

 BHEL Tenders		Government eProcurement System				
Tender Details						
Date : 04-Jun-2022 09:25 AM						
 Print						
Basic Details						
Organisation Chain	Bharat Heavy Electricals Limited HPEP - Hyderabad CMM					
Tender Reference Number	BHEL/NETWORK/RC/22-23					
Tender ID	2022_BHEL_11271_1					
Tender Type	Open Tender	Form of contract	Buy			
Tender Category	Services	No. of Covers	2			
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No			
Payment Mode	Offline	Is Multi Currency Allowed For BOQ	No			
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No			
Payment Instruments			Cover Details, No. Of Covers - 2			
Offline	S.No	Instrument Type	Cover No	Cover	Document Type	Description
	1	DD	1	Fee/PreQual/Technical	.pdf	NIT Documents
			2	Finance	.xls	Price Bid
Tender Fee Details, [Total Fee in ₹ * - 0.00]			EMD Fee Details			
Tender Fee in ₹	0.00		EMD Amount in ₹	2,00,000	EMD through BG/ST or EMD Exemption Allowed	Yes
Fee Payable To	Nil	Fee Payable At	Nil			
Tender Fee Exemption Allowed	No		EMD Fee Type	fixed	EMD Percentage	NA
			EMD Payable To	Payable To	EMD Payable At	Payable At
Click to view modification history						
Work /Item(s)						
Title	Rate Contract for Supply and Installation of Network Equipment as per BHEL					
Work Description	Rate Contract for Supply and Installation of Network Equipment as per BHEL requirement.					
Pre Qualification Details	As mentioned in NIT Document					
Independent External Monitor/Remarks	NA					
Show Tender Value in Public Domain	No					
Tender Value in ₹	70,00,00,000	Product Category	Network /Communication Equipments	Sub category	NA	
Contract Type	Rate Contract	Bid Validity(Days)	90	Period Of Work (Days)	1825	
Location	BHEL Hyderabad	Pincode	502032	Pre Bid Meeting Place	BHEL Hyderabad	

Pre Bid Meeting Address	Sujit Maharana, SDGM/DTG Admin Building, BHEL Hyderabad Ramachandrapuram Telangana 502032	Pre Bid Meeting Date	02-May-2022 10:00 AM	Bid Opening Place	BHEL Hyderabad
Should Allow NDA Tender	No	Allow Preferential Bidder	No		

Critical Dates

Publish Date	21-Apr-2022 06:00 PM	Bid Opening Date	18-Jun-2022 11:00 AM
Document Download / Sale Start Date	21-Apr-2022 06:00 PM	Document Download / Sale End Date	17-Jun-2022 11:00 AM
Clarification Start Date	NA	Clarification End Date	NA
Bid Submission Start Date	21-Apr-2022 06:00 PM	Bid Submission End Date	17-Jun-2022 11:00 AM

Tender Documents

NIT Document	S.No	Document Name	Description	Document Size (in KB)
	1	Tendernotice_1.pdf	NIT Document with Spec, Scope, PQC and other Terms and Conditions.	4660.60

Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	NIT.pdf	NIT Document including Spec, Scope, PQC and other terms and conditions.	4645.03
	2	BOQ	BOQ_11899.xls	Price Bid	543.00

Latest Corrigendum List

S.No	Corrigendum Title	Corrigendum Type	View
1	Due date extension till 17.06.2022	Date	
2	Corrigendum and reply to prebid queries	Other	

Bid Openers List

S.No	Bid Opener Login Id	Bid Opener Name	Certificate Name
1.	manoj.kotakonda@bhel.in	K MANOJ MANOJ	MANOJ KOTAKONDA
2.	venkateshm@bhel.in	Venkatesh M VENKATESH	VENKATESH MONDEM
3.	karunakar@bhel.in	Karunakar Pilli KARUNAKAR	KARUNAKAR PILLI
4.	ajaypekde@bhel.in	Ajay M. Pekde	AJAY MACCHINDRA PEKDE

GeMARPTS Details

GeMARPTS ID	79E0WEX1D72C
Description	Network Rate Contract
Report Initiated On	20-Apr-2022
Valid Until	20-May-2022

Tender Properties

Auto Tendering Process allowed	No	Show Technical bid status	Yes
Show Finance bid status	Yes	Show Bids Details	Yes
	Normal	BoQ Compartive chart decimal places	3

BoQ Comparative Chart model			
BoQ Comparative Chart Rank Type	L	Form Based BoQ	No

Tender Inviting Authority

Name	Ajay Pekde
Address	BHEL Hyderabad

Tender Creator Details

Created By	Ajay M. Pekde
Designation	DGM
Created Date	21-Apr-2022 05:17 PM

Tender Reference Number - BHEL/NETWORK/RC/22-23

CORRIGENDUM No 1 dated 04-06-2022

Tender Reference Number - BHEL/NETWORK/RC/22-23
CORRIGENDUM No 1 dated 04-06-2022

S No	Pg No	Clause No	Existing Clause	Corrigendum
1	52		# Sec. 22 - Arbitration Clause –	<u>Modification:</u> Modified clause is attached
2	49	15(a)		<u>Deletion:</u> last Word "or" in the clause 15(a) withdrawn
3	19	7.1.9	High Level Design (HLD) and Low-Level Design (LLD) must be prepared and proposed by OEM directly and it should be submitted to BHEL by the OEM.	<u>Modification:</u> HLD & LLD document preparation and finalization should be done by the Bidder Team and approved by OEM
4	20	7.1.20	Supply and configuration of all components for NAC Solution (software, license, firmware etc.) and its integration with BHEL's existing/future network infrastructure (during the period of contract) as per technical specifications. The solution should be capable of being bypassed in the event of any failure of the solution.	<u>Modification:</u> Supply and configuration of all components for NAC Solution (software, license, firmware etc.) and its integration with BHEL's existing network infrastructure (during the period of contract) as per technical specifications. The solution should be capable of being bypassed in the event of any failure of the solution.
5	20	7.1.10	The implementation and deployment should be overseen and handhold by the OEM	<u>Modification:</u> The implementation and deployment should be overseen and handhold by the OEM for major locations like Hyderabad, Trichy, Haridwar and bidder should do the rest of the sites accordingly.
6	24	7.3.1.	Copper Cabling & Fiber Cabling Repairing/replacing any fiber/UTP during full lease period, cut due to any reason whatsoever, will be done by the vendor. BHEL shall not bear any cost for the same.	<u>Modification:</u> Repairing/replacing any fiber/UTP during full lease period, will be done by the vendor. BHEL shall not bear any cost for the same.
7	24	7.3.1. Copper Cabling & Fiber Cabling	Repairing/replacing any fiber/UTP during full lease period, cut due to any reason whatsoever, will be done by the vendor. BHEL shall not bear any cost for the same.	<u>Modification:</u> Repairing/replacing any fiber/UTP during full lease period, will be done by the vendor. BHEL shall not bear any cost for the same.

S No	Pg No	Clause No	Existing Clause	Corrigendum
8	25	7.4.6	Upon successful completion of installation and implementation, the OEM (active components) should check and certify that all components are configured as per industry best security practices.	<u>Modification:</u> Upon successful completion of installation and implementation, the OEM (active components) should check and certify that all components are configured as per industry best security practices for major locations like Hyderabad, Trichy, Haridwar.
9	26	7.4.10	The Successful bidder shall submit a certificate of undertaking from respective OEM certifying that the equipment offered is not reaching End-of-Sale within next 3 years from the date of bid submission end date.	<u>Modification:</u> The Successful bidder shall submit a certificate of undertaking from respective OEM certifying that the equipment offered is not reaching End-of-Sale within next 2 years from the date of bid submission end date
10	65	LAN Core Switch	Should Support Hitless software upgrades (ISSU) to reduce downtime during software upgrade. The switch must support Fault isolation per process and process patching to enhance the switch availability	<u>Modification:</u> Should Support Hitless software upgrades (ISSU) or equivalent to reduce downtime during software upgrade. The switch must support Fault isolation per process and process patching to enhance the switch availability
11	65	LAN Core Switch	Should support integrated security features like DHCP snooping with option-82, Dynamic Arp Inspection, IP Source guard and MACSec-128/256	<u>Modification:</u> Should support integrated security features like DHCP snooping with option-82, Dynamic Arp Inspection, IP Source guard and encryption as per IEEE 802.1ae or equivalent
12	66	LAN Core Switch	IEEE 802.1ae	<u>Modification:</u> IEEE 802.1ae or equivalent
13	68	Data Centre Core Switch	All components (including elements such as I/O cards, Expansion Module, power supplies and fans) must be hot swappable with zero disruption to traffic forwarding (Unicast or multicast).	<u>Modification:</u> All components (including elements such as power supplies and fans) must be hot swappable with zero disruption to traffic forwarding (Unicast or multicast).
14	69	Data Centre Core Switch	Real-time statistics on per interface -> Buffer Utilization -> Queue drops -> Microbursts -> Queue depth -> Queue congestion	<u>Modification:</u> Real-time statistics on per interface -> Buffer Utilization -> Queue drops -> Queue depth -> Queue congestion

S No	Pg No	Clause No	Existing Clause	Corrigendum
15	69	Data Centre Core Switch- Point 12	OEM/Make/Model- All DC switches components and DC NMS must be from same OEM and the OEM should be in leaders quadrant of the latest Gartner's report for Wired and Wireless LAN Access Infrastructure	<u>Modification:</u> OEM/Make/Model- All DC switches components must be from same OEM and the OEM should be in leaders quadrant of the latest Gartner's report for Wired and Wireless LAN Access Infrastructure. NMS can be from different OEM
16	81, 84, 87 & 90	Access Switch Type 1/2/3/4	The uplink ports shall support 1000BaseLX, 1000BaseLH, 1000BaseSX, 1000BaseT, 10GBaseSR, 10GBaseLR, 10GBaseER, 10GBaseLRM transceivers	<u>Modification:</u> The uplink ports shall support 1000BaseLX, 1000BaseLH, 1000BaseSX, 1000BaseT, 10GBaseSR, 10GBaseLR, 10GBaseER transceivers
17	97	Hardware	The controller shall support 2x 10G/Multigigabit copper or 2x 10G/Multigigabit fiber	<u>Modification:</u> The controller shall support 2x 10G/Multigigabit copper or 2x 10G/Multigigabit fiber. The controller should come preloaded with 2 Nos of 10G single mode fiber modules.
18	104	Point No 43	Must be able to issue certificates using an inbuilt Certificate Authority	<u>Modification:</u> Must be able to issue certificates for BYOD devices using an inbuilt Certificate Authority.
19	106	Network Management System- Point-37	NMS should be available as a physical appliance including the licenses as per the unit wise requirement	<u>Modification:</u> " NMS should be available as a physical or Virtual appliance including the licenses as per the unit wise requirement". All the required hardware, software and licenses are in bidders scope.
20	111	Section-B : Data Centre Networking- Point 5	Solution shall be hardware Based appliance or x86 based server from the OEM and must run in redundancy to provide high availability. Server provided shall have minimum configuration of 64 GB RAM, 500 GB hard drive, 64bit 4 CPU cores, 1G Ethernet port	<u>Modification:</u> Solution shall be hardware or Virtual Based appliance or x86 based server from the OEM and must run in redundancy to provide high availability. Server provided shall have minimum configuration of 64 GB RAM, 500 GB hard drive, 64bit 4 CPU cores, 1G Ethernet port. All the required hardware, software and licenses are in bidders scope.
21	112	NMS	All the DC components shall be from same OEM.	<u>Deletion:</u> S.No.25 under Section B: Data Centre Networking of NMS is to be deleted

S No	Pg No	Clause No	Existing Clause	Corrigendum
22	117	3G/4G Router	Router should be ruggedized modular in nature with IP41 or above certification . The bidder also have an option to provide an external ruggedized box meeting the same certifications.	<u>Deletion:</u> Point to be removed
23	133	8 a)LCD Display	Input Voltage, Frequency Output Voltage, Frequency, Load level Battery Voltage, Level in %, Remaining backup time Fault Information MIMIC Information	<u>Modification:</u> Input Voltage, Frequency Output Voltage, Frequency, Load level Battery Voltage, Level in % Fault Information MIMIC Information
24	133	8. Other Features n. Noise Level	< 55 dB at 1 meter distance	<u>Modification:</u> <58 dB in 1 Meter Distance
25	133	6 kVA UPS _Test and Certificates sl No8 .r	Manufacturer -> ISO 9001, ISO 14001, OEM Plant should have water & air pollution control clearance certificate from respective govt. agency. UPS OEM should have registered office in India from last 15 years (certificate of incorporation and Pollution Control clearance Certificate to be provided)	<u>Modification:</u> Manufacturer -> ISO 9001, ISO 14001, OEM Plant should have water & air pollution control clearance certificate from respective govt. agency. UPS OEM should have registered office in India from last 10 years (certificate of incorporation and Pollution Control clearance Certificate to be provided)
26	135	7 a)LCD Display	Input Voltage, Frequency Output Voltage, Frequency, Load level Battery Voltage, Level in %, Remaining backup time Fault Information MIMIC Information	<u>Modification:</u> Input Voltage, Frequency Output Voltage, Frequency, Load level Battery Voltage, Level in % Fault Information MIMIC Information
27	135	2 kVA UPS _Test and Certificates Sl.No.8	Manufacturer -> ISO 9001, ISO 14001, OEM Plant should have water & air pollution control clearance certificate from respective govt. agency. UPS OEM should have registered office in India from last 15 years (certificate of incorporation and Pollution Control clearance Certificate to be provided)	<u>Modification:</u> Manufacturer -> ISO 9001, ISO 14001, OEM Plant should have water & air pollution control clearance certificate from respective govt. agency. UPS OEM should have registered office in India from last 10 years (certificate of incorporation and Pollution Control clearance Certificate to be provided)

S No	Pg No	Clause No	Existing Clause	Corrigendum
28	137	2.1.1	2.1.1 Structured communication network comprising of Fiber Optics (FO) Cable, UTP Cat 6A cables, switches, router, modem, light interface unit, patch panels, connectors, information outlets , intermediate junction boxes, racks, etc. for communication with servers/ PCs/ computers/ network printers and any other equipment as required.	<u>Modification:</u> 2.1.1 Structured communication network comprising of Fiber Optics (FO) Cable, UTP for CAT6 & U/FTP for CAT6A or equivalent, switches, router, modem, light interface unit, patch panels, connectors, information outlets , intermediate junction boxes, racks, etc. for communication with servers/ PCs/ computers/ network printers and any other equipment as required.
29	137	Introduction	Cat6A Specifications are duplicate, the same is present in Introduction with Cat6A U/FTP solution and Individual tab Cat6A U/UTP solution	<u>Deletion:</u> Cat6A Specification under Introduction to be deleted
30	138	A. Passive Components	1. Cat6 Components b. CAT6A U/FTP Cable	<u>Modification:</u> 1. Cat6 Components b. CAT6A U/FTP or F/UTP Cable
31	138	A. Passive Components	1. Cat6 Components d. CAT6A Information Outlet-STP	<u>Modification:</u> 1. Cat6 Components d. CAT6A Information Outlets compatible with CAT6A U/FTP or F/UTP
32	138	Structured Cabling for DATA System - REFERENCE STANDARDS	2) ANSI/TIA/EIA/568-C.1, Commercial Building Telecommunications Cabling Standard – 2009	<u>Modification:</u> 2) ANSI/TIA/EIA/568.1-D, Addendum 1, Commercial Building Telecommunications Cabling Standard – 2018.
33	138	A. PASSIVE COMPONENTS Point 2	2a. Single Mode OS2 Fiber 9/125 Outdoor Cable-6 Core,12 Core , 24 core , 2b. Multimode OM4 Fiber 50/125 Outdoor Cable-6 Core,12 Core, 24 core 2c. 24 Port,48 Port Loaded Fiber LIU 2d. Fiber Patch chord LC-LC ,3Ft , 7Ft., 10 Ft	<u>Modification:</u> 2a. Single Mode OS2 Fiber 9/125 Outdoor Cable-6 Core,12 Core , 24 core 2b. Multimode OM3 Fiber 50/125 Outdoor Cable - 6 Core, 12 Core, 24 Core 2c. Multimode OM4 Fiber 50/125 Outdoor Cable-6 Core,12 Core, 24 core 2d. 24 Port,48 Port Loaded Fiber LIU 2e. Fiber Patch chord LC-LC ,3Ft , 7Ft., 10 Ft

S No	Pg No	Clause No	Existing Clause	Corrigendum
34	138	Scope of Work of Passive Components :- Clause no 3.8	3.8 Carrying out supplier's benchmark test, if any certification for passive networking components and guarantee for minimum five years from OEM. Minor civil works such as chipping/ cutting of floors for making grooves, making holes/ opening through walls, ceiling or floors, drilling of holes through steel structures and frames, grouting of frames, hooks on walls/ceiling etc. required for execution of work. After erection, surface shall be made good by plastering/painting to their original shape and finish. Bidder shall coordinate with the contractors of ED works building where main data center is envisaged and other area shop offices where second core switch and remaining area switches are planned to be installed, for PVC conduit laying and installation of other network equipment so that that civil work as mentioned above can be minimized. Bidder has to align the civil work along with construction of such buildings as per approved drawings.	<u>Modification:</u> 3.8 Carrying out supplier's benchmark test, if any certification for passive networking components and guarantee for minimum five years from OEM. Minor civil works such as chipping/ cutting of floors for making grooves, making holes/ opening through walls, ceiling or floors, drilling of holes through steel structures and frames, grouting of frames, hooks on walls/ceiling etc. required for execution of work. After erection, surface shall be made good by plastering/painting to their original shape and finish. Bidder shall coordinate with the contractors of ED works building where main data center is envisaged and other area shop offices where second core switch and remaining area switches are planned to be installed, for PVC conduit laying and installation of other network equipment so that that civil work as mentioned above can be minimized. Bidder has to align the civil work along with construction of such buildings as per approved drawings. The best practices on Initial Cable Fill Ratio of 25% and Final Cable Fill Ratio of 50% must be followed by the installer. This is as recommended by ANSI/TIA-569-C Telecommunications Pathways and Spaces Standards 2012.
35	138		b. CAT6A U/FTP Cable	<u>Modification:</u> CAT6A U/FTP or Higher specifications are allowed
36	138	A. PASSIVE COMPONENTS :- d point	d. CAT6A Information Outlet-STP	<u>Modification:</u> CAT 6A Information Outlet - Shielded
37	138	A. PASSIVE COMPONENTS :- j point	j. CAT6A Patch chord 3Ft,7Ft.	<u>Modification:</u> CAT6A U/FTP or equivalent or Higher specifications (Patch cords 3Ft, 7Ft).
38	139	1.3 General	2. 50 / 125 um OM3/OM4 optical fiber cable.	<u>Modification:</u> 50/125um for OM3 and OM4 optical fiber cable.

S No	Pg No	Clause No	Existing Clause	Corrigendum
39	139	Structured Cabling for DATA System - REFERENCE STANDARDS	3) ANSI/TIA/EIA 568-2.D, Copper Cabling Components Standard	<u>Modification:</u> 3) ANSI/TIA/EIA 568.2-D, Copper Cabling Components Standard - 2018
40	139	Structured Cabling for DATA System - REFERENCE STANDARDS	4) ANSI/TIA/EIA 568-C.3, Optical Fiber Cabling Components Standard	<u>Modification:</u> 4) ANSI/TIA/EIA 568.3-D, Optical Fiber Cabling Components Standard - 2016
41	139	Structured Cabling for DATA System - REFERENCE STANDARDS	5) ANSI/TIA/EIA-569-B, Commercial Building Standard for Telecommunications Pathways and Spaces	<u>Modification:</u> 5) ANSI/TIA/EIA-569-E, Commercial Building Standard for Telecommunications Pathways and Spaces
42	139	Structured Cabling for DATA System - REFERENCE STANDARDS	6) ANSI/TIA/EIA-606-A, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings	<u>Modification:</u> 6) ANSI/TIA/EIA-606-C, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
43	139	Structured Cabling for DATA System - REFERENCE STANDARDS	7) ANSI/J-STD-607-A, Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications	<u>Modification:</u> 7) ANSI/J-STD-607-D, Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
44	139	CAT6A Copper Tender Specification	a) The Category 6A/ Class EA U/FTP SCS shall comply with the following standards b) ISO/IEC 11801 : 2010 c) ANSI/TIA-568-C d) IEC 60603-7-4 f) IEEE 802.3 applications as outlined in section 2	<u>Modification:</u> The Category 6A U/FTP or Category 6A F/UTP SCS shall comply with the following standards a. ISO/IEC 11801 Class EA b. ANSI/TIA-568.2-D
45	139	CAT6A Copper Tender Specification	Channel Performance a) The Category 6A/ Class EA U/FTP SCS shall comply with the following standards	<u>Modification:</u> Channel Performance a) The Category 6A/ Class EA U/FTP or F/UTP SCS shall comply with the following standards

S No	Pg No	Clause No	Existing Clause	Corrigendum
46	139	Special Points for Passive Components	Copper & Fiber Components should be made in India	<u>Modification:</u> Copper & Fiber Components (except accessories) should be made in India
47	139	CAT6A Copper Tender Specification	The Category 6A/ Class EA U/FTP system should support the following IEEE Ethernet applications	<u>Modification:</u> The Category 6A/ Class EA U/FTP or F/UTP system should support the following IEEE Ethernet applications
48	139	Special Points for Passive Components	The contractor has to assure that cross talk coupling between individual, unshielded twisted-pairs shall not affect the transmission performance of multi-pair cables.	<u>Modification:</u> The contractor has to assure that cross talk coupling between individual, unshielded and shielded twisted-pairs shall not affect the transmission performance of multi-pair cables.
49	139	Special Points for Passive Components	☒ Cat 6A performance even when termination is within 15 meters thus ensuring eliminating short resonance.	<u>Modification:</u> Cat 6A performance must be compliant to the ANSI/TIA Standards on the minimum length of Cat6A Permanent Links.
50	139	Special Points for Passive Components	☒ There should be minimum 25 year extended product warranty and Application Assurance for complete Permanent link.	<u>Modification:</u> 25 Year System Performance and Application Assurance Warranty on the tested Permanent Link plus the patch cords. Installers must comply with the tester settings and other requirements of the OEM by using a valid calibrated tester. Out of calibration testers must not be used.
51	140	CAT6A Copper Tender Specification	Additionally the Category 6A/ Class EA U/FTP SCS shall be capable of supporting the following Fibre Channel Applications Standards, per Technical Committee 11 of INCITS:	<u>Modification:</u> Additionally the Category 6A/ Class EA U/FTP or F/UTP SCS shall be capable of supporting the following Fibre Channel Applications Standards, per Technical Committee 11 of INCITS:
52	140	Modular RJ45 Patch Cords	All cords shall be round, and consist of copper conductors, tightly twisted into individual pairs.	<u>Modification:</u> All cords shall be round, and consist of Eight copper stranded conductors, twisted into four pairs.

S No	Pg No	Clause No	Existing Clause	Corrigendum
53	140	CAT6A Copper Tender Specification	Horizontal Cabling: The Cable should meet ANSI/TIA 568C.2 CAT6 & Category 6A U/FTP Specifications as per mentioned in Table 2	<u>Modification:</u> Horizontal Cabling: The Cable should meet ANSI/TIA 568C.2 CAT6 & Category 6A U/FTP or F/UTP Specifications as per mentioned in Table 2
54	140	CAT6A Copper Tender Specification	Horizontal Cabling: The length of the cable box of 500mtrs of CAT6A U/FTP & 305 mtrs of CAT6 and the weight should not be less than 30kgs for CAT6A & 13.6kgs for CAT6 UTP LSZH Cable.	<u>Modification:</u> Horizontal Cabling: The length of the cable box of minimum 305mtrs of CAT6A U/FTP or F/UTP & 305 mtrs of CAT6 and the weight should not be less than 30kgs for CAT6A & 13.6kgs for CAT6 UTP LSZH Cable
55	140	Modular RJ45 Patch Cords	Information Outlets support IEEE 802.3at PoE of 30W for VoIP, IEEE 802.11ac Wi-fi, and IP cameras. Supplier to provide detailed test reports and third party approvals.	<u>Modification:</u> Information Outlets support IEEE 802.3bt - Type-4 Power Over Ethernet Enhancements (upto 90 W) Class 8 for VoIP, IEEE 802.11ac Wi-fi, and IP cameras.
56	140	CAT6A Copper Tender Specification	It is critical that guaranteed worst-case values are provided to ensure the SCS can support 10G transmission without risk. "Average value" or "Typical Value" is not acceptable as they do not account for lower performance channels. The proposed Category 6A UTP SCS, when configured as a worst-case 100 meter channel shall provide performance headroom over limits specified by Cat6A	<u>Modification:</u> It is critical that guaranteed worst-case values are provided to ensure the SCS can support 10G transmission without risk. "Average value" or "Typical Value" is not acceptable as they do not account for lower performance channels. The proposed Category 6A U/FTP or Higher specs of SCS, when configured as a worst-case 100 meter channel shall provide performance headroom over limits specified by Cat6A
57	140	Category 6A - 10Gigabit outlets	The 8-pin modular (RJ-45) jacks shall comply with IEC 60603-7-4	<u>Modification:</u> The 8-pin modular (RJ-45) jacks shall comply with IEC 60603-7-51 standard
58	140	Category 6A - 10Gigabit outlets	The 8-pin modular (RJ-45) jacks shall comply with IEC 60603-7-4.	<u>Deletion:</u> Duplicate Entry - Withdrawn
59	140	Horizontal Cable	The Cable should meet ANSI/TIA 568C.2 CAT6 & Category 6A U/FTP Specifications as per mentioned in Table 2	<u>Modification:</u> The Cable should meet ANSI/TIA.2-D CAT6 & Category 6A U/FTP or Cat6A F/UTP Specifications as per mentioned in Table 2

S No	Pg No	Clause No	Existing Clause	Corrigendum
60	140	CAT6A Copper Tender Specification	The Category 6A cable and Category 6A components shall be manufactured by a single manufacturer. The manufacturer shall warrant the Category 6A on permanent link :cable, components, and applications for a period of 25 Years.	<u>Modification:</u> The Category 6A cable and Category 6A components shall be manufactured by a single manufacturer. The manufacturer shall warrant the installation of Category 6A on permanent link for cable and components towards System Performance and Application Assurance for a period of 25 Years.
61	140	Modular RJ45 Patch Cords	The cordage shall be UTP components that do not include internal or external shields, screened components or drain wires.	<u>Modification:</u> The cordage for CAT 6 shall be Unshielded components that do not include internal or external shields, screened components or drain wires. While, the cordage for CAT 6A shall be Shielded components that will include internal or external shields, screened components or drain wires.
62	140	Modular RJ45 Patch Cords	The SCS must support patch cord lengths of 1 meter minimum and equipment cords of 2 meter minimum and the Patch cords shall be available in Stranded construction with 24AWG for CAT6 & CAT6A with 26- 28 AWG.	<u>Modification:</u> The SCS must support patch cord lengths of 1 meter minimum and equipment cords of 2 meter minimum and the Patch cords shall be available in Stranded construction with 24AWG for CAT6 Unshielded and with 26- 28 AWG for CAT6A Shielded solution.
63	141	24Port Patch Panel	Storage Temperature Range = -40°F to 158°F (-40°C to 70°C)	<u>Modification:</u> Storage Temperature Range = -4°F to 158°F (-20°C to 70°C)
64	141	24Port Patch Panel	The patch panel type shall be a 1U panel capable of supporting 24 unshielded modular 8-pin connectors compliant with IEC 60603-7-4	<u>Modification:</u> The patch panel type shall be a 1U panel capable of supporting 24 unshielded modular 8-pin connectors compliant with IEC 60603-7
65	142	Horizontal Cable, Cat6 UTP Cable	ISO/IEC IEC 60332-3-22	<u>Modification:</u> IEC 60332-1 / IEC 60332-3-22
66	142	Channel Performance	Should support 2/4/6 connector Channel	<u>Modification:</u> Should support 2 / 4 connector Channel
67	142	Channel Performance	Should support a minimum of 4 connector Channel with a minimum 6 db guranteed NEXT over and above the standard ANSI/TIA-568.2-D	<u>Modification:</u> Should support a minimum of 4 connector Channel with NEXT value as per the standard of ANSI/TIA-568.2-D

S No	Pg No	Clause No	Existing Clause	Corrigendum
68	142	Channel Performance	The 25 year warranty shall be a transferable warranty and has component replacement policy in case of manufacturing defect	<u>Modification:</u> The 25 Year System Performance and Application Assurance Warranty on the tested Permanent Link plus the patch cords provided by the same OEM. Installers must comply with the tester settings and other requirements of the OEM by using a valid calibrated tester. Out of calibration testers must not be used.
69	142	Horizontal Cable, Cat6 UTP Cable	The cable should support the installation temperature: 0 to 60° C	<u>Modification:</u> The cable should support the installation temperature: 0° C to 50° C
70	142	Cat6 Copper Cabling system- Technical Specifications	The Category 6/Class UTP system shall comply with the following standards : ISO/IEC 11801 EN 50173 ANSI/TIA 568C.2 IEC 60603-7-4	<u>Modification:</u> The Category 6/Class UTP system shall comply with the following standards : ISO/IEC 11801-1:2017 EN 50173-1:2018 ANSI/TIA-568.2-D IEC 60603-7-4
71	143	Category 6 Information Outlets	Fully supports the safe delivery of power over LAN cabling described by IEEE 802.3bt (Type 4) and complies with the unmating under electrical load requirements prescribed by IEC 60512-99-002	<u>Modification:</u> Fully supports the safe delivery of power over LAN cabling described by IEEE 802.3 at (Type 2)
72	143	Category 6 Information Outlets	Fully supports the safe delivery of power over LAN cabling described by IEEE 802.3bt (Type 4) and complies with the unmating under electrical load requirements prescribed by IEC 60512-99-002	<u>Modification:</u> Fully supports the safe delivery of power over LAN cabling described by IEEE 802.3bt (Type 2) and complies with the unmating under electrical load requirements prescribed by IEC 60512-99-002
73	143	General specification	Nominal cordage diameter shall not exceed 5.92 mm.	<u>Modification:</u> Nominal cordage diameter shall not exceed 5.9 - 6.2 mm

S No	Pg No	Clause No	Existing Clause	Corrigendum
74	143	Horizontal Cable, Cat6 UTP Cable	Worst Case Cable Skew: 30 nsec/100 meters @ 250 MHz, Characteristic Impedance: 100±6 Ω@ 1-250 MHz or as per ANSI/TIA-568.2-D, DC Resistance Max: 7.61 Ohms/100m, LSZH	<u>Modification:</u> Worst Case Cable Skew: <45nsec/100m at 250MHz, Characteristic Impedance: 100±15W @1-250MHz or as per ANSI/TIA-568.2-D, DC Resistance Max: 7.61 to 9.38 Ohms/100m, LSZH
75	144	24Port CAT6 & CAT6A Patch Panel	24Port CAT6 & CAT6A Patch Panel	<u>Modification:</u> 24Port CAT6 Patch Panel
76	144	24Port CAT6 & CAT6A Patch Panel	Should accept UTP Information outlets	<u>Modification:</u> Should accept CAT6 UTP Information outlets
77	145	Category 6A U/UTP Cable	Category 6A 4 pair U/UTP LSZH cable shall be compliant with ANSI/TIA-568.2-D	<u>Modification:</u> CAT6A U/FTP or F/UTP or equivalent or higher specifications must be considered, Category 6A 4 pair U/FTP or higher specs LSZH cable shall be compliant with ANSI/TIA-568.2-D
78	145	Category 6A U/UTP Cable	ETL report of Full Cat6A Channel/Performance Test should be enclosed along with the technical bid.(4 connector channel)	<u>Modification:</u> ETL Witness report of Full Cat6A Channel/Performance Test should be enclosed.(4 connector channel)
79	145	Category 6A U/UTP Cable	Shielded solution provides 100% guarantee from The Category 6a UTP (Unshielded Twisted Pair) cable shall be constructed without metallic shielded tape to avoid EMI interference impacting cable performance due to poor grounding and bonding issue	<u>Modification:</u> Shielded solution provides 100% guarantee from EMI. The Category6A U/FTP or F/UTP or higher specification cable (Unshielded / Foiled Twisted Pair) cable shall be constructed with metallic shielded tape over each pair to avoid EMI interference impacting cable performance.
80	145	Category 6A U/UTP Cable	The cable shall be composed of solid copper conductors insulated with non-halogen high-density polyethylene and jacketed with a low smoke zero halogen compound. The Cable LSZH jacket shall be compliant with CPR Class Dca as minimum. The solution shall fully comply with Local/National Codes and Regulations.	<u>Modification:</u> The cable shall be composed of solid copper conductors insulated with non-halogen high-density polyethylene and jacketed with a low smoke zero halogen compound. The solution shall fully comply with Local/National Codes and Regulations.

S No	Pg No	Clause No	Existing Clause	Corrigendum
81	145	Category 6A U/UTP Cable	The cable shall have a round cable jacket and shall features small cable nominal diameter O.D of not more than 7.24 mm which improves density by 54% compared to the industry standard - 6.3 cables per square inch with a 40% fill ratio versus only 4.1 cables in standard size	<u>Modification:</u> The cable shall have a round cable jacket and shall features small cable nominal diameter O.D of not more than 7.6±0.5 mm
82	145	Category 6A U/UTP Cable	The Category 6a UTP (Unshielded Twisted Pair) cable shall be a rounded overall cable geometry twisted in pairs with conductor separator, separated with cross isolator, wrap with a finned inner jacket surface and 4 pairs of 23 AWG solid bare copper insulated with polyolefin material	<u>Modification:</u> The Category 6A U/FTP (Unshielded Foiled Twisted Pair) or F/UTP or equivalent or higher specifications) cable shall be a rounded overall cable and 4 twisted pairs of 23 AWG solid bare copper insulated with polyolefin material.
83	145	Category 6A U/UTP Cable	The Category 6a UTP cable shall be available in (LSZH) Low Smoke Zero Halogen jacket, comply with IEC 60754-2, IEC61034-2 and IEC 60332-3-22 test method	<u>Modification:</u> The Category 6a U/FTP or equivalent or higher specification cable shall be available in (LSZH) Low Smoke Zero Halogen jacket, comply with IEC 60754-2, IEC61034-2 and IEC 60332-1 test method.
84	145	Category 6A U/UTP Cable	The manufacturer shall provides minimum Guaranteed Performance Specifications for 4-connection CAT6A U/UTP channel specified in document on electrical parameter - NEXT @ 3dB of guaranteed margin to Cat6A/Class EA industry standards.	<u>Modification:</u> The manufacturer shall provides minimum Guaranteed Performance Specifications for 4-connection CAT6A U/FTP channel specified in document on electrical parameter - NEXT @ 3dB of guaranteed margin to Cat6A/Class EA industry standards.

S No	Pg No	Clause No	Existing Clause	Corrigendum
85	146	Category 6A U/UTP Cable	"Category 6A Cable Specifications Nominal Outer Jacket OD 0.285 in. (7.24 mm) Nominal Outer Jacket Thickness: 0.05 in. (1.27 mm) Maximum Pulling Tension: 25 lbs (11.3 kg) Nominal Cable Weight: 36.90 lbs/kft (54.7 kg/km) Operating Temperature: -4°F to 140°F (-20°C to 60°C) Installation Temperature: 32°F to 140°F (0°C to 60°C) Conductor gauge: 23 AWG Jacket Material: CPR Rating Low Smoke Zero Halogen, Minimum Dca compliant ETL Type IEC Verified: IEC 60332-3-22 Nominal Velocity of Propagation: 66% Maximum DC Resistance: 7.61 Ohms/100 m Maximum DC Resistance Unbalanced: 4% Maximum Mutual Capacitance at 1 KHz: 6.0 nF/100 m	<u>Modification:</u> Category 6A F/UTP or U/FTP Cable Specifications Nominal Outer Jacket OD 0.283 - 0.311 in (7.1 - 7.9 mm) Operating Temperature: -4°F to 140°F (-20°C to 60°C) Installation Temperature: 32°F to 140°F (0°C to 60°C) Conductor gauge: 23 AWG Jacket Material: Low Smoke Zero Halogen, Nominal Velocity of Propagation: 64-78%
86	146	Category 6A Information Outlets	Category 6A Unshielded Jack shall be Electrical performance guaranteed to meet or exceed the channel specifications to ISO/IEC 11801 Class EA and ANSI/TIA-568-C.2 Category 6A	<u>Modification:</u> Category6A Shielded Jack shall have electrical performance guaranteed to meet or exceed the channel specifications to ISO/IEC 11801 Class EA and ANSI/TIA-568.2-D Category 6A.
87	146	CAT6A Modular RJ45 Patch Cords	Category 6A Equipment cords, Low Smoke Zero Halogen (Length – 1mtr, 2mtr, 3 Mtrs, 5mtr & 10 mtr)	<u>Modification:</u> Shielded Category 6A Equipment cords, Low Smoke Zero Halogen (Length – 1mtr, 2mtr, 3 Mtrs, 5mtr & 10 mtr)
88	146	Category 6A Information Outlets	Material type Copper alloy High-impact, flame retardant, thermoplastic	<u>Modification:</u> Material type: Die cast Zinc alloy housing or Polycarbonate
89	146	Category 6A Information Outlets	The 8-pin modular (RJ-45) jacks shall comply with IEC 60603-7-4.	<u>Modification:</u> The 8-pin modular (RJ-45) jacks shall comply with IEC 60603-7 for both Cat6 and Cat6A.
90	147	24Port CAT6A Patch Panel	24Port CAT6A Patch Panel	<u>Modification:</u> 24 Port CAT6A Patch Panel

S No	Pg No	Clause No	Existing Clause	Corrigendum
91	147	24Port CAT6A Patch Panel	24-port, Modular Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2	<u>Modification:</u> 24-port, Modular Shielded , Category 6A, ANSI/TIA-568.2-D Standard
92	147	CAT6A Modular RJ45 Patch Cords	Cordage shall have a round overall cable geometry twisted in pairs with conductor separator, separated with cross isolator, wrap with a finned inner jacket surface and 4 pairs of 24 AWG solid bare copper insulated with polyolefin material	<u>Modification:</u> Cordage shall have a round overall cable geometry Shielded twisted in pairs with drain wire and 4 pairs of 24 AWG - 26 AWG Stranded/solid bare copper insulated with LSZH material
93	147	24Port CAT6A Patch Panel	Should accept UTP Information outlets	<u>Modification:</u> Should accept Shielded CAT6A Information outlets
94	147	24Port CAT6A Patch Panel	Should be compatible with downward and upward i.e, cat5e and Cat6a	<u>Modification:</u> Should be downward compatible with CAT5E and CAT6
95	147	CAT6A Modular RJ45 Patch Cords	The cordage shall be UTP components that do not include internal or external shields, screened components or drain wires.	<u>Modification:</u> The cordage shall be Shileded components that will include internal or external shields, screened components or drain wires.
96	147	CAT6A Modular RJ45 Patch Cords	The patch cords have a unique plug design featuring a distinctive aqua sled for easy and rapid field identification.	<u>Deletion:</u> Withdrawn
97	147	CAT6A Modular RJ45 Patch Cords	The patch cords shall incorporate an anti-snag feature that provides maximum protection from snagging during moves and re-arrangements. Fully compatible with intelligent patch panels	<u>Modification:</u> The patch cords shall incorporate an anti-snag feature that provides maximum protection from snagging during moves and re-arrangements.
98	149	Construction Materials	Jacket Material MDPE	<u>Modification:</u> Jacket Material MDPE/HDPE
99	149	Optical Specifications, Wavelength Specific	Attenuation, maximum 0.34 dB/km @ 1310 nm 0.22 dB/km @ 1550nm 0.31 dB/km @ 1385nm 0.27 dB/km @ 1490nm	<u>Modification:</u> Attenuation, maximum 0.34 - 0.35 dB/km @ 1310 nm 0.22 - 0.25 dB/km @ 1550nm
100	149	Single Mode FO Cable- 6 & 12Fiber	Cable Type Stranded loose tube	<u>Modification:</u> Cable Type: Unitube OR Multiple Loose Tube,
101	149	Single Mode FO Cable- 6 & 12Fiber	Cable Weight 108.0 kg/km 72.0 lb/kft	<u>Modification:</u> Cable Weight 108 to 115 kg.km

S No	Pg No	Clause No	Existing Clause	Corrigendum
102	149	24 & 48 Core optical Fiber Armored Single-Mode OS2	Cable Weight 108.0 kg/km 72.0 lb/kft	<u>Modification:</u> Cable Weight 108 to 118 kg.km
103	149	Single Mode FO Cable- 6 & 12Fiber	Diameter Over Jacket 11.50 mm 0.45 in	<u>Modification:</u> Diameter Over Jacket 11.0 to 11.8 mm
104	149	24 & 48 Core optical Fiber Armored Single-Mode OS2	Diameter Over Jacket 13 to 15.0 mm (Max)	<u>Modification:</u> Diameter Over Jacket Minimum 11.0 mm
105	149	Physical Specifications	Max. Tensile Strength-Long Term 800N	<u>Modification:</u> Max. Tensile Strength-Long Term Minimum 800N
106	150	Optical Specifications, Wavelength Specific	Attenuation, maximum 0.34 dB/km @ 1310 nm 0.22 dB/km @ 1550nm 0.31 dB/km @ 1385nm 0.27 dB/km @ 1490nm	<u>Modification:</u> Attenuation, maximum 0.34 - 0.35 dB/km @ 1310 nm 0.22 - 0.25 dB/km @ 1550nm
107	150	Optical Specifications, Wavelength Specific	Chromatic dispersion between 1285-1330nm < 3.5 ps/nm.km between 1550nm < 18 ps/nm.km between 1625nm < 22 ps/nm.km	<u>Deletion:</u> Withdrawn
108	150	Physical Specifications	Max. Tensile Strength-Long Term 800N	<u>Modification:</u> Max. Tensile Strength-Long Term Minimum 800N
109	150	Physical Specifications	Max. Tensile Strength-Short Term 2700N	<u>Modification:</u> Max. Tensile Strength-Short Term 2500N and more
110	150	Commercial Standards	RoHS 2011/65/EU	<u>Modification:</u> RoHS
111	151	Singlemode LC to LC, Fiber Patch Cord, 1.6 mm Duplex, Low Smoke Zero Halogen (LSZH)	17 Jacket Material/Flame test method IEC 60332-1-2, IEC 60332-3, IEC 60754-2, IEC	<u>Modification:</u> All Fiber Optic Patch Cords - irrespective of the type of fiber optic connectors and SM or MM, Jacket of Fiber Patch Cords must be LSOH, IEC 61034-1 & 2, IEC-60332-1, IEC60754-1 & 2

S No	Pg No	Clause No	Existing Clause	Corrigendum
112	151	Cable assemblies - Fiber Patch Cords, Single Mode OFC Patch Cords 9/125 Micron	Attenuation 0.4dB/km over 1310nm to 1625nm	<u>Modification:</u> Attenuation as per ANSI/TIA Standards
113	151	Rack Mounted Fiber Optic Patch Panel specifications (LIU) Fully loaded	Dimensions 1.75in x 19in x 12.52 in	<u>Modification:</u> Dimensions 1.75in x 19in x 10.03 - 12.52in
114	151	Singlemode LC to LC, Fiber Patch Cord, 1.6 mm Duplex, Low Smoke Zero Halogen (LSZH)	Insertion Loss Less than 0.34dB Maximum	<u>Modification:</u> Insertion Loss 0.15 - 0.35 dB
115	151	Cable assemblies - Fiber Patch Cords, Single Mode OFC Patch Cords 9/125 Micron	Insertion Loss Less than 0.35 dB per Connector	<u>Modification:</u> Insertion Loss 0.15 - 0.35 dB
116	151	Singlemode LC to LC, Fiber Patch Cord, 1.6 mm Duplex, Low Smoke Zero Halogen (LSZH)	Return Loss 50dB minimum	<u>Modification:</u> Return Loss -50db or better
117	151	Rack Mounted Fiber Optic Patch Panel specifications (LIU) Fully loaded	Return Loss Minimum for SM OS2 45dB	<u>Modification:</u> Return Loss Minimum for SM OS2: - 45 dB and better

S No	Pg No	Clause No	Existing Clause	Corrigendum
118	152	24 core Outdoor Loose Tube Armoured 50/125µm OM3 Type Optical Cable	24 core Outdoor Loose Tube Armoured 50/125µm OM3 Type Optical Cable	<u>Modification:</u> 24 core Outdoor Multiple Loose Tube Armoured 50/125µm OM3 Type Optical Cable"
119	152	Optical Multi-Mode (OM3) Technical Specifications	Central Strength Member: Fibre Reinforced Plastic(FRP)	<u>Modification:</u> Central Strength Member Fibre Reinforced Plastic(FRP)/ ECCS armouring and the strength members (Two Steel Wires).
120	152	Optical Multi-Mode (OM3) Technical Specifications	ISO.IEC 11801 - 2nd Edition, type OM3; AS/ACIF S008; AS/NZS 3080 TIA-492-AAAD	<u>Modification:</u> ISO/IEC 11801 - 2nd Edition, Type OM3: TIA-492-AAAC
121	152	24 core Outdoor Loose Tube Armoured 50/125µm OM3 Type Optical Cable	ISO.IEC 11801 - 2nd Edition, type OM3; AS/ACIF S008; AS/NZS 3080, EIA/TIA 568-C.3	<u>Modification:</u> ISO.IEC 11801 - 2nd Edition, type OM3; AS/ACIF S008; AS/NZS 3080, EIA/TIA 568.3-D
122	152	24 core Outdoor Loose Tube Armoured 50/125µm OM3 Type Optical Cable	Mass (Nominal) : 110 kg/km	<u>Modification:</u> Mass (Nominal) : "110kg/km - 135kg/km"
123	152	24 core Outdoor Loose Tube Armoured 50/125µm OM3 Type Optical Cable	Overall Cable (Nominal) : 10.8 mm	<u>Modification:</u> Overall Cable (Nominal) : "10.8mm - 11.2mm"

S No	Pg No	Clause No	Existing Clause	Corrigendum
124	153	24 core Outdoor Loose Tube Armoured 50/125µm OM3 Type Optical Cable	Min. Bandwidth(EMB); At 850 nm :1500MHz*km	<u>Modification:</u> Min. Bandwidth(EMB); At 850 nm :1500 -2000MHz*km
125	153	Cable assemblies - Fiber Patch Cords Multi Mode OFC Patch Cords OM3	Jacket colour Industry Standard Colour - OS1-Yellow, OM3/OM4-Aqua	<u>Modification:</u> Jacket colour as per Industry Standard
126	153	Rack Mounted Fiber Optic Patch Panel specifications (LIU)	LIU must be Powder coated Mild Steel	<u>Modification:</u> LIU must be Powder coated Mild Steel /Cold Rolled Steel
127	153	Rack Mounted Fiber Optic Patch Panel specifications (LIU)	Rugged steel construction in graphite finish	<u>Modification:</u> Rugged steel construction in : Black / Graphite finish
128	153	Rack Mounted Fiber Optic Patch Panel specifications (LIU)	The dimension should be 483mm W x 318mm D x 45mm H(must be Rackmount) & weight should be minimum 5.7 Kg.	<u>Modification:</u> The dimension: W 483 - 485 mm D 255 - 318 mm H 45 mm Must be rack mount
129	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Cable Feature: 6Fiber/12Fiber Multimode OM4 Unitube Dry core Single sheath Armoured Fiber Optic Cable, FRLSZH	<u>Modification:</u> Cable Feature: 6Fiber/12Fiber Multimode OM4 Unitube Dry core Single sheath Armoured Fiber Optic Cable, FRLSZH / LSZH

S No	Pg No	Clause No	Existing Clause	Corrigendum
130	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Cabled Fiber Attenuation @1300nm :1.0 dB/Km (Max)	<u>Deletion:</u> Withdrawn
131	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Cabled Fiber Attenuation @850nm :3.0 dB/Km (Max)	<u>Deletion:</u> Withdrawn
132	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Central Strength Member: Fibre Reinforced Plastic(FRP)	<u>Modification:</u> Central Strength Member Fibre Reinforced Plastic(FRP)/ ECCS armouring and the strength members (Two Steel Wires).
133	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Mass (Nominal) : 100 kg/km	<u>Modification:</u> Mass (Nominal) : Minimum 100kg or higher
134	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Max. Attenuation; At 850 nm : 2.7 dB/km At 1300 nm: 0.7 dB/km	<u>Modification:</u> Max. Attenuation; at 850nm: 2.7 - 3.0dB/km at 1300nm: 0.7 - 1.5dB/km
135	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Overall Cable (Nominal) : 10mm	<u>Modification:</u> Overall Cable (Nominal) : Minimum 10 mm or higher

S No	Pg No	Clause No	Existing Clause	Corrigendum
136	155	24 core Outdoor Loose Tube Armoured 50/125µm OM4 Type Optical Cable	Overall Cable (Nominal) : 13mm	<u>Modification:</u> Overall Cable (Nominal) : Minimum 10mm or higher
137	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Sheath : FR LSZH	<u>Modification:</u> Sheath : FR LSZH / LSZH
138	155	6/12 Fiber Outdoor Unitube Single Sheathed Armoured, FRLSZH 50/125µm OM4 Type	Standards: EN 50173; ISO/IEC 11801, ANSI/TIA-568-C.3, Telcordia GR-409	<u>Modification:</u> Standards: EN 50173; ISO/IEC 1 11801, ANSI/TIA-568.3-D, Telcordia GR-4093
139	156	24 core Outdoor Loose Tube Armoured 50/125µm OM4 Type Optical Cable	Cabled Fiber Attenuation @1300nm :1.0 dB/Km (Max)	<u>Deletion:</u> Withdrawn
140	156	24 core Outdoor Loose Tube Armoured 50/125µm OM4 Type Optical Cable	Cabled Fiber Attenuation @850nm :3.0 dB/Km (Max)	<u>Deletion:</u> Withdrawn
141	156	Rack Mounted Fiber Optic Patch Panel specifications (LIU) Fully loaded	Dimensions 1.75in x 19in x 12.52 in	<u>Modification:</u> Dimensions 1.75in x 19in x 10.03-12.52in

S No	Pg No	Clause No	Existing Clause	Corrigendum
142	156	24 core Outdoor Loose Tube Armoured 50/125µm OM4 Type Optical Cable	Mass (Nominal) : 190 kg/km	<u>Modification:</u> Mass (Nominal) : Minimum 110kg/km or higher
143	156	24 core Outdoor Loose Tube Armoured 50/125µm OM4 Type Optical Cable	Max. Attenuation; At 850 nm : 2.7 dB/km At 1300 nm: 0.7 dB/km	<u>Modification:</u> Max. Attenuation; at 850nm: 2.7 - 3.0dB/km at 1300nm: 0.7 - 1.5dB/km
144	156	Rack Mounted Fiber Optic Patch Panel specifications (LIU) Fully loaded	MM LC connectors:Aqua, as per Industry standard	<u>Modification:</u> MM LC connectors: as per Industry standard
145	156	Rack Mounted Fiber Optic Patch Panel specifications (LIU) Fully loaded	Return Loss Minimum for MM OM4 :20dB	<u>Modification:</u> Return Loss Minimum for MM: As per ANSI/TIA Standards
146	156	Rack Mounted Fiber Optic Patch Panel specifications (LIU) Fully loaded	Return Loss Minimum for SM:45dB	<u>Modification:</u> Return Loss Minimum for SM -55db or better
147	156	24 core Outdoor Loose Tube Armoured 50/125µm OM4 Type Optical Cable	Standards: EN 50173; ISO/IEC 11801, ANSI/TIA-568-C.3, Telcordia GR-409	<u>Modification:</u> Standards: EN 50173; ISO/IEC 1 11801, ANSI/TIA-568.3-D, Telcordia GR-4093

S No	Pg No	Clause No	Existing Clause	Corrigendum
148	157	Multimode OM4 LC to LC, Fiber Patch Cord, 1.6 mm Duplex, Low Smoke Zero Halogen (LSZH)	Jacket colour: Industry Standard Colour OM4-Aqua	<u>Modification:</u> Jacket colour: As per Industry Standard
149	157	Multimode OM4 LC to LC, Fiber Patch Cord, 1.6 mm Duplex, Low Smoke Zero Halogen (LSZH)	Jacket Material/Flame test method: IEC 60332-1-2, IEC 60332-3, IEC 60754-2, IEC 61034-2, IEEE 383, UL 1666 & UL 1685	<u>Modification:</u> Jacket Material/Flame test method IEC 60332-1 / IEC 60332-3
150	5	2.2 Point No 5 and 7	<p>5. Turnover Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr.</p> <p>7. Past Experience The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal:</p> <p>i. One Purchase order costing more than ₹ 35 Crores OR ii. Two Purchase orders costing more than ₹ 25 Crores each OR iii. Three Purchase orders costing more than ₹ 10 Crores each</p>	<p><u>Addition:</u> For MSE , Startups (Medium): Under clause no 2.2. The pre-qualification criteria for the bidders: 25% relaxation is applicable for SI No 5(Turnover) & 7(Past Experience)</p> <p>5. Turnover: Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 15.75 cr.</p> <p>7. Past Experience: The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal:</p> <p>i. One Purchase order costing more than ₹ 26.25 Crores OR ii. Two Purchase orders costing more than ₹ 18.75 Crores each OR iii. Three Purchase orders costing more than ₹ 7.5 Crores each</p>

S No	Pg No	Clause No	Existing Clause	Corrigendum
151	7	3. General Instructions for Bidders in addition to BHEL ITB GCC Rev10: ii) EMD	An amount of Rs.2,00,000 towards EMD shall be paid by RTGS/NEFT/Demand Draft/Banker's cheque on any nationalized bank / scheduled bank in the name of "Bharat Heavy Electricals Limited" payable at Hyderabad and shall be enclosed to the tender bid.	<u>Modification:</u> An amount of Rs.2,00,000 towards EMD shall be paid by RTGS/NEFT/Demand Draft/Banker's cheque on any nationalized bank /Bank Guarantee from scheduled bank in the name of "Bharat Heavy Electricals Limited" payable at Hyderabad and shall be enclosed to the tender bid. BG format for EMD is attached

ARBITRATION & CONCILIATION CLAUSE:

The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding (delete whichever is inapplicable), which the Parties are unable to settle mutually), arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof.

Except as provided else in this Contract, in case amicable settlement is not reached between the parties, in respect of any dispute or difference, arising out of the formation, breach, termination, validity or execution of the contract ; or the respective rights and liabilities of the parties ; or , in relation to interpretation of any provision of contract ; or , in any manner touching upon the Contract , then , either party may , by a notice to the other party refer such dispute or difference to the arbitration tribunal. The Arbitration Tribunal shall consists of three arbitrators one appointed by each party and two appointed arbitrators shall appoint the third presiding arbitrators.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory or enactments thereof and the rules made thereunder and for the time being in shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Hyderabad, India.

The cost of arbitration shall be borne as per the award of the Arbitrator.

Subject to the arbitration in terms of clause _____ above, the courts at Hyderabad, Telangana shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.

Notwithstanding the existence or any dispute or differences and /or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

In case of contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

"In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No 4(1)/2013-DPE(GM/FTS 1835 dated 22 05-2018".

ANNEXURE A

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY

(On non-Judicial paper of appropriate value)

Bank Guarantee No.....

Date.....

To

(Employer's Name and Address)

.....

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....1(Tender Conditions), M/s. having its registered office at2 (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....3 invited by4.(name of the Employer) through its Unit at(

The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of5 is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the[Name & address of the Bank] having our Registered Office at(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs. 5(in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including6 and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the 7 we shall be discharged from all liabilities under this Guarantee.

We, Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....5.....
- b) This Guarantee shall be valid up to 6
- c) Unless the Bank is served a written claim or demand on or before7 all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of

(Name of the Bank)

Date.....

Place of Issue.....

¹ *Details of the Invitation to Bid/Notice Inviting Tender*

² *Name and Address of the Tenderer*

³ *Details of the Work*

⁴ *Name of the Employer*

⁵ *BG Amount in words and Figures*

⁶ *Validity Date*

⁷ *Date of Expiry of Claim Period*

Tender Reference Number - BHEL/NETWORK/RC/22-23

BHEL's REPLY to Prebid Queries

Tender Reference Number - BHEL/NETWORK/RC/22-23

BHEL's REPLY to Prebid Queries

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
1	3	Reverse Auction (RA)	"BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the technocommercially qualified bidders.	Please clarify the below given points; 1. Is it mandatory to conduct the RA irrespective of no. of bids received? 2. Whether the price bids of all the technically qualified bidders will be opened before the RA? 3. What is the criteria for setting the base price for RA?		As per NIT Terms(Refer RA guidelines in NIT)
2	4	2.2 The pre-qualification criteria for the bidders	The bidder should be a registered company in India under Indian Companies Act 1956 / 2013.	The bidder or Consortium members should be a registered entity in India. If the bidder is consotium and the consortium agreement should be submitted . The consortium members should I authorise the Lead bidder to participate in the tender. Consortium Agreement should clearly mention the roles and responsibilities of each member. In case of Consortium all the members should have experience in executing Lease Contracts of IT Equipments	If it is consortium the local bidders ie., closer the units of BHEL can be able to participate and thus better support can be delivered during the lease period. In the past history of BHEL local bidders delivered better support than the PAN India level System Integrator	As per NIT Terms and Conditions
3	5	2.2 The pre-qualification criteria for the bidders	Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr.	Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr. Incase of Consortium, the Lead bidder should meet the above Turnover		As per NIT Terms and Conditions
4	5	Turnover	Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least Rs. 21 cr.	Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least Rs. 100 cr. Incase of Consortium, the Lead bidder should meet the above Turnover		As per NIT Terms and Conditions
5	5	2.2. The pre-qualification criteria for the bidders will be as follows Sl. No. 6	Parameter: Net Worth Description:The Bidder should have positive net worth as on 31st March 2022. Documents to be submitted: Certificate from CA confirming the same	Kindly consider the following changes Description:The Bidder should have positive net worth as on 31st March 2021. Documents to be submitted: Audited balance sheet and Profit & Loss Statements or a certificate from CA confirming the same		As per NIT. Provisional certificate from CA for FY 2021-22 can be submitted

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
6	5	2.2. The pre-qualification criteria for the bidders will be as follows Sl. No. 5	Parameter: Turnover Description: Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr. Documents to be submitted: Audited balance sheet and Profit & Loss Statements or a certificate from CA confirming the same	Kindly consider the following changes Description: Average Annual financial turnover during the last 3 years ending 31st March 2021, should be at least 21 cr.		As per NIT. Provisional certificate from CA for FY 2021-22 can be submitted
7	5	2.2 The pre-qualification criteria for the bidders	The bidder shall submit OEM Authorization letter (Manufacturers' Authorization Form) specific to this tender	The bidder or the Lead bidder of a consortium shall submit OEM Authorization letter (Manufacturers' Authorization Form) specific to this tender	Since the consortium agreement is submitted along with bid, and the same will have clear mention of roles and responsibilities of each member. One member of the consortium will be authorised to bid on behalf all. But the entire terms & conditions of the tender will bind and abide by all the members	As per NIT Terms and Conditions
8	5	2.2 The pre-qualification criteria for the bidders	The Bidder should be an Authorized Partner of the OEM and should have partnership with the OEM for a minimum duration of last 5 years.	The Bidder or Lead Bidder of a consortium should be an Authorized Partner of the OEM and should have partnership with the OEM for a minimum duration of last 5 years.		As per NIT Terms and Conditions
9	5	2.2 The pre-qualification criteria for the bidders	The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal: i. One Purchase order costing more than ₹ 35 Crores OR ii. Two Purchase orders costing more than ₹ 25 Crores each OR iii. Three Purchase orders costing more than ₹ 10 Crores each	The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal: i. One Purchase order costing more than ₹ 35 Crores OR ii. Two Purchase orders costing more than ₹ 25 Crores each OR iii. Three Purchase orders costing more than ₹ 10 Crores each the joint experience of the members of the consortium shall be considered for the above		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
10	5	7	The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal: i. One Purchase order costing more than ₹ 35 Crores OR ii. Two Purchase orders costing more than ₹ 25 Crores each OR iii. Three Purchase orders costing more than ₹ 10 Crores each	Relax Past Experience		As per NIT Terms
11	5	Net Worth	The Bidder should have positive net worth as on 31st March 2022.	The Bidder or Lead Bidder should have positive net worth of Rs.10 cr. as on 31st March 2022.		As per NIT Terms and Conditions
12	5	2.2 The pre-qualification criteria for the bidders	The Bidder should have positive net worth as on 31st March 2022.	The Bidder or Lead Bidder should have positive net worth of as on 31st March 2021.	Since the Income returns filing due date is not over for the FY 2021-2022 and thus the Audited Network Statement will be available until March 31, 2021	As per NIT Terms and Conditions
13	6	2.2 The pre-qualification criteria for the bidders	a) If "Insolvency Resolution Process" has been initiated against the bidder and is pending, or the bidder is under insolvency, the bidder shall not be eligible to bid for this tender. b) Even during the processing period of tender till declaration of L1 if "Insolvency Resolution Process" is initiated against the bidder, or where the liquidation commencement date has occurred or a liquidation order has been passed or liquidation has been initiated in relation to the bidder, such bidder shall be disqualified from the process and BHEL will proceed further with tendering process without considering such bids.	a) If "Insolvency Resolution Process" has been initiated against the bidder or member of consortium and is pending, or the bidder or the consortium members insolvency, the bidder or the consortium members shall not be eligible to bid for this tender. b) Even during the processing period of tender till declaration of L1 if "Insolvency Resolution Process" is initiated against the bidder or Consortium or where the liquidation commencement date has occurred or a liquidation order has been passed or liquidation has been initiated in relation to the bidder or Consortium, such bidder or consortium shall be disqualified from the process and BHEL will proceed further with tendering process without considering such bids.		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
14	6	2.2 The pre-qualification criteria for the bidders	The bidder or its associated group companies delivering the services must have ISO 27001 and ISO 9001 Certificate	The bidder or its associated group companies / Lead bidder or its associated companies delivering the services must have ISO 27001 and ISO 9001 Certificate		As per NIT Terms and Conditions
15	7	3.ii) EMD	An amount of Rs.2,00,000 towards EMD shall be paid by RTGS/NEFT/Demand Draft/Banker's cheque on any nationalized bank / scheduled bank in the name of "Bharat Heavy Electricals Limited" payable at Hyderabad and shall be enclosed to the tender bid. Copy of EMD payment shall be uploaded along with the technical bid and forward the original copy to AGM/Purchase/CMM , 4th Floor, Admin Building, HPEP – BHEL Hyderabad 502 032 without fail before due date.	Soft Copy of the EMD will be submitted in the Technical Bid Online. Can the Original EMD document be submitted to BHEL Hyderabad after the online bid submission date?		EMD has to be submitted along with Tender. Offers submitted without EMD are liable for rejection
16	8	3. General Instructions for Bidders in addition to BHEL ITB GCC Rev10 iv) Security Deposit:	Successful bidder has to submit security deposit amount of Rs 1 crore to BHEL Hyderabad valid for the entire lease period.	Kindly remove this clause	BHEL has already made provisions for PBG under the clause 4.22.1 which is nothing but an instrument of security deposit. Therefore please remove the additional requirement of security deposit under this clause which also could be in the form of Bank Guarantee. BHEL would appreciate that asking bidders to submit two separate Bank Guarantee may not make much sense & this is not a stanper best & standard practice.	As per NIT Terms
17	8	Security Deposit	The bidder shall forfeit the Security Deposit In the event bidder fails to execute the supply as per terms and conditions of the contract.	Instead of Bidder it should be purchaser.		As per NIT Terms
18	8	v	V) The quotation should be valid at least for a period of 180 days from the tender opening date. Price quoted should be on firm price basis. Price Variation Clause within this period will not be entertained.	Price Validity should be kept flexible in current turbulent time where Currency is fluctuating and Semiconductor cost is skyrocketing can not be kept fixed. Kindly requesting for amending the clause to introduce the "Acceptance for Price Change" in case of currency conversion rate (USD to INR) fluctuation of 2% or more.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
19	10	4.5.2	4.5.2. Rates are to be quoted as per Price Bid Format providing details of prevailing rates of taxes and duties. Bidders, in their own interest, are requested to check up the different tax tariff like "Right to use" etc. at stipulated locations. After opening of Price Bid, no request for any change in rates/tariff due to above will be entertained.	What is the meaning of "Right to Use"		Right to use means the lessee's right to use the asset over the lease period.
20	10	4.6.1	4.6.1.The Lease agreement will be signed centrally; however, the payment of lease charges will be made on quarterly basis after completion of each quarter and submission of invoice(s) in triplicate, uptime report to the respective payment centers from where the payments will be directly released. Purchase Orders will be placed by respective BHEL units. Payment will be released by respective BHEL units within 75 days of submission of invoices and certification by BHEL.	Please specify the clear payment terms for Passive work also and the payment should be net 30 days post submission of invoices. Any delay beyond 35 days from the date of invoice, interest will be applicable on all amounts overdue at the rate of two percent (2%) per month or the highest interest rate permitted by law.		As per NIT Terms
21	10	4.6. PAYMENT TERMS	4.6.3.Group B (passive components) – 100% Payment of passive components will be made after supply, installation, commissioning of the total project and certification by respective unit of BHEL	Kindly requesting for 70% payment against delivery and acceptance of the material as deployment will have multiple dependencies like site not ready or work permit not available. Remaining 30% payment can be made of full installation and signoff.		As per NIT Terms
22	10	4.8. PENALTY FOR LATE DELIVERY OF THE PROJECT	4.8.1.For the delay in delivery, penalty shall be levied at the rate of 0.5% per week (or part thereof) subject to maximum of 10% of the total lease rent for entire lease period. This penalty will be deducted from the first quarter rental charges, in case the penalty amount to be deducted is more than the first quarter rental charges, the same will be adjusted from the consecutive quarter. Penalty amount so determined along with applicable GST thereon shall be recovered.	10% maximum penalty is against the industry standard. Kindly requesting to cap it at 5% of the total lease rent for entire lease period.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
23	10	4.6	Payment Terms.....	For eg: If Services commence on January 1st. Will payment be made to vendor on March 30th?		As per NIT Terms
24	12	4.13	Insurance	Bidder would only provide transit insurance, any additional insurance requirement would incur additional charges.		As per NIT Terms
25	14	4.16 Force Majeure	4.16.1. The supplier shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions. Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the supplier to BHEL by registered letter/courier service immediately within 14 days. In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL. In the event of such cancellation the supplier shall refund any amount advanced or paid to the supplier by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.	In case of any delay in performance of the scope of work, due to Force Majeure event, the timeline for such work shall automatically get extended for such period, affected due to Force Majeure event.		Will be dealt later on the merit of the case
26	15	4.18	4.18. SUB-CONTRACTING 4.18.1. Order/contract or any part thereof shall not be sub-contracted, assigned or otherwise transferred to any other party without prior written consent of the Purchaser. (in contradiction to above tie up point).	The vendor should be allowed to outsource the work with due permission from BHEL as there are lot of activity in this project which can not be full field by bidders.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
27	16	4.22. ACCEPTANCE OF LOI/ Rate Contract.	Letter of Seller/ Contractor/ bidder's acceptance of the LOI / Rate Contract is to be submitted within one week of issue date of LOI/Rate Contract. This will be submitted along with the performance Bank guarantee of the value of 10% of the total annual Lease Rent for all the equipment and valid for a period of one year.	Kindly reduce the PBG value to 3% of the total annual Lease Rent for all the equipment and valid for a period of one year.	We would like to bring to your kind attention that Department of Expenditure (DoE) under Ministry of Finance vide office memorandum no. F.9/4/2020-PPD dated 12th November 2020 notified to all CPSUs to reduce the Performance Security to 3% for all contracts.	As per NIT Terms
28	16	4.22.1	Letter of Seller/ Contractor/ bidder's acceptance of the LOI / Rate Contract is to be submitted within one week of issue date of LOI/Rate Contract. This will be submitted along with the performance Bank guarantee of the value of 10% of the total annual Lease Rent for all the equipment and valid for a period of one year. During the five years lease contract period this Bank guarantee shall be renewed year after year before the expiry of the earlier performance bank guarantee in force.	Kindly request to remove the PBG of 10% of the annual lease rent when security deposit of 1 crore is already been asked in RFP in Section 3.iv) Security Deposit on Page 7 of the RFP. Kindly requesting to remove PBG.		As per NIT Terms
29	176	Sl. No. 4	BID SUBMISSION PROCEDURE A : For Single Part Bids: B : For two-Part Bids:	We understand that the bid (Technical and Commercial) is to submitted through e procurement portal (https://eprocurebhel.co.in/nicgep/app)only.		Yes. Later any clarifications will be sent through email
30	176	Sl. No. 2B	In case of Single-Part bid Tender, the complete bid shall be submitted in a single sealed cover super subscribing the Tender number and due date. Incomplete offers are liable for rejection. E mail bids shall be sent to mail ID pricebid_hyd@bhel.in as an attachment only.	We understand that the bid (Technical and Commercial) is to submitted through e procurement portal (https://eprocurebhel.co.in/nicgep/app)only.		Yes. Later any clarifications will be sent through email
31	176	Sl. No. 2E	Offers shall be submitted directly, on..... Bid envelops shall bear the name of Supplier. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from supplier name.	We understand that the bid (Technical and Commercial) is to submitted through e procurement portal (https://eprocurebhel.co.in/nicgep/app)only.		Yes. Later any clarifications will be sent through email

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
32	176	Sl. No. 1	SCOPE OF SUPPLY: Signed & Sealed offers are invited for the Scope of Supply of goods and Services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer. Bidder can also submit offer through email at their own risk. The offer is to be submitted in two parts. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in as an attachment only	We understand that the bid (Technical and Commercial) is to be submitted through the procurement portal (https://eprocurebhel.co.in/nicgep/app) only.		Yes. Later any clarifications will be sent through email
33	182	INSTRUCTIONS TO BIDDER (ITB) 22/Startups	For Startups Medium Enterprises, Condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications . Startups are exempt from paying earnest money deposit.	Please modify the clause as under : "For Startups Enterprises, Condition of prior turnover and prior experience in Public Procurement is relaxed subject to meeting of Quality and Technical Specifications . Startups are exempt from paying earnest money deposit.	We have removed "Medium" word which is used for MSME criteria but the same is not applicable for Startup Enterprises. Startup organizations are defined as startup only without any segregation of Small or Medium. Also we believe that Condition of prior turnover and prior experience are relaxed for all Startup Enterprises (recognized by DIPP) in this tender.	As per NIT Terms
34	187	Annexure-I of ITB GCC rev 10	Major Activity timelines shall be considered for indigenous purchases	What is the purpose of this information and how it is applicable to bidder.		Not applicable
35	General Query		Bid submission date is on 13th May 2022	Requesting you to kindly extend the bid submission date to 6 weeks post receiving all the queries responses keeping in mind the complexity of the bid and the approvals required we need time to stitch the complete solution.		Necessary extension will be given as per BHEL requirement
36	General Query			Does BHEL get any duty benefit or Tax exemptions in any of the plant locations		No
37		New	Invoicing for the Project	As discussed, there will be two invoices i.e. 1st from 3rd Party Financier for Product supply and 2nd from Bidder for Support Service and REs. SLA Penalty if any should be deducted from Bidder's Invoice only and not from 3rd party Financier's quarterly Product Lease Rental.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
38		NEW		The Quarterly lease rental invoices have to reach your respective units and then they will be received, and then paid ? Are the payments subject to receipt of Invoices on a before a due date ? Physical or EInvoices ? If the process of receipt of invoices, certification and payment of quarterly invoices is clarified it can help.		Either Digital signed invoices can be sent through email or Physical invoices in original also can be submitted.
39	13	4.12.1	Bidder shall fully indemnify and keep indemnified the Purchaser/Lessee against all claims which may be made in respect of the use of System/Software/Item(s)/services supplied/rendered by the Bidder, for infringement of any rights protected by patent, registration of designs or trademarks and legality of the Software. However, the Bidder will have no obligation for any claim of infringement arising from third party products not supplied in the order, modifications and technical information/ instructions advised by purchaser and use of products prohibited by product manuals.	Bidder shall fully indemnify and keep indemnified the Purchaser/Lessee against all proven third party claims which may be made in respect of the use of System/Software/Item(s)/services supplied/rendered by the Bidder, for infringement of any rights protected by patent, registration of designs or trademarks and legality of the Software. However, the Bidder will have no obligation for any claim of infringement arising from third party products not supplied in the order, modifications and technical information/instructions advised by purchaser and use of products prohibited by product manuals. We request that provisions related to Indemnity be restricted to Third party indemnification claims arising from infringement of IPR in respect of the Services provided by Bidder.		Changes proposed by bidder is not acceptable
40	15	4.17.1	Bidder shall at all times indemnify the Purchaser against all claims which may be made in respect of the Systems/goods/Software supplied by the Bidder, for infringement of any right protected by patent, registration of designs or trademarks and legality of usage of Software. In the event of any such claims being made against the Purchaser, Purchaser/Lessee will inform the Bidder who shall at his own cost either settle any such dispute or conduct any litigation that may arise there from.	Bidder shall at all times indemnify the Purchaser against all proven third party claims which may be made in respect of the Systems/goods/Software supplied by the Bidder, for infringement of any right protected by patent, registration of designs or trademarks and legality of usage of Software. In the event of any such claims being made against the Purchaser, Purchaser/Lessee will inform the Bidder who shall at his own cost either settle any such dispute or conduct any litigation that may arise there from.		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
41	15	4.19.5	Purchaser reserves the rights to cancel the lease agreement in case the equipment and services are not found to be satisfactory by the purchaser and apply Risk purchase clause for the same as mentioned at clause 4.18 and 4.21.3.	Lease rent agreement can not be cancelled in any scenario.		As per NIT Terms and Conditions
42	15	4.19.7	Consequences: As soon as the lease agreement is cancelled / terminated by the purchaser on account of fore-closure no further lease rent will be payable to the bidder.	Lease rent schedule will not be cancelled in any case.		As per NIT Terms and Conditions
43	16	4.20.1	Except as otherwise specifically provided in the Order/Contract, all disputes concerning questions of the facts arising under the Order/Contract, shall be decided by the Purchaser, subject to written appeal by the Bidder to the Purchaser, whose decision shall be final to the parties hereto.	Except as otherwise specifically provided in the Order/Contract, all disputes concerning questions of the facts arising under the Order/Contract, shall be decided by mutual consent of both the parties		As per NIT Terms and Conditions
44	17	4.25	Limitation of Liability	The liability of the Bidder shall not exceed 50% of the annual value of the contract, irrespective of whether the liability arises under contract, tort or indemnity. Neither party shall be liable for indirect and consequential loss and damages including but not limited to loss of profit, anticipated savings, loss of data, loss of business. Neither Party shall be liable for any indirect damages (including, without limitation, loss of revenue, profits, and business) under this agreement and the aggregate liability of Company		As per NIT Terms and Conditions
45	27	7.6.8	The RE's must be on the payrolls of the SI and SI has to submit the payslips (salary statement) to respective locations. Offloading/Sub-contracting of RE's to other vendors is not allowed.	Kindly requesting to amend this clause to allow the bidder to used the resources from its trusted and authorized partners. In case of using 3rd party resources for Resident Engineer requirement, Bidder should take the full responsibility of statutory and other points mentioned under section 7.6.xx		As per NIT Terms and Conditions
46	12	4.1	E-Waste disposal	Kindly requesting to remove this clause as none of bidders (System Integrators) have this service offering and this will become single point of non-compliance.		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
47	45		# Sec. 5 –	BHEL requires the Lessor won't have security interest over the Equipment while it is in possession of the Lessee. We suggest that this be removed because it limits Capital's ability to secure its interest over the equipment.		As per NIT Terms and Conditions
48	45		# Sec. 6 –	BHEL has not inserted the hell or high water clause with respect to the Rent payments. The obligation to pay rentals should be non-cancelable. This clause must be reinstated. Clause below :		As per NIT Terms and Conditions
49			NEW CLAUSE : UNCONDITIONAL PAYMENT OF RENT BY LESSEE	ONCE THE TERM OF THIS AGREEMENT HAS BEGUN UPON ACCEPTANCE UNDER SECTION 2.4, THE LEASE OF THE EQUIPMENT SHALL BE NON-CANCELABLE. LESSEE AGREES THAT IT HAS AN ABSOLUTE AND UNCONDITIONAL OBLIGATION TO PAY ALL LEASE RENT AND OTHER AMOUNTS WHEN DUE. EXCEPT AS PROVIDED IN SECTION 13 ON WITHHOLDING TAX, LESSEE IS NOT ENTITLED TO ABATE OR REDUCE PERIODIC PAYMENTS OR ANY OTHER AMOUNT DUE, OR TO SET OFF ANY CHARGE AGAINST ANY SUCH AMOUNT. LESSEE HEREBY WAIVES ANY RECOUPMENT, CROSS-CLAIM, COUNTERCLAIM OR ANY OTHER DEFENSE AT LAW OR IN EQUITY TO ANY PERIODIC PAYMENT OR OTHER AMOUNT DUE, WHETHER ANY SUCH DEFENSE ARISES OUT OF THIS AGREEMENT OR ANY OTHER AGREEMENT WITH VENDOR. IF THE EQUIPMENT ARE NOT PROPERLY INSTALLED OR DELIVERED, DO NOT OPERATE OR INTEGRATE AS REPRESENTED OR WARRANTED BY VENDOR OR ARE UNSATISFACTORY FOR ANY REASON WHATSOEVER, LESSEE SHALL MAKE ANY CLAIM ON ACCOUNT THEREOF SOLELY AGAINST VENDOR AND SHALL NEVERTHELESS PAY ALL SUMS DUE WITH RESPECT TO THE LEASE..		Changes proposed by bidder is not acceptable

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
50	46		# Sec. 8 –	BHEL passed the obligation to secure insurance to the Vendor. This can't be done because the Vendor does not have insurable interest over the Equipment. This should be undertaken by BHEL. Further, the proceeds of insurance should either go to Capital directly to defray the payment by BHEL of the Casualty value. The contract does not also provide a computation for Casualty value. This should be inserted back to the document. If BHEL wants the insurance proceeds to be paid to it, BHEL should be responsible for timely payment of Casualty Value because BHEL assumes risk of loss. It is also unfair for BHEL to require Lessor to provide a replacement equipment if the Casualty Value is not paid. Under the new clause that BHEL inserted, it requires Lessor to supply replacement equipment even if neither insurance proceeds nor Casualty Value were paid.		As per NIT Terms and Conditions
51	46		# Sec. 9.2 –	BHEL has not inserted the waiver of Warranty Clause. This has to be reinstated because Lessor cannot be responsible for any Equipment warranty claims. As a Lessor, it won't have the ability to fix these claims. It will be unfair to make Lessor to be jointly responsible with the Lessor for such claims. Clause below :		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
52			NEW CLAUSE	EXCEPT AS EXPRESSLY SET FORTH ABOVE, LESSOR MAKES OR SHALL BE DEEMED TO HAVE MADE, NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, AS TO THE TITLE, CONDITION, DESIGN OR OPERATION, MERCHANTABILITY, FITNESS FOR USE OF ANY EQUIPMENT OR ANY PART THEREOF, THE ABSENCE OF ANY LATENT OR OTHER DEFECTS, THE ABSENCE OF ANY INFRINGEMENT OF ANY PATENT, TRADEMARK OR COPYRIGHT, THE ABSENCE OF OBLIGATIONS BASED ON STRICT LIABILITY IN TORT, OR ANY OTHER REPRESENTATION OR WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, WITH RESPECT TO ANY EQUIPMENT OR ANY PART THEREOF. IN NO EVENT IS CAPITAL RESPONSIBLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR LOSS OF DATA.		Changes proposed by bidder is not acceptable
53	47		# Sec. 12.2 -	BHEL made the Lessor responsible for penalty imposed for downtime. It provides that if the penalty amount is more than the service fee payment to the Vendor, the BHEL can deduct the balance against the rent payable to Lessor. This clause should be deleted because the rent obligations cannot be used to pay for downtime penalties.		As per NIT Terms and Conditions
54	49		# Sec. 16.3 –	Check the effect of an INR 1 purchase option clause and ensure that this is consistent with the statement that BHEL can take on the depreciation accounting for the Equipment.		As per NIT Terms and Conditions
55	49		# Sec. 17 -	BHEL has not included the Events of Default clause and instead replaced it with limited termination rights like breach of the contract and winding up petition filed against BHEL. It also removed the ability of the Lessor to terminate due to other credit events like reorganizations, mergers where BHEL disappears, sale of all the assets, and filing of other bankruptcy proceedings.		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
56			NEW CLAUSE : EVENTS OF DEFAULT AND TERMINATION	The occurrence of any of the following shall constitute an "Event of Default" under this Agreement: (a) LESSEE fails to pay any Rent, or other amount due under any this Agreement within five days after it becomes due and payable; (b) LESSEE fails to perform any other term or condition to be performed by it under any Lease, and such failure continues for a period of 20 days after such breach; (c) bankruptcy, receivership, insolvency, reorganization, dissolution, liquidation or other similar proceedings are instituted by or against LESSEE, and, if such proceeding is brought against such LESSEE, it consents thereto or fails to cause the same to be discharged within 60 days after it is filed; (f) LESSEE defaults under any other agreement with LESSOR or LESSOR's Parent, Subsidiary, or Affiliate (as defined but in relation to LESSOR); (g) LESSEE sells or transfers all or substantially all of its assets, or any substantial portion of its assets out of the ordinary course of business; (h) LESSEE merges or consolidates with or into any person, other than mergers where the LESSEE is the surviving entity; or (h) a Material Adverse Effect shall have occurred. A "Material Adverse Effect" means, in respect of this Agreement, a material impairment of the ability of LESSEE to perform its obligations under or remain		Changes proposed by bidder is not acceptable
57	49		# Sec 18.2 –	This clause should be removed and the only reason for termination of lease part of the tripartite agreement would be default by the lessee under which the remedies provisions will be invoked as suggested by Cisco Capital as part of Sec 19.		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
58	49		# Sec 19 -	BHEL has not included the remedies clause in case there is a termination. It does not allow Lessor to accelerates all amounts due and payable (termination amount which should include the casualty value) as a consequence of termination. It also has not included Lessor's ability to charge penalty interest, collection of damages and attorney's fees in case of failure to pay the rent on time. Remedies should be reinstated to assure that Lessor gets compensated properly in case of termination of the contract due to BHEL's default. Pls include the below clause :		As per NIT Terms and Conditions
59			NEW CLAUSE : LESSOR'S REMEDIES IN THE EVENT OF DEFAULT	If an Event of Default occurs, LESSOR may exercise any one or more of the following remedies: (a) cancel the Lease or this Agreement; (b) declare all amounts due and to become due under the Lease or this Agreement immediately due and payable; including interest on all amounts due and owing at the Late Payment Fee of 1.5% per month (c) take possession of, or render unusable, any Equipment wherever located, without notice or process of law (and such action will not constitute a cancellation or termination of any Schedule); (d) require LESSEE to return the Equipment to a location designated by LESSOR; (e) declare the applicable Stipulated Loss Sum ("Stipulated Loss Sum" shall mean the sum of all unpaid Rent whether due or to be due, the Late Payment Fee, and all other reasonable costs and expenses incurred by LESSOR in enforcing this Agreement) to be due and payable as liquidated damages for loss of a bargain and not as a penalty and in lieu of any further Periodic Payments under this Agreement; (f) proceed by legal action to enforce performance by LESSEE of this Agreement and/or to recover all damages and expenses suffered by LESSOR as a consequence of such Event of Default, including, without limitation, any loss of anticipated tax benefits; or (g) exercise any other right or remedy		Changes proposed by bidder is not acceptable
60				The foregoing remedies are cumulative in nature and are intended only to make LESSOR whole (as if no Event of Default occurred) and not to penalize LESSEE or allow LESSOR duplicative remedies.		Changes proposed by bidder is not acceptable

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
61	50		# Sec. 19.2 -	In case of repossession of Equipment by Lessor, Lessor has to pay BHEL for rent for over-staying or if Lessor delays in repossessing the Equipment.		As per NIT Terms and Conditions
62	51		# Interest Clause	BHEL does not want to pay any interest for any amount that is due under the contract. This should be removed.		As per NIT Terms and Conditions
63	51		# Limitation of Liability clause	BHEL wants to limit its liability under the contract to Contract Price. This should be removed because it gives incentive to BHEL to delay payments without any consequence like payment of Late Payment Interest.		As per NIT Terms and Conditions
64	52		# Force Majeure clause –	this provision excuses BHEL for not complying with its obligations due to force majeure. Further, it provides that if the Equipment gets lost or destroyed due to Force Majeure, then the Lessor is obligated to replace the Equipment. This provision should be deleted because it allows BHEL not to pay for rent due to Force Majeure. Also it forces Lessor to provide replacement Equipment even if Lessee does not pay the Casualty Value of the Equipment.		As per NIT Terms and Conditions
65	56		# Sec. 28 –	3 rd Party Claim Indemnity – BHEL passed the responsibility to indemnify for 3 rd Party claims to Vendor. This can be limited only to 3 rd Party claims in relation to IP. However, other types of 3 rd Party claim indemnity should be with BHEL as the user/beneficiary of the lease and Equipment. It cases where there are 3 rd Party claims with respect to the use of the Equipment, then BHEL is the rightful entity to provide the indemnity.		As per NIT Terms and Conditions

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
66	11	4.9		<p>Are the lease rental payments to the lessor by the lessee(BHEL) - unconditional post installation and confirmation by BHEL ?</p> <p>Since as per clause 4.9 of the NIT - Penalty will be limited to maximum quarterly maintenance value for the equipment. However clause 12.3 of the Lease agreement states</p> <p>"LESSEE shall be finally compensated for any short fall in the guaranteed uptime as specified hereunder:</p> <p>a) The penalty amount so computed may be deducted from the payment towards the maintenance fee payable to the VENDOR if it exceeds, it may be deducted from the lease rental payable to the LESSOR. VENDOR will promptly indemnify the LESSOR with respect to any deduction made by LESSEE under this clause “</p>		As per NIT Terms and Conditions
67	4	2.2 The pre-qualification criteria for the bidders	The bidder should be a registered company in India under Indian Companies Act 1956 / 2013.	<p>The bidder or Consortium members should be a registered entity in India.</p> <p>If the bidder is consotium and the consortium agreement should be submitted . The consortium members should I authorise the Lead bidder to participate in the tender. Consortium Agreement should clearly mention the roles and responsibilities of each member. In case of Consortium all the members should have experience in executing Lease Contracts of IT Equipments</p>		As per NIT Terms
68	5	2.2 The pre-qualification criteria for the bidders	The bidder shall submit OEM Authorization letter (Manufacturers' Authorization Form) specific to this tender	The bidder or the Lead bidder of a consotium shall submit OEM Authorization letter (Manufacturers' Authorization Form) specific to this tender		As per NIT Terms
69	5	2.2 The pre-qualification criteria for the bidders	The Bidder should be an Authorized Partner of the OEM and should have partnership with the OEM for a minimum duration of last 5 years.	The Bidder or Lead Bidder of a consortium should be an Authorized Partner of the OEM and should have partnership with the OEM for a minimum duration of last 5 years.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
70	5	2.2 The pre-qualification criteria for the bidders	Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr.	Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr. In case of Consortium, the Lead bidder should meet the above Turnover		As per NIT Terms
71	5	2.2 The pre-qualification criteria for the bidders	The Bidder should have positive net worth as on 31st March 2022.	The Bidder or Lead Bidder should have positive net worth of as on 31st March 2021.		As per NIT Terms
72	5	2.2 The pre-qualification criteria for the bidders	The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal: i. One Purchase order costing more than ₹ 35 Crores OR ii. Two Purchase orders costing more than ₹ 25 Crores each OR iii. Three Purchase orders costing more than ₹ 10 Crores each	The bidder should have executed any one of the following Similar Works in the preceding seven years in India as on the date of opening of Techno-Commercial proposal: i. One Purchase order costing more than ₹ 35 Crores OR ii. Two Purchase orders costing more than ₹ 25 Crores each OR iii. Three Purchase orders costing more than ₹ 10 Crores each the joint experience of the members of the consortium shall be considered for the above		As per NIT Terms
73	5	2.2. The pre-qualification criteria for the bidders will be as follows Sl. No. 5	Parameter: Turnover Description: Average Annual financial turnover during the last 3 years ending 31st March of the previous financial year, should be at least 21 cr. Documents to be submitted: Audited balance sheet and Profit & Loss Statements or a certificate from CA confirming the same	Kindly consider the following changes Description: Average Annual financial turnover during the last 3 years ending 31st March 2021, should be at least 21 cr.		As per NIT Terms
74	5	2.2. The pre-qualification criteria for the bidders will be as follows Sl. No. 6	Parameter: Net Worth Description: The Bidder should have positive net worth as on 31st March 2022. Documents to be submitted: Certificate from CA confirming the same	Kindly consider the following changes Description: The Bidder should have positive net worth as on 31st March 2021. Documents to be submitted: Audited balance sheet and Profit & Loss Statements or a certificate from CA confirming the same		As per NIT Terms
75	6	2.2 The pre-qualification criteria for the bidders	The bidder or its associated group companies delivering the services must have ISO 27001 and ISO 9001 Certificate	The bidder or its associated group companies / Lead bidder or its associated companies delivering the services must have ISO 27001 and ISO 9001 Certificate		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
76	6	2.2 The pre-qualification criteria for the bidders	<p>a) If "Insolvency Resolution Process" has been initiated against the bidder and is pending, or the bidder is under insolvency, the bidder shall not be eligible to bid for this tender.</p> <p>b) Even during the processing period of tender till declaration of L1 if "Insolvency Resolution Process" is initiated against the bidder, or where the liquidation commencement date has occurred or a liquidation order has been passed or liquidation has been initiated in relation to the bidder, such bidder shall be disqualified from the process and BHEL will proceed further with tendering process without considering such bids.</p>	<p>a) If "Insolvency Resolution Process" has been initiated against the bidder or member of consortium and is pending, or the bidder or the consortium members insolvency, the bidder or the consortium members shall not be eligible to bid for this tender.</p> <p>b) Even during the processing period of tender till declaration of L1 if "Insolvency Resolution Process" is initiated against the bidder or Consortium or where the liquidation commencement date has occurred or a liquidation order has been passed or liquidation has been initiated in relation to the bidder or Consortium, such bidder or consortium shall be disqualified from the process and BHEL will proceed further with tendering process without considering such bids.</p>		As per NIT Terms
77	5	2.2/ Qualification Criteria for Bidders/S.No. 3	The Bidder should be an Authorized Partner of the OEM and should have partnership with the OEM for a minimum duration of last 5 years.	Kindly amend the clause as under : "The Bidder should be an Authorized Partner of the OEM"		As per NIT Terms
78	6	2.2 The pre-qualification criteria for the bidders	i) "Similar" Work means any work, which includes Supply, Installation and Commissioning of IT Network Equipment like Core Switch, Data Centre Core & Data Centre Access Switch, Distribution Switch, Access Switches, Firewall, Router, NMS, NAC.	i)"Similar" Work means any work, which includes Supply, Installation and Commissioning of IT DC/DR infrastructure equipment and also including Network Equipment like Core Switch, Data Centre Core & Data Centre Access Switch, Distribution Switch, Access Switches, Firewall, Router, NMS, NAC.		As per NIT Terms
79	9	4.3.2	4.3.2. The successful Bidder has also to produce a certificate from his principal OEM for back-to-back support for the complete lease period for all items. The period of back-to-back support with OEM will start from the date of installation note issued by respective locations.	In case if installation is delayed beyond 60 days from date of delivery of devices due to reason related with BHEL Site then BHEL should allow to start the warranty support services.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
80	9	4.4	4.4.2. "Delivery and Installation period" shall be as detailed below and it will be counted from the date of Order. All Items: 10 Months Delivery Period	Basis current situation of global shortage of semiconductors and disruption in global supply chain, please increase the Delivery & Installation to minimum 15 months. Any delay of 2 or more days due to no access to site/workplace or work permission should be added to overall project timeline.		As per NIT Terms
81	10	4.8.2	Any delay attributable to BHEL will not be considered for penalty.	Kindly remove this clause		As per NIT Terms
82	11	4.9	Downtime Calculation for Network Equipment: The vendor shall maintain the overall uptime to minimum 99% on quarterly basis during the lease period.	Please clarify that in case of failure of meeting 99% SLA uptime, penalty will be deducted for the device which is failed as per Downtime calculation details given in the Formula on Page 10 of RFP.		Penalty will be deducted for the device which is failed as per Downtime calculation details given in RFP Document
83	11	4.9. Downtime Calculation for Network Equipment	Penalty will be limited to maximum quarterly maintenance value for the equipment	Penalty should be capped at maximum quarterly maintenance value of the equipment which didn't meet the uptime criteria of 99% in case of devices deployed in redundant mode (Active-Active/Passive) and 97% in case of devices deployed in standalone mode		As per NIT Terms
84	11	4.9. Downtime Calculation for Network Equipment	The vendor shall maintain the overall uptime to minimum 99% on quarterly basis during the lease period.	Requirement consist of lot of devices which will be deployed in standalone mode and offering 99% uptime for these devices will be very difficult hence requesting to amend this clause to 97%		As per NIT Terms
85	12	4.10.2 & 4.10.3	4.10.2. Vendor should ensure that either them or the producer of products supplied by them has required authorization from respective State Pollution Control Boards /Pollution Control Committees for implementing EPR (Extended Producer Responsibility) across the concerned state. 4.10.3. In case BHEL wants to discard the products as E-waste after the end of the lease period as per latest E-Waste Management and Handling Rules, the Vendor should arrange for collection of e-waste and bear all the costs. BHEL will not pay any cost for the same	Kindly remove this clause		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
86	12	4.11	<p>TRAINING</p> <p>i) The bidder shall organize minimum 10 working day training courses from authorized training partner of the OEM(s) of the active components with proper lab environment for minimum 15 BHEL officials.</p>	Can the training be provided online/Remote and LAB will be Cloud base Lab access. Due to the Covid-19 situation, majority of the training and certification institute started offering the services in Remote/Online Mode only. Kindly allow the Online Training with LAB Access.		As per NIT Terms
87	16	4.23	<p>4.23. SHIFTING OF EQUIPMENT FROM A LOCATION TO OTHER</p> <p>4.23.1. After initial installation as per location details given by BHEL, shifting of equipment from one location to another shall be the responsibility of the Bidder. The entire requisite works like dismantling of equipment, packing, transportation and transit insurance shall be the responsibility of the Bidder. A mutually agreed cost can be paid by BHEL to the Bidder on this account. The time given for shifting and installation of equipment at new location will be mutually agreed and time taken beyond that period will be treated as downtime.</p>	<p>1. How many such transfers are expected?</p> <p>2. Should we need buy insurance for shifting?</p> <p>3. Will it be withing the same site/location/unit or across different sites/locations/units</p>		As per NIT Terms
88	19	7.1.3.	<p>7.1.3. Scope of work consists of two (2) groups:</p> <p><u>A.1</u></p> <ul style="list-style-type: none"> - LAN Core, Data Centre Core, Distribution, Access Switch - Access Point (AP) and Wireless Controller (WLC) - NAC - SFP Modules <p><u>A.2</u></p> <ul style="list-style-type: none"> - NMS - Firewall - Web Security Appliance - Link Load Balancer - Router - 3G 4G Router/DSLAM/CPE - UPS 	Kindly request to add the clause that "All the SFP Modules (Transceivers) supplied for this RFP should be from same OEM's whoes Active components are supplied". No third Party SFP Modules (Transceivers) will be accepted".		Already mentioned in Clause 7.1.3

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
89	19	7.1.4.	All active components mentioned under Group A.1 of 7.1.3 should be from same OEM. No third-party components are to be integrated into the system.	Kindly requesting to allow Campus Networking (LAN Core, Distribution, Access Switches, WLAN and Routers etc) from One OEM and Data Center Networking (Data Center Core and Access Switches) from different OEM as per Gartner's Magic Quadrant for "Wired and Wireless LAN Access Infrastructure" and "Data Center and Cloud Networking". This will help BHEL in getting the best of the breed solution in both the domains of Campus Networking and Data Center Networking.		As per NIT Terms
90	20	7.1.13	Successful bidder has to integrate the proposed solution with other existing security solution such as Firewalls, Antivirus, Active Directory (Microsoft), Desktop & patch Management, etc. The bidder should provide necessary licenses as a part of the solution if required to connect / integrate with other above solutions	Can BHEL specify which technologies to be integrated with which security solutions. Please provide the details of existing Firewalls, Antivirus and Patch Management Solution which need to be integrated with proposed solution		Shared with successful bidder at the time of implementation
91	20	7.1.18	Successful bidder shall integrate all endpoints with the proposed NAC solution.	Please mention the different operating systems present in BHEL environment for compatibility cross check and are there any outdated operating systems present. If outdated and end of support endpoint OS does not work with proposed NAC solution then BHEL need to change the endpoint OS to latest version.		Windows 10 and later, Windows Server 2012 R2/2016, 2019 and later, MAC OS.

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
92	20	7.1.21, 7.1.22 and 7.1.23	7.1.21. Solution should have centralized architecture with web or Graphical User, Interface (GUI) based dashboard console to monitor, reporting, notification, maintaining and policy push for the registered users centrally. 7.1.22. The solution must be able to generate report on different parameters i.e. Compliance, Non-Compliance, frequency and variety of end points, Corporate, Guest, BYOD, Mobile Devices, IOT's, etc. 7.1.23. The solution should able to create complete separation for Guest and BHEL Employee.	We understand that this solution should have capability which can be achieved by adding necessary components, and not required from day 1.		As per SI.No.3 of NAC Specification
93	21	7.1.24	The proposed solution should be able to integrate with existing Antivirus solutions (TrendMicro), active directory (Microsoft) for compliance. Integration with other solutions if any should not be limited to the above-mentioned OEMs and integration should be available with other OEMs also without any additional licensing	Can BHEL specify which technologies to be integrated with wick security solutions		Will be shared with successful bidder at the time of implementation
94	22	7.2.3	NAC	Can BHEL specify the required use cases to be configured & will the agent roll out be part of the bidders scope or will BHEL use your software distribution tool to rollout the agents		Use case: As per NAC specification Agent rollout will be in bidders scope
95	23	7.2.5	Firewall	Which are the existing firewalls and how many number of rules to be migrated? Do we need to do rule re-validation before migration?		Will be shared with successful bidder at the time of implementation
96	23	7.2.7	Web Security Appliance	What is the expected mode of deployment (Explicit proxy or transparent)		Mode of deployment - Explicit proxy
97	26	7.6	7.6. The supplier shall assign a qualified Project Manager having at least 10 years of experience to supervise the installation and deployment of all the items across all the BHEL locations. The engineers deployed to carry.....	Please provide a detailed job description of the resources required ?		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
98	26	7.6	7.6. The supplier shall assign a qualified Project Manager having at least 10 years of experience to supervise the installation and deployment of all the items across all the BHEL locations. The engineers deployed to carry.....	Is the duration of support for these resources : 5 years from Go-Live?		Project manager duration will be required till go-live.
99	26	7.6.2	The resident engineer (RE) posted at BHEL locations should have the following minimum qualification and experience: <ul style="list-style-type: none"> • 3 years diploma/Engineering degree in electronics / computers/ hardware. • CCNA or equivalent certified engineers for providing support on network devices. 	Please provide the details for below given points; <ol style="list-style-type: none"> 1. What is the job profile/description of L1 and L2 resources 2. Minimum Educational qualification for L1 and L2 resources 3. Minimum no. of Years eperience for L1 and L2 resources 4. Any past experience for L1 and L2 resources 		1. L1 resource - Network engineer with CCNA or equivalent certification with minimum experience of 1 years in network support and maintenance. Educational qualification: 3 years diploma/Engineering degree in electronics / computers/ hardware L2 resource - Network engineer with CCNA or equivalent certification with minimum experience of 3 years in network support and maintenance. Educational qualification: 3 years Engineering degree in electronics / computers/ hardware
100	26	7.6.2	The resident engineer (RE) posted at BHEL locations....	Please provide the details for below given points; <ol style="list-style-type: none"> 1. Resident Engineers need to be deployed for a duration of 5 Years 2. Resident Enginners are required from day site go live post project sign off 3. Location wise working time windows during which RE need to be at the site i.e. Working days and working hours 		1. Resident Engineers need to be deployed for a duration of 5 Years 2. Resident Engineers are required from day site go live post project sign off. 3. As per respective BHEL Units working time and as per BHEL Units leave calender
101	27	8	8. Warranty and Support	Please provide the location wise support service window ?		Refer Clause 8.8 of Warranty & Support

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
102	27	7.6.9	If resident engineer is absent for more than 2 consecutive working days, a substitute shall be arranged.	Kindly requesting to amend this clause to provide the substitute resource in case if Resident Engineer is absent/leave for 6 or more days.		As per NIT Terms
103	27	8. WARRANTY	<p>The successful bidder shall provide comprehensive on-site support of the all the hardware / software with back to back support with the respective OEM, for a period of 5 years, from the date of sign-off.</p> <p>8.2. Contract/Support period of 5(five) years will start from the date of Sign Off or 'Go-Live' date provided by BHEL respective units.</p> <p>8.3. During this Comprehensive Onsite Maintenance Support period, Vendor needs to provide complete support for any Software / Hardware issues and provide either repair or replacement support with identical or higher configuration at no extra cost to BHEL. There shall be no limitations on no. of support calls / visits by the Vendor / Vendor's representative whenever required. Replacement or Repair under Comprehensive Onsite Maintenance Support clause shall be made by the Vendor free of all charges at sites including freight, insurance or any other charges related to maintenance of the items supplied. Comprehensive Onsite Maintenance Support covers all hardware, software patches and upgrades, Firmware Upgrades, Networking and Peripheral components and there shall be no exclusions.</p>	<p>WARRANTY</p> <p>PRODUCT WARRANTY</p> <p>All Products delivered under this Agreement are subject to the warranties provided by the OEM's or OSD's manufacturer as legally and contractually permissible for Bidder to pass onto, resell, or assign to Client. Unless otherwise specified, Bidder is not the manufacturer of the Products and provides no warranty in respect of the Products. BIDDER DISCLAIMS ANY AND ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS.</p> <p>SERVICES UNDERTAKINGS</p> <p>Bidder represents and undertakes that Services will be performed by qualified individuals in a proper, workmanlike and professional manner and in accordance with all applicable laws, regulations, codes and standards of government agencies or authorities having jurisdiction. Further, Bidder represents and undertakes that the Services shall be performed and completed in accordance with applicable specifications contemplated in any applicable Schedule and/or accepted Statement of</p>		As per NIT Terms
104	64	LAN Core Switch	Line Cards required from day 1	Please let know the 10G transceivers type and quantity, and 40G transceivers type and quantity per switch		Transceivers count for core switch has been considered separately and given in Annexure-VIII(a) (Sl.No.22 to 25)
105	64	LAN Core Switch	The switch must support 1/10G/25 SFP+ ports with 40G QSFP up link ports as Day 1 Requirement. The switch must support 100 Gbps SFPs for future scalability.	Kindly clarify the no. of ports of each type to be available from the day one.		Refer point no 10 of LAN Core Switch specification

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
106	64	LAN Core Switch	There should not be any single point of failure in the switch. All the main components like CPU module, switching fabric, support module, power supplies and fans etc should be in redundant configuration. Components, like modules/power supplies/fan tray should be Hot Swappable	There should not be any single point of failure in the switch. All the main components like CPU module (along with an integrated or dedicated switching fabric and integrated or dedicated management module), power supplies and fans etc should be in redundant configuration. Components, like modules/power supplies/fan tray should be Hot Swappable		As per NIT Terms
107	68	Port Throughput	Minimum 2.56 Tbps and 720 MPPS processing	Please change this to 7.2 Tbps as since Core/Spine Switches would be connected to all leaf switches and it is recommended for them to support higher throughput to avoid any packet drops under heavy traffic conditions.		As per NIT Terms
108	68	Switching Features	Should have 32Mb buffer with Memory Support of 8GB DRAM and 8GB Flash	Please modify this to "Should have 80Mb buffer with Memory Support of 8GB DRAM and 8GB Flash". Higher buffer is recommended to avoid traffic drops.		As per NIT Terms
109	68	DC Core/ point 2	Switch must have at least 32 no. of 10/40/100 QSFP form-factor ports capable of providing line rate forwarding	will the 10G support be fine with Copper cable only, if not on fiber cable? Request you to confirm		10G is on fiber
110	68	DC Core/ point 2	Switch must have at least 32 no. of 10/40/100 QSFP form-factor ports capable of providing line rate forwarding	Please let know how many ports of 10G and/or 40G needs to be populated with transceivers		Transceivers count for data centre core switch has been considered separately and given in Annexure-VIII(a) (Sl.No.22 to 25)
111	68	Interfaces Support	Switch must have atleast 32 no. of 10/40/100G QSFP+ form-factor ports capable of providing line rate forwarding.	Please change the number of ports to be 36x10/40/100G QSFP+ Ports. As more ports provides more scalability for future expansion in the same form factor.		As per NIT Terms
112	69	Point 12 OEM/Make/ Model	All DC switches components and DC NMS must be from same OEM and the OEM should be in leaders quadrant of the latest Gartner's report for Wired and Wireless LAN Access Infrastructure.	As there is separate Magic quadrant from gartner for Data Center (Gartner Magic Quadrant for Data Center and Cloud Networking), kindly request to include the same instead of "Wired and wireless". Kindly allow that Campus Networking and Data Center Networking can be from two OEM's as per Gartner Magic Quadrant so that BHEL gets the best of the breed solution in both the domains of Campus Networking and Data Center Networking.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
113	69	point 12	All DC switches components and DC NMS must be from same OEM and the OEM should be in leaders quadrant of the latest Gartner's report for Wired and Wireless LAN Access Infrastructure.	As there is separate Magic quadrant from gartner for DC / Cloud networking, request to please include the same instead of "Wired and wireless"		As per NIT Terms
114	69	Scale	Switch hardware should be capable of supporting at least: 1. 4K multicast routes 2. 128K ipv4 route prefixes 3. 120K host routes 4. 90K MAC addresses 5. 256 VRF's	Please change this to below as Data Center requirements are changing rapidly and it is recommended to have higher routing scale to support more routing demands in the Data Center. Also with containers being popular in Data Center requirements for number of mac addresses and route table increases. So we strongly recommend to increase this scale for future scalability and product longevity. 1. 32K multicast Routes 2. 768K IPv4 route prefixes 3. 768K host routes 4. 256K mac addresses 5. 1000 VRFs		As per NIT Terms
115	71	Switching Features	Additional Points	Please change this to below as Data Center requirements are changing rapidly and it is recommended to have higher routing scale to support more routing demands in the Data Center. Also with containers being popular in Data Center requirements for number of mac addresses and route table increases. So we strongly recommend to increase this scale for future scalability and product longevity. 1. 32K multicast Routes 2. 768K IPv4 route prefixes 3. 768K host routes 4. 256K mac addresses 5. 1000 VRFs		As per NIT Terms
116	71	Architecture	Additional Points	Switch must support wire-rate MACsec encryption		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
117	74	Switching Features	Additional Points	<p>Please change this to below as Data Center requirements are changing rapidly and it is recommended to have higher routing scale to support more routing demands in the Data Center. Also with containers being popular in Data Center requirements for number of mac addresses and route table increases. So we strongly recommend to increase this scale for future scalability and product longevity.</p> <ol style="list-style-type: none"> 1. 32K multicast Routes 2. 768K IPv4 route prefixes 3. 768K host routes 4. 256K mac addresses 5. 1000 VRFs 		As per NIT Terms
118	74	Architecture	Additional Points	Switch must support wire-rate MACsec encryption		As per NIT Terms
119	81, 84, 87 & 90	Access Switch Type 1/2/3/4	Dedicated uplink module supplied must be able to support minimum 4 x 1/10G Fiber Uplink ports.	Dedicated or integrated uplink module supplied must be able to support minimum 4 x 1/10G/25/50G Fiber Uplink ports.		The switch should have either integrated or separate module providing 4 x 1/10G Fiber uplink ports.
120	81, 84, 87 & 90	Access Switch Type 1/2/3/4	Minimum 2GB Flash Memory and 4 GB DRAM	Minimum 16GB Flash Memory and 8 GB DRAM		As per NIT Terms
121	81, 84, 87 & 90	Access Switch Type 1/2/3/4	Should have support for dual internal field replaceable redundant AC Power and FAN unit	Kindly let us know if the redundant PSU and FANs to be considered from the day one or only the support to be there.		Redundant PSU and FANs need not be considered from the day one and only the support to be there.
122	81, 84	Access Switch Type 1/2	Switch should support stack bandwidth of at least 136 Gbps.(Equal speed to all ports)	Switch should support stack bandwidth of minimum 200Gbps		As per NIT Terms
123	81, 84, 87, 90, 93, 95	General Requirements	The fiber port should be populated with 2 x 1G Single mode transceivers	should we consider separately these transceivers, in addition to what is considered in Annexure-VIII(a)		These transceivers should be considered in addition to what is mentioned in Annexure-VIII(a)
124	87, 90	Access Switch Type 3/4	Switch should support stack bandwidth of at least 128 Gbps.(Equal speed to all ports)	Switch should support stack bandwidth of minimum 200Gbps		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
125	98	Wireless Controller	The controller shall be able to embedded custom web portal page (HTML) to fully customize user experience without additional cost or extra box	The controller shall be able to embedded or integrate with custom web portal page (HTML) to fully customize user experience as part of the overall solution		As per NIT Terms
126	98	Wireless Controller	The controller shall support standard-based, secure AP-Controller data control protocol. OEM to fix any known vulnerabilities associated with this protocol before deployment. A declaration on OEM letter head in this regard will be required	The controller shall support secure AP-Controller data & control protocol like CAPWAP or PAPI		As per NIT Terms
127	100	Indoor Access Point	Must support 4x4 MIMO for both radios interface bands (5Ghz and 2.4Ghz)	Must support 4x4 MIMO for 5GHz radio interface band and 2x2 MIMO for 2.4 GHz radio interface band		As per NIT Terms
128	100	Indoor Access Point	Must support minimum of 23dbm of transmit power in both 2.4Ghz and 5Ghz radios. And should follow the local regulatory Norms.	Must support minimum of 21dbm of transmit power on 2.4Ghz and 23dbm of transmit power on 5Ghz radio. And should follow the local regulatory Norms.		As per NIT Terms
129	101	Outdoor Access Point	Access Point should have 1x 100, 1000, 2500 Multigigabit Ethernet (RJ-45) – IEEE 802.3bz uplink, and 1G SFP downlink port.	Access Point should have 1x 100, 1000, 2500 Multigigabit Ethernet (RJ-45) – IEEE 802.3bz uplink, and 1G BASE-T downlink port.		As per NIT Terms
130	106	Network Management System		<p>New Clause to be add: In order to select a robust. scalable and proven NMS solution having successful deployment in government, we recommend the authority to consider this clause for incorporation.</p> <p>The OEM of NMS/ Health Monitoring solution provider should be registered in India for minimum period of 5 years as on bid submission. The Proposed platform should have been implemented in at-least 3 successful surveillance or large governmental body with atleast 10,000 nodes implemented in India in the last 5 years. A copy of Implementation sign-off for all projects needs to be submitted by the OEM at the time of bidding.</p>		Not considered by BHEL

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
131	106	Network Management System		<p>New Clause to be add: In order to provide complete visibility of IT infrastructure including servers with micro level monitoring (on need basis) through which granular level details can be captured along with flexibility of monitoring through agent and agentless approach. Hence, we request the authority to add the following clause in the NMS specification:</p> <p>The proposed NMS solution must provide agentless as well as agent based monitoring for server infrastructure. The agents should be able to set polling interval as low as 1 second with low overhead on target server infrastructure.</p>		Not accepted
132	106	Network Management System		<p>New Clause to be add: In order to select proven EMS solution from industry, we would request you to add following clause in the NMS specification:</p> <p>The proposed NMS solution must be featured in Gartner/IDC reports. Documentary proof must be submitted at the time of submission.</p>		Not accepted
133	106	Network Management System		<p>New Clause to be add: Time series database offers better performance as compared to RDBMS in terms of accurate reporting and is cost effective due to optimized storage requirement. Hence, requesting authority to consider this clause for incorporation.</p> <p>The Proposed NMS solution must not use any third party database (including RDBMS and open source) to store data in order to provide full flexibility and control on collected data as well as avoiding tempering with SLA calculations</p>		Not accepted
134	111	DC NMS	DC NMS software / hardware	Hope DC NMS is to be provided at Central location for managing all DC Switching. Please confirm.		NMS is decentralised.

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
135	111	NMS	Section-B : Data Centre Networking	Kindly clarify whether the management layer for DC should be dedicated from the other infra management and to be from the same vendor of Networking infra provider.		The NMS provided should manage both LAN and DC network components. NMS need not be from the same vendor of Networking infra provider
136	118	DSLAM		Make & Model		As per NIT Terms
137	119	CPE		Make & Model		As per NIT Terms
138	129	Hardware	The solution should provide provision to keep and view, in real time, online logs and audit trails. Solution should provide minimum 20 TB storage for keeping the logs backup in off-line mode. Each appliance must have the following from day 1	Requesting to change 20 TB to 9 TB storage		As per NIT Terms
139	129	Web Security Appliance	The solution should provide provision to keep and view, in real time, online logs and audit trails. Solution should provide minimum 20 TB storage for keeping the logs backup in off-line mode. Each appliance must have the following from day 1- a) 64 GB RAM, and b) minimum one (1) dedicated management interface, c) minimum 4 nos 10G Cu/Fibre interfaces, or a combination of minimum 2 nos. 1G Cu/Fibre interfaces & 2 nos. 10G Cu/Fibre interfaces. Should have the ability to proxy, monitor, and manage IPv6 traffic from day 1.	1) Need clarity on the 20 TB storage part. In terms of function and number of days of backup required. 2) Both 4specific RAM and storage no. should be removed and rather performance must be the criteria		As per NIT Terms
140	129	Web Security Appliance	The Web Security solution offered from OEM must be rated as 'leaders' or 'Challengers' in the latest Magic Quadrant for Secure Web Gateways published by Gartner.	Either the point must be removed Or The Web Security solution offered from OEM must be rated as 'leaders' or 'Challengers' in either of the last two Magic Quadrant for Secure Web Gateways published by Gartner.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
141	133	6 kVA UPS _Test and Certificates sl No 9 .Warranty B.	Batteries need to be replaced during 30th Month and 60th Month Mandatory	SMF Sealed Maintenance Free Batteries are designed and technology with maximum cycle of 1300 at 10% of discharge depth and for 50% of discharge depth is 600 cycles however its depend on the power cut and restoring ,We recommend to consider 1 set Mandatory replacement on 3 year 30th month so that function of project is smooth and its assured successfully completion of 5 years and Go live period irrespective of N number of charge and discharge ,60th Month Mandatory replacement is not required which will incur unnecessary cost to project.		As per NIT Terms
142	135	7 i) Connections - Input	Point No. 7 i) Connections - Input : Terminal ; Output : 6 Nos 6 A Indian Socket ; Battery : ANEN 2 Poles connector	Input : Terminal: Output : 2 Nos. of 6A Indian Socket ; Battery : ANEN 2 Poles connector		As per NIT Terms
143	135	2 kVA UPS _Test and Certificates sl No 9 .Warranty B.	Batteries need to be replaced during 30th Month and 60th Month Mandatory	SMF Sealed Maintenance Free Batteries are designed and technology with maximum cycle of 1300 at 10% of discharge depth and for 50% of discharge depth is 600 cycles however its depend on the power cut and restoring ,We recommend to consider 1 set Mandatory replacement on 3 year 30th month so that function of project is smooth and its assured successfully completion of 5 years and Go live period irrespective of N number of charge and discharge ,60th Month Mandatory replacement is not required which will incur unnecessary cost to project.		As per NIT Terms
144	139	Special Points for Passive Components	OEM should have a manufacturing presence with 30 Years in India. Proof of incorporation should be submitted	OEM should have a manufacturing presence with a minimum of 7 plus year in India. OEM should have a BICSI RCDD Professional as well as a certified project management professional (PMIPMP) in India on their payroll		As per NIT Terms
145	143	Category 6 Information Outlets	The Category 6 outlets shall be capable of being installed at either a 45 or a 90 angle in any modular faceplate, frame, or surfacemounted box avoiding the need for special faceplates	The modular jack (RJ-45) shall be capable of being installed at either a 90 or a 45 degree angled in any modular faceplate, frame, or surfacemounted box avoiding the need for special faceplates.		BHEL may use faceplate with straight or angled orientation of the Category 6 outlet (modular jack) based on the design requirements and at various locations.

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
146	143	Category 6 Information Outlets	The Category 6 outlets shall be capable of being installed at either a 45 or a 90 angle in any modular faceplate, frame, or surfacemounted box avoiding the need for special faceplates	The modular jack (RJ-45) shall be capable of being installed at either a 90 or a 45 degree angled in any modular faceplate, frame, or surfacemounted box avoiding the need for special faceplates.		BHEL may use faceplate with straight or angled orientation of the Category 6 outlet (modular jack) based on the design requirements and at various locations.
147	160	Annexure-VIII(a) UNIT WISE REQUIREMENTS - ACTIVE COMPONENTS	SR. 20 (NMS License) and Sr. No. 21 (NMS Hardware) NMS Tool is procured only for 6 locations out of 17 Location	Please clarify that how network monitoring will be done for remaining sites where NMS Tool is not procured and is there any existing tool available which can for this project. Bidder will not be responsible for providing the tool for those site where NMS tool is not procured as part of this RC RFP.		As per NIT Terms
148		New Clause		Is BHEL presently using any software for support or is it expected from the vendor ?		The software for support should be provided by the vendor
149				Office Boy Please provide the details for below given points; 1. What is the job profile/description of Office Boy i.e. what work/job office boy has to perform 2. Minimum Educational qualification 3. Minimum no. of Years eperience 4. Any past experience		1. Minimum qualification: 10th Class Pass. 2. Job profile: Cabling related activity (Both fiber and copper) 3. Minimum 1 year of experience in cabling related activity
150		General Queries		a) Current OEM stack at Customer Place (b) SIEM Make & Model (c) Whether Firewall needs to be included in DC Component (d) Current Wired & Wireless inventory and whether they will be re-located / included in the new setup or will it be kept as Stand By?		(a) Will be informed at time of implementation (b)To get SIEM details (c) Firewall required in DC for BHEL Hyderabad (d) Will be informed at time of implementation
151				Please clarity on the 1G LX transceiver which are asked for each Access Switch as part of the compliance and the transceivers which are asked as a separate line items too under BOQ. Looks like these got duplicated! Please clarify.		As per NIT Terms

S No	Pg No	Clause No	Existing Clause	Bidders Query/ Suggestions	Bidders Remarks/Justification	BHEL's Reply
152				AP licenses are asked per controller as 250 as part of the compliance and also asked as a separate line item in the BOQ. This too needs to be clarified as, for some of the locations, location wise AP licenses are not meeting the actual AP counts asked for it.		As per NIT Terms