type External Hard Disk Drive		Yes														
63	BIS	ITE	USB Type External Solid-State Storage Devices (above 256 GB capacity)		Yes														
64	BIS	SMPS	Standalone Switch Mode Power Supplies (SMPS) with output voltage 48V (max)		Yes	Yes Latent													
65	BIS	Solar	Thin-Film Terrestrial Photovoltaic (PV) Modules (a-Si, CiGs and CdTe)		Yes														
66	BIS	Solar	Power Invertors for use in photovoltaic power system		Yes														
67	BIS	Solar	Utility-Interconnected Photovoltaic inverters		Yes														
68	BIS	White Goods	Visual Display Units, Video Monitors of Screen size 32" and above		Yes	Yes Latent		Yes Latent	Yes Latent							Yes		Yes	
69	BIS	White Goods	Plasma/ LCD/LED Television of screen size up-to 32		Yes	Yes Latent		Yes Latent	Yes Latent							Yes		Yes	
70	BIS	White Goods	Visual Display Units, Video Monitors of screen size upto 32		Yes	Yes Latent		Yes Latent	Yes Latent							Yes		Yes	
71	BIS	Solar	Crystalline Silicon Terrestrial Photovoltaic (PV) modules (Si wafer based)		Yes													Yes	
72	BIS	Luminary	Independent LED Modules for General Lighting		Yes													Yes	
73	BIS	White Goods	Television other than Plasma/ LCD/LED TVs		Yes	Yes Latent		Yes Latent	Yes Latent							Yes		Yes	
74	BIS	CE	Video Camera		Yes														
75	BIS	ITE	Webcam (Finished Product)		Yes											Yes	Yes		
76	BIS	White Goods	Microwave Ovens		Yes													Yes	
77	BIS	White Goods	Rice Cooker		Yes													Yes	
78	MTCTE	OE	2-Wire Telephone Equipment								Yes	Yes	Yes	Yes	Yes				
79	MTCTE	OE	G3 Fax Machine								Yes	Yes	Yes	Yes	Yes				

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80	MTCTE	OE	Modem			Yes Latent		Yes Latent	Yes Latent		Yes	Yes	Yes	Yes	Yes				
81	MTCTE	OE	Cordless Telephone								Yes	Yes	Yes	Yes	Yes				
82	MTCTE	OE	ISDN Customer Premises Equipment								Yes	Yes	Yes	Yes	Yes				
83	MTCTE	OE	Private Automatic Branch Exchange (PABX)								Yes	Yes	Yes	Yes	Yes				
84	MTCTE	Telecom	Passive Optical Network (PON) family (PON ONT, PON ONU & PON OLT)								Yes	Yes	Yes	Yes	Yes				
85	MTCTE	Telecom	Feedback Devices								Yes	Yes	Yes	Yes	Yes				
86	MTCTE	Telecom	Transmission Terminal Equipment (SDH, Multiplexing Equipment)								Yes	Yes	Yes	Yes	Yes				
87	MTCTE	Telecom	Base Station for Cellular Network								Yes	Yes	Yes	Yes	Yes				
88	MTCTE	Telecom	Compact Cellular Network								Yes	Yes	Yes	Yes	Yes				
89	MTCTE	Telecom	End Point Device for Environmental Monitoring								Yes	Yes	Yes	Yes	Yes				
90	MTCTE	Telecom	Equipments Operating in 2.4 GHz and 5 GHz Band			Yes Latent		Yes Latent			Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
91	MTCTE	ITE	IoT Gateway							Yes Latent	Yes	Yes	Yes	Yes	Yes		Yes		
92	MTCTE	Telecom	Repeater for Cellular Network								Yes	Yes	Yes	Yes	Yes	Yes			
93	MTCTE/ MoP*	IE	Smart Electricty Meter								Yes	Yes	Yes	Yes	Yes				
94	MTCTE	CE	Tracking Device								Yes	Yes	Yes	Yes	Yes				
95	MTCTE	OE	Conferencing Equipment		Yes						Yes	Yes	Yes	Yes	Yes	Yes	Yes		
96	MTCTE	Telecom	DSL Equipments								Yes	Yes	Yes	Yes	Yes				
97	MTCTE	Telecom	HF Radio								Yes	Yes	Yes	Yes	Yes				
98	MTCTE	OE	IP Multimedia Conferencing Equipment		Yes						Yes	Yes	Yes	Yes	Yes	Yes			
99	MTCTE	OE	IP Security Equipment								Yes	Yes	Yes	Yes	Yes				
100	MTCTE	ITE	LAN Switch								Yes	Yes	Yes	Yes	Yes		Yes		Yes
101	MTCTE	Telecom	Media Gateway								Yes	Yes	Yes	Yes	Yes				
102	MTCTE	Telecom	Mobile Radio Trunking System								Yes	Yes	Yes	Yes	Yes				
103	MTCTE	Telecom	Mobility Management Entity (MME)								Yes	Yes	Yes	Yes	Yes				
104	MTCTE	PT	Optical Fibers (Single Mode)								Yes	Yes	Yes	Yes	Yes				
105	MTCTE	Telecom	Precision Timing Protocol Grand Master Equipment								Yes	Yes	Yes	Yes	Yes				
106	MTCTE	RT	PTP PMP Microwave Fixed Radio Systems								Yes	Yes	Yes	Yes	Yes				
107	MTCTE	CE	Radio Broadcast Receivers								Yes	Yes	Yes	Yes	Yes				
108	MTCTE	ITE	Router								Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes
109	MTCTE	SC	Satellite Communication Equipments								Yes	Yes	Yes	Yes	Yes				
110	MTCTE	AITT	Session Border Controller								Yes	Yes	Yes	Yes	Yes				
111	MTCTE	AITT	Signalling Gateway			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
112	MTCTE	AITT	Softswitch			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
113	MTCTE	RT	VHF UHF Radio System Equipments								Yes	Yes	Yes	Yes	Yes				
114	MTCTE	AITT	Transmission Terminal Equipment (SDH Equip, Multiplexing Equip)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
115	MTCTE	AITT	MSC/MSC-S/GMSC/GMSC-S including VLR (Mobile Switching Centre)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
116	MTCTE	RT	Base Station Controller (BSC)/Radio N/w Controller								Yes	Yes	Yes	Yes	Yes				
117	MTCTE	AITT	Equipment Identity Register			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
118	MTCTE	Mobile	Subscriber Identity Module (SIM)								Yes	Yes	Yes	Yes	Yes				
119	MTCTE	AITT	OTA Platform and Device Manager Platform/FOTA			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
120	MTCTE	AITT	Home Location Register(HLR) or Home Subscriber Register (HSS) or Authentication Centra (Auc)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				

CE- Conumer Electronics/ IE- Industrial Equipment/ OE- Office Equipment/ AITT- Appliance IT Telecom/ PT- Passive Telecomm/ SC- Satellite Communication/ ITE- IT Equipment/ RT- Radio Telecom/AITT- Appliance IT Equipment

Appendix-D

S No	Scheme	Sub-Category from a Industry Perspective	List of Product/ Variants	Scheme ->	CRO/ CRS	STQC-S	STQC IC3S	STQC Prod Fn	STQC-TEVCS	STQC-IoTSCS	MTCTE-EMI	MTCTE-Safety	MTCTE-Security	MTCTE-TR	MTCTE-ECR	WPC/ ETA	NSDTS	BEE	MoP-CCC*
121	MTCTE	AITT	Serving GPRS Support Node / Gateway GPRS Support Node (SGSN/GGSN)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
122	MTCTE	AITT	S-GW/P-GW (Serving Gateway / Packet Gateway)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
123	MTCTE	AITT	Short Message Service Center (SMSC)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
124	MTCTE	AITT	Cell Broadcast Centre (CBC)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
125	MTCTE	AITT	Service Control Point (SCP)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
126	MTCTE	AITT	OMC/EMS/NMS/OSS (Operation and Maintenance Centre/ Element Management System/ Network Management System/ Operation Support Systems)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
127	MTCTE	AITT	Gateway Mobile Location Centre			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
128	MTCTE	ITE	Infiniband Switch								Yes	Yes	Yes	Yes	Yes				
129	MTCTE	PT	Optical Fibre Cable								Yes	Yes	Yes	Yes	Yes				
130	MTCTE	AITT	Serving Mobile Location Centre (SMLC)			Yes Latent			Yes Latent		Yes	Yes	Yes	Yes	Yes				
131	WPC	Telecom	Wi-Fi Modules/BT													Yes			
132	NSDTS	ICT	All active Products used on Indian Telecom N/w													Yes			
133	BEE	CE	Frost Free (No-Frost) Refrigerator															Yes	
134	BEE	Luminary	Tubular Fluorescent Lamps															Yes	
135	BEE	CE	Room Air Conditioners															Yes	
136	BEE	Industrial	Distribution Transformer															Yes	
137	BEE	CE	RAC (Cassette, Floor Standing Tower, Ceiling, Corner AC)															Yes	
138	BEE	CE	Direct Cool Refrigerator															Yes	
139	BEE	CE	Electric Geysers															Yes	
140	BEE	CE	Color TV		Yes	Yes Latent		Yes Latent	Yes Latent							Yes		Yes	
141	BEE	CE	Inverter AC															Yes	
142	BEE	Luminary	LED Bulbs		Yes													Yes	
143	STQC	ICT	All ICT Products. To be certified as a Secure ICT infrastructure Product			Yes	Yes		Scheme Under Development								Yes		
144	STQC	ICT	Firewall		Yes		Yes				Yes	Yes	Yes	Yes	Yes				
145	STQC	Authentication	Finger Print Scanner		Yes	Yes		Yes	Yes							Yes			
146	STQC	Authentication	Enrolment		Yes	Yes		Yes	Yes							Yes			
147	STQC	Authentication	Q R Code Scanner		Yes	Yes		Yes	Yes							Yes			
148	STQC	Authentication	Single Chip-Micro Controller with Integrated Secure Element			Yes		Yes	Yes										
149	STQC	Authentication	Printed Circuit Board Assembly (PCBA) based on NXP i.MX250 secure processor			Yes		Yes	Yes										
150	STQC	Mobile	Mobile Terminal			Yes Latent													
151	STQC	Retail	Micro ATM Biometric Devices			Yes		Yes	Yes										
152	STQC	Retail	Smart Card		Yes	Yes		Yes	Yes										
153	STQC	IoT	IoT S/s including Sensors, Embadded Components, Actuators, IoT Gateways, End-user devices		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				Yes	Yes		

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GLOSSARY

BIS: Bureau of Indian Standards

BEE: Bureau of Energy Efficiency

CISA The Certified Information Systems Auditor

CISPR: International Standards Commission's (IEC's) Committee on Electromagnetic Interference (CISPR)

CRO: Compulsory Registration Order

CRS: Compulsory Registration Scheme

ComSec: Communication Security Certification Scheme

CEL: China Energy Leveling

CEA: Central Electricity Authority

CEC: Commission for Environmental Cooperation

CAB: Conformity Assessment Bodies

CB: Certification Bodies' Scheme

CCC: China Compulsory Certificate

DoT: Department of Telecommunication

DOE: United States Department of Energy

ECR/EP: Energy Consumption Ration/Energy Passport

EOL: End of Life

EMI/EMC: Electromagnetic Interference/ Electromagnetic Compatibility

ER: Essential Requirement

ETA: Equipment Type Approval

ETSI: European Telecommunications Standards Institute

FCC: Federal Communication Commission

HSE: Highly Specialize Equipment

IEC: International Standards Commission

IEEE: Institute of Electrical and Electronics Engineers

ILAC: International Laboratory Accreditation Cooperation

ICT: Information & Communication Technology

IPV6: Internet Protocol Version-6

ITSAR: Indian Telecom Security Assurance Requirement

KC: Korea Certification

GLOSSARY

KCC: Korean Communications Commission

KMEPS: Korean Standard

MeitY: Ministry of Electronics & Information Technology

METI: Ministry of Economy, Trade, and Industry, Japan

MIC: Minster of Internal Affairs and Communications, Japan

MIC: Ministry of Information and Communications, Vietnam

MOPS: Ministry of Public Security, China

MTCTE: Mandatory Testing and Certification of Telecomm Equipment

NCCS: National Centre for Communication Security

NRTL: Nationally Recognized Testing Laboratory

NSDTS: National Security Directives on Telecommunication Sectors

PABX: Private Automatic Branch Exchange

PTQC: Posts and Telematics Quality Control Directorate, Vietnam

RRA: National Radio Research Agency, Korea

SDPPI: Indonesia Radio & Telecommunication Approval

SNI: Indonesia National Standard

SLA: Service Level Agreements

SRRC: State Radio Regulation of China

STQC: Standardization Testing and Quality Certification

STB: Set Top Box

TEC: Telecommunication Engineering Centre

TEVC: Trusted Electronic Value Chain Compliance Scheme

VCCI: Voluntary Control Council for Interference

WPC: Wireless Planning & Coordination Wing