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स॰क्र॰ CIL/C2D/PM 2020/123



कोल इंडिया लिमिटेड (एक महारत्न कंपनी) सामग्री प्रबंधन विभाग

कोल भवन, प्लाट सं. -ए.एफ-३, एक्शन एरिया-१ए न्यू टाउन, राजरहाट, कोलकाता - ७००१५६ फ़ोन:०३३-२३२४४१२७, फैक्स:०३३-२३२४४११५

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दिनांक- 01.06.2023

कार्यालय आदेश

विषय - Guidelines for implementing the provisions of Public Procurement (Preference to 'Make in India') Order, 2017, related to procurement of Telecom products

Please find enclosed Notification dated 29.08.2018 of Department of Telecommunications, Ministry of Communications, Govt. of India, for your information and compliance.

This is issued with competent approval.

संलग्न - उपरोक्तानुसार

(अम्बुज कुमार मोहंती) किारी निदेशक (सामग्री एवं संविद्या

वितरण:

- १. निदेशक (तकनीकी) /निदेशक (वित्त) /निदेशक (विपणन) /निदेशक (कार्मिक) /निदेशक (बीडी) , सी आई एल
- २. अ प्र नि, बीसीसीएल/सीसीएल/सीएमपीडीआई/ईसीएल/एमसीएल/एनसीएल/एसईसीएल/डब्ल्यूसीएल
- ३. निदेशक (तकनीकी) -पी&पी/सं, बीसीसीएल/सीसीएल/ईसीएल/एमसीएल/एनसीएल/एसईसीएल/डब्ल्यूसीएल
- ४. मुख्य सतर्कता अधिकारी, सीआईएल
- ५. कार्यकारी निदेशक (समन्वय) / (सुरक्षा एवं बचाव) / (उत्पादन) / (आईसीटी) / (पर्यावरण) / (वित्त) / (सोलार) / (ईई) , सीआईएल
- ६. महाप्रबंधक, नार्थ ईस्टर्न कोलफ़ील्ड्स
- ७. महाप्रबंधक (सिविल) /महाप्रबंधक (सीएमसी) /महाप्रबंधक (सी&एफ) /महाप्रबंधक (सीवी) /महाप्रबंधक (प्रणा ली) /महाप्रबंधक (ई&टी) /महाप्रबंधक (ईआरपी) , सीआईएल
- ८. महाप्रबंधक (सा/प्र) , बीसीसीएल / सीसीएल / सीएमपीडीआई / ईसीएल / एमसीएल / एनसीएल / एसईसीएल / डब्ल्यूसीएल
- ९. सा प्र विभाग, सी. आई. एल के सभी अधिकारीगण



MINISTRY OF COMMUNICATIONS

(Department of Telecommunications)
NOTIFICATION

New Delhi, the 29th August, 2018

Subject: Public Procurement (Preference to Make in India) Order 2017- Notification of Telecom Products, Services or Works - regarding.

Reference: (i) Department of Industrial Policy & Promotion (DIPP) Order No. P-45021/2/2017-B.E.-II dated 15.06.2017

(ii) Department of Industrial Policy & Promotion (DIPP) Order No. P-45021/2/2017-PP (BE-II) dated 28.05.2018

No. 18-10/2017-IP The Government has issued Public Procurement (Preference to Make in India) Order 2017 vide the Department of Industrial Policy and Promotion (DIPP) Order No. P-45021/2/2017-B.E.-II dated 15.06.2017 which is further revised vide No. P-45021/2/2017-PP (BE-II) dated 28.05.2018 to encourage 'Make in India' and to promote manufacturing and production of goods and services in India with a view to enhancing income and employment.

- 2. DIPP has identified Department of Telecommunications as the nodal Department for implementing the provisions related to procurement of goods, services or works related to the telecommunication sector.
- 3. Accordingly, in furtherance of the aforesaid Public Procurement (Preference to Make in India), Order 2017 (hereinafter called as PPP-MII Order), and in supersession of notification of this Department's Policy for Preferential Market Access (PMA) dated 5th October 2012 and notification for value addition criterion dated 11th January 2017, the Department of Telecommunications, hereby notifies that the aforesaid Order shall be applicable for telecom products, services or works in full except as specified in this notification.
- 4. It is clarified that this notification shall be applicable to all Central Schemes (CS)/ Central Sector Schemes (CSS), for which procurement is made by States and Local Bodies, if that project or scheme is fully or partially funded by the Government of India including Universal Service Obligation Fund (USOF) projects.
- 5. In terms of clauses 2, 3 and 11 of PPP-MMI Order, the Department of Telecommunications has prepared a list of telecom products, services and works for their purchase preference from local suppliers for public procurement. The list of telecom products, services and works along with their Preference to Make in India (PMI) and their Local Content (LC) is in **Table-A.** The local supplier has to manufacture equipment from component level in India and also develop local vendors for procurement of raw materials, components and parts for increasing local content. The Department has identified conditions for the inputs to be qualified as Local Content and maximum ceiling for design as LC out of total LC which are in **Table-B** and **Table-C** respectively.
- 6. In terms of clauses 3(a) and 11 of the PPP-MII Order, it is declared that list of telecom product, services and works in **Table-A** have sufficient local capacity and local competition. It is hereby notified that the procuring entities will procure a minimum percentage as indicated under Preference to Make in India (PMI) of their telecom products, services or works requirements fulfilling Local Content (LC) criterion prescribed against each item as in **Table A**.
- 7. Clause 14 (a) of PPP-MII Order regarding powers to reduce the minimum local content below the prescribed level stands withdrawn from Ministries/Departments of Government of India and the Boards of Directors of Government companies or autonomous bodies. This power vests only with Standing Committee as constituted under clause 16 of PPP-MII Order.

- 8. In terms of clause 9(a) of PPP-MII Order, the local supplier at the time of tender, bidding or solicitation shall provide self-certification in **Form-1** specifying that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made.
- 9. Each identified products, services or works as in **Table-A** shall comply with the latest TEC GR/IR, if such GR/IR have been issued. The procuring entity may ensure that prior experience clause is not too restrictive to exclude all local suppliers of telecom product, services or works. All Procurement Officers may be required to certify compliance of this order before uploading tenders on Central Public Procurement Portal (CPPP). Disciplinary action will be taken against erring officers who insert restrictive tender conditions against local suppliers with a malafide intent or otherwise flout the provisions of PPP-MII Order.
- 10. For compliance of GR/IR or any national standard, certification from Indian bodies i.e. TEC/TSEC, STQC, BIS or any accredited lab by them, is a mandatory requirement to be submitted by the bidder. For any telecom product, service and work as in **Table-A**, the procuring entity should not specify to bidder to mandatory qualify any foreign eligibility specifications or certification(s) issued by any foreign testing/security lab(s).
- In case a complaint is received by the procuring entity or the concerned Ministry/Department against the claim of a bidder regarding local content in telecom products, services or works or in case of a question whether an item being procured is a telecom product, service or work to be covered under the notification or any doubt in respect of telecom products, services or works, reference shall be made to Telecommunications Engineering Centre (TEC), Department of Telecommunications or technical auditor as accredited by the Telecommunications Engineering Centre (TEC), Department of Telecommunications), New Delhi.
- 12. In terms of clause 9(d) of PPP-MII Order, the following Committee is constituted for complaints and independent verification of self-declarations and auditor's/accountant's certificates on random basis:

i.	DDG(TC), TEC, New Delhi	-Chairperson
ii.	Director (Technical), C-DOT	- Member
iii.	Any other member(s) as co-opted by the chairperson	- Member
iv.	DG, TEPC	- Member
v.	Director (Finance), DoT	- Member
vi.	Director, TEC	- Convener

- 13. In case a complaint is received by the procuring entity or the concerned Ministry/Department against the claim of a bidder regarding Local Content (LC) in a locally supplied telecom product, services or works, the same shall be referred to the Committee as in para 12 above. The Committee should dispose of the complaint within 4 weeks, as far as possible, from the date of receipt of complaint along with all necessary documentation in support of Local Content claimed by the bidder.
- 14. In terms of clause 9 (e) of PPP-MII Order, it is hereby notified that there will be a minimum complaint fee of 2 Lakh or 1% of the value of the locally supplied telecom products, services or works being procured (subject to a maximum of 5 Lakh), whichever is higher, to be paid by Demand Draft or online, and to be deposited with Telecommunications Engineering Centre (TEC), as the case may be, or with any other third party testing laboratories or technical auditors accredited by TEC along with the complaint by the complainant. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld in part or full, deposited fee of the complainant will be refunded without any interest.

15. The Department of Telecommunications shall be the nodal Department to monitor the implementation of this notification for telecom products, services and works. For vetting the restrictive and discriminating terms and conditions against domestic manufactures of telecom products, services and works, a Committee is constituted with the following composition:

(i)	JS (T)	Chairperson
(ii)	DDG(IC)	Vice-Chairperson
(iii)	One representative of TEC	Member
(iv)	One representative of C-DOT	Member
(v)	Director (IP)	Member Secretary

16. The Notification comes into effect immediately and shall remain valid till revised.

Table –A
List of Telecom Products, Services and Works with PMI and LC

Sl. No.	and an obligate of (professions to peak that I all later to essentions) as a	Ye		Year		
	Telecom Products, Services and Works		2018-19		2019-20 onwards	
	il-olds.T	PMI	LC	PMI	LC	
1.	Encryption/UTM platforms (TDM and IP)	100	65	100	65	
2.	IP/MPLS Core routers/ Edge/ Enterprise Router	50	55	50	60	
3.	Managed Leased line Network equipment	50	55	50	60	
4.	Ethernet Switches (L2 and L3), Hubs	50	55	50	60	
5.	IP based Soft Switches, IMS, Unified Communication Systems	100	55	100	60	
6.	Wireless/Wireline PABXs / IP PBX & / Media Gateways	100	65	100	65	
7.	CPE (including Wi-Fi Access points and Routers, Media Converters), 2G/3G/4G/LTE Modems, Leased-line Modems, NFV/SDN CPE	100	45	100	50	
8.	Set-Top Boxes	50	50	50	55	
9.	SDH/Carrier-Ethernet/MPLS- TP/ Packet Optical Transport equipment/ PTN/ OTN systems	100	65	100	6.	
10.	DWDM/CWDM systems	50	55	50	60	
11.	GPON / XGS-PON, NG-PON2 equipment (including ONT and OLT)	100	55	100	60	
12.	Optical/SDH/PDH Cross Connects/ OTN Cross-connects and optical MUX,OADM	100	55	100	60	
13.	Small size 2 G/3 G GSM based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB, C-RAN BBU and RRH	100	55	100	6	
14.	2 G/3 G GSM based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB, C-RAN BBU and RRH	50	55	50	6	
15.	Small Size LTE/LTE-R Based Mobile Systems, with its various derivatives including rural & disaster communications, Macro & Micro eNodeB, Small Cells, EPC, NIB C-RAN BBU and RRH, LTE/LTE-R/4.5 G/ 5 G based broadband wireless access systems (eNodeB, gNB, EPC, etc.)	50	55	50	6	
16.	LTE/LTE-R Based Mobile Systems, with its various derivatives including rural & disaster communications, Macro & Micro eNode B, Small Cells, EPC, NIB C-RAN BBU and RRH ,LTE/LTE-R/4.5 G/ 5 G based broadband wireless access systems (eNodeB, gNB, EPC, etc.)	50	45	50	50	
17.	Wi-Fi based broadband wireless access systems (Including Access Point, Aggregation Block, Core Block), Integrated Broadband system	50	50	50	5.	
18.	Microwave Radio systems (IP/Hybrid), Mobile Front haul BBU and RRH (CPRI, eCPRI, FlexE, RoE, NGFI)	100	50	100	5.	
19.	Software Defined Radio, Cognitive Radio systems	50	50	50	5:	
20.	Repeaters (RF/RF-over-Optical), IBS, and Distributed Antenna system	100	55	100	60	
21.	Satellite based systems -Hubs, VSAT Disaster Communication Systems etc.	50	35	50	4	
22.	Copper access systems (DSL/DSLAM), high-speed xDSL (G.fast)	50	50	50	5:	
23.	Network Management systems (NMS) with its various derivatives	100	65	100	6.	
24.	Security and Surveillance Communication Systems (video and sensors based) including Perimeter Security Systems	100	35	100	4	

25.	Optical Fiber	50	50	1 50	1 50
26.	Optical Fiber Cable			50	50
27.	Telecom Power System (Including Solar Power)	75	50	75	5:
28.	Telecom Batteries (Lead Acid & Li-ion)	50	50	50	5.
29.	IP audio phones / IP video Phones / Analog adaptor	50	35	50	5.
30.	SDN Software Controllers, NVF and CNF software	50	50	50	5:
31.	Telecom Cloud infrastructure, Telecom Data centers	50	35	50	4
32.	2 way Analog/Digital radio including Walkie-Talkie & Mobile Radio	50	50	50	5
33.	Batteries of 2 way Analog/Digital radio including Walkie-Talkie	50	40	50	-
34.	Fiber Monitoring System	50	50		4:
35.	M2M/IOT Subsystems	50		50	5:
36.	Telecom Services/Works	100	50 70	100	5:

PMI =Minimum preference in % (of total quantity being procured) for Make in India Telecom Products, Services or Works as indicated against each financial year.

LC = Minimum Local Content as a percentage of total Bill of Material (cost of production) to qualify as Make in India Telecom Products, Services or Works as indicated against each financial year.

Table-B
Main Inputs /stages for manufacture of telecom products & conditions for the inputs to be qualified as Local
Content

Main Inputs /stages for manufacture of telecom products *	Conditions for the inputs to be qualified as Loca
(1) Design (a) Hardware design (b) Software Design & Development	The maximum Local Content (LC) percentage for Design which can be claimed by a Local manufacturer for the telecom products based on in house/in country R&D costs incurred/amortized to create IPR in India are as per Table-C subject to the condition that: (a) The Intellectual Property Right (IPR) resides in India for Hardware Design, (b) The Copyright is in India for the software Design & Development.
 (2) Components (a) Integrated chips (ICs) – Processor, Memory etc. (b) Active components – Transistors, Diodes etc. (c) Passive Components – Resistors, Capacitors, Inductors etc. 	Manufactured in India
(3) PCBs (a) PCB Fabrication (b) PCB population using components	Manufactured in India
(4) Cables/Chassis etc. (a) Chassis (b) Cables (c) Racks (d) Heat sinks (e) Enclosures	Manufactured in India
(5) RF Components/Subsystem (a) Duplexers/Filters (b) Antenna	Manufactured in India
(6) Assembly/Integration/Testing [#] The product may include some/all of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the input/stage as mentically be calculated which in the content of the i	The upper ceiling limit of Domestic Local Content (LC) for Assembly/ Integration/ Testing in respect of the telecom products listed in Table-C would be 10% of the total product Bill of Material (except S. No. 25,26 and 36)

will be calculated which are involved in the manufacturing of these telecom products.

[#] In case a system of its subsystem is merely assembled / integrated / tested, then actual Local Content shall be taken as up to 10% only of the cost of system / subsystem.

Table-C

Maximum ceiling for Design as Local Content out of total LC for Telecom Equipment

Sl. No.	Telecom equipment Description	Maximum ceiling for Design as Local Content out of total LC
1	Encryption/UTM platforms (TDM and IP)	55
2	IP/MPLS Core routers/ Edge/ Enterprise Router	40
3	Managed Leased line Network equipment	40
4	Ethernet Switches (L2 and L3), Hubs	40
5	IP based Soft Switches, IMS, Unified Communication Systems	40
6	Wireless/Wireline PABXs / IP PBX & / Media Gateways	45
7	CPE (including Wi-Fi Access points and Routers, Media Converters), 2G/3G/4G/LTE Modems, Leased-line Modems, NFV/SDN CPE	30
8	Set-Top Boxes	35
9	SDH/Carrier-Ethernet/MPLS- TP/ Packet Optical Transport equipment/ PTN/ OTN systems	45
10	DWDM/CWDM systems	40
11	GPON / XGS-PON, NG-PON2 equipment (including ONT and OLT)	40
12	Optical/SDH/PDH Cross Connects/ OTN Cross-connects and optical MUX,OADM	40
13	Small size 2 G/3 G GSM based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB, C-RAN BBU and RRH	40
14	2 G/3 G GSM based Base Station Systems, with its various derivatives including rural & disaster response, Macro & Micro BTS, Small Cells, NIB, C-RAN BBU and RRH	40
15	Small Size LTE/LTE-R Based Mobile Systems, with its various derivatives including rural & disaster communications, Macro & Micro eNode B, Small Cells, EPC, NIB C-RAN BBU and RRH, LTE/LTE-R/4.5 G/5 G based broadband wireless access systems (eNodeB, gNB, EPC, etc.)	40
16	LTE/LTE-R Based Mobile Systems, with its various derivatives including rural & disaster communications, Macro & Micro eNode B, Small Cells, EPC, NIB C-RAN BBU and RRH ,LTE/LTE-R/4.5 G/ 5 G based broadband wireless access systems (eNodeB, gNB, EPC, etc.)	and and
17	Wi-Fi based broadband wireless access systems (Including Access Point, Aggregation Block, Core Block), Integrated Broadband system	35
18	Microwave Radio systems (IP/Hybrid), Mobile Front haul BBU and RRH (CPRI, eCPRI, FlexE, RoE, NGFI)	35 Hodel 35
19	Software Defined Radio, Cognitive Radio systems	35
20	Repeaters (RF/RF-over-Optical), IBS, and Distributed Antenna system	40
21	Satellite based systems –Hubs, VSAT Disaster Communication Systems etc.	25
22	Copper access systems (DSL/DSLAM), high-speed xDSL (G.fast)	35
23	Network Management systems (NMS) with its various derivatives	50
24	Security and Surveillance Communication Systems (video and sensors based) including Perimeter Security Systems	30
25	Optical Fiber	NIL
26	Optical Fiber Cable	NIL
27	Telecom Power System (Including Solar Power)	30
28.	Telecom Batteries (Lead Acid & Li-ion)	30
29	IP audio phones / IP video Phones / Analog adaptor	15
30	SDN Software Controllers, NVF and CNF software	15
31	Cloud infrastructure, Data centers	20
32	2 way Analog/Digital radio including Walkie-Talkie & Mobile Radio	30
33	Batteries of 2 way Analog/Digital radio including Walkie-Talkie	30
34	Fiber Monitoring System	35
35	M2M/IOT Subsystems	35
36	Telecom Services/Works	NIL

Format for Self Certification regarding Local Content (LC) for Telecom Product, Services or Works

Frank -		Cla Dla WI	
	o deretad)	S/o, D/o, W/o do hereby solemnly affirm and dec	, Resident of
	34	do hereby solelling affirm and dec	clare as under:
That I a issued vi	gree to abide by the de Notification No:	terms and conditions of Department of dated	of Telecommunications, Government of India
P	Total records our	hed hereinafter is correct to best of ore the procuring entity or any other ment of India for the purpose of assess	my knowledge and belief and I undertake to authority so nominated by the Department of sing the LC.
That the am respon	LC for all inputs who is a sible for the correction	nich constitute the said Telecom Produ ess of the claims made therein.	ct/Services/Works has been verified by me and I
Telecomr (Preferen	nunications, Governmence to Make in India	nent of India and I will be liable as Order 2017.	mentioned herein is found to be incorrect and a authority so nominated by the Department of s under clause 9 (f) of Public Procurement
I agree to make this	maintain all informat available for verificat	ion regarding my claim for LC in the Co ion to any statutory authorities.	mpany's record for a period of 2 years and shall
i. II.	Name and details of Date on which this	the Local supplier (Registered Office, Ma	nufacturing unit location, nature of legal entity)
iii.	Telecom Product/S	ervices/Works for which the certificate is	produced
iv.	Procuring agency to	whom the certificate is furnished	Thomas a real scene of the
v. vi.	Percentage of LC cl	aimed etails of the unit of the manufacturer	
vii.	Sale Price of the pri	oduct	
viii.	Ex-Factory Price of		
ix.	Freight, insurance a	nd handling	
х.	Total Bill of Materia		
xi.	List and total cost	value of inputs used for manufacture	of the Telecom Product/Services/Works
xii.	List and total cos	of oilibring which are locally source	ed. Please attach LC certificates from local
xiii.		ts which are imported, directly or indirectl	
or and on	behalf of	(Name	of firm/entity)
uthorized	signatory (To be duly		
nsert Na	me Designation on	authorized by the Board of Directors) l Contact No. and date>	

List of Acronyms used in the notification

SI No.	Acronyms	Expansion
1.	2/3/4/4.5/5 G	Second/Third/Fourth/4.5/Fifth Generation
2.	BBU	Base Band Unit
3.	BIS	Bureau of Indian Standard
4.	BTS	Base Transceiver Station
5.	C-DoT	Centre for Development of Telematics
6.	CNF	Container /Cloud Network Function
7.	CPE	Customer Premise Equipment
8.	CPRI	Common Public Radio Interface
9.	C-RAN	Cloud/Centralized Radio Access Network
10.	CS	Central Scheme
11.	CSS	Central Sector Scheme
12.	CWDM	Coarse Wavelength Division Multiplexing
13.	DIPP	Department of Industrial Policy and Promotion

		14(12) 2.57
14.	DoT	Department of Telecommunications
15.	DSL	Digital Subscriber Line
16.	DSLAM	Digital Subscriber Line Access Multiplexer
17.	DWDM	Dense Wavelength Division Multiplexing
18.	eCPRI	e- Common Public Radio Interface
19.	e-node B	Evolved node B
20.	EPC	Evolved Pocket Core
21.	FlexE	Flexible Ethernet
22.	G. fast	ITU-T G series recommendations for Fast Access to Subscriber Terminals
23.	gNB	Next Generation Node B
24.	GPON	Gigabit Passive Optical Network
25.	GR	Generic Requirements
26.	GSM	Global System for Mobile
27.	IBS	Integrated Building System
28.	IC	Integrated Chip
29.	IMS	IP Multimedia Subsystem
30.	IOT	Internet of Things
31.	IP	Internet Protocol
32.	IPR	Intellectual Property Right
33.	IR	Interface Requirement
34.	L-2	Layer Two
35.	L-3	Layer Three
36.	LC	Local Content
37.	Li-ion	Lithium-ion
38.	LTE	Long Term Evolution
39.	LTE-R	Long Term Evolution-Railway
40.	M2M	Machine to Machine
41.	MPLS	Multiprotocol Label Switching
42.	MPLS-TP	Multiprotocol Label Switching-Transport Profile
43.	MUX	Multiplexer
44.	NFV	Network Function Virtualization
45.	NGFI	Next Generation Fronthaul Interfaces
46.	NG-PON2	Next Generation Gigabit Passive Optical Network 2
47.	NIB	Network in Box
48.	NMS	Network Management Software
49.	NVF	Network Virtual Function
50.	OADM	Optical Add-Drop Multiplexer
51.	OLT	Optical Line Terminal
52.	ONT	Optical Network Terminal
53.	OTN	Optical Transport Network
54.	PABX	Private Auto Branch Exchange
55.	PBX	Private Branch Exchange
56.	PCB	Printed Circuit Board
57.	PDH	Plesiochronous Digital Hierarchy
58.	PMA	Preferential Market Access
59.	PMI	Preference for Make in India
60.	PPP-MII	Public Procurement (Preference to Make in India)
61.	PTN	Packet Transport Network
62.	R&D	Research and Development
	RF	Radio Frequency
63.	RRH	Remote Radio Head
64.		Synchronous Digital Hierarchy
65.	SDH	Synchronous Digital Dictatony

66.	SDN	Software Defined Network
67.	STQC	Standardisation Testing and Quality Certification
68.	TDM	Time Division Multiplexing
69.	TEC	Telecommunication Engineering Centre
70.	TEPC	Telecom Export Promotion Council
71.	TSEC	Technical Specification Evaluation Certificate
72.	USOF	Universal Service Obligation Fund
73.	UTM	Unified Threat Management
74.	VSAT	Very Small Aperture Terminal
75.	Wi-Fi	Wireless Fidelity
76.	XDSL	different variations of Digital Subscriber Line
77.	XGS-PON	10 Gigabit Symmetrical Passive Optical Network

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