



रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड
भारत सरकार का एक "नवरत्न" केंद्रीय सार्वजनिक क्षेत्र उद्यम

<u>पूर्वी क्षेत्र कार्यालय</u> 19वीं मंजिल, ऑरोरा वॉटरफ्रंट, जीएन 34/1, सेक्टर V, बिधाननगर, कोलकाता, पश्चिम बंगाल 700091	<u>कॉर्पोरेट कार्यालय</u> प्लेट-ए, 6वीं मंजिल, ऑफिस टॉवर-2, एनबीसीसी बिल्डिंग, ईस्ट किडवाई नगर, नई दिल्ली- 110023
<u>Eastern Region Office</u> 19th Floor, Aurora Waterfront, GN 34/1, Sector V, Bidhannagar, Kolkata, West Bengal 700091	<u>Corporate Office</u> Plate-A, 6th Floor, Office Tower-2, NBCC Building, East Kidwai Nagar, New Delhi-110023

ईओआई संख्या (EOI No.):

**RAILTEL/ER/MKT/EOI/2026-27/ ECL-MPLS, TPaaS & MCL/032-
034, DTD 25-06-2026**

रेलटेल द्वारा सूचीबद्ध बिज़नेस एसोसिएट्स में से उपयुक्त भागीदार के चयन हेतु रुचि की अभिव्यक्ति आमंत्रण:
“ईसीएल कमांड क्षेत्र के अंतर्गत 247 स्थानों पर डेटाकॉम उपकरण, नेटवर्क रैक, ऑनलाइन यूपीएस, अर्थिंग और एनओसी की स्थापना, कॉन्फ़िगरेशन और कमीशनिंग, जिसमें 5 (पांच) वर्षों के लिए व्यापक रखरखाव भी शामिल है तथा कोल इंडिया मुख्यालय (HQ) में डाटाकॉम उपकरणों की आपूर्ति, स्थापना, कॉन्फ़िगरेशन एवं कमीशनिंग तथा एनओसी (NOC) के नवीनीकरण का कार्य, जिसमें 6 (छह) वर्षों के लिए व्यापक रखरखाव शामिल है। ”

और

“ईसीएल कमांड क्षेत्र के अंतर्गत 23 स्थानों पर वीसी सिस्टम की आपूर्ति, स्थापना, कॉन्फिगरेशन और कमीशनिंग, जिसमें 5 (पांच) वर्षों के लिए व्यापक रखरखाव भी शामिल है ”

और

“एमसीएल कमांड क्षेत्र के अंतर्गत 253 स्थानों पर डेटाकॉम उपकरण, नेटवर्क रैक, ऑनलाइन यूपीएस, अर्थिंग और एनओसी की आपूर्ति, स्थापना, कॉन्फिगरेशन और कमीशनिंग, जिसमें 5 (पांच) वर्षों के लिए व्यापक रखरखाव भी शामिल है”

Invitation for Expression of Interest For

Selection of Suitable Partner from RailTel Empanelled Business Associate for:

“Supply, Installation, Configuration and Commissioning of Datacom Equipment, Network Rack, Online UPS, Earthing & setup of NOC at 247 locations of Eastern Coalfield Ltd including comprehensive maintenance for 5 (Five) Years and Supply, Installation, Configuration and Commissioning of Datacom Equipment & renovation of NOC at Coal India HQ including comprehensive maintenance for 6 (Six) Years ”

AND

“Supply, Installation, Configuration and Commissioning of VC system at 23 locations under Eastern Coalfield Ltd command area including comprehensive maintenance for 5 (Five) Years”

AND

“Supply, Installation, Configuration and Commissioning of Datacom Equipment, Network Rack, Online UPS, Earthing & setup of NOC at 253 locations under Mahanadi Coalfield Ltd command area including comprehensive maintenance for 5 (Five) Years”

रेलटेल
RAILTEL

EOI NOTICE

RailTel Corporation of India Ltd.

19th Floor, Aurora Waterfront, GN 34/1, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

EXPRESSION OF INTEREST

RAILTEL/ER/MKT/EOI/2026-27/ ECL-MPLS, TPaaS & MCL/032-034, DTD 25-06-2026

रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड (जिसे आगे रेलटेल कहा जाएगा), द्वारा सूचीबद्ध बिजनेस एसोसिएट्स में से उपयुक्त भागीदार के चयन हेतु रुचि की अभिव्यक्ति आमंत्रण:

“ईसीएल कमांड क्षेत्र के अंतर्गत 247 स्थानों पर डेटाकॉम उपकरण, नेटवर्क रैक, ऑनलाइन यूपीएस, अर्थिंग और एनओसी की स्थापना, कॉन्फिगरेशन और कमीशनिंग, जिसमें 5 (पांच) वर्षों के लिए व्यापक रखरखाव भी शामिल है तथा कोल इंडिया मुख्यालय (HQ) में डाटाकॉम उपकरणों की आपूर्ति, स्थापना, कॉन्फिगरेशन एवं कमीशनिंग तथा एनओसी (NOC) के नवीनीकरण का कार्य, जिसमें 6 (छह) वर्षों के लिए व्यापक रखरखाव शामिल है। ”

और

“ईसीएल कमांड क्षेत्र के अंतर्गत 23 स्थानों पर वीसी सिस्टम की आपूर्ति, स्थापना, कॉन्फिगरेशन और कमीशनिंग, जिसमें 5 (पांच) वर्षों के लिए व्यापक रखरखाव भी शामिल है ”

और

“एमसीएल कमांड क्षेत्र के अंतर्गत 253 स्थानों पर डेटाकॉम उपकरण, नेटवर्क रैक, ऑनलाइन यूपीएस, अर्थिंग और एनओसी की आपूर्ति, स्थापना, कॉन्फिगरेशन और कमीशनिंग, जिसमें 5 (पांच) वर्षों के लिए व्यापक रखरखाव भी शामिल है”

RailTel Corporation of India Ltd., (hereafter referred to as RailTel) invites EOIs for Selection of Suitable Partner from RailTel Empanelled Business Associate for:

“Supply, Installation, Configuration and Commissioning of Datacom Equipment, Network Rack, Online UPS, Earthing & setup of NOC at 247 locations of Eastern Coalfield Ltd including comprehensive maintenance for 5 (Five) Years and Supply, Installation, Configuration and Commissioning of Datacom Equipment & renovation of NOC at Coal India HQ including comprehensive maintenance for 6 (Six) Years ”

AND

“Supply, Installation, Configuration and Commissioning of VC system at 23 locations under Eastern Coalfield Ltd command area including comprehensive maintenance for 5 (Five) Years”

AND

“Supply, Installation, Configuration and Commissioning of Datacom Equipment, Network Rack, Online UPS, Earthing & setup of NOC at 253 locations under Mahanadi Coalfield Ltd command area including comprehensive maintenance for 5 (Five) Years”.

विवरण निम्नानुसार है/ The details are as under:

1	ईओआई फ्लोटिंग की तिथि Date of EOI Floating	25.06.2026
2	ईओआई के तहत बोलियां प्रस्तुत करने की अंतिम तिथि Last date for submission of Bids against EOI	07.07.2026 up to 15:00 Hours
3	ईओआई के तहत प्राप्त बोलियों को खोलना Opening of Bids received against EOI	07.07.2026 at 15:30 Hours
4	बोली प्रणाली Bidding System	Two Stage – Two Packet System
5	ईओआई का अनुमानित मूल्य Estimated Value of EOI	
	a. RAILTEL/ER/MKT/EOI/2026-27/ECL-MPLS/032 DTD 25-06-2026	Total: 34,25,28,686/- (excl GST)
	b. RAILTEL/ER/MKT/EOI/2026-27/ECL-TPaaS/033 DTD 25-06-2026	Total: 3,61,51,598/- (excl GST)
	c. RAILTEL/ER/MKT/EOI/2026-27/MCL--MPLS/034 DTD 25-06-2026	Total: 27,56,03,442.22/- (excl GST)
6	ईओआई दस्तावेज लागत (कर सहित) (वापसी योग्य नहीं) EOI document cost (inclusive tax) (non-refundable)	Rs. 5,900/- Incl. GST (Five Thousand Nine Hundred only)
7	बयाना राशि जमा (ईएमडी)/ Earnest Money Deposit (EMD)	
	a. RAILTEL/ER/MKT/EOI/2026-27/ECL-MPLS/032 DTD 25-06-2026	Rs 34,26,000/-
	b. RAILTEL/ER/MKT/EOI/2026-27/ECL-TPaaS/033 DTD 25-06-2026	Rs 3,62,000/-
	c. RAILTEL/ER/MKT/EOI/2026-27/MCL--MPLS/034 DTD 25-06-2026	Rs 27,57,000/-
8	प्रस्तावों की वैधता/ Validity of offers	180 days from the date of opening of Offers

नोट: रेलटेल अपने विवेकानुसार उपरोक्त तिथियों में परिवर्तन करने का अधिकार सुरक्षित रखता है।/

Note: RailTel reserves the right to change the above dates at its discretion.

ईओआई सूचना और ईओआई दस्तावेज रेलटेल की वेबसाइट पर उपलब्ध हैं और इसे <https://www.railtel.in> या ई-निविदा पोर्टल <https://railtel.enivida.com> से डाउनलोड किया जा सकता है। ऑनलाइन बोली जमा करने के लिए निविदाकर्ता को <https://railtel.enivida.com> पोर्टल से ईओआई दस्तावेज की आधिकारिक ऑनलाइन प्रति अनिवार्य रूप से डाउनलोड करनी होगी।

EOI Notice and EOI Document are available on RailTel's website and can be downloaded from <https://www.railtel.in> or from the e-Tendering portal <https://railtel.enivida.com>. For online bid submission, the tenderer will have to necessarily download an official online copy of the EOI document from the portal <https://railtel.enivida.com>.

प्रस्ताव जमाकर्ता रुचि की अभिव्यक्ति की तैयारी, प्रस्तुत करने/भाग लेने से संबंधित सभी लागतों को वहन करेगा। रेलटेल इन लागतों के लिए किसी भी तरह से जिम्मेदार या उत्तरदायी नहीं होगा, चाहे बोली प्रक्रिया के आचरण या परिणाम कुछ भी हों।

The Respondent shall bear all cost associated with preparation, submission/participation of the Expression of Interest. RailTel in no way will be responsible or liable for these costs regardless of the conduct or outcome of the bidding process.

इस ईओआई के लिए भविष्य की सभी जानकारी अर्थात् शुद्धिपत्र / परिशिष्ट / संशोधन आदि केवल ई-निविदा पोर्टल पर पोस्ट किए जाएंगे। ईओआई दस्तावेज की मुद्रित प्रति रेलटेल कार्यालय से उपलब्ध नहीं की जाएगी।

All future information viz. corrigendum /addendum/ amendments etc. for this EOI shall be posted on this e-Tendering Portal only. Printed copies of the EOI document will not be provided from the RailTel office.

प्रस्ताव उपर्युक्त तिथि को उन प्रस्ताव जमाकर्ताओं की उपस्थिति में खोले जाएंगे जो उपस्थित होना चाहते हैं। यदि बोली प्राप्ति/खोलने की तिथि को अवकाश होता है, तो इसे अगले कार्य दिवस पर किया जाएगा।

The offers shall be opened on above mentioned date in the presence of those Respondents who choose to be present. If the receipt/opening bid date happens to be a holiday, the same shall be done on the next working day.

आरसीआईएल बिना किसी कारण के प्रस्तावों को स्वीकार/अस्वीकार करने का अधिकार सुरक्षित रखता है होगा।/

RCIL reserves the right to accept/reject the offers without any reason.

ईएमडी ईनिविदा पोर्टल के माध्यम से ऑनलाइन कोलकाता में देय रेलटेल कॉर्पोरेशन ऑफ इंडिया लिमिटेड के पक्ष में जमा होना चाहिए। बोलीदाता को प्रस्ताव के साथ ऑनलाइन बैंक ट्रांसफर विवरण जैसे यूटीआर नंबर दिनांक और बैंक साझा करने की आवश्यकता है।

The EMD should be submitted in the favour of RailTel Corporation of India Limited payable at KOLKATA through online via eNivida Portal. Bidder needs to share the online bank transfer/DD/Pay Order/Banker's Cheque details like UTR No. date and Bank along with the

proposal.

टिप्पणी : इस ईओआई के लिए एमएसई के लिए ईओआई दस्तावेज लागत और ईएमडी प्रस्तुत करने से कोई छूट उपलब्ध नहीं है। इसलिए, बोलीदाताओं को अपने प्रस्ताव के साथ ईओआई दस्तावेज लागत और ईएमडी प्रस्तुत करना चाहिए, जिसमें विफल होने पर उनके प्रस्ताव को मूल्यांकन के लिए नहीं माना जाएगा, और सरसरी तौर पर अस्वीकार कर दिया जाएगा। एमएसई के लिए खरीद वरीयता भी इस ईओआई के लिए लागू नहीं है

Note: No exemption from submission of EOI document cost and EMD is available for MSEs for this EOI. Hence, the bidders should submit the EOI Document Cost & EMD along with their offer, failing which their offer will not be considered for evaluation, and will summarily be rejected. Purchase preference to the MSEs is also not applicable for this EOI

बोलियों की भाषा: बोली में सभी जानकारी हिंदी या अंग्रेजी में होगी। किसी अन्य भाषा में सूचना के साथ हिंदी/अंग्रेजी में उसका अनुवाद संलग्न होगा। इसका अनुपालन करने में विफल रहने पर बोली को अयोग्य घोषित कर दिया जाएगा। अर्थ में किसी भी विसंगति की स्थिति में, सभी दस्तावेजों की अंग्रेजी भाषा की प्रति मान्य होगी।

Language of Bids: All information in the bid shall be in Hindi or English. Information in any other language shall be accompanied by its translation in Hindi/English. Failure to comply with this shall disqualify a bid. In the event of any discrepancy in meaning, the English Language copy of all documents shall prevail.

पात्र बीए(एस)/ओईएम/ओईएम अधिकृत भागीदार/वितरक को ईओआई दस्तावेज के लिए इस आमंत्रण से संबंधित सभी संचार निम्नलिखित नामित संपर्क व्यक्तियों के माध्यम से निर्देशित करना आवश्यक है:/

Eligible BA(s)/OEM/OEM authorized partner/distributor are required to direct all communications related to this Invitation for EOI document, through the following Nominated Point of Contact persons:

Level:1 Contact:

Sh. Upendra Kumar Singh (AGM/Proj-1)

Email: upendrakumarsingh@railtel.in

Contact: +91- 9007044144

Level:2 Contact:

Sh. Kuldeep Norge (AGM/Mktg)

Email: kuldeep.n@railtel.in

Contact: +91- 9007041222

Level 3: Contact:

Sh. Abhishek Mani (Sr DGM/Mktg)

Email: abhishekmani@railtel.in;

Contact: +91- 9007044135

CHAPTER 1 SUBMISSION OF BID

1. This EOI should be duly submitted online using e-Procurement Portal <https://railtel.enivida.com>.
 - 1..1 The offer shall be submitted in Single packet on eNivida Portal as per instructions given.
 - 1..2 Tenderer shall quote in SOR provided in eNivida portal. In case the schedule of requirement quoted by tenderer is incomplete with reference to EOI document, the offer is liable to be rejected.
 - 1..3 Any document submitted/uploaded in eNivida portal must be duly signed & stamped/digitally signed by the tenderer in each page.
 - 1..4 The rates quoted should be written both in words and figures. The unit of rates should be in metric system and as per EOI specification/schedule. In case of difference between words and figures, the rate in words will prevail. If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected by the purchaser accordingly.
 - 1..5 Tenderers are requested to go through all the conditions of the EOI document and note that, by submitting the EOI documents, duly signed, they have accepted these conditions and undertake to abide by these conditions (unless specifically disagreed to clause wise).
 - 1..6 **ATTESTATION OF ALTERATION:** No scribbling is permissible in the EOI documents. Bids containing erasures and alterations in the EOI documents are liable to be rejected. Any correction made by the tenderer/ tenderers in his/their entries must be signed (not initiated) by him/them.
2. COVER-01:
 - a. EOI Document Fee, EMD, Credential & Technical Bid: This shall contain UTR Numbers of transaction/ Date of online transaction of EMD and EOI Fee amount paid online in RailTel Collection Account/proof of transaction to be enclosed.
 - b. Documents as per the eligibility criteria and Credential & Technical Bid shall be submitted. These documents should be in conformance to the eligibility criteria/Credential. These documents shouldn't contain the financial bids, in either explicit or implicit form; otherwise, the bid may be rejected.
 - c. Financial Part: This shall contain only the Price bid against the SOR in excel format.
3. Cover -02: **In case of two packet system** : Financial bid and/or related annexures if applicable.
4. **E-tendering Instructions to Bidders**
 - i. **GENERAL:** These Special Instructions (for e-Tendering) supplement, as given above. Submission of Bids only through online process is mandatory for this EOI.

 E-Tendering is a methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, RailTel has decided to use the portal <https://railtel.enivida.com>. Bidder Enrolment can be done using "Online Bidder Enrolment".

 The instructions given below are meant to assist the bidders in registering on the e- tender Portal, and submitting their bid online on the e-tendering portal as per uploaded bid. More information for submitting online bids on the eNivida Portal may be obtained at: <https://railtel.enivida.com>

ii. **GUIDELINES FOR REGISTRATION:**

1. Bidders are required to enrol on the e-Procurement Portal: <https://railtel.enivida.com/bidderRegistration/newRegistration> or click on the link "**Bidder Enrolment**" available on the home page of e-tender Portal by paying the Registration fee of Rs. 2000/-+ Applicable GST.
2. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their account.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidders.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (**Only Class III Certificates with signing + encryption key usage**) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.) with their profile.
5. Only valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC /e-Token.
7. The scanned copies of all original documents should be uploaded in pdf format on e-tender portal.
8. After completion of registration payment, bidders need to send their acknowledgement copy on our help desk mail id eprocurement@railtelindia.com for activation of account.

iii. **SEARCHING FOR EOI DOCUMENT:**

1. There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters.
2. Once the bidders have selected the tenders they are interested in, bidders can pay the EOI fee and processing fee (NOT REFUNDABLE) by net-banking / Debit / Credit card then bidder may download the required documents / EOI schedules, Bid documents etc. Once bidder pay both fee EOI will be moved to the respective 'requested' Tab. This would enable the e- tender Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the EOI document.

iv. **PREPARATION OF BIDS:**

1. Bidder should take into account any corrigendum published on the EOI document before submitting their bid.
2. Please go through the EOI notice and the EOI document carefully to understand the documents required to be submitted as part of the bid.
3. Bidder, in advance, should get ready the bid documents to be submitted as indicated in the EOI document / schedule and generally, they can be in PDF formats. Bid Original documents may be scanned with 100 dpi with Colour option, which helps in reducing size of the scanned document.
4. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, GST, Annual reports,

auditor certificates etc.) has been provided to the bidders. Bidders can use “My Documents” available to them to upload such documents.

5. These documents may be directly submitted from the “My Documents” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process. Already uploaded documents in this section will be displayed. Click “New” to upload new documents.

v. SUBMISSION OF BIDS:

1. Bidder should log into the website well in advance for the submission of the bid so that it gets uploaded well in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
2. The bidder has to digitally sign and upload the required bid documents one by one as indicated in the EOI document as a token of acceptance of the terms and conditions laid down by RailTel.
3. Bidder has to select the payment option as “e-payment” to pay the EOI fee / EMD as applicable and enter details of the instrument.
4. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the financial bid has been given as a standard BOQ format with the EOI document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the **Sky-Blue Coloured** (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the file name. If the BOQ file is found to be modified by the bidder, the bid will be rejected.
5. The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
6. The uploaded EOI documents become readable only after the EOI opening by the authorized bid openers.
7. Upon the successful and timely submission of bid click “Complete” (i.e. after Clicking “Submit” in the portal), the portal will give a successful Bid submission acknowledgement & a bid summary will be displayed with the unique id and date & time of submission of the bid with all other relevant details.
8. The EOI summary has to be printed and kept as an acknowledgement of the submission of the Bid. This acknowledgement may be used as an entry pass for any bid opening meetings.
9. For any clarification in using eNivida Portal:
 - a. Any queries relating to the EOI document and the terms and conditions contained therein should be addressed to the EOI Inviting Authority for a EOI or the relevant contact person indicated in the EOI Document.
 - b. Any queries relating to the process of online bid submission or queries relating to e- tender Portal in general may be directed to the Helpdesk Support.
 - c. Please feel free to contact eNivida Helpdesk (as given below) for any query related to e-tendering.
 - d. Phone No. 011-49606060/8448288988
 - e. Mail id: - enividahelpdesk@gmail.com

10. Documents to be submitted: Following documents shall be submitted in Technical and Financial bid as given below:

(a) **“TECHNICAL BID”**; -The bid shall consist of the following: -

- a. Offer Letter.
- b. Signed Copy of EOI Document/ Corrigenda.
- c. E-receipt of EMD.
- d. E-receipt of EOI Document fee.
- e. Power of attorney/Authorization (The original copy also to be submitted offline).
- f. Complete technical solution documents.
- g. Clause wise compliance to EOI conditions.
- h. Documentary proof of qualifying criteria.
- i. Affidavit (The original copy also to be submitted offline).
- j. Certificate by bidders sharing a land border with India.
- k. Any other document asked in the EOI Document but not listed above.

(b) **“PRICE BID”** Shall contain the financial bid for “Schedule of requirements” only.

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CHAPTER 2: LIST OF DOCUMENTS TO BE SUBMITTED OFFLINE

2.1 The below-mentioned documents are to be submitted in offline mode and these should reach RailTel Office before opening of the bids:

- a) Power of attorney/Authorization.
- b) Affidavit (Annexure-4).
- c) Integrity pact (2 copies) (if value of work is more than 5 Crs)

2.2 Address for submission of offline documents:

RailTel Corporation of India Limited, Eastern Region,
Aurora Waterfront, 19th floor, GN 34/1, Sector V,
Salt Lake, Bidhannagar, Kolkata-91 (WB)

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CHAPTER 3: IMPORTANT POINTS

1. RailTel Empanelled Business Associate(s) are required to submit soft copy of response through Online on RailTel's eNivida portal at <https://railtel.enivida.com> duly signed by Authorized Signatories with Company seal and stamp.
2. The EOI response is invited from BA(s). A prospective bidder can be empanelled during the preboarding/onboarding process i.e. Partner who have applied for empanelment with RailTel can also participate duly submitting the mail sent to RailTel & proof of payment of empanelment fee. **However, award of work will be done only after empanelment of partner by RailTel CO.**
3. BA(s) can participate as a sole bidder or as a consortium (maximum three members are allowed in the consortium). In case of consortium, lead bidder of the consortium must be RailTel's Empanelled partner and will be responsible for all the conditions mentioned in the EOI. The roles & responsibilities of each consortium partner shall be defined clearly.
4. If, the interested partner is OEM authorised partner/distributor, it should submit the supporting document (Channel Partner Certificate / MAF/ Letter of Authorisation from OEM) for the same.
5. All the documents must be submitted with proper indexing and page numbering.
6. Deleted.
7. Deleted
8. Transfer and Sub-letting. The Partner has no right to give, bargain, sell, assign or sublet or otherwise dispose of the Contract or any part thereof, as well as to give or to let a third party take benefit or advantage of the present.
9. Partner/Consortium has to submit MAF/OEM Documentation & other documents required as per EOI.
10. Deleted
11. Deleted
12. Installation, commissioning and integration should be done by OEM or their authorized agencies only. If authorized agencies are involved, RailTel should be informed in writing before finalization.
13. Partner/Consortium has to ensure OEM support (of its product including customization part) till the expiry of contract period.
14. Partner/Consortium has to ensure validity of all licenses from implementation stage to the expiry of contract period. To maintain confidentiality, RailTel reserves the right to show/not show the competition bids in eNivida Portal.
15. Deleted.
16. To maintain confidentiality, RailTel reserves the right to show/not show the competition bids in eNivida Portal.
17. Manpower deployment to be done by selected bidder as per the scope of the work. The charges for

necessary deployment to be borne by the bidder. RailTel will be responsible for overall supervision of the Project and any part scope as defined by RailTel (if any).

18. The successful Bidder has to arrange for the demonstration of the Proof of Concept at No Extra Cost to RailTel.
19. In case of any ambiguity, discrepancy, or interpretation issue arising out of the EOI document, the decision of RailTel shall be final, binding, and conclusive on all bidders. RailTel reserves the right to clarify, modify, or interpret any clause of the EOI document as deemed necessary, and such decision shall not be subject to further challenge or dispute by the participating bidders.
20. In the event that additional items (NS Items) are deemed necessary to complete the project in accordance with the customer's new/additional requirements, the Business Associate (BA) shall supply and/or install the same. Such execution shall be carried out at the approved rates, subject entirely to the sole discretion of RailTel.
21. Bidder can be participated in either SOR-A or SOR-B or SOR-C or in any two or in all three.

If a bidder participated in more than one EOI, the bidder should have minimum cumulative average annual financial turnover during the last 3 years, ending 31st March of the previous financial year of at least 30% of the total advertised value of all the SORs of EOI in which they have participated.

Same will be applicable for technical evaluation.

22. The bidder shall obtain monthly SLA sign-off from each Area Office.

23. The OEM should be registered on Trusted Telecom Portal (Authority: DOT notification No. 20- 1263/2021-AS-I Dated: 30.03.2021, <https://trustedtelecom.gov.in>) and shall have MTCTE (Mandatory Testing and Certification of Telecom Equipment) certificate at the time of delivery. Documentary evidence for the same shall be submitted (Authority: DOT circular No. 5-2/2021TC/TEC/112 dated 31.01.2022, <https://www.mtcte.tec.gov.in>).



CHAPTER 4: DETAILS OF THE PROJECT

1. PROJECT BACKGROUND AND OBJECTIVE OF EOI

RailTel is inviting EOIs from RailTel's Empanelled Partners for the selection of suitable partner for

"Supply, Installation, Configuration and Commissioning of Datacom Equipment, Network Rack, Online UPS, Earthing & setup of NOC at 247 locations including comprehensive maintenance for 5 (Five) Years and Supply, Installation, Configuration and Commissioning of Datacom Equipment & renovation of NOC at Coal India HQ including comprehensive maintenance for 6 (Six) Years "

AND

"Supply, Installation, Configuration and Commissioning of VC system at 23 locations under ECL command area including comprehensive maintenance for 5 (Five) Years" Years"

AND

"Supply, Installation, Configuration and Commissioning of Datacom Equipment, Network Rack, Online UPS, Earthing & setup of NOC at 253 locations under MCL command area including comprehensive maintenance for 5 (Five) Years".

It will be responsibility of Partner to comply all extant guidelines and regulations of Central/State Govt. including Make in India or any other concerned entities including DoT/TEC in respect of supply of new equipment and services from time to time. In addition, Partner will also comply any change in the rules and regulations by Govt. or any other entities DoT/TEC. Partner should submit an undertaking in this regard in their bid.

The Empanelled partner is expected to have excellent execution capability and good understanding of customer local environment.

2. SCOPE OF WORK

The successful bidder shall submit a detailed implementation plan as per the project deliverables timelines before the commencement of the project.

The successful bidder shall conduct a detailed study of functional and technical requirements of the work to make the required system configuration and design modifications to its solution if required in order to achieve the desired functionality. However, the same must be accepted and approved by RailTel/Customer.

Partner has to submit the detailed bifurcation in as per Price Schedule (**Annexure 12A**)

Special Note: RAILTEL may retain any portion of the work mentioned in the end organization tender, where RailTel has competence.

2.1 Special Terms and Conditions:

- i) Any additional hardware/ licenses required directly or indirectly to meet the objective will be the responsibility of the Partner(s) without any extra cost to RailTel/ Customer.
- ii) RailTel's decision to meet the scope/ end objective will be final.
- iii) Any change in solution/ OEM will require prior approval of RailTel.
- iv) In case of any discrepancy or ambiguity in any clause/ specification pertaining to scope of work area, the Work Order released by customer to RailTel shall supersede and will be considered sacrosanct.

- v) Successful bidder shall take Back-to-Back OEM support for supplied equipment for entire period of the contract.
- vi) All equipment/ hardware, software, Licenses supplied under the scope of this EOI document should not be declared end of life/end of sale by the OEM at the time of supply/delivery. The successful bidder has to ensure that all equipment/ hardware, software, Licenses supplied as part of this EOI document should not have reached End of Support during the Contract Period of 5 years. In the event of any equipment/hardware, software, Licenses supplied by the bidder reaches End of Support within the entire contract period, the bidder has to replace the equipment/ hardware along with required Software/Licenses with similar or higher specifications at no additional cost to the company before end of support.
- vii) All licenses/ software/ Warranty support shall be issued/ procured either in the name of the Customer or RailTel, as applicable. The exact licensing entity shall be confirmed after the issuance of the Purchase Order (PO).
- viii) Bidder shall provide a single point of contact (Name, number, mail id) for all operation, maintenance, configuration & management issues on day-to-day basis. The bidder shall also provide an escalation matrix, including the contact details of the concerned personnel, for effective coordination and timely resolution of issues during the contract period.

2.2 Manpower:

- 2.2.1 **Qualification:** The manpower should be Diploma/Degree in Engineering (Electronics/Computer Science /IT or equivalent) with minimum 01 year Experience in IT field.
- 2.2.2 Transportation to & fro, lodging and boarding of manpower shall be in bidder scope.
- 2.2.3 Manpower shall be equipped with mobile, hand -held blower, etc for maintaining areas. He shall be reachable and available in the section at any time.
- 2.2.4 The Successful bidder should inform in writing preferably in 1 month advance about the change of onsite manpower under unavoidable circumstances. There should be adequate time to transfer knowledge before relieving the existing onsite manpower and admitting the new onsite manpower.
- 2.2.5 The successful bidder should conduct proper security and background checks of the onsite manpower before deploying on the site.
- 2.2.6 Successful bidder has to deploy qualified and experienced manpower to support, manage, monitor and maintain entire network and infrastructure.
- 2.2.7 The deputed personnel will be employed by the selected successful bidder on their payrolls/contracts without having any employment right with the RailTel or customer. Moreover deployed personnel will not have any right whatsoever to lodge claim of any nature directly or indirectly with the RailTel/ customer and it would be responsibility of selected successful bidder to address such issues without involving the RailTel/ customer.
- 2.2.8 The manpower have to maintain the utmost secrecy & confidentiality of the RailTel/customer's data. At any time, if it comes to the notice of the RailTel/customer that data has been compromised/disclosed/misused/misappropriated, then RailTel would take suitable action as deemed fit and selected successful bidder would be required to compensate the RailTel/customer to the fullest extent of loss incurred by the RailTel/customer. Successful bidder is expected to adhere RailTel/customers advice for removal of any personnel, if RailTel/customer notice any negligence/gross misconduct/violation of trade secret/disclosure of

RailTel/customer's data to third party and any decision of the RailTel in this regard would be final and binding upon the successful bidder.

2.2.9 Bidder shall ensure the availability of onsite manpower support in customer command area and shall provide a single point of contact for all operation & maintenance. In case of non-availability of required support as above, RailTel shall deduct proportionate amount on pro-rata basis from the offered price for the said services i.e. Onsite Technical Support for operation, coordination and maintenance of above systems as per contract". In the event of any specific issue not being resolved by onsite support team, Bidder may deploy person with competency/expertise for timely resolution to maintain the SLA of the contract. Apart from the above, bidder may take remote/onsite TAC support from the respective OEM to resolve critical issues.

2.2.10 In case engineers go on leave /absence, suitable replacement of manpower has to be arranged by successful bidder to ensure that regular functioning of RailTel's O&M activities. If replacement resource is not provided in absence of resident engineers, RailTel will levy penalty of Rs 1000/- per man shift per day.

2.2.11 Resource Non-Performance: RailTel will provide in writing Non-Performance of the resource and can ask for replacement within 15 days' notice Period. The successful bidder will make efforts to resolve resource non-performance and if required replace the resource within the notice period.

2.2.12 Duties:

- a) Ensuring smooth functioning of network at all times.
- b) Attend to any reported failure immediately upon intimation by the RailTel NOC or any RailTel's official.
- c) Following up / coordination for service calls, issues/faults
- d) Engineers shall be responsible for coordinating with OEM/RailTel's NOC team to get the necessary support to resolve the issue.
- e) Preventive maintenance exercise monthly and submission of its reports/ monthly (testing and cleaning of each equipment of all site). In the event of any fault, malfunction, or abnormal behaviour of the devices noticed during site visit/ preventive maintenance, the same shall be immediately reported to RailTel's NOC. Simultaneously, a complaint/ticket shall be lodged with the respective OEM for necessary corrective action.
- f) Any other activities or work assigned by RailTel.

3. RESPONSE TO EOI GUIDELINES

3.1 Language of Proposals

The proposal and all correspondence and documents shall be written in English in soft copy through an email.

3.2 RailTel's Right to Accept/Reject responses

RailTel reserves the right to accept or reject any response and annul the bidding process or even reject all responses at any time prior to selecting the partner, without thereby incurring any liability to the affected partner or Business Associate or without any obligation to inform the affected partner or partners about the grounds for RailTel's action.

3.3 EOI response Document

The partner is expected to examine all instructions, forms, terms and conditions and technical specifications in the bidding documents. Submission of bids, not substantially responsive to the bidding document in every aspect will be at the partner's risk and may result in rejection of its bid without any further reference to the partner.

All pages of the documents shall be signed by the partner including the closing page in token of his having studied the EOI document and should be submitted along with the bid.

3.4 Period of Validity of bids and Bid Currency

Bids shall remain valid for a period of **90 days** from the date of opening of EOI.

3.5 Bidding Process

The bidding process as defined in Chapter-1.

3.6 Bid Earnest Money (EMD)

3.6.1. The Partner shall furnish a sum as given in EOI Notice via online transfer from any scheduled bank in India in favour of "RailTel Corporation of India Limited" along with the offer or directly through e-Nivida portal. This will be called as EOI EMD.

3.6.2. Offers not accompanied with valid EOI Earnest Money Deposit shall be summarily rejected.

3.6.3. Return of EMD for unsuccessful Business Associates: EOI EMD of the unsuccessful Business Associate shall be returned without interest after completion of EOI process.

3.6.4. Return of EMD for successful Business Associate: EOI-EMD (Earnest Money Deposit) of the successful partner will be discharged / returned: On receipt of Security Deposit and Performance Bank Guarantee as applicable (clause no. 3.7) from Business Associate

3.6.5. Forfeiture of EOI EMD and or Penal action as per EMD Declaration.

3.6.5.1. The EOI EMD may be forfeited and or penal action shall be initiated if a Business Associate withdraws his offer or modifies the terms and conditions of the offer during validity period.

3.6.5.2. In case of non-submission of SD/PBG (as per clause no. 3.7) lead to forfeiture of EOI EMD and or suitable action as prescribed in the EMD Declaration shall be initiated as applicable.

3.7 Security Deposit / Performance Bank Guarantee (PBG):

3.7.1 **SECURITY DEPOSIT: Not Applicable**

3.7.2 **Performance Bank Guarantee** : The successful tenderer shall submit 10% of total value of the Service including GST detailed in the Purchase Order/ Letter of Acceptance towards Performance Guarantee* in the form of online transfer or irrevocable Bank Guarantee from any scheduled commercial bank (either private or PSU) but not from any cooperative bank or NBFC, within 30 days of issue of the Purchase Order/Letter of Acceptance, failing which

a penal interest of 15% per annum shall be charged for the delayed period i.e. beyond 30 (thirty) days from the date of issue of PO/LOA, till the date PBG is received.

If, the PBG is not submitted by the successful partner within 60 days of issuance of PO/LOA, RailTel reserves the right to terminate the contract.

* Round off to higher Rs. 1000/- (One thousand).

3.7.2.1 The PBG shall be initially valid up to stipulated completion of all contractual obligations including warranty obligations (if applicable) plus 90 days along with a claim period of 12 months (time period between expiry date and claim date) on top of guarantee period (if applicable) under the contract.

3.7.2.2 If end customer requirements of claim of PBG varies, then RCIL reserves the right to vary the claim period.

Note:

A separate advice of the BG will invariably be sent by the BG issuing bank to the RailTel's Bank through SFMS and only after this the BG will become acceptable to RailTel. It is therefore in own interest of bidder to obtain RailTel's bank IFSC code, its branch and address and advise these particulars to the BG issuing bank and request them to send advice of BG through SFMS to the RailTel's Bank.

Detail for online SFMS confirmation using the platform is as below:
BG advising message – IFN 760COV/ IFN 767COV via SFMS
To mandatorily send the Cover message at the time of BG issuance.
IFSC Code of ICICI Bank to be used (ICIC0000007).
Mention the unique reference (RAILTEL6103) in field 7037

3.7.2.3 Any performance security up to a value of Rs. 5 Lakhs is to be submitted through online transfer only.

RailTel's Bank Account Details for online submission of Performance Guarantee amount are given as below:

- Company Name: RailTel Corporation of India Ltd.
- Bank Name: Union Bank of India
- Branch Name: Camac Street Branch
- Bank IFSC: UBIN0540161
- Account Type: Current Account
- Account No.: 401601010519491

3.7.2.4 No Interest on Earnest Money and Performance Security: No interest shall be paid on the amount of earnest money and Performance Security held by RailTel, at any stage.

3.7.2.5 The Performance Bank Guarantee shall be submitted by the successful bidder after the Letter of Acceptance (LOA)/Purchase Order has been issued, but before signing of the contract agreement. In case, the time for completion of work gets extended, the contractor shall get the validity of PBG. extended to cover such time for completion of work plus 90 days with a claim period of

12 months (time period between expiry date and claim date) on top of guarantee period. If end customer requirements of claim of PBG varies, then RCIL reserves the right to vary the claim period.

3.7.2.6 In the event that the End Customer requires an additional Performance Bank Guarantee (PBG) due to contract variations, the selected partner shall be obligated to submit the same within the stipulated timeline.

3.7.2.7 The Performance Bank Guarantee (PBG) shall be released on completion of Contract including warranty period obligations under the contract, as applicable duly adjusting any dues recoverable from the successful tenderer.

3.7.2.8 Wherever the contracts are rescinded, the Performance Bank Guarantee shall be encashed and the balance work should be got done separately.

3.8 Last date & time for Submission of EOI response

EOI response must be submitted to RailTel at eNivida Portal of RailTel not later than the specified date and time mentioned in the preamble.

3.9 Modification and/or Withdrawal of EOI response

3.9.1 EOI response once submitted will be treated as final and no modification will be permitted except with the consent of the RailTel.

3.9.2 No Partner shall be allowed to withdraw the response after the last date and time for submission.

3.9.3 The successful Partner will not be allowed to withdraw or back out from the response commitments. In case of withdrawal or back out by the successful business associate, the Earnest Money Deposit shall be forfeited and all interests/claims of such Business Associate shall be deemed as foreclosed.

3.10 Clarification of EOI Response:

To assist in the examination, evaluation and comparison of bids the purchaser may, at its discretion, ask the Business Associate for clarification. The response should be in writing and no change in the price or substance of the EOI response shall be sought, offered or permitted.

3.11 Period of Association/Validity of Agreement: RailTel will enter into an agreement with selected partner with detailed Terms and conditions.

4. EVALUATION CRITERIA

4.1 The BA(s) are first evaluated on the basis of the Eligibility Criteria as per clause 14.

4.2 The BA(s) who fulfils the Eligibility criteria of Bidding shall be further evaluated on the basis of Technical Evaluation and Financial evaluation.

4.3 For the opened bid as per outcome of the Eligibility criteria above, the partner will be selected on the lowest quote (L-1) basis /QCBS (if applicable) for complete 'Scope of Work' as mentioned in the EOI document and documents of technical specifications of Customer, subject to the respective

overall bid is in compliance to the requirements of this EOI. The so selected partner will be termed as 'Commercially Suitable Partner (hereafter referred to as 'CSP')'. It is re-mentioned, that the final selection of CSP will be on the L-1 basis / QCBS (if applicable). Further, RailTel reserves the right to have negotiation with the CSP at any stage before issuing Work Order.

- 4.4 RailTel reserves the right to accept or reject the response against this EOI, without assigning any reasons. The decision of RailTel is final and binding on the participants. The RailTel evaluation committee will determine whether the proposal/ information is complete in all respects and the decision of the evaluation committee shall be final.
- 4.5 All General requirement mentioned in the Technical Specifications are required to be complied. The solution proposed should be robust and scalable.

5. PAYMENT TERMS

A. For item 1-18, 20-21 & 23-35 of SOR A and 1-6, 8-9 of SOR-B and 1-13, 15-16, 18-25:

(i) 70% payment would be paid after supply of individual SOR item at respective site duly inspected by RailTel Nominated Officer.

The following document shall be attached along with the bills:

- i. PO/LOA copy issued to selected partner.
- ii. Submission/Declaration of applicable SD/BG amount against PO issued to selected partner/vendor.
- iii. Signed Agreement Copy
- iv. Original Tax Invoice (E-invoice if applicable).
- v. TDS declaration.
- vi. Receipted Challan/ Consignment Note of all the consignments.
- vii. Inspection Certificate shall be provided as part of the payment documentation. **(NA for Software)**
- viii. Manufacturer's Warranty /Guarantee Certificate. **(NA for Software).**
- ix. For software license copy/SRS document/UAT as applicable.
- x. E-way bill (Part-A & Part -B).
- xi. Insurance of the project in favour of RailTel/End Customer.
- xii. PAN, GST Registration Certificates
- xiii. Any other document mentioned as required by End Customer.
- xiv. A certificate duly signed by the firm certifying that equipment/ materials being supplied are new and conforms to technical specification.

(ii) 20% payment will be released after successful Installation, Commissioning of the work at respective site and after the issue of PAC or after completion of last phase of work.

iii) 5% payment will be released after successful completion of 1year after the issue of PAC or after completion of last phase of work.

iii) ECL & MCL: The remaining 5% balance will be disbursed into twenty equal instalments of 0.25% each, payable quarterly upon successful completion of each quarter (0.25% after completion of every quarter).

CIL: The remaining 5% balance will be disbursed into twenty four equal instalments of 0.21% each, payable quarterly upon successful completion of each quarterly (0.21% after completion of every quarterly).

Note: Installation and commissioning charges, amounting to 20% of the item value, shall not be payable for any items supplied and handed over to the store as spares. Payment towards installation and commissioning shall be admissible only for items that are actually installed, commissioned, and put into service.

B. For item 19 (a & b) & 22 (a & b) of SOR-A and 7 (a & b) of SOR-B and 14 (a & b) & 17 (a & b) of SOR-C:

(i) 70% payment would be paid after supply of individual SOR item at respective site duly inspected by RailTel Nominated Officer.

The following document shall be attached along with the bills:

- i. PO/LOA copy issued to selected partner.
- ii. Submission/Declaration of applicable SD/BG amount against PO issued to selected partner/vendor.
- iii. Signed Agreement Copy
- iv. Original Tax Invoice (E-invoice if applicable).
- v. TDS declaration.
- vi. Receipted Challan/ Consignment Note of all the consignments.
- vii. Inspection Certificate shall be provided as part of the payment documentation. **(NA for Software)**
- viii. Manufacturer's Warranty /Guarantee Certificate. **(NA for Software).**
- ix. E-way bill
- x. PAN, GST Registration Certificates
- xi. A certificate duly signed by the firm certifying that equipment/ materials being supplied are new and conforms to technical specification.

(ii) 20% payment will be released after successful Installation, Commissioning of the work at respective site and after the issue of PAC or after completion of last phase of work.

iii) The remaining 10% balance will be disbursed into two equal instalments of 5% each, payable annually upon successful completion of each year (5% after completion of every year).

C. For item 36 – 75 of SOR-A and 26-65 of SOR-C:

90% payment would be paid after supply of individual SOR item at respective site duly inspected by RailTel Nominated Officer.

The following document shall be attached along with the bills:

- i. PO/LOA copy issued to selected partner.
- ii. Submission/Declaration of applicable SD/BG amount against PO issued to selected partner/vendor.
- iii. Signed Agreement Copy
- iv. Original Tax Invoice (E-invoice if applicable).
- v. TDS declaration.
- vi. Receipted Challan/ Consignment Note of all the consignments.
- vii. Inspection Certificate shall be provided as part of the payment documentation. **(NA for Software)**
- viii. Manufacturer's Warranty /Guarantee Certificate. **(Applicable for item no 37-56).**
Bidder's warranty/ Guarantee Certificate for item no 57-61
- ix. E-way bill
- x. PAN, GST Registration Certificates

- xi. A certificate duly signed by the firm certifying that equipment/ materials being supplied are new and conforms to technical specification.

(ii) 10% payment will be released after successful Installation, Commissioning of the work at respective site and after the issue of PAC or after completion of last phase of work.

In the event of any unresolved discrepancy or service request remaining pending for more than 15 days, a penalty on a pro-rata basis shall be levied and adjusted against the any payment of this project.

D. For item 76 of SOR-A and 66 of SOR-C:

100% payable annually after successful completion of security audit, submission of audit certificate and acceptance by RailTel/ customer.

Liquidated Damages (LD) shall be applicable in the event that the audit is not completed within the stipulated timeline as fixed by RailTel/ customer. The applicable LD shall be recovered from the contractor's payable amount.

E. For item 77-78 of SOR-A and 10 of SOR-B and 67 of SOR-C:

Payment shall be made on a quarterly basis upon successful completion of the services and submission of a satisfactory service completion certificate duly certified by the field unit.

In the event of any service outage, non-availability, or failure to meet the stipulated service requirements, a penalty calculated on a daily pro-rata basis shall be imposed and adjusted against the corresponding payment.

* Any deduction/Liquidated Damages (LD)/penalties arising from breach of SLA and imposed by the Customer on RailTel's invoices due to failure of Datacom equipment and associated items including manpower, license etc shall be recovered from the respective CSP's quarterly invoices or Performance Bank Guarantee (PBG), as applicable. The maximum LD shall be limited to the value of the respective quarter. Full amount of LD (limited to bidder's quarterly invoice value) will be charged.

** Payment will only be released once GSTR-1 and GST-3B is filed by the partner for claimed invoice.

*** The last bills shall be settled after end of the contract period after adjusting all outstanding dues.

**** No interest is payable on any amount whatsoever to the successful Partner.

5.1 Bill Passing Authority: Sr DGM/P

5.2 Bill Paying Authority: Finance Head/ER

6. SERVICE LEVEL AGREEMENT (SLA)

- 6.1 The selected partner will be required to adhere to the SLA matrix as defined by the customer for his scope of work and the SLA breach penalty will be applicable on the selected partner. All associated clarifications, responses to queries, revisions, addendum and corrigendum, associated Prime Services Agreement (PSA)/ MSA/ SLA also included. Any deduction by Customer from RailTel payments on account of SLA breach which is attributable to Partner will be passed on to the Partner as per payment terms.

- 6.2 Penalty (full amount, which ever levied by Customer) will be deducted at the time of payment.
- 6.3 Additional Penalty Obligations: An independent penalty clause shall apply over and above the customer's penalty, under the following circumstances:

"In the event of a failure by the partner to fulfil its contractual obligations, resulting in pecuniary loss, direct expenditures, or reputational damage to RailTel, RailTel reserves the absolute and unilateral right to impose independent penalties upon the partner. Such right shall be exercisable entirely at RailTel's discretion, completely irrespective of any decision, action, or waiver by the End Customer".

- 6.4 The table below summarizes the performance indicators for the services to be offered by RCIL.

S/N	SLA Terms	Description
1	Uptime	'Uptime' refers to network backbone availability across various segments of central location network i.e. between campus Junction/locations and Server "%Uptime" means ratio of 'up time' (in minutes) in a month to Total time (in minutes) in the month multiplied by 100.
2	Planned Network Outage	'Planned Network Outage' refers to unavailability of network services due to infrastructure maintenance activities such as configuration changes, up gradation, or changes to any supporting infrastructure. Details related to such planned outage shall be approved by the University or authorized authority and shall be notified to the entire concerned stakeholder in advance (at least three working days). It is desirable that such outage shall be taken on Sundays or other Government holidays to the extent possible.
3	Unplanned Network Outage	'Unplanned Network Outage' refers to as on when required for maintenance of the network apart from the schedule down-time for which campus are connects to the fiber network Backbone.
4	Incidence Resolution (Network)	The network outage, security or performance related issues impacting the network availability/performance and leading to unavailability of the services. Resolution of incidence as per below priority Levels: • L1 Level Severity: Impacting the central Server. • L2 Level Severity: impacting the network. • L3 Level Severity: Impacting one or more Departments/ Offices
6	Incidence Resolution	• Priority Level 1 Incident - Within 6 hr • Priority Level 2 Incident - Within 12hr • Priority Level 3 Incident - Within 24hr Note: Incidents will be logged in the support desk and the same will have to resolve the incident and provide necessary updates through email and co-ordinate with the stakeholders. Root Cause should be identified for all incidents; if root cause is not identified then additional penalties will be levied. The Business hour is considered for resolution.

S/N	SLA Terms	Description
7	Request Resolution	• Priority Level 1 Incident - Within 6hr • Priority Level 2 Incident - Within 12hr • Priority Level 3 Incident - Within 24hr Note: Requests (like password reset, firewall port opening, hardening, etc.) will be logged with the support desk team and will have to resolve the request and provide necessary updates through email on a daily basis and co-ordinate with the stakeholders. The Business hour is considered for resolution.

7. Insurance

Projects should be covered under Contractors All Risk Insurance policy irrespective of the fact whether terms and conditions of the customers agreement/Tender requires the same or not.

The Project Insurance cover should be effective from the date of commencement of project till the project is handed over to the customer (including warranty period if any). In case the project insurance is not valid from the date of commencement, RailTel at its discretion, may impose appropriate penalty.

Additionally, the CAPEX Item under the project should be insured for entire contract period i.e. valid till completion of contract.

Responsibility of taking the Project insurance should be of Business Associates (BAs)/sub-contractors and RailTel shall be the beneficiary in the said policy.

The insurance policy shall remain live during entire period of the project execution till the project is handed over to the customer. The insurance policy shall cover the entire material purchased under the project including installation cost. In case terms and conditions of agreement with customers requires any additional insurance such as warranty period the compliance of the same should also be ensured.

The following insurance should be taken:

- a. Transit Insurance by the Supplier of the material.
- b. Contractors All Risk Insurance till PAC by the Business Associates (BAs) or Contractors who is responsible for Installation and commissioning.

The CSP shall take out and keep in force a policy or policies of insurance from the date, the delivery of material starts (including the transit portion) against all liabilities of the CSP or RailTel as per customer tender specified terms. The CSP shall take out and keep in force a Policy or policies of Insurance for all materials covered in schedule of requirement irrespective of whether used up in the portion of work already done or kept for the use in the balance portion of the work. The risk of goods shall remain with CSP till the completion of contract. The insurance shall be as per end Customer tender specified terms. Claimant of insurance shall be in the name of RailTel Corporation of India Ltd and shall be kept valid till completion of contract.

7.1. INSURANCE OF MATERIALS: The Contractor shall take out and keep in force a Policy or policies of Insurance for all machine & materials including RailTel supply materials/equipment.

- (i) The Contractor should, however, insure the stores brought to HQ, site, against risks in consequence of war and invasion, as required under the Emergency Risk (Goods) Insurance Act on force from time to time.

(ii) It may be noted that the beneficiary of the insurance policy should be RailTel or the policies should be pledged in favour of RailTel/Railway. The contractor shall keep the policy/policies current till the completion of the contract.

(iii) For the purpose of enabling the contractor to take the insurance cover in connection with this contract, the Executive Director or its representatives will advise the approximate price of all the RailTel supply materials to the Contractor.

8. Liquidated Damages:

If the Bidder fails to complete the installation and commissioning of captioned work within 90 days from date of issue of LOI/LOA, liquidated damages shall be recovered from the outstanding bills of the Bidder at the rate of 0.5% on the undelivered value of work per week delay subject to maximum 10% of the awarded value of contract OR the BG will be revoked as the case may be. In the event the progress of work is extremely poor or in the event of loss of RailTel's revenue from ECL, RailTel will have right to get the work executed through its chosen vendor at your Risk & Cost.

In addition of above, RailTel will levy the liquidated damages imposed by customer (if any) to partner on value terms at the time of releasing of quarterly payment.

Note: Full amount of LD (limited to bidder's quarterly invoice value) will be charged.

Additional Penalty Obligations: An independent penalty clause shall apply over and above the customer's LD under the following circumstances:

"In the event of a failure by the partner to fulfil its contractual obligations, resulting in pecuniary loss, direct expenditures, or reputational damage to RailTel, RailTel reserves the absolute and unilateral right to impose independent penalties upon the partner. Such right shall be exercisable entirely at RailTel's discretion, completely irrespective of any decision, action, or waiver by the End Customer".

If the total value of penalty on account of delay in implementation exceeds 10% of contract value, RailTel will be, within its rights, to terminate the contract.

Extension of the PO without Liquidated Damages (LD) shall not be granted on a back-to-back basis in following cases. If the delay is attributable to the vendor and RailTel receives an extension without LD from the customer due to own expenditure/reputation by RailTel, RailTel reserves the right to grant extension with or without LD, as deemed fit.

9. Delivery & Inspection

- 9.1 Delivery, Installation and Commissioning Period: 90 days from the date of issue of LOA.
- 9.2 All the material should be made available for Inspection by RailTel nominated person/agency.
- 9.3 Partner will be custodian of all the material till installation and commissioning of system.
- 9.4 Charges for any 3rd party inspection should be under scope of Partner.

10. PROVISIONAL ACCEPTANCE TESTING /GO-LIVE

- 10.1 Immediately after the completion of the work in all aspects, the Bidder shall certify and advise the purchaser in writing that the installation is complete, commissioned and ready for handing over to customer.
- 10.2 The tests will be conducted jointly by purchaser and Bidder as soon as possible after receipt of such advice of completion of the work from the Bidder. The test schedule shall be finalized mutually between the Bidder and RailTel. Any component/modules/sub-assemblies or equipment failing during the commissioning shall be replaced/repared free of cost by bidder.
- 10.3 Purchaser's Engineer shall issue a Provisional Acceptance Certificate (PAC) after successful Supply, installation, integration & commissioning covering all materials and services included in the Schedule of Requirements after the acceptance test as per the approved test procedure have been completed and the performance has been found to meet the specifications. RailTel's decision in this respect shall be final. The Provisional Acceptance Certificate (PAC) shall be signed by both the parties. The period of Comprehensive Maintenance shall commence from the date of issue of Provisional Acceptance Certificate (PAC).

11. FINAL ACCEPTANCE TESTING

- 11.1 The final acceptance of the works shall take effect after completion of the project from the issue of Provisional Acceptance Certificates, provided in any case that the Bidder has complied fully with his obligations in respect of each item under the contract
- 11.2 Notwithstanding the issue of Final Acceptance Certificate (FAC), the Bidder and the purchaser (subject to Sub Clause as above) shall remain liable for fulfilment of any obligation incurred under the provision of the contract prior to the issue of Final Acceptance Certificate which remains unperformed at the time such certificate is issued and for determining the nature and extent of such obligation the contract shall be deemed to remain in force between the parties hereto.
- 11.3 For cases where the scope of work and services are not back-to-back, RailTel shall reserve the right to deduct costs for damaged CAPEX items till issue of FAC as deemed fit by RailTel.

12. INSPECTION

- 12.1 All third-party inspection charges applicable on RailTel's Purchase Order (PO) amount, as received from the customer, shall be borne by the Business Associate (BA).
In addition to the mentioned inspection charges, any other charges of inspection as required by end customer will be borne by BA.
- 12.2 Pre-shipment / pre-dispatch inspection shall be carried out at manufacturers/supplier's premises by RailTel's authorized representative, if it is mentioned. Traveling, lodging & boarding expenses of RailTel's representative and charges for 3rd party inspection, if any, shall be borne by RailTel but necessary facilities to carry out tests/inspection shall be provided by the manufacturer/supplier free of cost.
- 12.3 Along with inspection call, the supplier/manufacturer shall submit details of test procedures, program, parameters together with permissible values, etc., and their Quality Assurance Plan.
- 12.4 In case material/equipment fails during inspection, the fresh lot of material shall be offered without any extra cost, by the manufacturer/supplier. In such a case, total cost of re-inspection including travel, lodging & boarding of the inspecting officials shall be to manufacturer's /supplier's account.
- 12.5 Material on arrival at customer premises/project site (other than third party) will be inspected by QA/Inspection Department/Authorised Inspection Authority as per appropriate Quality Assurance

Plan and RailTel/end customer's decision in the matter will be final. The test certificate and relevant supporting documents has to be sent by the partner along with the consignment.

All testing shall be facilitated by the BA/SI, and full responsibility for compliance of all features shall lie solely with the BA/SI.

Any item, including hardware or hardware with license, shall be deemed accepted only upon formal acceptance by the RailTel/end customer. RailTel shall not be liable or responsible for any damages or payments in the event of rejection of such hardware or hardware with license by the end customer. Responsibility of acceptance of goods by end customer fully lies with BA/SI. In the event of any rejection of goods at any stage, the BA/SI shall not raise any claims against RailTel. RailTel shall not be a party to any disputes arising from the rejection of goods or licenses.

13. PARTNER'S PROFILE

The partner shall provide the information in the below table:

SN	ITEM	Details
1.	Full name of Partner's Organization	
2.	Full address, telephone numbers, fax numbers, and email address of the primary office of the organization / main / head / corporate office	
3.	Name, designation and full address of the Chief Executive Officer of the partner's organization as a whole, including contact numbers and email Address	
4.	Full address, telephone and fax numbers, and email addresses of the office of the organization dealing with this EOI	
5.	Name, designation and full address of the person dealing with the EOI to whom all reference shall be made regarding the EOI enquiry. His/her telephone, mobile, Fax and email address	
6.	Bank Details (Bank Branch Name, IFSC Code, Account number)	
7.	GST Registration number	
8.	Whether owned by SC/ST	
9.	Whether owned by Women entrepreneur	
10.	Whether MSME (attach Udhyaam Aadhaar certificate and Number)	

14. ELIGIBILITY CRITERIA FOR BUSINESS PARTNER OF RAILTEL

SN	Description	Requirement	Compliance
A	General, Technical, Financial & OEM Eligibility		
1	General	Any Organization (Limited/Pvt. Limited/LLP/Partnership/Startup/Proprietary)	1. Certificate of Incorporation/partnership deed/Start Up certificate/ Trade License (As applicable)

SN	Description	Requirement	Compliance
			2. PAN, GSTIN Certificate
2	Financial	1. Partner / Any Consortium member should have average annual financial turnover during the last 3 years, ending 31st March of the previous financial year of at least 30% of the advertised value of the EOI. 2. Sole partner/ All consortium members should also have a positive net worth & be profitable in the last 3 financial years.	Documentary Evidence Required: Certificate of Turnover, Positive Network and Profitable from Chartered Accountant. Certificate from Chartered Accountant. Certificate should contain UDIN no. issued by ICAI. IMPORTANT NOTE: The Eligibility will be checked as per advertised Value of individual SOR. If bidder applies for more than one SOR then they will be evaluated against accumulative value of SORs.
3	Technical - 1	A. The Partner must have completed similar nature of work during last 3 (Three) years ending Bid submission date as per following capacity 1. One Similar work, each costing not less than the amount equal to 35% of the advertised value of the EOI. OR 2. Two Similar works, each costing not less than the amount equal to 20% of the advertised value of the EOI. OR 3. Three Similar works, each costing not less than the amount equal to 15% of the advertised value of the EOI. for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India. Similar Work means: For SOR-A & C: SITC of Datacom Equipment/ IT project/ Networking project for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India. For SOR-B: Supply & Installation / Maintenance / Operation & maintenance/Services of Video Conferencing system/solution/IT project/ Networking project in India, for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India.	Documentary Evidence Required: The bidder shall also furnish Supply/ Work Commissioning/ work completion certificate issued by customer/s for the Purchase Orders/ Work Orders. IMPORTANT NOTE: The Eligibility will be checked as per advertised Value of individual SOR. If bidder applies for more than one SOR then they will be evaluated against accumulative value of SORs.

SN	Description	Requirement	Compliance
		OR The partner should possess a proven track record in completion of Similar Products/Services of at least 50% of Scope of work (quantity to be considered only for Router & Switch), through one order in last 7 years for any Central / State Government Organization / Public Sector Unit (PSU)/Large Enterprise in India. Large Enterprise means: Company having turnover of more than 250 Crs in previous audited financial year.	
4	Technical - 2	B. Only For SOR-A & C: The Partner must have completed SITC of Datacom Equipment, online UPS, Earthing, LAN/WAN Networking in Mines Areas with multi locations, minimum 100 locations during last 5 (Five) years ending Bid submission date.	Documentary Evidence Required: The bidder shall also furnish Supply/ Work Commissioning/ work completion certificate issued by customer/s for the Purchase Orders/ Work Orders.

15. FAILURE AND TERMINATION

- 15.1 Failure and Termination: If the Contractor fails to deliver the supply and services or any instalment thereof within the period fixed for such delivery in the contract or as extended or at any time repudiates the contract before the expiry of such period the Purchaser may without prejudice to his other rights:
- 15.1.1 Recover from the Contractor as agreed liquidated damages and not by way of penalty a sum equivalent to Half per cent of the price of any stores (including elements of taxes, duties, freight, etc.) which the Contractor has failed to deliver within the period fixed for delivery in the contract or as extended for each week or part of a week during which the delivery of such stores may be in arrears where delivery thereof is accepted after expiry of the aforesaid period The upper limit for recovery of liquidated damages will be 10% (Ten Percent) of Total contract value provided in the contract or
- 15.1.2 Cancel the contract or a portion thereof and forfeit the security deposit and encash performance bank guarantee. Or
- 15.1.3 Cancel the contract or a portion thereof and if so desired purchase or authorize the purchase of the stores not so delivered or others of a similar description (where stores exactly complying with particulars are not, in the opinion of the Purchaser, which shall be final, readily procurable) at the risk and cost of the contractor.
It shall, however, be in the discretion of the Purchaser to collect or not the security deposit from the firm/firms on whom the contract is placed at the risk and expense of the defaulted firm.

Where action is taken under sub-clause (15.1.2) above, the contractor shall be liable for any loss which the purchaser may sustain on the account provided the purchase, or if there is an agreement to purchase, such agreement is made, in case of failure to deliver the stores within the period fixed for such delivery in the contract or extended as per a reasonable period as per the discretion of the purchaser from the date of such failure and in case of repudiation of the contract before the expiry of the aforesaid period of delivery, a reasonable period as per the discretion of the purchaser from the date of cancellation of the contract. The contractor shall not be entitled to any gain on such purchase and the manner and method of such purchase shall be in the entire discretion of the purchaser. It shall not be necessary for the purchaser to serve a notice of such purchase to the contractor.

15.1.4 Deleted.

15.2 Termination for Default: The purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the Tenderer, terminate this contract in whole or in part.

15.2.1 If the tenderer fails to deliver any or all of the goods within the time period(s) specified in the contract.

15.2.2 If the tenderer fails to perform any other obligation(s) under the contract; and

15.2.3 If the tenderer, in either of the above circumstance(s) does not remedy his failure within a period of 30 days (or such longer period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

15.2.4 In case of any of the above circumstances the RailTel shall pay the supplier for all products and services delivered till point of termination as per terms and conditions of the contract.

However, any recovery and losses occurred to RailTel will be recovered from Contractor up to the value of contract.

15.2.5 If 10% or more equipment found to be failed frequently again and again, the bidder may be barred for participating in the tender for a period of two years besides the above penalties to be imposed. RailTel keeps the right to terminate the contract in case of poor performance of quality and reliability of product supplied.

15.2.6 In the case of failure by the BA partner to implement the project as per the scheduled timeline, RailTel may issue a 7 days' notice & subsequently a 48 hours notice before proceeding to terminate the contract. RailTel will not be liable for any loss/dispute caused to BA partner on account of this termination

16. INDEMNITY BY CONTRACTOR:

16.1 The selected partner agrees to indemnify and hold harmless RailTel, its officers, employees and agents (each an "Indemnified Party") promptly upon demand at any time and from time to time, from and against any and all losses, claims, damages, liabilities, costs (including reasonable attorney's fees and disbursements) and expenses (collectively, "Losses") to which the Indemnified party may become subject, in so far as such losses directly arise out of, in any way relate to, or result from.

a) Any mis-statement or any breach of any representation or warranty made by CSP or

b) The failure by the CSP to fulfil any covenant or condition contained in this contract by any employee or agent of the Bidder. Against all losses or damages arising from claims by third Parties that any Deliverables (or the access, use or other rights thereto), created by CSP pursuant to this contract, or any equipment, software, information, methods of operation or other intellectual property created by CSP pursuant to this contract, or the SLAs (i) infringes a copyright, trade mark, trade design enforceable in India, (ii) infringes a patent issues in India, or (iii) constitutes misappropriation or unlawful disclosure or used of another Party's trade secrets under the laws of India (collectively, "Infringement Claims"); or

c) Any compensation / claim or proceeding by any third party against RailTel arising out of any act, deed or omission by the CSP or

d) Claim filed by a workman or employee engaged by the CSP for carrying out work related to this agreement. For the avoidance of doubt, indemnification of Losses pursuant to this section shall be made in an amount or amounts sufficient to restore each of the Indemnified Party to the financial position it would have been in had the losses not occurred

16.2 Any payment made under this contract to an indemnity or claim for breach of any provision of this contract shall include applicable taxes.

16.3 Indemnity bond of proportionate amount to be submitted by contractor.

17. Materials supplied by RailTel will be supplied at customer designated store. Transportation of this material to site for installation shall be the responsibility of contractor. Free of Cost

MATERIAL HANDLING

17.1. If the stores are to be kept at RailTel's end prior to execution, but customer has paid for these materials as per payment terms-

The Partner will be responsible for storing materials prior to execution of the work at their designated store, against which they will submit a standing indemnity bond. The Partner will make an insurance policy for this store and submit the document to RailTel. Monthly rent, Guarding and other costs for this store will be borne by Partner.

RailTel will be the custodian of the material and will manage the transaction of the material from this store and issue materials as per weekly/fortnightly/monthly consumption of the materials to the Partner. Partner will submit a monthly statement of material reconciliation (Received/used/balance) to RailTel. To make the transaction easy and reduce additional cost of storing part material at a separate store, the Partner may make a small exclusive enclosure inside the main store to keep the weekly/fortnightly/monthly consumables received from RailTel, if need be.

17.2. If the stores are directly dispatched to customers and to be kept under custody of customers:

RailTel will receive the materials at customer premises and issue the store to customers through a separate delivery challan to be issued by RailTel. Further steps will be followed for issuing the stores as per weekly/fortnightly/monthly consumption of the materials to the SI/BA against a standing indemnity bond.

In both cases the SI/BA has to take a contractor's all risk project insurance policy (CAR) in favour of RailTel/customer (as per requirement) apart from storage insurance.

18. Variation in Quantity: (i) Any variation in quantity in this procurement will be governed by RailTel's Requirement irrespective of any limit and at sole discretion of RailTel.

(ii) In addition of above, RailTel reserves the right during the currency of contract to the signing of the agreement till the successful completion of the project to increase or decrease by up to ($\pm$) 25% of the quantity of supply and services specified in the Schedule of Requirements without any change in unit price of the ordered quantity or other terms and conditions. Variation beyond ($\pm$)25%, PBG for the full amount to be submitted.

Purchaser's Right to Vary Quantities

(A) Upto maximum extent of +/- 50% subject to following condition

i. Upto +25% with no rebate.

ii. From +25% to +40% with 2% rebate

iii. From +40% to +50% with 4% rebate

(B) For variation beyond +50% of the quantity mentioned in the SOR may be done after proper negotiation with the selected bidder.

19. New Item / Non-Scheduled (NS) Item: In the event that additional items (NS Items) are deemed necessary to complete the project in accordance with the customer's new/additional requirements, the Business Associate (BA) shall supply and/or install the same. Such execution shall be carried out at the approved rates, subject entirely to the sole discretion of RailTel.

20. Deleted.

21. FORCE MAJEURE CLAUSE: On the occurrence of any unforeseen event, beyond the control of either Party, directly interfering with the delivery of Services arising during the currency of the contract, such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, or acts of God, the affected Party shall, within a week from the commencement thereof, notify the same in writing to the other Party with reasonable evidence thereof. Unless otherwise directed by RailTel in writing, the contractor shall continue to perform its obligations under the contract as far as reasonably practicable and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. If the force majeure condition(s) mentioned above be in force for 90 days or more at any time, either party shall have the option to terminate the contract on expiry of 90 days of commencement of such force majeure by giving 14 days' notice to the other party in writing. In case of such termination, no damages shall be claimed by either party against the other, save and except those which had occurred under any other clause of this contract before such termination.

22. RESOLUTION OF DISPUTES:

22.1 Disputes and Excepted Matters

All disputes and differences between the parties hereto, as to the construction or operation of this contract, or the respective rights and liabilities of the parties on any matter in question; or any other account whatsoever, but excluding the Excepted Matters (detailed below); arising out of or in connection with the contract, within twenty one (21) days from aggrieved Party notifying the other Party of such matters; whether before or after the completion/ termination of the contract, that cannot be resolved amicably between the Procurement Officer and the contractor within twenty one (21) days from aggrieved Party notifying the other Party of such matters, shall be hereinafter called the "Dispute". The aggrieved party shall give a 'Notice of Dispute' indicating the Dispute and claims citing relevant Contractual clause to the designated authority and requesting for invoking the following dispute resolution mechanisms. The Dispute shall be resolved without recourse to courts through dispute resolution mechanisms detailed subsequently, in the sequence as mentioned below, and the

next mechanism shall not be invoked unless the earlier mechanism has been invoked or has failed to resolve it within the deadline mentioned therein.

1.1.1 Adjudication

1.1.2 Conciliation

1.1.3 Arbitration

21.2 Excepted Matters

Matters for which provision has been made in any Clause of the contract shall be deemed as 'excepted matters' (matters not disputable/ arbitrable), and decisions of RailTel, thereon shall be final and binding on the contractor. The 'excepted matters' shall stand expressly excluded from the purview of the sub-clauses below, including Arbitration. However, where RailTel has raised the dispute, this sub-clause shall not apply. Unless otherwise stipulated in the contract, excepted matters shall include but not limited to:

21.2.1 any controversies or claims brought by a third party for bodily injury, death, property damage or any indirect or consequential loss arising out of or in any way related to the performance of this Contract ("Third Party Claim"), including, but not limited to, a Party's right to seek contribution or indemnity from the other Party in respect of a Third-Party Claim.

21.2.2 Issues related to the pre-award EOI process or conditions

21.2.3 Issues related to ambiguity in contract terms shall not be taken up after a contract has been signed. All such issues should be highlighted before the signing of the contract by the contractor.

21.2.4 Provisions incorporated in the contract, which are beyond the purview of RailTel or are in pursuance of policies of Government, including but not limited to:

21.2.4.1 Provisions of restrictions regarding local content and Purchase Preference to Local suppliers in terms of Make in India policy of the Government;

21.2.4.2 Provisions regarding restrictions on Entities from Countries having land- borders with India in terms of the Government's policies in this regard;

21.2.4.3 Purchase preference policies regarding MSEs and Start-ups.

21.3 Adjudication

After exhausting efforts to resolve the Dispute with the Purchasing Officer executing the contract on behalf of RailTel, the contractor shall give a 'Notice of Adjudication' specifying the matters which are in question, or subject of the dispute or difference indicating the relevant contractual clause, as also the amount of claim item-wise to Head of Procurement or any other authority mentioned in the contract (hereinafter called the "Adjudicator") for invoking resolution of the dispute through Adjudication. During his adjudication, the Adjudicator shall give adequate opportunity to the contractor to present his case. Within 60 days after receiving the representation, the Adjudicator shall make and notify decisions in writing on all matters referred to him. The parties shall not initiate, during the adjudication proceedings, any conciliation or arbitral or judicial proceedings in respect of a dispute that is the subject matter of the adjudication proceedings. If not satisfied by the decision in adjudication, or if the adjudicator fails to notify his decision within the abovementioned time-frame, the contractor may proceed to invoke the process of Conciliation as follows.

21.4 Conciliation of disputes

21.4.1 Any party may invoke Conciliation by submitting "Notice of Conciliation" to the Head of the RailTel Corporation of India Ltd. Since conciliation is a voluntary process, within 30 days of receipt of "Notice of Conciliation", the Head of the RailTel Corporation of India Ltd shall notify a sole Conciliator if the other party is agreeable to enter Conciliation. If the other party is not agreeable to Conciliation, the aggrieved party may invoke Arbitration.

21.4.2 The Conciliator shall proactively assist the parties to reach an amicable settlement independently and impartially within the terms of the contract, within 60 days from the date of appointment of the Conciliator.

21.4.3 If the parties reach an agreement on a dispute settlement, they shall draw up a written settlement agreement duly signed by the parties and conciliator. When the parties sign the settlement agreement, it shall be final and binding on the parties. The dispute shall be treated as resolved on the date of such agreement.

21.4.4 The parties shall not initiate, during the conciliation proceedings, any arbitral or judicial proceedings in respect of a dispute that is the subject matter of the conciliation proceedings.

21.4.5 Termination of Conciliation: Disputes shall remain alive if the conciliation is terminated as follows:

21.4.5.1 By written declaration of the conciliator, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of such declaration; or

21.4.5.2 By a written declaration of any party to the conciliator to the effect that the conciliation proceedings are terminated, on the date of such declaration; or

21.4.5.3 If the parties fail to reach an agreement on a settlement of the dispute, within 60 days of the appointment of Conciliator

21.4.6 On termination of Conciliation, if the dispute is still alive, the aggrieved party shall be free to invoke Arbitration.

21.5 Arbitration Agreement

21.5.1 This Arbitration Agreement (hereinafter referred to as this "Agreement") relating to this Contract (hereinafter called the "Main Agreement" for this agreement) is made under the provisions of The Arbitration and Conciliation Act, 1996 as amended from time to time and the rules thereunder (hereinafter called The Arbitration Act). This Agreement shall continue to survive termination, completion, or closure of the Main Agreement for 120 days after that.

21.5.2 Subject to aforesaid provisions, relevant clauses of the contract shall apply to the appointment of arbitrators and arbitration proceedings under this Agreement.

21.5.3 The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 provides parties to a dispute (where one of the parties is a Micro or Small Enterprise) to be referred to Micro and Small Enterprises Facilitation Council if the dispute is regarding any amount due under Section 17 of the MSMED Act, 2006. If a Micro or Small Enterprise, being a party to dispute, refers to the provisions in MSMED Act 2006, these provisions shall prevail over this Agreement.

21.6 Notice for Arbitration

21.6.1 Authority to Appoint Arbitrator(s): For this Arbitration Agreement 'The Appointing Authority', to appoint the arbitrator shall be Head of the RailTel Corporation of India Ltd named in the contract and includes if there be no such authority, the officer who is for the time being discharging the functions of that authority, whether in addition to other functions or otherwise.

21.6.2 In the event of any dispute as per GCC-clause 28.1 above, if the Adjudicator fails to decide within 60 days (as referred in GCC-clause 28.3 above), or the Conciliation is terminated (as referred in sub-clause 28.4 above) then, parties to the contract, after 60 days but within 120 days of 'Notice of Dispute' (clause 28.1 above) shall request the Appointing Authority through a "Notice for Arbitration" in writing requesting that the dispute or difference be referred to arbitration.

21.6.3 The "Notice for arbitration" shall specify the matters in question or subject of the dispute or difference indicating the relevant contractual clause, as well as the amount of claim item-wise.

21.7 Reference to Arbitration

After appointing Arbitrator(s), the Appointing Authority shall refer the Dispute to them. Only such dispute or difference shall be referred to arbitration regarding which the demand has been made, together with counter-claims or set off. Other matters shall be beyond the jurisdiction of Arbitrator(s)

21.8 Appointment of Arbitrator

21.8.1 Qualification of Arbitrators:

21.8.1.1 In the case of retired officers of The RailTel Corporation of India Ltd, he shall have retired in the rank of Senior administrative grade (or equivalent) and shall have retired at least 1 years prior and must not be over 70 years of age on the date of Notice for arbitration.

21.8.1.2 He/ they shall not have had an opportunity to deal with the matters to which the contract relates or who, in the course of his/ their duties as officers of the RailTel Corporation of India Ltd, expressed views on any or all of the matters under dispute or differences. A certification to this effect shall be taken from Arbitrators. The proceedings of the Arbitral tribunal or the award made by such Tribunal shall, however, not be invalid merely for the reason that one or more arbitrators had in the course of his service, an opportunity to deal with the matters to which the contract relates or who in the course of his/ their duties expressed views on all or any of the matters under dispute.

21.8.1.3 An Arbitrator may be appointed notwithstanding the total no. of arbitration cases in which he has been appointed in the past.

21.8.1.4 Not be other than the person appointed by The Appointing Authority and that if for any reason that is not possible, the matter shall not be referred to arbitration at all.

21.9 Replacement of Arbitrators

If one or more of the arbitrators appointed as above refuses to act as arbitrator, withdraws from his

office as arbitrator, or in the event of the arbitrator dying, neglecting/ unable or unwilling or refusing to act for any reason, or his award being set aside by the court for any reason, or in the opinion of The Appointing Authority fails to act without undue delay, the Appointing Authority shall appoint new arbitrator/ arbitrators to act in his/ their place in the same manner in which the earlier arbitrator/ arbitrators had been appointed. Such a re-constituted Tribunal may, at its discretion, proceed with the reference from the stage at which it was left by the previous arbitrator (s).

21.10 Appointment of Arbitrator

- 21.10.1 In cases where the total value of all claims in question added together does not exceed Rs 50,00,000/- (Rupees Fifty Lakh only), the Arbitral Tribunal shall consist of sole Arbitrator. For this purpose, The Appointing Authority shall send to the contractor, within 60 days from the day of receipt of a written and valid notice for arbitration, a panel of at least four (4) names of retired officers, duly indicating their retirement dates.
- 21.10.2 The contractor shall be asked to nominate at least two names out of the panel for appointment as his nominee within 30 days from the dispatch date of the request by The Appointing Authority. The Appointing Authority shall appoint at least one out of them as the sole arbitrator within 30 days from the receipt of the names of the contractor's nominees.
- 21.10.3 In cases where the total value of all claims in question added together exceeds Rs 50,00,000/- (Rupees Fifty Lakh only), the Arbitral Tribunal shall consist of three (3) retired Officers of the RailTel Corporation of India Ltd. For this purpose, The Appointing Authority shall send a panel of at least four (4) names of such Officer(s) empaneled to work as Arbitrators duly indicating their retirement date to the contractor within 60 days from the day when a written and The Appointing Authority receives valid demand for arbitration.
- 21.10.4 The contractor shall be asked to nominate at least 2 names out of the panel for appointment as his nominee within 30 days from the dispatch date of the request by The Appointing Authority. The Appointing Authority shall appoint at least one out of them as the contractor's nominee. It shall also simultaneously appoint the balance number of arbitrators either from the panel or outside the panel, duly indicating the 'Presiding Arbitrator' from amongst the 3 arbitrators so appointed, within 30 days from the receipt of the names of Contractor's nominees.
- 21.10.5 If the contractor does not suggest his nominees for the arbitral tribunal within the prescribed timeframe, The Appointing Authority shall proceed for appointment of the arbitral tribunal within 30 days of the expiry of such time provided to the contractor.

21.11 Failure to appoint Arbitrators.

If The Appointing Authority fails to appoint an arbitrator within 60 (sixty) days, then subject to the survival of this Arbitration Agreement, in international commercial arbitration, the Supreme Court of India shall designate the arbitral institution for the appointment of arbitrators. In case of national arbitrations, the High Court shall designate arbitral institutions. The Arbitration Council of India must have graded these arbitration institutions. These arbitral institutions must complete the selection process within thirty days of accepting the request for the arbitrator's appointment.

21.12 Arbitral Procedure

- 21.12.1 **Effective Date of Entering Reference:** The arbitral tribunal shall be deemed to have entered the reference on the date on which the arbitrator(s) have received notice of their appointment. All subsequent time limits shall be counted from such date.
- 21.12.2 **Seat and Venue of Arbitration:** The seat of arbitration shall be the place from which the Purchase Order or the contract is issued. The venue of arbitration shall be the same as the seat of arbitration. However, in terms of section 20 of The Arbitration Act, the arbitrator, at his discretion, may determine a venue other than the seat of the arbitration without in any way affecting the legal jurisdictional issues linked to the seat of the arbitration.
- 21.12.3 If the Adjudication and/ or Conciliation mechanisms had not been exhausted before such reference to Arbitration, the Arbitrator should ask the aggrieved party to approach designated authority for such mechanisms before the Arbitration proceedings are started.
- 21.12.4 The claimant shall submit to the Arbitrator(s) with copies to the respondent his claims stating the facts supporting the claims along with all the relevant documents and the relief or remedy sought against each claim within 30 days from the date of appointment of the Arbitral Tribunal unless otherwise extension has been granted by Arbitral Tribunal.
- 21.12.5 On receipt of such claims, the respondent shall submit its defence statement and counter claim(s), if any, within 60 days of receipt of the copy of claims, unless otherwise extension has been granted by Arbitral Tribunal.
- 21.12.6 No new claim shall be added during proceedings by either party. However, a party may amend or supplement the original claim or defence thereof during arbitration proceedings subject to acceptance by the Tribunal having due regard to the delay in making it.
- 21.12.7 Statement of claims, counterclaims and defence shall be completed within six months from the effective reference date.
- 21.12.8 **Oral arguments to be held on a day-to-day basis:** Oral arguments as far as possible shall be heard by the arbitral tribunal on a day-to-day basis, and no adjournments shall be granted without sufficient cause. The arbitrator(s) may impose an exemplary cost on the party seeking adjournment without sufficient cause.
- 21.12.9 **Award within 12 (twelve) months:** The arbitral tribunal is statutorily bound to deliver an award within 12 (twelve) months from the date when the arbitral tribunal enters reference. The award can be delayed by a maximum of six months only under exceptional circumstances where all parties consent to such extension of time. The court's approval shall be required for further extension if the award is not made out within such an extended period. During the period of an application for extension of time is awaiting before the court, the arbitrator's proceedings shall continue until the disposal of the application.

21.13 Fast Track Procedure

The parties to arbitration may choose to opt for a fast-track procedure either before or after the commencement of the arbitration. The award in fast-track arbitration is to be made out within six months, and the arbitral tribunal shall be entitled to additional fees. The salient features of the fast-track arbitration are:

- 21.13.1 The dispute is to be decided based on written pleadings only.

21.13.2 Arbitral Tribunal shall have the power to call for clarifications in addition to the written pleadings where it deems necessary.

21.13.3 An oral hearing may be held only if all the parties request or the arbitral tribunal considers it necessary.

21.13.4 The parties are free to decide the fees of the arbitrator(s) for fast-track procedure.

21.14 Powers of Arbitral Tribunal to grant Interim Relief

The parties to arbitration may approach the arbitral tribunal for seeking interim relief on the grounds available under section 9 of the act. The tribunal has the powers of a court while making interim awards in the proceedings before it.

21.15 Confidentiality

As provided in Section 42A of The Arbitration Act, all the details and particulars of the arbitration proceedings shall be kept confidential, except in certain situations like if the disclosure is necessary for the implementation or execution of the arbitral award.

21.16 Obligation During Pendency of Arbitration

Performance of the contract shall, unless otherwise directed by RailTel, continue during the arbitration proceedings, and no payment due or payable by RailTel shall be withheld on account of such proceedings, provided; however, it shall be open for Arbitral Tribunal to consider and decide whether or not the performance of the contract or payment therein should continue during arbitration proceedings.

21.17 The Arbitral Award

21.17.1 In the case of the Tribunal, comprising of three members, any ruling on award shall be made by a majority of members of the Tribunal. In the absence of such a majority, the views of the Presiding Arbitrator shall prevail.

21.17.2 The arbitral award shall state item-wise the sum and reasons upon which it is based. The analysis and reasons shall be detailed enough so that the award can be inferred from it.

21.17.3 It is further a term of this arbitration agreement that where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period till the date on which the award is made in terms of Section 31 (7) (a) of The Arbitration Act.

21.17.4 The award of the arbitrator shall be final and binding on the parties to this contract.

21.17.5 A party may apply for corrections of any computational errors, typographical or clerical errors, or any other error of similar nature occurring in the award or interpretation of a specific point of the award to the Tribunal within 60 days of receipt of the award.

21.17.6 A party may apply to the Tribunal within 60 days of receiving the award to make an additional award as to claims presented in the arbitral proceedings but omitted from the arbitral award.

21.18 Savings

The Arbitral Tribunal shall decide any matter related to Arbitration not covered under this Arbitration Agreement as per the provisions of The Arbitration Act.

21.19 Cost of Arbitration and fees of the Arbitrator(s)

- 21.19.1 The concerned parties shall bear the cost of arbitration in terms of section 31 (A) of The Arbitration Act. The cost shall inter-alia include fees of the Arbitrator. Further, the fees payable to the Arbitrator shall be governed by instructions issued on the subject by RailTel and/ or the Government from time to time, in line with the Arbitration and Conciliation Act, irrespective of the fact whether the Arbitrator is appointed by RailTel or the Government under this clause or by any court of law unless directed explicitly by Hon'ble court otherwise on the matter. A sole arbitrator shall be entitled to a 25% extra fee over such a prescribed fee.
- 21.19.2 The arbitrator shall be entitled to a 50 percent extra fee if the award is made within 6 months in terms of provisions contained in section 29(A) (2) of The Arbitration Act.
- 21.19.3 Besides the above, Arbitrator shall also be entitled to this extra fee in cases where Fast Track Procedure in terms of section 29 (B) of The Arbitration Act is followed.

23. APPLICABLE LAW: The work orders will be governed by the laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing. Any default in the terms and conditions of the EOI by the bidder will lead to rejection of bid/work order and forfeiture of EMD/Security Deposit & Performance Guarantee Amount.

24. INTELLECTUAL PROPERTY RIGHTS: The Selected Partner will indemnify RAILTEL of any infringement of third-party rights be they under the Patents Act or the IPR.

25. Eligibility of bidders from specified countries

24.1 Orders issued by the Government of India restricting procurement from bidders from certain countries that share a land border with India shall apply to this EOI.

- 1) Any bidder (as defined in GCC-clause 2.5) from a country that shares a land border with India, excluding countries as listed on the website of the Ministry of External Affairs, to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects (hereinafter called 'Restricted Countries') shall be eligible to bid in this only if Bidder is registered with the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT). Bidders shall enclose the certificate in this regard in Form 1.2.
- 2) In Bids for Turnkey contracts, the successful bidder shall not be allowed to sub-contract works to any contractor from such Restricted Countries unless such contractor is similarly registered. In such cases, the bidders shall enclose the certificate in Form 1.2.
- 3) If Bidder has proposed to sub-contract Services or incidental Goods directly/ indirectly from the vendors from such countries, such vendor shall be required to be registered with the Competent Authority. However, if Bidder procures raw material, components, and sub-assemblies from such countries' vendors, such vendors shall not require registration.
- 4) "Bidder from such Restricted Countries" means:-
 - a. An entity incorporated, established, or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established, or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established, or registered in such a country; or

- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity. Agent is a person employed to do any act for another, or to represent another in dealings with third persons.; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium/ joint venture where any member falls under any of the above

5) The beneficial owner shall mean:

- a. In a company or Limited Liability Partnership, the beneficial owner is the natural person(s). Whether acting alone or together or through one or more juridical persons, controlling ownership interest or exercises control through other means.

Explanation-

- i. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five percent of the company's shares or capital or profits.
- ii. "Control" shall include the right to appoint a majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder agreements or voting agreements;
- b. In the case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together or through one or more juridical persons, has ownership of entitlement to more than fifteen percent of capital or profits.
- c. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- d. Where no natural person is identified under 5 (a) or (b) or (c) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
- e. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

26. EXIT MANAGEMENT

25.1 Exit Management Purpose

- b) This clause sets out the provision, which will apply during Exit Management period. The parties shall ensure that their respective associated entities carry out their respective obligation set out in this Exit Management Clause.
- c) The exit management period starts, in case of expiry of contract, at least 03 months prior to the date when the contract comes to an end or in case of termination contract, on the date when the notice of termination is sent to the CSP. The exit management period ends on the date agreed upon by RailTel or Three (03) months after the beginning of the exit management period, whichever is earlier.

- 25.2 Confidential Information, Security and Data: CSP will promptly, on the commencement of the exit management period, supply to RailTel or its nominated agencies the following (if asked by RailTel in writing):
- a) Information relating to the current services rendered and performance data relating to the performance of the services; documentation relating to the project, project's customized source code (if any); any other data and confidential information created as part of or is related to this contract;
 - b) All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable RailTel and its nominated agencies, or its replacing vendor to carry out due diligence in order to transition the provision of the services to RailTel or its nominated agencies, or its replacing vendor (as the case may be).
- 25.3 Employees : Promptly on reasonable request at any time during the exit management period, the CSP shall, subject to applicable laws, restraints and regulations (including in particular those relating to privacy) provide RailTel a list of all employees (with job titles and communication address), dedicated to providing the services at the commencement of the exit management period; To the extent that any Transfer Regulation does not apply to any employee of the CSP, RailTel or the replacing vendor may make an offer of contract for services to such employees of the CSP and the CSP shall not enforce or impose any contractual provision that would prevent any such employee from being hired by RailTel or any replacing vendor.
- 25.4 Rights of Access to Information: Besides during the contract period, during the exit management period also, if asked by RailTel in writing, the CSP shall be obliged to provide an access of information to RailTel and / or any Replacing Vendor in order to make an inventory of the Assets (including hardware / software / active / passive), documentations, manuals, catalogues, archive data, Live data, policy documents or any other related material.

27. MANPOWER DEPLOYMENT

- 27.1. The Bidder shall be responsible for meeting the customer requirement. The Bidder shall, at its own cost, deploy and maintain the requisite manpower, resources, and infrastructure as required for the entire Project duration, including the Warranty and Annual Maintenance Contract (AMC) period (if applicable.) RailTel's role and responsibility shall be limited solely to the supervision and oversight of the Project, without prejudice to the obligations and liabilities of the Bidder.
- 27.2. The successful bidder shall place and keep on the works at all times efficient and competent staff to give the necessary directions to his workmen and to see that they execute their work in sound & proper manner and shall employ only such supervisors, workmen & labourers in or about the execution of any of these works as are careful and skilled in the various trades.
- 27.3. In the event of the RailTel Official being of the opinion that the Contractor is not employing on the works a sufficient number of staff and workmen as is necessary for proper completion of the works within the time prescribed, the Contractor shall forthwith on receiving intimation to this effect deploy the additional number of staff and labour as specified by the RailTel.

28. SITE CLEARANCE

- 28.1. Clearance of Site on Completion: On completion of the works, the Contractor shall clear away and remove from the site all constructional plant, surplus materials, old or released material if any, rubbish and temporary works of every kind and leave the whole of the site and works clean and in a workman like condition to the satisfaction of the RailTel Official. No final payment in settlement

of the accounts for the works shall be paid, held to be due or shall be made to the, Contractor till, in addition to any other condition necessary for final payment, site clearance shall have been affected by him, and such clearance may be made by the Engineer at the expense of the Contractor in the event of his failure to comply with this provision within 7 days after receiving notice to that effect.

The bidder shall be solely responsible for the release, loading, unloading, transportation, and delivery of all released materials from the site to RailTel's designated store. All costs and risks associated with these activities shall be borne by the bidder.

29. Warranty & Support

- 29.1 The warranty would be valid for a period 60 months from the date of issue of Provisional Acceptance Certificate/ commissioning date. The supplier shall warrant that stores to be supplied shall be new and free from all defects and faults in material, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards of materials of the type ordered and shall perform in full conformity with the specifications and drawings. The supplier shall be responsible for any defects that may develop under the conditions provided by the contract and under proper use, arising from faulty materials, design or workmanship such as corrosion, inadequate quantity of material to meet equipment requirements, inadequate contact protection, deficiencies in design and/ or otherwise and shall remedy such defects at his own cost when called upon to do so by the Purchaser who shall state in writing in what respect the stores are faulty.
- 29.2 If it becomes necessary for the contractor to replace or renew any defective portion/portions of the supplies under this clause, the provisions of the clause shall apply to the portion/portions of the equipment so replaced or renewed or until the end of the above-mentioned period or twelve months, whichever may be later. If any defect is not remedied within a reasonable time of 30 days, the Purchaser may proceed to do the work at the contractor's cost, but without prejudice to any other rights which the Purchaser may have against the contractor in respect of such defects
- 29.3 Replacement under warranty clause shall be made by the contractor free of all charges at site including freight, insurance and other incidental charges.
- 29.4 Note- Warranty and Support of all product/solution supplied must be available for 5 years (60 months from the date of PAC/ commissioning. In addition to this bidder along with OEM undertaking must be submitted with the statement that product support shall not be end of life/end of support for next 5 years from the date of PAC/ commissioning.
- 29.5 Bidder shall provide five years onsite comprehensive warranty from the date of PAC/ commissioning for all the components commissioned at site and the responsibility for smooth functioning of the components shall rest upon bidder during this period of warranty.
- 29.6 The comprehensive onsite warranty includes replacement of all such hardware/items necessary for keeping the network in perfect working order and condition at all the times during the period of the warranty from any defects/ disturbance or any unscheduled call for corrective and maintenance services, by taking appropriate steps on time to set right the full functioning of the network.

29.7 Replacement Services

If the contractor fails to replace the equipment within 30 days, the following penalties will be imposed:

Equipment	Duration of repair	Deduction/Penalties
All Modules and accessories	More than 30 days and up to 40 days (from the date of receipt)	10% of the cost of the equipment

All Modules and accessories	More than 40 days and up to 50 days (from the date of receipt)	25% of the cost of the equipment
All Modules and accessories	More than 50 days and up to 60 days (from the date of receipt)	75% of the cost of the equipment
All Modules and accessories	More than 60 days (from the date of receipt)	Full cost of the equipment. RailTel may terminate the contract in this case.

30. Preference to Make in India:

The provisions of the revised "Public Procurement (Preference to Make in India) Order 2017" dated 15.06.2017, dated 16.09.2020 and 19.07.2024 (or subsequent revisions, if any till opening of EOI) by Department of Promotion of Industry and Internal Trade (DPIIT), GoI shall apply to this EOI.

30.1. Local Content:

- i) Only Class-I local suppliers (meeting minimum 50% local content) & Class-II local suppliers (meeting minimum 20% local content) are eligible to participate in this EOI.
- ii) Minimum Local Content shall be 50% for purchase preference or as per the Notification No. 18-10/2017-IP dated 29th August 2018 issued by Department of Telecommunications, Ministry of Communications and Notification No. 33(1)/2017-IPHW dated 14.09.2017 issued by MeitY or latest notification issued till opening of EOI.
- iii) Among all qualified bids, the lowest bid will be termed as L1. If L1 is Class-I local supplier, the contract will be awarded to L1. If L1 is not Class-I local supplier, the lowest bidder among the Class-I local supplier, will be invited to match the L1 price subject to local supplier's quote price falling within the margin of purchase preference of 20%, and the 50% of the tendered quantity shall be awarded to such Class-I local supplier subject to matching the L1 price. In case such lowest eligible Class-I local supplier fails to match the L1 price, the Class-I local supplier with the next higher bid within the margin of purchase preference of 20%, shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the Class-I local supplier within the margin of purchase preference of 20%, matches the L1 price, the contract may be awarded to the L1 bidder.
- iv) As per para 9 of PPP-MIII order 16.09.2020, bidder shall be required to indicate percentage of local content and provide self-certification in his bid (without mention of any price) that the item offered meets the local content requirement for Class-I/Class-II local supplier, as the case may be and shall also give details of the location(s) at which the local value addition is made. In case of procurement for a value in excess of Rs. 10 Crores, the bidder shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. Bidder shall upload the certificate along with their techno-commercial bid. The bidder shall also provide calculation of Local Content with price Break-up of "Local Content" and "Imported Content" for each SOR item as per DPIIT's PMI Policy and its clarifications and same shall be uploaded by the bidder along with their price bid. In case of any false declaration, action shall be taken in line with the provisions of the PPP-MIII order. Performa for self-certification regarding local content is given in the

Notification No. 18-10/2017-IP dated 29th August 2018 or latest issued by Department of Telecommunications.

v) The bidder shall also provide calculation of “Local Content” and “Imported Content” in terms of Percentage for each SOR item as per DPIIT’s PMI Policy & its clarifications and same shall be uploaded by the bidder along with their Technical bid.

vi) Self-certification of bidder as above shall be supported by the following certificate from Statutory Auditor engaged by the bidder, on the letter head of such Statutory Auditor.

“We_____ the statutory auditor of M/s.____ (name of the bidder) hereby certify that M/s._____ (name of bidder) meet the mandatory Local Content requirements of the Project Work under this EOI i.e. ____% (to be filled by the work center) quoted vide offer No._____ dated____ against RAILTEL EOI No._____ by M/s. _____ (Name of the bidder).

Note: In case of bidder(s) for whom Statutory Auditor is not required as per law, required certificates shall be provided by a practicing Chartered Accountant.

i) Notification dated 21.10.24 (or latest) issued by Department of Telecommunications, Ministry of Communications shall be applicable for Clause 10(d) of Public Procurement (Preference to Make in India) Order, 2017 or latest.

ii) Official website of Department of Promotion of Industry and Internal Trade (DPIIT) i.e. “<https://dpiit.gov.in/public-procurements>” may be referred by bidder for above mentioned orders or any revision issued. Frequently Asked Question (FAQ) available there may also be referred by bidders.

iii) In terms of Clause 2, 3 and II of the DPIIT’s PPP-MII Order dated 19.07.2024, Department of Telecommunications vide Notification dated 21.10.24 notified that telecom products, services and works listed in Table-A have sufficient local capacity and local competition. A Class-I local supplier must meet the Minimum Local Content (MLC) requirement specified against each item in Table-A. Table- A also specifies the maximum ceiling of LC percentage for design out of total LC against each item. The conditions for the inputs to be qualified as Local Content (LC) are specified in Table-B. Only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.

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RAILTEL

Annexure 1: Format for OFFER LETTER

OFFER LETTER (To be on company letter head)

Eol Reference No:

Date:

To,
The Principle Executive Director
RailTel Corporation of India Ltd. 19th Floor, Aurora
Waterfront, opposite NALBAN, Sector V, Bidhannagar,
Kolkata, West Bengal 700091

Dear Sir,

SUB: Participation in the Eol process

Having examined the Invitation for Eol document bearing the reference number _____ released by your esteemed organization, we, undersigned, hereby acknowledge the receipt of the same and offer to participate in conformity with the said Invitation for Eol document.

If our application is accepted, we undertake to abide by all the terms and conditions mentioned in the said Invitation for Eol document.

We hereby declare that all the information and supporting documents furnished as a part of our response to the said Invitation for Eol document, are true to the best of our knowledge. We understand that in case any discrepancy is found in the information submitted by us, our Eol is liable to be rejected.

We hereby Submit EMD amount of Rs. _____ issued vide _____ from Bank _____.

Authorized Signatory
Name
Designation

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RAILTEL

Annexure 2: Format for Self-Certificate & Undertaking

Self-Certificate (To be on company letter head)

Eoi Reference No:

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor, Aurora
Waterfront, opposite NALBAN, Sector-V,
Bidhannagar, Kolkata, West Bengal 700091

Dear Sir,

Sub: Self Certificate for EOI, Technical & other compliances

- 1) Having examined the technical specifications mentioned in this EOI, we hereby confirm that we meet all specification.
- 2) We _____ agree to abide by all the technical, commercial & financial conditions of the EOI is submitted if applicable or as per requirement mentioned in EOI (except pricing, termination & risk purchase rights of the RailTel). We understand and agree that RailTel shall release the payment to selected sole partner as per payment term. Further we understand that in case we fail to execute assigned portion of work, then the same shall be executed by RailTel through third party or departmentally at the risk and cost of selected partner.
- 3) We agree to abide by all the technical, commercial & financial conditions of the EOI for the agreed scope of work for which this EOI is submitted.
- 4) We hereby agree to comply with all OEM technical & Financial documentation including MAF, Technical certificates/others as per EOI. We are hereby enclosing the arrangement of OEMs against each of the BOQ item quoted as mentioned EOI. We also undertake to submit MAF and other documents required in the EOI in favour of RailTel against the proposed products.
- 5) We hereby certify that any services, equipment and materials to be supplied are produced in eligible source country complying with OM/F. No. 6/18/2019 dated 23rd July 2020 issued by DoE, MoF or any latest order in this regard.
- 6) We hereby undertake to work with RailTel as per EOI terms and conditions. We confirm to submit all the supporting documents constituting/ in compliance with the Criteria as required in the EOI terms and conditions like technical certificates, OEM compliance documents.
- 7) We understand and agree that RailTel is intending to select CSP who is willing to accept all terms & conditions of EOI for the agreed scope of work. RailTel will strategies to retain scope of work where RailTel has competence.
- 8) We hereby agree to submit that in case of being selected by RailTel as sole partner/ consortium

for the proposed project(for which EOI is submitted), we will submit all the forms, appendix, relevant documents etc. to RailTel.

- 9) We hereby undertake to sign Agreement and Non-Disclosure Agreement with RailTel on a non-judicial stamp paper of Rs. 100/- in the prescribed Format.

Authorized

SignatoryName

& Designation

रेलटेल
RAILTEL

Annexure 3: Undertaking for not Being Blacklisted/Debarred

<On Company Letter Head>

To,

The Principle Executive Director
RailTel Corporation of India Ltd. 19th Floor, Aurora
Waterfront, opposite NALBAN, Sector V, Bidhannagar,
Kolkata, West Bengal 700091

Subject: **Undertaking for not Being Blacklisted/Debarred**

We, Company Name, having its registered office at Address hereby declares that that the Company has not been blacklisted / debarred / “put on Holiday” by any Government or quasi-Government agencies or PSUs in India for past 3 Years as on bid submission date.

Date and Place

Authorized Signatory's Signature:

Authorized Signatory's Name and Designation:

Partner's Company Seal:

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Annexure 4: Format of Affidavit

FORMAT FOR AFFIDAVIT TO BE UPLOADED BY SOLE PARTNER/ ALL CONSORTIUM PARTNERS
ALONGWITH THE EOI DOCUMENTS

(To be executed in presence of public notary on non-judicial stamp paper of the value of Rs. 100/-. The paper has to be in the name of the partner) **

I..... (Name and designation) ** appointed as the attorney/authorized signatory of the partner (including its constituents), M/s _____ (hereinafter called the partner) for the purpose of the EOI documents for the work of _____ as per the EOI No. _____ of (RailTel Corporation of India Ltd.), do hereby solemnly affirm and state on the behalf of the BA including its constituents as under:

1. I/we the partner (s), am/are signing this document after carefully reading the contents.
2. I/we the partner (s) also accept all the conditions of the EOI and have signed all the pages in confirmation thereof.
3. I/we hereby declare that I/we have downloaded the EOI documents from RailTel website www.railtel.enivida.com. I/we have verified the content of the document from the website and there is no addition, no deletion or no alternation to be content of the EOI document. In case of any discrepancy noticed at any stage i.e. evaluation of EOI, execution of work or final payment of the contract, the master copy available with the RailTel Administration shall be final and binding upon me/us.
4. I/we declare and certify that I/we have not made any misleading or false representation in the forms, statements and attachments in proof of the qualification requirements.
5. I/we also understand that my/our offer will be evaluated based on the documents/credentials submitted along with the offer and same shall be binding upon me/us.
6. I/we declare that the information and documents submitted along with the EOI by me/us are correct and I/we are fully responsible for the correctness of the information and documents, submitted by us.
7. I/we undersigned that if the certificates regarding eligibility criteria submitted by us are found to be forged/false or incorrect at any time during process for evaluation of EOI, it shall lead to forfeiture of the EOI EMD besides banning of business for five years on entire RailTel. Further, I/we (insert name of the partner)** and all my/our constituents understand that my/our constituents understand that my/our offer shall be summarily rejected.
8. I/we also understand that if the certificates submitted by us are found to be false/forged or incorrect at any time after the award of the contract, it will lead to termination of the contract, along with forfeiture of EMD/SD and Performance guarantee besides any other action provided in the contract including banning of business for five years on entire RailTel.

DEPONENT SEAL AND SIGNATURE OF THE PARTNER

VERIFICATION

I/We above named EOI do hereby solemnly affirm and verify that the contents of my/our above affidavit are true and correct. Nothing has been concealed and no part of it is false.

DEPONENT

Place: Dated:

SEAL AND SIGNATURE
OF THE PARTNER

**The contents in Italics are only for guidance purpose. Details as appropriate, are to be filled in suitably by partner. Attestation before Magistrate/Notary Public.

Annexure-5: Non-Disclosure Agreement (NDA) Format

NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement (this “**Agreement**”) is made and entered into on this ____ day of ____, 20XX (the “**Effective Date**”) at _____.

By and between

RailTel Corporation of India Limited, (CIN: L64202DL2000GOI107905), a Public Sector Undertaking under Ministry of Railways, Govt. of India, having its registered and corporate office at Plate-A, 6th Floor, Office Block, Tower -2, East Kidwai Nagar, New Delhi-110023, (hereinafter referred to as '**RailTel**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of the ONE PART,

And

_____) (CIN: _____), a company duly incorporated under the provisions of Companies Act, _____ having its registered office at _____, (hereinafter referred to as '**_____**'), which expression shall unless repugnant to the context or meaning thereof, deem to mean and include its successors and its permitted assignees of OTHER PART

RailTel and _____ shall be individually referred to as “Party” and jointly as “Parties”

WHEREAS, RailTel and _____, each possesses confidential and proprietary information related to its business activities, including, but not limited to, that information designated as confidential or proprietary under Section 2 of this Agreement, as well as technical and non-technical information, patents, copyrights, trade secrets, know-how, financial data, design details and specifications, engineering, business and marketing strategies and plans, forecasts or plans, pricing strategies, formulas, procurement requirements, vendor and customer lists, inventions, techniques, sketches, drawings, models, processes, apparatus, equipment, algorithms, software programs, software source documents, product designs and the like, and third party confidential information (collectively, the “**Information**”);

WHEREAS, the Parties have initiated discussions regarding a possible business relationship for _____.

WHEREAS, each Party accordingly desires to disclose certain Information (each Party, in such disclosing capacity, the “**Disclosing Party**”) to the other Party (each Party, in such receiving capacity, the “**Receiving Party**”) subject to the terms and conditions of this Agreement.

NOW THEREFORE, in consideration of the receipt of certain Information, and the mutual promises made in this Agreement, the Parties, intending to be legally bound, hereby agree as follows:

1. Permitted Use.

(a) Receiving Party shall:

- (i) hold all Information received from Disclosing Party in confidence;
- (ii) use such Information for the purpose of evaluating the possibility of entering into a commercial arrangement between the Parties concerning such Information; and
- (iii) restrict disclosure of such Information to those of Receiving Party's officers, directors, employees, affiliates, advisors, agents and consultants (collectively, the “**Representatives**”) who the Receiving Party, in its reasonable discretion, deems need to know such Information, and are bound by the terms and conditions of (1) this Agreement, or (2) an agreement with terms and conditions substantially similar to those set forth in this Agreement.

(b) The restrictions on Receiving Party's use and disclosure of Information as set forth above shall not apply to any Information that Receiving Party can demonstrate:

- (i) is wholly and independently developed by Receiving Party without the use of Information of Disclosing Party;
- (ii) at the time of disclosure to Receiving Party, was either (A) in the public domain, or (B) known to Receiving Party;
- (iii) is approved for release by written authorization of Disclosing Party; or
- (iv) is disclosed in response to a valid order of a court or other governmental body in the India or any political subdivision thereof, but only to the extent of, and for the purposes set forth in, such order; provided, however, that Receiving Party shall first and immediately notify Disclosing Party in writing of the order and permit Disclosing Party to seek an appropriate protective order.

(c) Both parties further agree to exercise the same degree of care that it exercises to protect its own Confidential Information of a like nature from unauthorised disclosure, but in no event shall a less than reasonable degree of care be exercised by either party.

2. **Designation.**

(a) Information shall be deemed confidential and proprietary and subject to the restrictions of this Agreement if, when provided in:

- (i) written or other tangible form, such Information is clearly marked as proprietary or confidential when disclosed to Receiving Party; or
- (ii) oral or other intangible form, such Information is identified as confidential or proprietary at the time of disclosure.

3. **Cooperation.** Receiving Party will immediately give notice to Disclosing Party of any unauthorized use or disclosure of the Information of Disclosing Party.

4. **Ownership of Information.** All Information remains the property of Disclosing Party and no license or other rights to such Information is granted or implied hereby. Notwithstanding the foregoing, Disclosing Party understands that Receiving Party may currently or in the future be developing information internally, or receiving information from other parties that may be similar to Information of the Disclosing Party. Notwithstanding anything to the contrary, nothing in this Agreement will be construed as a representation or inference that Receiving Party will not develop products, or have products developed for it, that, without violation of this Agreement, compete with the products or systems contemplated by Disclosing Party's Information.

5. **No Obligation.** Neither this Agreement nor the disclosure or receipt of Information hereunder shall be construed as creating any obligation of a Party to furnish Information to the other Party or to enter into any agreement, venture or relationship with the other Party.

6. **Return or Destruction of Information.**

(a) All Information shall remain the sole property of Disclosing Party and all materials containing any such Information (including all copies made by Receiving Party) and its Representatives shall be returned or destroyed by Receiving Party immediately upon the earlier of:

- (i) termination of this Agreement;
- (ii) expiration of this Agreement; or
- (iii) Receiving Party's determination that it no longer has a need for such Information.

(b) Upon request of Disclosing Party, Receiving Party shall certify in writing that all Information received by Receiving Party (including all copies thereof) and all materials containing such Information (including all copies thereof) have been destroyed.

7. Injunctive Relief: Without prejudice to any other rights or remedies that a party may have, each party acknowledges and agrees that damages alone may not be an adequate remedy for any breach of this Agreement, and that a party shall be entitled to seek the remedies of injunction, specific performance and/or any other equitable relief for any threatened or actual breach of this Agreement

8. Notice.

(a) Any notice required or permitted by this Agreement shall be in writing and shall be delivered as follows, with notice deemed given as indicated:

- (i) by personal delivery, when delivered personally;
- (ii) by overnight courier, upon written verification of receipt; or
- (iii) by certified or registered mail with return receipt requested, upon verification of receipt.

(b) Notice shall be sent to the following addresses or such other address as either Party specifies in writing.

RailTel Corporation of India limited:

Attn: _____
 Address: _____
 Phone: _____
 Email: _____

 Attn: _____
 Address: _____
 Phone: _____
 Email: _____

9. Term, Termination and Survivability.

(a) Unless terminated earlier in accordance with the provisions of this agreement, this Agreement shall be in full force and effect for a period of _____ years from the effective date hereof.

(b) Each party reserves the right in its sole and absolute discretion to terminate this Agreement by giving the other party not less than 30 days' written notice of such termination.

(c) Notwithstanding the foregoing clause 9(a) and 9 (b) , Receiving Party agrees that its obligations, shall:

- (i) In respect to Information provided to it during the Term of this agreement, shall survive and continue even after the expiry of the term or termination of this agreement; and
- (ii) not apply to any materials or information disclosed to it thereafter.

10. Governing Law and Jurisdiction. This Agreement shall be governed in all respects solely and exclusively by the laws of India without regard to its conflicts of law principles. The Parties hereto expressly consent and submit themselves to the jurisdiction of the courts of New Delhi.

11. Counterparts. This agreement is executed in duplicate, each of which shall be deemed to be the original and both when taken together shall be deemed to form a single agreement

12. No Definitive Transaction. The Parties hereto understand and agree that no contract or agreement with respect to any aspect of a potential transaction between the Parties shall be deemed to exist unless and until a definitive written agreement providing for such aspect of the transaction has been executed by a duly

authorized representative of each Party and duly delivered to the other Party (a "***Final Agreement***"), and the Parties hereby waive, in advance, any claims in connection with a possible transaction unless and until the Parties have entered into a Final Agreement.

13. Settlement of Disputes:

- a) The parties shall, at the first instance, attempt to resolve through good faith negotiation and consultation, any difference, conflict or question arising between the parties hereto relating to or concerning or arising out of or in connection with this agreement, and such negotiation or consultation shall begin promptly after a Party has delivered to another Party a written request for such consultation.
- b) In the event of any dispute, difference, conflict or question arising between the parties hereto, relating to or concerning or arising out of or in connection with this agreement, is not settled through good faith negotiation or consultation, the same shall be referred to arbitration by a sole arbitrator.
- c) The sole arbitrator shall be appointed by CMD/RailTel out of the panel of independent arbitrators maintained by RailTel, having expertise in their respective domains. The seat and the venue of arbitration shall be New Delhi. The arbitration proceedings shall be in accordance with the provision of the Arbitration and Conciliation Act 1996 and any other statutory amendments or modifications thereof. The decision of arbitrator shall be final and binding on both parties. The arbitration proceedings shall be conducted in English Language. The fees and cost of arbitration shall be borne equally between the parties.

14. CONFIDENTIALITY OF NEGOTIATIONS

Without the Disclosing Party's prior written consent, the Receiving Party shall not disclose to any Person who is not a Representative of the Receiving Party the fact that Confidential Information has been made available to the Receiving Party or that it has inspected any portion of the Confidential Information or that discussions between the Parties may be taking place.

15. REPRESENTATION

The Receiving Party acknowledges that the Disclosing Party makes no representation or warranty as to the accuracy or completeness of any of the Confidential Information furnished by or on its behalf. Nothing in this clause operates to limit or exclude any liability for fraudulent misrepresentation.

16. ASSIGNMENT

Neither this Agreement nor any of the rights, interests or obligations under this Agreement shall be assigned, in whole or in part, by operation of law or otherwise by any of the Parties without the prior written consent of each of the other Parties. Any purported assignment without such consent shall be void. Subject to the preceding sentences, this Agreement will be binding upon, inure to the benefit of, and be enforceable by, the Parties and their respective successors and assigns.

17. EMPLOYEES AND OTHERS

Each Party shall advise its Representatives, contractors, subcontractors and licensees, and shall require its Affiliates to advise their Representatives, contractors, subcontractors and licensees, of the obligations of confidentiality and non-use under this Agreement, and shall be responsible for ensuring compliance by its and its Affiliates' Representatives, contractors, subcontractors and licensees with such obligations. In addition, each Party shall require all persons and entities who are not employees of a Party and who are provided access to the Confidential Information, to execute confidentiality or non-disclosure

agreements containing provisions no less stringent than those set forth in this Agreement. Each Party shall promptly notify the other Party in writing upon learning of any unauthorized disclosure or use of the Confidential Information by such persons or entities.

18. NO LICENSE

Nothing in this Agreement is intended to grant any rights to under any patent, copyright, or other intellectual property right of the Disclosing Party, nor will this Agreement grant

the Receiving Party any rights in or to the Confidential Information of the Disclosing Party, except as expressly set forth in this Agreement.

19. RELATIONSHIP BETWEEN PARTIES:

Nothing in this Agreement or in any matter or any arrangement contemplated by it is intended to constitute a partnership, association, joint venture, fiduciary relationship or other cooperative entity between the parties for any purpose whatsoever. Neither party has any power or authority to bind the other party or impose any obligations on it and neither party shall purport to do so or hold itself out as capable of doing so.

20. UNPULISHED PRICE SENSITIVE INFORMATION (UPSI)

_____ agrees and acknowledges that _____, its Partners, employees, representatives etc., by virtue of being associated with RailTel and being in frequent communication with RailTel and its employees, shall be deemed to be "Connected Persons" within the meaning of SEBI (Prohibition of Insider Trading) Regulations, 2015 and shall be bound by the said regulations while dealing with any confidential and/ or price sensitive information of RailTel. _____ shall always and at all times comply with the obligations and restrictions contained in the said regulations. In terms of the said regulations, _____ shall abide by the restriction on communication, providing or allowing access to any Unpublished Price Sensitive Information (UPSI) relating to RailTel as well as restriction on trading of its stock while holding such Unpublished Price Sensitive Information relating to RailTel

21. MISCELLANEOUS

This Agreement constitutes the entire understanding among the Parties as to the Information and supersedes all prior discussions between them relating thereto. No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed on behalf of each Party by its authorized representative. The failure or delay of any Party to enforce at any time any provision of this Agreement shall not constitute a waiver of such Party's right thereafter to enforce each and every provision of this Agreement. In the event that any of the terms, conditions or provisions of this Agreement are held to be illegal, unenforceable or invalid by any court of competent jurisdiction, the remaining terms, conditions or provisions hereof shall remain in full force and effect. The rights, remedies and obligations set forth herein are in addition to, and not in substitution of, any rights, remedies or obligations which may be granted or imposed under law or in equity.

IN WITNESS WHEREOF, the Parties have executed this Agreement on the date set forth above.

_____ : RailTel Corporation of India Limited:

By _____ By _____
Name: _____ Name: _____
Title: _____ Title: _____

Witnesses

Annexure-6: CHECKLIST**A. Required Documents**

S. No.	Document	Remarks	Submitted (Yes/No)	Pg Ref
1	Power of Attorney/ Authorization (Mandatory)			
2	Empanelment letter issued by RailTel and valid BG copy till bid opening date OR Proof of Payment of empanelment fee & mail sent to RailTel CO (Mandatory)			
3	Annexure 1: Offer Letter (Mandatory)			
4	Annexure 2: Self-Certificate for EOI, Technical & other compliances (Mandatory)			
5	Annexure 3: Undertaking for not Being Blacklisted/Debarred			
6	Annexure 4: Notarized Affidavit (Mandatory)			
7	Clause 14. A. 1 of Eligibility Criteria (Mandatory)			
8	Clause 14. A. 2 of Eligibility Criteria (Mandatory)			
9	Clause 14. A. 3 of Eligibility Criteria (Mandatory)			
10	Annexure 5: Non-disclosure agreement by Partner/Consortium with RailTel.			
11	Annexure 8: Technical Proposal Document			
12	Annexure 9: CONSORTIUM AGREEMENT /MEMORANDUM OF AGREEMENT (Mandatory)	In case of Consortium Bid		
13	Annexure 10: Undertaking of Service Level Compliance			
14	Annexure 11: Statement of No Deviation Declaration			
15	Annexure 12: Commercial Proposal Document			
16	Annexure 13: Undertaking on Exit Management and Transition			
17	Annexure 14: Declaration – 2Exclusivity of Participation (Not Applicable)	In case of RailTel has floated EOI for participation in EOI		
18	Annexure 15: Integrity Pact Program & Proforma	For more than 5 Crores Case – 2 Copies Required		
19	Annexure 18: Standing Indemnity Bond			
20	Annexure 19: Land Border Certificate			
21	Annexure 12(A): Price Bid Format			

B. Other Documents

S. No.	Document	Remarks	Submitted (Yes/No)	Pg Ref
1	OEM Documents for item no 1-19, 21-22, 25-38, 53-54 of SOR-A and 1-7 & 10 of SOR-B and 1-14, 16-17, 20-23, 26-27 & 43 of SOR-C: 1. MAF as per Annexure 7 (Mandatory) 2. Compliance of Specification as given in Annexure 21 (by OEM) (Mandatory)			
2	Signed Copy of EOI (Mandatory)			
3	Solution Document			
4	Document Outlining Approach & Methodology			

Annexure-7: MAF/ MOU and other Documents

Dated: DD/MM/YYYY

To,
The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Reference: EOI Number RAILTEL/ER/MKT/EOI/2024-25/XXX dtd. XX-01-2025

Sir,

We _____, (name and address of the manufacturer) who are established and reputed manufacturers of _____ having factories at _____ (addresses of manufacturing locations) do hereby authorize M/s _____ (name and address of the Bidder) to bid, negotiate and conclude the contract with you against the above-mentioned EOI for the above equipment manufactured by us.

Yours faithfully,

For and on behalf of M/s _____ (Name of the manufacturer)

Seal & Signature of OEM _____

Name and Title of Signatory: _____

Designation : _____ Date: _____

Note: This letter of authority should be on the letterhead of all the hardware manufacturer (OEM) and should be signed by the person (from OEM Side) competent and having the power of attorney to bind the manufacturer.

Partner shall also arrange other OEM Authorisations/Documents as required in CoR Tender.

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Annexure 8 - Technical Proposal Document

(On the Partner's Letterhead)

EOI Ref. No.:

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Subject: Submission of Technical Proposal

Dear Sir/Madam,

We, the undersigned, express our commitment to provide Systems Implementation solutions to RailTel Corporation of India Limited in response to your Request for Proposal dated [insert date] and our Proposal. Our submission comprises this Technical Bid and the Financial Bid, submitted separately.

We affirm that all information and statements in this Technical Bid are accurate, and we acknowledge that any misrepresentation may result in our disqualification.

If our Proposal is accepted, we commit to initiating the Implementation services related to the assignment no later than the date indicated in the Data sheet.

We agree to adhere to all the terms and conditions outlined in the EOI document and confirm that the validity of our bid extends for 60 days, as specified in the EOI document.

Furthermore, we declare that we are not insolvent, in receivership, bankrupt, or undergoing winding up. Our affairs are not administered by a court or a judicial officer, our business activities have not been suspended, and we are not subject to legal proceedings for any of the aforementioned reasons.

We acknowledge that RailTel Corporation of India Limited is not obligated to accept any Proposal received.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the Partner)

Name:

Designation:

Place:

Date:

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RAILTEL

Annexure-9: CONSORTIUM AGREEMENT / MEMORANDUM OF AGREEMENT

(On Stamp Paper of appropriate value)

This Consortium Agreement is executed at on this _ day of . BETWEEN

M/s. , a Company incorporated under the Companies Act, 1956 and having its Registered Office at acting through its Managing Director, duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the „LEAD MEMBER“ which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the ONE Part;

AND

M/s. , a Company having its Office at and Office at
 , acting through its Joint President/ MD/.. , duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the (‐Participant member‐) which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHER PART‐

AND

M/s. , a Company having its Office at and Office at
 , acting through its Joint President/ MD/.. , duly authorized by a resolution of the Board of Directors dated (hereinafter referred to as the (‐Participant member‐) which expression unless excluded by or repugnant to the subject or context be deemed to mean and include its successors in interest, legal representatives, administrators, nominees and assigns) of the OTHER PART‐

Whereas RailTel Corporation of India Ltd. (hereinafter referred to as „RCIL‐) has invite tenders for the (‐NAME OF WORK‐) in terms of the tender documents issued for the said purpose and the eligibility conditions required that the applicants bidding for the same should meet the conditions stipulated by RCIL for participating in the bid by the Consortium for handling the project for which the tender has been floated by RCIL.

AND WHEREAS in terms of the bid documents the parties jointly satisfy the eligibility criteria laid down for a bidder for participating in the bid process by forming a Consortium between themselves.

AND WHEREAS the parties hereto have discussed and agreed to form a Consortium for participating in the aforesaid bid and have decided to reduce the agreed terms to writing.

NOW THIS CONSORTIUM Agreement hereby WITNESSES:

- b. That in the premises contained herein the Lead Member and the Participant Member having decided to pool their technical know-how, working experiences and financial resources, have formed themselves into a Consortium to participate in the tender process for (‐NAME OF WORK‐) in terms of the tender invited by RailTel Corporation of India Ltd., (RCIL).
 - c. That the members of the Consortium have represented and assured each other that they shall abide by and be bound by the terms and conditions stipulated by RCIL for awarding the tender to the Consortium so that the Consortium may take up the
1. aforesaid (‐NAME OF WORK‐) in case the Consortium turns out to be the successful bidder in the bid being invited by RCIL for the said purpose.
 2. That the members of the Consortium have satisfied themselves that by pooling their technical know-how and technical and financial resources, the Consortium fulfills the prequalification/ eligibility criteria stipulated for a bidder, to participate in the bid for the said tender process for (‐NAME OF WORK‐)
 3. That the Consortium have agreed to nominate any one of, and as the common representative who shall be authorized to represent the Consortium for all intents and purposes for dealing with the Government and for submitting the bid as well as doing all other acts and things necessary for submission of bid documents such as Tender Application Form etc., Mandatory Information, Financial Bid. Etc., and such other documents as may be necessary for this purpose.

4. That if any change in the membership of the Consortium be required to be made by the members of the Consortium, the same shall be done with the consent of RCIL subject to the conditions as may be stipulated by them in this regard.
5. That in case to meet the requirements of bid documents or any other stipulations of RCIL, it becomes necessary to execute and record any other documents amongst the members of the Consortium, they undertake to do the needful and to participate in the same for the purpose of the said project.
6. That it is clarified by and between the members of the Consortium that execution to this Consortium Agreement by the members of the Consortium does not constitute any type of partnership for the purposes of provisions of the Indian Partnership Act and that the members of the Consortium shall otherwise be free to carry on their independent business or commercial activities for their own respective benefits under their own respective names and styles. This Consortium Agreement is limited in its operation to the specified project.
7. That the Members of the Consortium undertake to specify their respective roles and responsibilities for the purposes of implementation of this Consortium Agreement and the said project, if awarded to the Consortium, to meet the requirements and stipulations of RCIL.
8. The consortium formed will not be subject to alteration with regard to change in constituting firms and/or reorientation of roles. Any changes, if proposed by Consortium to take advantage of certain developments during evaluation stage will render the bid liable to be REJECTED.
9. All partners of the consortium shall be jointly and severally liable to RailTel for the execution of the entire contract in accordance with its terms.
10. Each Consortium member has minimum 20% contribution in the work and role/scope of each member is enclosed.
11. Power of Attorney by all members of the Consortium in favor of the Lead Member is also enclosed

IN FAITH AND TESTIMONY WHEREOF, THE PARTIES HERETO HAVE SIGNED THESE PRESENTS ON THE DATE, MONTHS AND YEAR FIRST ABOVE WRITTEN

1. ()

Managing Director

For (Name of company)

2. ()

Managing Director

For (Name of company)

3 ()

Managing Director

For (Name of company)

WITNESSES:

1.

2.

Enclosure:

Board resolution of each of the Consortium Members authorizing:

- (i) Execution of the Consortium Agreement and Appointing the authorized signatory for such purpose.

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Annexure 10- Undertaking of Service Level Compliance

(On the Partner's Letterhead)

Tender Ref. No.:

Date:

To

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Dear Sir/Madam,

Sub: Undertaking on Service Level Compliance

1. I/We as Implementing Agency do hereby undertake that we shall monitor, maintain, and comply with the service levels stated in the tender to provide quality service to end customer of RailTel referred in this tender.
2. However, if the proposed resources, Infrastructure and ICT components are found to be insufficient in meeting the tender and/or the service level requirements given by RCIL, then we will augment the same without any additional cost to RCIL.

Yours sincerely

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date:

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RAILTEL

Annexure 11 - Statement of No Deviation from Requirement Specifications

(On the Partner's Letterhead)

Tender Ref. No.:

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Sir,

There are no technical deviations (null deviations) from the requirement specifications of Tender items and schedule of requirements. The entire work shall be performed as per your specifications and documents.

This is to certify that our proposed solution meets all the requirements of the Tender including but not limited to Scope of Work, stated Project Outcomes (including SLAs), Business Requirements and Functional Specifications/ Requirements.

We further certify that our proposed solution meets, is equivalent or better than the minimum technical specifications as given in the tender.

We understand that the Bill of Quantity provided in the tender is indicative, we confirm that we have undertaken our own assessment to finalize the components and quantity.

In case, any item of hardware or software is found non-compliant at any stage during project implementation, it would be replaced with a fully compliant product/solution at no additional cost to end customer. In case of non-adherence of this activity, RCIL reserves the right to cancel the contract, in case the said Contract is awarded to us by RCIL.

We further confirm that our commercial proposal is for the entire scope of work, comprising all required components and our obligations, for meeting the scope of work.

Thanking you, Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date:

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RAILTEL

Annexure 12 - Commercial Proposal Document

EOI Ref. No.:

Date:

(Format for reporting commercials and mandatory letters that needs to be part of the commercial proposal document. Breakdown of cost mentioned, cost of each component, operating cost, employee cost, cost of operations and management, any other cost which the Partner feels.)

To

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Subject: Submission of Commercial proposal

Reference: EOI No:

Dated:

We, the undersigned Partner, having read and examined in detail the EOI documents for “_____”. I / we do hereby propose to provide services as specified in the EOI documents number -----Dated <dd/mm/yy>

1. PRICE PROPOSAL AND VALIDITY

All the prices mentioned in our tender are in accordance with the terms as specified in the tender documents. All the prices and other terms and conditions of this tender are valid for a period of 60 days from opening of EOI.

We hereby confirm that our tender prices include all taxes. However, all the taxes are quoted separately under relevant sections.

We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on Income Tax, Professional and any other corporate Tax in altered under the law, we shall pay the same.

2. UNIT RATES

We have indicated in the relevant schedules enclosed the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

3. DEVIATIONS

We declare that all the services shall be performed strictly in accordance with the tender documents except for the variations and deviations, all of which have been detailed out exhaustively in the following statement, irrespective of whatever has been stated to the contrary anywhere else in our proposal. Further, we agree that additional conditions, if any, found in the tender documents, other than those stated in deviation schedule, shall not be given effect to.

4. TENDER PRICING

We further confirm that the prices stated in our proposal are in accordance with your Instruction to Partners included in TENDER documents.

5. QUALIFYING DATA

We confirm having submitted the information as required by you in your Instruction to Partners. In case you require any other further information/documentary proof in this regard before evaluation of our tender, we agree to furnish the same in time to your satisfaction.

6. PROPOSAL PRICE

We declare that our Proposal Price is for the entire scope of the work as specified in the Schedule of Requirements and TENDER documents.

7. PERFORMANCE BANK GUARANTEE BOND

We hereby declare that in case the contract is awarded to us, we shall submit the PBG in the form prescribed in Proforma of Bank Guarantee towards PBG. We hereby declare that our TENDER is made in good faith, without collusion or fraud and the information contained in the TENDER is true and correct to the best of our knowledge and belief. We understand that our TENDER is binding on us and that you are not bound to accept a TENDER you receive. We confirm that no Technical deviations are attached here with this commercial offer.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Designation:

Place:

Date:

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Annexure 12-A – Price Bid Format

Please refer the excel price bid format and use the same for bidding purpose.



RailTel Corporation of India Ltd.
19th Floor, Aurora Waterfront, GN 34/1, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

PRICE BID			
Name and Address of Bidder :			
Sl. No.	SOR	Total Amount, round off (Rs), excl GST	Percentage quoted on total amount of SOR in figures & words (At par/ Below/ Above/Not Quoted)
1	SOR-A	34,25,28,686/-	
2	SOR-B	3,61,51,598/-	
3	SOR-C	27,56,03,442/-	

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RAILTEL

Price Bid for Buy-back:

S No	Item	UoM	Offered Unit Price, Rs (excl GST)
1	SRX 300, 5 years old	No	
2	SRX 340, 5 years old	No	
3	ACX 1100, 7 years old	No	
4	ACX 2200, 7 years old	No	
5	Switch EX-2300-24T, 5 years old	No	
6	Switch EX-2300-12T, 5 years old	No	
7	UPS - 6KVA, 5 years old	No	
8	UPS - 2KVA, 5 years old	No	
9	Battery (12 V, 65AH), 2 years old	No	
10	Battery (12 V, 42AH), 2 years old	No	
11	TV, 75 inch, 5 years old	No	

Note: (i) The bidder shall submit a quote for the buyback of old items. RailTel reserves the right to retain any item, either partially or in full quantity, at its sole discretion. RailTel's decision in this regard shall be final and binding on the bidder.

(ii) In the event RailTel decides to hand over the old materials to the successful bidder at the accepted buyback rates, the bidder shall be obligated to take possession of such materials. The scope shall include collection of materials from RailTel sites, loading, unloading, transportation, and all other associated activities and costs.

(iii) The quoted rate will not be considered for the evaluation of any SOR.

Annexure – 13 - Undertaking on Exit Management and Transition

(On the Partner's Letterhead)

TENDER Ref. No:

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Dear Sir/Madam,

Sub: Undertaking on Exit Management and Transition

1. I/We hereby undertake that at the time of completion of our engagement with RCIL, either at the End of Contract or termination of Contract before planned Contract Period for any reason, we shall successfully carry out the exit management and transition of this Project to RCIL or to an agency identified by RCIL to the satisfaction of RCIL. I/We further undertake to complete the following as part of the Exit management and transition:
 - a. We undertake to complete the updating of all Project documents and other artefacts and handover the same to RCIL before transition.
 - b. We undertake to design standard operating procedures to manage system (including application and IT systems), document the same and train Customer personnel on the same.
 - c. If RCIL decides to take over the operations and maintenance of the Project on its own or identifies or selects any other agency for providing operations & maintenance services on this Project, then we shall provide necessary handholding and transition support, which shall include but not be limited to, conducting detailed walkthrough and demonstrations for the IT Infrastructure, handing over all relevant documentation, addressing the queries/clarifications of the new agency with respect to the working / performance levels of the ICT components , conducting Training sessions etc.
2. I/We also understand that the Exit management and transition will be considered complete on the basis of approval from RCIL.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Place:

Designation:

Date

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Annexure 14: Declaration – Exclusivity of Participation (Not Applicable)

EOI Ref No.

Date:

To,

The Principal Executive Director
RailTel Corporation of India Ltd. 19th Floor,
Aurora Waterfront, opposite NALBAN, Sector V,
Bidhannagar, Kolkata, West Bengal 700091

Sub: Exclusive pre-RFP partnership arrangement with Empaneled business associate of RailTel for participating in the end customer RFP.

We, M/s <Name and Address of Partner> will not submit directly or indirectly our bids and techno-commercial solution/association with any other organization once selected in this EOI for pre-bid teaming arrangement (before and after submission of bid to end customer organization by RailTel).

Note: This undertaking has to be given with this EOI Response.

Yours sincerely,

(Seal & Signature of the Authorized signatory of the System Integrator)

Name:

Designation:

Place:

Date:

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Annexure 15

Integrity Pact Program

RailTel has adopted Integrity Pact Program and for implementation thereof all TENDER/EOIs relating to procurement of OFC, quad cable, pre-fab shelters, electronic equipment and its installation and/or commissioning etc and other item(s) or activity/activities proposed to be carried out or required by the Company for the value exceeding Rs. 15 crores at a time including for repair and maintenance of cable/network and any other items required for special works assigned to RailTel will be covered under the Integrity Pact Program and the vendors are required to sign the IP document and submit the same to RailTel/REL before or along with the bids.

- a) Only those vendors who have purchased the EOI/TENDER document and signed the IP document can send their grievances, if any, to the Independent External Monitors (IEMNs) through the nodal officer, i.e. Chief Vigilance Officer (CVO), RailTel.

Name of IEMs and contact details:

1. Shri. Dinesh Kumar Batra E-Mail: dineshbatra11@gmail.com M.No. +91-9871294565
2. Shri. Mukesh Mittal E-Mail: mukeshmittal6045@gmail.com M.No. +91-8586889911
3. Shri Bipin Bihari Mallick E-Mail: bipinmallick@gmail.com M.No. +91-9968150900

Name & contact details of Nodal Officer (IP) in RailTel:

Chief Vigilance Officer, RailTel Corporation of India Ltd
6th Floor, Office Block Tower-2, NBCC Complex, East Kidwai Nagar, New Delhi-110023
E-Mail: cvo@railtelindia.com

- b) If the order, with total value equal to or more than the threshold value, is split to more than one vendor and even if the value of PO placed on any/each vendor(s) is less than the threshold value, IP document having been signed by the vendors at bid stage itself, the Pact shall continue to be applicable.
- c) Partner of Indian origin shall submit the Integrity Pact (in 2 copies) on a non-judicial stamp paper of Rs. 100/- duly signed by the person signing the bid. If the partner is a partnership or a consortium, the Integrity Pact shall be signed by all the partners or consortium members.
- d) Partner of foreign origin may submit the Integrity Pact on its company's letterhead, duly signed by the person signing the bid.
- e) The 'Integrity Pact' shall be submitted by the Partner duly signed in all pages along with the Bid in a separate envelope, duly superscripted with 'Integrity Pact'. Response received without signed copy of the Integrity Pact document will be liable to be rejected. Proforma for signing the Integrity Pact is available in Annexure-15 of this EOI document.
- f) One copy of the Integrity Pact shall be retained by RailTel and the 2nd copy will be issued to the representative of the partner during bid opening. If the Partners representative is not present during the Bid opening, the 2nd copy shall be sent to the partner by post/courier.
- g) The Integrity Pact is applicable in this EOI vide CVC circular no. 10/05/09 dated 18.05.09 and revised guideline of CVC circular no. 015/VGL/091 dated 13.01.17 or the latest updated from time to time shall be followed.

RAILTEL

PROFORMA FOR “SIGNING THE INTEGRITY PACT”

RailTel Corporation of India Limited, hereinafter referred to as “The Principal”.

AND

....., hereinafter referred to as “The Partner/ Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s forThe Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relations with its Partner(s) and /or Contractor(s).

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the EOI process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - a. No employee of the Principal, personally or through family members, will in connection with the EOI for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b. The Principal will during the EOI process treat all Partner(s) with equity and reason. The Principal will in particular, before and during the EOI process, provide to all Partner(s) the same information and will not provide to any Partner(s) confidential/additional information through which the Partner(s) could obtain an advantage in relation to the process or the contract execution.
 - c. The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2- Commitments of the Partner(s) / Contractor(s)

1. The Partner(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the EOI process and during the contract execution.
 - a. The Partner(s)/contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of the Principal's employees involved in the EOI process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage during EOI process or during the execution of the contract.
 - b. The Partner(s)/Contractor(s) will not enter with other Partners into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
 - c. The Partner(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Partner(s) /Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship,

regarding plans, technical proposals and business details, including information contained or transmitted electronically.

- d. The Partner(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the partner(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further details as mentioned in the "Guidelines on Indian Agents of Foreign Suppliers" shall be disclosed by the Partner(s)/Contractor(s). Further, as mentioned in the Guidelines all the payments made to the Indian agent/representative have to be in Indian Rupees only.
- e. The Partner(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
2. The Partner(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3: Disqualification from EOI process and exclusion from future contracts

If the Partner(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Partner(s)/Contractor(s) from the EOI process or take action as per the procedure mentioned in the "Guidelines on Banning of business dealings". Copy of the "Guidelines on Banning of business dealings" is annexed and marked as Annex-"B".

Section 4: Compensation for Damages

1. If the Principal has disqualified the Partner(s) from the EOI process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to be terminated the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5: Previous Transgression

1. The Partner declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the anti-corruption approach or with any other public sector enterprise in India that could justify his exclusion from the EOI process.
2. If the partner makes incorrect statement on this subject, he can be disqualified from the EOI process for action can be taken as per the procedure mentioned in "Guidelines on Banning of business dealings".

Section 6: Equal treatment of all Partners / Contractors/Subcontractors.

1. The Partner(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
2. The Principal will enter into agreements with identical conditions as this one with all partners, contractors and subcontractors.
3. The Principal will disqualify from the EOI process all partners who do not sign this Pact or violate its provisions.

Section 7: Criminal charges against violation by Partner(s) / Contractor(s) / Sub contractor(s)

If the Principal obtains knowledge of conduct of a Partner, Contractor or Subcontractor, or of an employee or a representative or an associate of a Partner, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8: Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, RailTel.
3. The Partner(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Partner(s)/Contractor(s)/Subcontractor(s) with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the CMD, RailTel within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitled to compensation on the same terms as being extended to provided to Independent Directors on the RailTel Board.
8. If the Monitor has reported to the CMD, RailTel, a substantiated suspicion of an offence under relevant IPC/PC Act, and the CMD, RailTel has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word 'Monitor' would include both singular and plural.

Section 9: Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 10 months after the last payment under the contract, and for all other Partners 6 months after the contract has been awarded.

If any claim is made / lodged by either party during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged / determined by CMD of RailTel.

Section 10: Other Provisions

1. This agreement is subject to Indian Law, Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing.
3. If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of the Principal)
(Office Seal)

Place _____

Date _____

Witness 1:
(Name & Address)

Witness 2:
(Name & Address)

(For & On behalf of Partner/Contractor)
(Office Seal)

Annexure-A to the Integrity Pact

GUIDELINES FOR INDIAN AGENTS OF FOREIGN SUPPLIERS

1.0 There shall be compulsory registration of agents for all global (Open) Tender and Limited Tender. An agent who is not registered with RailTel Units shall apply for registration in the prescribed Application -Form.

1.1 Registered agents will file an authenticated Photostat copy duly attested by a Notary Public/ Original certificate of the principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/ retainer-ship being paid by the principal to the agent before the placement of order by RailTel.

1.2 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 DISCLOSURE OF PARTICULARS OF AGENTS/ REPRESENTATIVES IN INDIA, IF ANY.

2.1 Tenderers of Foreign nationality shall furnish the following details in their offer:

2.1.1 The name and address of the agents/representatives in India, if any and the extent of authorization and authority given to commit the Principals. In case the agent/representative be a foreign Company, it shall be confirmed whether it is real substantial Company and details of the same shall be furnished.

2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/representatives in India.

2.1.3 Confirmation of the Tenderer that the commission/ remuneration if any, payable to his agents/ representatives in India, may be paid by RAILTEL in Indian Rupees only.

2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:

2.2.1 The name and address of the foreign principals indicating their nationality as well as their status, i.e, whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically

authorizing the agent to make an offer in India in response to tender either directly or through the agents/representatives.

2.2.2 The amount of commission /remuneration included in the price(s) quoted by the tenderer for himself.

2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/ remuneration, if any, reserved for the Tenderer in the quoted price(s), may be paid by RAILTEL in India in equivalent Indian Rupees on satisfactory completion of the Project or supplies of Stores and Spares in case of operation items.

2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/ remuneration, if any payable to the agents/representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.

2.4 Failure to furnish correct and detailed information as called for in paragraph 2.0 above will render the concerned tender liable to rejection or in the event of a contract materializing, the same liable to termination by RAILTEL. Besides this there would be a penalty of banning business dealings with RAILTEL or damage or payment of a named sum.

Annexure-B to the Integrity Pact

GUIDELINES ON BANNING OF BUSINESS DEALINGS

S. No.	Description
1	Introduction
2	Scope
3	Definitions
4	Initiation of Banning / Suspension
5	Suspension of Business Dealings
6	Ground on which Banning of Business Dealings can be initiated
7	Banning of Business Dealings
8	Removal from List of approved Agencies-Suppliers/ Contractors etc.
9	Procedure for issuing Show-cause Notice
10	Appeal against the Decision of the Competent Authority
11	Review of the Decision by the Competent Authority
12	Circulation of the names of Agencies with whom Business Dealings have been banned

1. Introduction

1.1 RailTel Corporation of India Ltd (RAILTEL), being a Public Sector Enterprise, under the administrative control of the Ministry of Railways and therefore being an authority deemed to be 'the state' within the meaning of Article 12 of Constitution of India, has to ensure preservation of rights enshrined in Chapter III of the Constitution. RAILTEL has also to safeguard its commercial interests. RAILTEL deals with Agencies, who have a very high degree of integrity, commitments and sincerity towards the work undertaken. It is not in the interest of RAILTEL to deal with Agencies who commit deception, fraud or other misconduct in the execution of contracts awarded / orders issued to them. In order to ensure compliance with the constitutional mandate, it is incumbent on RAILTEL to observe principles of natural justice before banning the business dealings with any Agency.

1.2 Since banning of business dealings involves civil consequences for an Agency concerned, it is incumbent that adequate opportunity of hearing is provided and the explanation, if tendered, is considered before passing any order in this regard keeping in view the facts and circumstances of the case.

2. Scope

2.1 The General Conditions of Contract (GCC) of RAILTEL generally provide that RAILTEL reserves its rights to remove from list of approved suppliers/ contractors or to ban business dealings if any Agency has been found to have committed misconduct and also to suspend business dealings pending investigation. If such provision does not exist in any GCC, the same may be incorporated.

2.2 Similarly, in case of sale of material there is a clause to deal with the Agencies/ customers/ buyers, who indulge in lifting of material in unauthorized manner. If such a stipulation does not exist in any Sale Order, the same may be incorporated.

2.3 However, absence of such a clause does not in any way restrict the right of Company (RAILTEL) to take action / decision under these guidelines in appropriate cases.

2.4 The procedure of (i) Removal of Agency from the List of approved suppliers/ contractors; (ii) Suspension and (iii) Banning of Business Dealing with Agencies, has been laid down in these guidelines.

2.5 These guidelines apply to Corporate Office, all Regions and Subsidiaries of RAILTEL.

2.6 It is clarified that these guidelines do not deal with the decision of the Management to avoid entertaining any particular Agency due to its poor / inadequate performance or for any other reason.

2.7 The banning shall be with prospective effect, i.e., future business dealings.

3. Definitions

In these Guidelines, unless the context otherwise requires:

i) 'Party / Contractor / Supplier / Purchaser / Customer' shall mean and include a public limited company or a private limited company, a firm whether registered or not, an individual, a cooperative society or an association or a group of persons engaged in any commerce, trade, industry, etc. 'Party / Contractor / Supplier / Purchaser / Customer' in the context of these guidelines is indicated as 'Agency'.

ii) 'Inter-connected Agency' shall mean two or more companies having any of the following features:

- a) If one is a subsidiary of the other;
- b) If the Director(s), Partner(s), Manager(s) or Representative(s) are common;
- c) If management is common;
- d) If one owns or controls the other in any manner;

iii) 'Competent Authority' and 'Appellate Authority' shall mean the following:

- a) For Company (entire RAILTEL) wide Banning: The Director shall be the 'Competent Authority' for the purpose of these guidelines. CMD, RAILTEL shall be the 'Appellate Authority' in respect of such cases except banning of business dealings with Foreign Suppliers of imported items.

- b) For banning of business dealings with Foreign Suppliers of imported items, RAILTEL Directors Committee (RDC) shall be the 'Competent Authority'. The Appeal against the Order passed by RDC, shall lie with CMD, as First Appellate Authority.
- c) In case the foreign supplier is not satisfied by the decision of the First Appellate Authority, it may approach Railway Board as Second Appellate Authority.
- d) For RailTel Regions only: Any officer not below the rank of General Manager appointed or nominated by the Executive Director of concerned Region shall be the 'Competent Authority' for the purpose of these guidelines. The Executive Director of the concerned Region shall be the 'Appellate Authority' in all such cases.
- e) For Corporate Office only: For procurement of items / award of contracts, to meet the requirement of Corporate Office only, Concerned Group General Manager / General Manager shall be the 'Competent Authority' and concerned Director shall be the 'Appellate Authority'.
- f) CMD, RAILTEL shall have overall power to take suo-moto action on any information available or received by him and pass such order(s) as he may think appropriate, including modifying the order(s) passed by any authority under these guidelines.
- iv) 'Investigating Department' shall mean any Department or Unit investigating into the conduct of the Agency and shall include the Vigilance Department, Central Bureau of Investigation, the State Police or any other department set up by the Central or State Government having powers to investigate.
- v) 'List of approved Agencies - Parties / Contractors / Suppliers/ Purchaser/ Customers' shall mean and include list of approved /registered Agencies - Parties/ Contractors / Suppliers / Purchasers / Customers, etc.

4. Initiation of Banning / Suspension

Action for banning / suspension of business dealings with any Agency should be initiated by the department having business dealings with them after noticing the irregularities or misconduct on their part. Besides the concerned department, Vigilance Department of each Region / Unit/ Corporate Office may also be competent to initiate such action.

5. Suspension of Business Dealings

5.1 If the conduct of any Agency dealing with RAILTEL is under investigation by any department (except Foreign Suppliers of imported items), the Competent Authority may consider whether the allegations under investigation are of a serious nature and whether pending investigation, it would be advisable to continue business dealing with the Agency. If the Competent Authority, after consideration of the matter including the recommendation of the Investigating Department, if any, decides that it would not be in the interest to continue business dealings pending investigation, it may suspend business dealings with the Agency. The order to this effect may indicate a brief of the charges under investigation. If it is decided that inter-connected Agencies would also come within the ambit of the order of suspension, the same should be specifically stated in the order. The order of suspension would operate for a period not more than six months and may be communicated to the Agency as also to Investigating Department. The Investigating Department may ensure that their investigation is completed and whole process of final order is over within such period.

5.2 The order of suspension shall be communicated to all the departmental heads within the unit/ region/ Corporate Office as the case may be. During the period of suspension, no business dealing may be held with the agency.

5.3 As far as possible, the existing contract(s) with the Agency may continue unless the Competent Authority, having regard to the circumstances of the case, decides otherwise.

5.4 If the gravity of the misconduct under investigation is very serious and it would not be in the interest of RAILTEL, as a whole, to deal with such an Agency pending investigation, the Competent Authority may send his recommendation to Chief Vigilance Officer (CVO), RAILTEL Corporate Office along with the material available. If Corporate Office considers that depending upon the gravity of the misconduct, it would not be desirable for all the units/ regions of RAILTEL to have any dealings with the Agency concerned, an order suspending business dealings may be issued to all the units/ Regions / Corporate Office by the Competent Authority of the Corporate Office, copy of which may be endorsed to the Agency and all concerned. Such an order would operate for a period of six months from the date of issue.

5.5 for suspension of business dealings with Foreign Suppliers of imported items, following shall be the procedure:

- i) Suspension of the foreign suppliers shall apply throughout the Company/ Regions including Subsidiaries.
- ii) Based on the complaint forwarded by ED / GGM / GM or received directly by Corporate Vigilance, if gravity of the misconduct under investigation is found serious and it is felt that it would not be in the interest of RAILTEL to continue to deal with such agency, pending investigation, Corporate Vigilance may send such recommendation on the matter to Executive Director / GGM / GM, to place it before a committee consisting of the following:
 1. ED / GGM/ GM (viz. Representative of Corporate Finance).
 2. ED / GGM/ GM (viz. Representative of Department concerned with procurement of imported items)- Convener of the Committee.
 3. ED / GGM/ GM (to be nominated on case-to-case basis).
 4. ED / GGM/ GM ((viz. Representative of Corporate Law).

The committee shall expeditiously examine the report and give its comments / recommendations within twenty-one days of receipt of the reference by ED/ GGM/ GM.

iii) The comments / recommendations of the Committee shall then be placed by ED/GGM/GM, before RAILTEL Directors' Committee (RDC) constituted for import of items. If RDC opines that it is a fit case for suspension, RDC may pass necessary orders which shall be communicated to the foreign supplier by the ED/GGM/GM.

5.6 If the Agency concerned asks for detailed reasons of suspension, the Agency may be informed that its conduct is under investigation. It is not necessary to enter into correspondence or argument with the Agency at this stage.

5.7 It is not necessary to give any show-cause notice or personal hearing to the Agency before issuing the order of suspension. However, if investigations are not complete in six months time, the Competent Authority may extend the period of suspension by another three months, during which period the investigations must be completed.

6. Ground on which Banning of Business Dealings can be initiated

6.1 If the security consideration, including questions of loyalty of the Agency to the State, so warrants;

6.2 If the Director / Owner of the Agency, proprietor or partner of the firm, is convicted by a Court of Law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises or RAILTEL, during the last five years;

6.3 If there is strong justification for believing that the Directors, Proprietors, Partners, owner of the Agency have been guilty of malpractices such as bribery, corruption, fraud, substitution of tenders, interpolations, etc;

6.4 If the Agency continuously refuses to return / refund the dues of RAILTEL without showing adequate reason and this is not due to any reasonable dispute which would attract proceedings in arbitration or Court of Law;

- 6.5 If the Agency employs a public servant dismissed / removed or employs a person convicted for an offence involving corruption or abetment of such offence;
- 6.6 If business dealings with the Agency have been banned by the Govt. or any other public sector enterprise;
- 6.7 If the Agency has resorted to Corrupt, fraudulent practices including misrepresentation of facts;
- 6.8 If the Agency uses intimidation/ threatening or brings undue outside pressure on the Company (RAILTEL) or its official in acceptance/ performances of the job under the contract;
- 6.9 If the Agency indulges in repeated and / or deliberate use of delay tactics in complying with contractual stipulations;
- 6.10 Wilful indulgence by the Agency in supplying sub-standard material irrespective of whether pre-dispatch inspection was carried out by Company (RAILTEL) or not;
- 6.11 Based on the findings of title investigation report of CBI / Police against the Agency for malafide/ unlawful acts or improper conduct on his part in matters relating to the Company (RAILTEL) or even otherwise;
- 6.12 Established litigant nature of the Agency to derive undue benefit;
- 6.13 Continued poor performance of the Agency in several contracts;
- 6.14 If the Agency misuses the premises or facilities of the Company (RAILTEL), forcefully occupies tampers or damages the Company's properties including land, water resources, etc.
- (Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealing for any good and sufficient reason).

7. Banning of Business Dealings

7.1 Normally, a decision to ban business dealings with any Agency should apply throughout the Company including subsidiaries. However, the Competent Authority of the Region/ Unit except Corporate Office can impose such ban Region-wise only if in the particular case banning of business dealings by respective Region/ Unit will serve the purpose and achieve its objective and banning throughout the Company is not required in view of the local conditions and impact of the misconduct/ default to beyond the Region/ Unit. Any ban imposed by Corporate Office shall be applicable across all Regions/ Units of the Company including Subsidiaries.

7.2 For Company-wide banning, the proposal should be sent by ED of the Region/ Unit to the CVO/RailTel setting out the facts of the case and the justification of the action proposed alongwith all the relevant papers and documents except for banning of business dealings with Foreign Suppliers of imported items.

The Corporate Vigilance shall process the proposal of the concerned Region/ Unit for a prima-facie view in the matter by the Competent Authority nominated for Company-wide banning.

The CVO shall get feedback about that agency from all other Regions/ Units. Based on this feedback, a prima-facie decision for banning / or otherwise shall be taken by the Competent Authority.

If the prima-facie decision for Company-wide banning has been taken, the Corporate Vigilance shall issue a show-cause notice to the agency conveying why it should not be banned throughout RAILTEL.

After considering the reply of the Agency and other circumstances and facts of the case, a final decision for Company-wide banning shall be taken by the competent Authority.

7.3 There will be a Standing Committee in each Region/ Unit to be appointed by Chief Executive Officer for processing the cases of "Banning of Business Dealings" except for banning of business dealings with foreign suppliers. However, for procurement of items/ award of contracts, to meet the requirement of Corporate Office only, the committee shall be consisting of General Manager/ Dy. General Manager each from Operations, Finance, Law & Project. Member from Project shall be the convener of the committee. The functions of the committee shall, inter-alia include:

- i) To study the report of the investigating Agency and decide if a prima-facie case for Company-wide / Region wise banning exists, if not, send back the case to the Competent Authority.
- ii) To recommend for issue of show-cause notice to the Agency by the concerned department.
- iii) To examine the reply to show-cause notice and call the Agency for personal hearing, if required.
- iv) To submit final recommendation to the Competent Authority for banning or otherwise.

7.4 If the Competent Authority is prima-facie of view that action for banning business dealings with the Agency is called for, a show- cause notice may be issued to the Agency and an enquiry held accordingly.

7.5 Procedure for Banning of Business Dealings with Foreign Suppliers of imported items.

- i) Banning of the agencies, shall apply throughout the Company including subsidiaries.
- ii) Based on the complaint forwarded by Executive Director or received directly by Corporate Vigilance, an investigation shall be carried out by Corporate Vigilance. After investigation, depending upon the gravity of the misconduct, Corporate Vigilance may send their report to Executive Director/ GGM/ GM, to be placed before a Committee consisting of the following:
 1. ED / GGM/ GM (viz. Representative of Corporate Finance).
 2. ED / GGM/ GM (viz. Representative of Department concerned with procurement of imported items)- Convener of the Committee.
 3. ED / GGM/ GM (to be nominated on case to case basis).
 4. ED / GGM/ GM ((viz. Representative of Corporate Law).

The Committee shall examine the report and give its comments/ recommendations within 21 days of receipt of the reference by ED.

iii) The comments/recommendations of the Committee shall be placed by ED/ GGM/ GM before RAILTEL Directors' Committee (RDC) constituted for import of foreign items. If RDC opines that it is a fit case for initiating banning action, it will direct ED/ GGM/ GM to issue show-cause notice to the agency for replying within a reasonable period.

iv) On receipt of the reply or on expiry of the stipulated period, the case shall be submitted by ED to RDC for consideration & decision.

v) The decision of the RDC shall be communicated to the agency by ED/GGM/GM concerned.

8. Removal from List of Approved Agencies – Suppliers/ Contractors, etc.

8.1 If the Competent Authority decides that the charge against the Agency is of a minor nature, it may issue a show-cause notice as to why the name of the Agency should not be removed from the list of approved Agencies - Suppliers / Contractors, etc.

8.2 The effect of such an order would be that the Agency would not be disqualified from competing in Open Tender Enquiries but LTE (Limited Tender Enquiry) may not be given to the Agency concerned.

8.3 Past performance of the Agency may be taken into account while processing for approval of the Competent Authority for awarding the contract.

9. Show-cause Notice

9.1 In case where the Competent Authority decides that action against an Agency is called for, a show-cause notice has to be issued to the Agency. Statement containing the imputation of misconduct or misbehavior

may be appended to the show-cause notice and the Agency should be asked to submit within 15 days a written statement in its defence.

9.2 If the Agency requests for inspection of any relevant document in possession of RAILTEL, necessary facility for inspection of documents may be provided.

9.3 The Competent Authority may consider and pass all appropriate speaking order:

- a) For exonerating the Agency if the charges are not established.
- b) For removing the Agency from the list of approved Suppliers/ Contactors, etc.
- c) For banning the business dealing with the Agency.

9.4 If it decides to ban business dealings, the period for which the ban would be operative may be mentioned. The order may also mention that the ban would extend to the interconnected Agencies of the Agency.

10. Appeal against the Decision of the Competent Authority

10.1 The agency may file an appeal against the order of the Competent Authority banning business dealing, etc. The appeal shall lie to Appellate Authority. Such an appeal shall be preferred within one month from the date of receipt of the order banning business dealing, etc.

10.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the Agency as well as the Competent Authority.

11. Review of the Decision by the Competent Authority

Any petition / application filed by the Agency concerning the review of the banning order passed originally by Chief Executive / Competent Authority under the existing guidelines either before or after filing of appeal before the Appellate Authority or after disposal of appeal by the Appellate Authority, the review petition can be decided by the Chief Executive / Competent Authority upon disclosure of new facts / circumstances or subsequent development necessitating such review. The Competent Authority may refer the same petition to the Standing Committee for examination and recommendation.

12. Circulation of the names of Agencies with whom Business Dealings have been banned

12.1 Depending upon the gravity of misconduct established, the Competent Authority of the Corporate Office may circulate the names of Agency with whom business dealings have been banned, to the Government Departments, other Public Sector Enterprises, etc. for such action as they deem appropriate.

12.2 If Government Departments or a Public Sector Enterprise request for more information about the Agency with whom business dealings have been banned, a copy of the report of the Inquiring authority together with a copy of the order of the Competent Authority / Appellate Authority may be supplied.

12.3 If business dealings with any Agency have been banned by the Central or State Government or any other Public Sector Enterprise, RAILTEL may, without any further enquiry or investigation, issue an order banning business dealing with the Agency and its interconnected Agencies.

12.4 Based on the above, Regions / Units may formulate their own procedure for implementation of the guidelines.

ANNEXURE-16: PROFORMA FOR BANK GUARANTEE**BANK GUARANTEE BOND**

(On Stamp Paper of Rs. One Hundred)

(To be used by approved Scheduled Banks)

In consideration of the RailTel Corporation of India Limited, Eastern Region, 19th Floor, Aurora Waterfront Building, Plot no. 34/1, Block -GN, Sector - V, Salt Lake City, Kolkata -700091, West Bengal.

(Herein after called RailTel) having agreed to exempt..... (Herein after called "the said Contractor(s)") from the demand, under the terms and conditions of an Agreement No. dated made between and for (herein after called "the said Agreement") of Performance Guarantee for the due fulfillment by the said Contractor (s) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for Rs.....(Rs only). We,(indicate the name of the Bank) here in after referred to as "the Bank") at the request of Contractor(s) do hereby Undertake to pay the RailTel an amount not exceeding Rs..... Against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.

1. We, Bank **and our local branch at Kolkata (indicate detail address of local Kolkata Branch with code no.)** do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. 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.....

2. We, bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal.

The payment so made by us under this Bond shall be a valid discharge of our liability for payment there under and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.

We, Bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the (1) We shall be discharged from all liability under this Guarantee thereafter.

We, We, (indicate the name of Bank) Further agree with the RailTel that the RailTel 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 Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).

We, theBank further agree that this guarantee shall be invokable at our place of business at/Kolkata (indicate detailed address of local Kolkata Branch with code no.) The branch at New Delhi is being advised accordingly.

(indicate the name of Bank) lastly undertaken not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated the day of 20XX

for..... (Indicate the name of the Bank)

Witness

1. Signature & Name

2. Signature & Name

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ANNEXURE-17: PROFORMA FOR CONTRACT AGREEMENT

ERP LOA No. _____ dated. _____ (EOI No. _____) for the work of "-----Name of the Work-----"

This AGREEMENT is made at _____ on this _____ day of _____ two thousand and twenty _____, by and between RailTel Corporation of India Limited (A Government of India Undertaking) having its Registered and Corporate office at Plate-A, 6th Floor, Office Block Tower-2, East Kidwai Nagar, New Delhi-110023, acting in the premises through Principal Executive Director /Eastern Region, 19th Floor, Aurora Waterfront Building, Plot No. 34/1, Block -GN, Sector- V, Salt Lake City, Kolkata -700091, West Bengal. (hereinafter referred to as 'RailTel', which expression should unless repugnant to the context or meaning thereof include its successors and permitted assignees) of the ONE PART; AND

M/s. ----- Name & Address of Partner----- (hereafter referred to as 'Contractor', which expression should unless repugnant to the context or meaning thereof include its successor and permitted assignees) of the OTHER PART.

WHEREAS in response to a call for Tender by RailTel for the work of "-----Name of the Work-----" as per tender papers at Annexure-B issued by RailTel hereto, the Contractor has submitted a Tender.

AND WHEREAS the said Tender of the Contractor has been accepted for the work of "-----Name of the Work-----" as per copy of ERP LOA No. _____ dated. _____ (EOI No. _____) complete with enclosures at the accepted rates as per Annexure-A at contract value of Rs. _____ (Rupees _____ (in words)----- Only) including GST duly accepted by the contractor.

Now this agreement witnesses that in consideration of premises and the payment to be made by the Purchaser (RailTel) to the Contractor provided for herein, the Contractor shall supply all equipment and materials and execute and perform all works for which the said Tender of the Contractor has been accepted strictly according to the various provisions in Annexure-'A' and 'B' hereto and upon such supply execute and performance to the satisfaction of the purchaser (RailTel) and the purchaser (RailTel) shall pay to the Contractor at the rates accepted as per Annexure-A and in terms of the provisions therein, and in terms of Purchase Order conditions that contractor has submitted Performance Guarantee Amount for Rs. _____ (Rupees _____ (in words)----- Only) vide PBG No – _____ dt. _____, issued by ----- Name of Bank & Branch-----, claim expiry date Upto _____, included in Annexure-C.

IN WITNESS whereof both the parties have hereunto set and subscribed their respective hands and/or seals on the day and year respectively mentioned against their respective signatures.

Signed and delivered by Shri/Smt. _____ or and on behalf of RailTel Corporation of India Ltd, Eastern Region, Kolkata.

The contract within named in the presence of :

1. Signature :
Date :

Name in Capital Letters :
Address :

2. Signature :
Date :
Name in Capital Letters :
Address :

Signed and delivered by Shri/Smt. _____ for and on behalf of M/s. _____ Name
& Address of Partner _____, the contract within named in the presence of:

1. Signature :
Date :
Name in Capital Letters :
Address :

2. Signature :
Date :
Name in Capital Letters :
Address :

Annexure A : ERP LOA No. _____ with all enclosures.

Annexure B : EOI No. _____ dt. _____.

Annexure C : Performance Guarantee Amount for _____ vide PBG No –
_____ dt. _____, claim expiry date Upto _____.

Annexure D : Firms Offer Letter.

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ANNEXURE-18: STANDING INDEMNITY BOND

(For on Account Payments and Stores supplied by RailTel)

(On Non-Judicial Stamp paper of Rs. 100/-)

We, M/s _____ hereby undertake that we hold at our Stores Depot/s at _____ for and on behalf of RailTel Corporation of India Limited in the premises through PED/RGM/RailTel/----- Region or his successor hereinafter referred to as the Purchaser all materials for which On Account payments have been made to us against the Contract _____ for vide letter of Acceptance/PO of Tender No. _____ and the materials handed over to us by the Purchaser for all purpose of execution of the said Contract, until such time the materials are duly erected or otherwise handed over to him.

We shall be entirely responsible for the safe custody and protection of said materials against all risk till they are duly delivered as erected equipment to the purchaser or as he may direct otherwise and shall indemnify the Purchaser against any loss, damage or deterioration whatsoever in respect of the said materials while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any engineer authorized by the Regional General Manager (RGM)/Principal Executive Director (PED)-----Region (whose address will be intimated in due course).

Should any loss, damage or deterioration of materials occur or surplus materials disposed off and refund becomes due, the purchaser shall be entitled to recover from us the full cost as per prices included in the Contract (as applicable) and also compensation for such loss or damage, if any, along with the amount to be refunded without prejudice to any other remedies available to him by deduction from any sum due or any sum which at any time hereafter becomes due to us under the said or any other Contract.

In the event of any loss, damage or deterioration as aforesaid the assessment of such loss or damage and the assessment of such compensation therefore would be made by the RGM/PED/RailTel/----- Region, or his authorized nominee and the said assessments shall be final and binding upon us.

Dated this day of, [year]

for and on behalf of M/s. _____

(Contractor)

Signature of witness

Name and witness in Block letters Address

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ANNEXURE-19: LAND BORDER CERTIFICATE

Certificate to be given by the Tenderer:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that I am not from such a country or, if from such a country, I have been registered with the Competent Authority. I hereby certify that I fulfil all requirements in this regard and I am eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

Dated this day of, [year]

for and on behalf of M/s. _____
(Contractor)..

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ANNEXURE-20: SOR

SOR-A:

				Total for ECL		CIL HQ		Total qty	Total amount, Rs
S No	Item description	Unit	Unit Rate, excl GST	Qty	Amount, Rs	Qty	Amount, Rs		
Carrier Grade Switching Solution									
1	Type-1 with 5 years warranty	Nos	5,40,000.00	42	2,26,80,000.00			42	2,26,80,000.00
2	Type-2 with 5 years warranty	Nos	95,000.00	96	91,20,000.00			96	91,20,000.00
3	Type-3 with 5 years warranty	Nos	1,04,500.00	-	-	4	4,18,000.00	4	4,18,000.00
Carrier Grade Routing Solution									
4	Type-1 with 5 years warranty	Nos	14,50,000.00	21	3,04,50,000.00			21	3,04,50,000.00
5	Type-2 with 6 years warranty	Nos	15,95,000.00	-	-	2	31,90,000.00	2	31,90,000.00
6	Type-3 with 5 years warranty	Nos	15,50,000.00	21	3,25,50,000.00			21	3,25,50,000.00
7	Type-4 with 6 years warranty	Nos	17,05,000.00	-	-	2	34,10,000.00	2	34,10,000.00
8	Type-5 with 5 years warranty	Nos	53,00,000.00	1	53,00,000.00			1	53,00,000.00
9	Type-6 with 5 years warranty	Nos	4,35,000.00	3	13,05,000.00			3	13,05,000.00
10	Type-7 with 6 years warranty	Nos	4,78,500.00	-	-	2	9,57,000.00	2	9,57,000.00
11	Type-8 with 5 years warranty	Nos	8,50,000.00	17	1,44,50,000.00			17	1,44,50,000.00
12	Type-9 with 5 years warranty	Nos	1,45,000.00	248	3,59,60,000.00			248	3,59,60,000.00
13	Type-10 with 6 years warranty	Nos	1,59,500.00	-	-	1	1,59,500.00	1	1,59,500.00
Switch									

14	Supply, Installation and Commissioning of Switch 8 port 10/100/1000 Base TX + 2 X 1 G, with 5 year warranty	Nos	75,000.00	248	1,86,00,000.00		248	1,86,00,000.00
15	Supply, Installation and Commissioning of fiber switch with 5 year warranty	Nos	34,865.67	15	5,22,984.98		15	5,22,984.98
Other items								
16	Supply, Installation and Commissioning of Power plant, (Warranty: Charger 5 years & Battery 2 years)	Nos	4,07,759.79	2	8,15,520.00	-	2	8,15,520.00
17	Supply, Installation and Commissioning of Rack-19" 9U	Nos	7,380.04	247	18,22,869.18	-	247	18,22,869.18
18	Supply, Installation and Commissioning of UPS-6.0 KVA online UPS with single phase input & single Phase Output, SNMP card with 5 years Warranty with 4 hrs backup and isolation Transformer	Nos	1,90,324.80	17	32,35,521.60	-	17	32,35,521.60
19 (a)	Supply, Installation and Commissioning of Battery bank 12 V-65 AH (16 Nos) with 2 years warranty against item	Set	1,06,200.00	15	15,93,000.00	-	15	15,93,000.00

	no 19. The OEM should be reputed like Exide / Amraraja or equivalent.								
19 (b)	Supply, Installation and Commissioning of Battery bank 12 V-65 AH (16 Nos) with 2 years warranty against item no 19, as a replacement of item no 20 (a) after 2 years of warranty period. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	1,06,200.00	15	15,93,000.00		-	15	15,93,000.00
20	Supply, Installation and Commissioning of Customized Battery Rack for item no 3	Nos	9,450.00	15	1,41,750.00		-	15	1,41,750.00
21	Supply, Installation and Commissioning of Online UPS-System 2 KVA with single phase Input & Single Phase Output, SNMP card with 5 years Warranty with 4 hrs backup and isolation Transformer	Set	62,730.00	252	1,58,07,960.00		-	252	1,58,07,960.00

22 (a)	Supply, Installation and Commissioning of Battery Set (6 Nos of 12 V-42AH Battery) with 2 years warranty for 2KVA UPS against Item no 22. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	37,710.00	233	87,86,430.00	-	233	87,86,430.00
22 (b)	Supply, Installation and Commissioning of Battery Set (6 Nos of 12 V-42AH Battery) with 2 years warranty for 2KVA UPS against Item no 22, as a replacement of item no 23 (a) after 2 years of warranty period. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	37,710.00	233	87,86,430.00	-	233	87,86,430.00
23	Supply, Installation and Commissioning of Customised battery rack	Nos	3,960.00	233	9,22,680.00	-	233	9,22,680.00
24	Supply, installation & commissioning of Single Phase Surge protector Class C Device for switching surge protection as per standard IEC 61643. Warranty: 5 years	Nos	15,300.00	248	37,94,400.00	-	248	37,94,400.00

25	Supply, Installation and Commissioning of Desktop PC-with 5yrs onsite support	Set	53,405.48	3	1,60,216.44	-	3	1,60,216.44
26	Supply, Installation and Commissioning of Desktop PC (27 inch) -with 5yrs onsite support	Set	1,08,000.00	-	-	2	2,16,000.00	2,16,000.00
27	Supply, Installation & Commissioning of Laser printer color: with 8 MB internal memory & 5yrs onsite support	Nos	11,587.39	1	11,587.39	-	1	11,587.39
28	Supply, Installation & Commissioning of Laser Printer B&W with Scanner with 5yrs onsite support	Nos	16,186.20	2	32,372.40	-	2	32,372.40
29	Supply, Installation and Commissioning of Laser Printer B&W with Scanner with 6yrs onsite support	Nos	17,778.54	-	-	1	17,778.54	17,778.54
30	Supply, Installation & Commissioning of LED Wall Mounted Monitor (75 inch)-with 5yrs onsite support	Nos	2,52,000.00	1	2,52,000.00	-	1	2,52,000.00
31	Supply, Installation and Commissioning of LED Wall Mounted Monitor (75 inch)-with 6 yrs onsite support	Nos	2,64,600.00	-	-	2	5,29,200.00	5,29,200.00
32	Supply, Installation and Commissioning of Hardware at each Area HQ	Nos	5,79,083.45	13	75,28,084.85	-	13	75,28,084.85

	with 5 years warranty								
33	Supply, Installation and Commissioning of Net Flow Analyzer	Nos	96,67,116.90	1	96,67,116.90		1	96,67,116.90	
34	Supply, Installation and Commissioning of Forti Manager with 5 years warranty (Make: Fortinet)	Nos	25,61,351.10	1	25,61,351.10		1	25,61,351.10	
35	Supply, Installation and Commissioning of Server for NMS with 6 year warranty	No	15,57,000.00	-	-	1	15,57,000.00	1	15,57,000.00
36	Supply of Line Card for MX480/960 series router MPC7E-MRATE with 5 years warranty (Make: Juniper, Card: Line card)	Nos	85,00,000.00	1	85,00,000.00		1	85,00,000.00	
37	Supply of Line Card for MX480/960 series router MPC2E with 5 years warranty (Make: Juniper, Card: Line card)	Nos	43,00,000.00	1	43,00,000.00		1	43,00,000.00	
38	Supply of 4X10G MIC card for MPC2E with 5 years warranty (Make:	Nos	31,50,000.00	4	1,26,00,000.00		4	1,26,00,000.00	

	Juniper, Card: Line card)								
39	Supply of Dual Rate 10G Pluggable Transceiver for 10GE & OC192, 1310nm for 10 Km Transmission, from same OEM of item no 1, 4, 5,6 & 7	Nos	17,067.42	16	2,73,078.73			16	2,73,078.73
40	Supply of 100G QSFP + LR optics (SM Distance Supported up to 10 Kms) from same OEM of item no 1, 4, 5, 6 & 7.	Nos	2,75,000.00	18	49,50,000.00			18	49,50,000.00
41	Supply of 40G QSFP + LR optics (SM Distance Supported up to 10 Kms) from same OEM of item no 1, 4, 5, 6 & 7.	Nos	2,15,000.00	40	86,00,000.00			40	86,00,000.00
42	Supply of 40G QSFP + LR optics (SM Distance Supported up to 40 Kms)	Nos	47,200.00	182	85,90,400.00			182	85,90,400.00
43	Supply of 40G QSFP LR +MPO to LC*4 (SM breakout cable 10 mtr) Patch chord.	Nos	7,506.07	6	45,036.42			6	45,036.42

44	Supply of 10 G SFP - 80Km UD.	Nos	16,757.86	50	8,37,893.16			50	8,37,893.16
45	Supply of 10 G SFP - 40Km UD.	Nos	7,855.25	71	5,57,723.01			71	5,57,723.01
46	Supply of 10 G SFP - 20Km UD.	Nos	1,350.00	126	1,70,100.00			126	1,70,100.00
47	Supply of 10 G SFP - 80Km BD.	Nos	20,065.09	172	34,51,194.79			172	34,51,194.79
48	Supply of 10 G SFP - 40Km BD.	Pair	4,300.00	342	14,70,600.00			342	14,70,600.00
49	Supply of 10 G SFP - 20Km BD.	Pair	8,814.67	260	22,91,814.20			260	22,91,814.20
50	Supply of 10 G SFP - 10Km with same OEM of item no 4-11.	Nos	5,500.00	20	1,10,000.00			20	1,10,000.00
51	Supply of 1000Base-LX Transceiver from same OEM of item no 4-11.	Nos	4,500.00	50	2,25,000.00			50	2,25,000.00
52	Supply of 1 G SFP - 20Km UD.	Nos	825.00	1,308	10,79,100.00	20	16,500.00	1,328	10,95,600.00
53	Supply of Laptop with 5 years warranty	Nos	68,288.09	20	13,65,761.87		-	20	13,65,761.87
54	Supply of Laptop with 6 years warranty	Nos	75,006.02	-	-	2	1,50,012.05	2	1,50,012.05
55	Supply of AC TO DC converter 10A 230V i/p 48v o/p, Warranty: 1 year	Nos	2,627.13	20	52,542.60	6	15,762.78	26	68,305.38
56	Supply of Chairs with 5 years warranty	Nos	12,150.00	10	1,21,500.00	5	60,750.00	15	1,82,250.00
57	Supply of Cabinet with 5 years warranty	Nos	37,800.00	6	2,26,800.00		-	6	2,26,800.00
58	Supply of Optical Power Meter with 5 years warranty	Nos	8,100.00	13	1,05,300.00		-	13	1,05,300.00
59	Supply of Clamp Meter with 5 years warranty	Nos	9,900.00	13	1,28,700.00		-	13	1,28,700.00

60	Supply of Table for NOC with 5 years warranty	Nos	56,430.00	-	-	3	1,69,290.00	3	1,69,290.00
61	Supply of LC TO LC 20 mtr Patch chord	Nos	190.61	361	68,810.21	-	-	361	68,810.21
62	Supply of LC TO LC 10 mtr Patch chord	Nos	150.15	670	1,00,600.50	10	1,501.50	680	1,02,102.00
63	Supply of LC TO SC 10 MTR Patch chord	Nos	148.20	691	1,02,406.20	-	-	691	1,02,406.20
64	Supply of LC TO LC 5 mtr Patch chord	Nos	129.68	758	98,297.44	20	2,593.60	778	1,00,891.04
65	Supply of 5dB attenuator LC-LC	Nos	260.33	452	1,17,669.16	-	-	452	1,17,669.16
66	Supply of Patch Chord (LC-FC 10Mtr.)	Nos	157.95	494	78,027.30	-	-	494	78,027.30
67	Supply of Patch Chord (LC-SC 20Mtr.)	Nos	190.13	200	38,026.00	-	-	200	38,026.00
68	Supply of Patch Chord (LC-SC 5Mtr.)	Nos	129.68	250	32,420.00	-	-	250	32,420.00
69	Supply of SC-SC 0 dB coupler	Nos	69.23	250	17,307.50	-	-	250	17,307.50
70	LAN Cabling (LAN Cabling at all customer site mentioned under SOR, as per site requirement with supply & installation of UTP CAT6 Cable, I/O Box, RJ45, Patch Panel, Patch Cord with Laying of CAT6 Cable in casing Capping including supply of Casing Capping. Typically but not limited to 5 I/O box per	Nos	21,609.66	167	36,08,812.63	-	-	167	36,08,812.63

	site. Detailed Specification for CAT 6 UTP Cable, Patch Panel)							
71	Electrical works (Electrical fitting like 2 nos LED of 25 watts of standard make, fixing switch board with 3 (15/5 Amp) socket & 5 electrical switches and fuse and A/C indicator (if required) Restoration of floor, walls, door/window fittings of existing customer sites (if required)	Nos	4,633.71	167	7,73,829.00	-	167	7,73,829.00
72	Extension of AC Mains from Main Source to UPS Input point with 16 A dual pole MCB and UPS to Rack with provision of two nos distribution board with 3 nos 15 A socket and fuse in each board.	Nos	8,860.01	167	14,79,621.07	-	167	14,79,621.07
73	Maintenance Free Earthing	Nos	25,200.00	167	42,08,400.00	-	167	42,08,400.00
74	Renovation of NOC at the ECL Hq	LS	6,85,350.90	1	6,85,350.90	-	1	6,85,350.90
75	Renovation of NOC at the CIL HQ Kolkata	LS	50,000.00	-	-	1	50,000.00	50,000.00
76	Security Audit, annually	Nos	11,25,000.00	5	56,25,000.00	-	5	56,25,000.00
77	Integration of GIS mapping	Months	27,000.00	60	16,20,000.00	-	60	16,20,000.00
78	Onsite Manpower support (9	Nos	26,760.00	9	1,44,50,400.00	-	9	1,44,50,400.00

manpower @ Rs 26760/- per month per man, for 5 years)						
Total (Rs), excl GST			33,16,07,797.11		1,09,20,888.47	34,25,28,685.58

Note:

1- Separate PO will be issued for ECL & CIL HQ. Bidder can be participated in either SOR-A or SOR-B or SOR-C or in all three.

If a bidder participated in more than one EOI, the bidder should have minimum cumulative average annual financial turnover during the last 3 years, ending 31st March of the previous financial year of at least 30% of the total advertised value of all the SORs of EOI in which they have participated.

Same will be applicable for technical evaluation.

2- The security audit shall be conducted annually by an STQC or CERT-In empanelled agency. First preference will be STQC. A CERT-In empanelled agency may be engaged only after confirmation/permission from RailTel.

First Year: The scope shall be limited to ECL only. From the 2nd year onwards, it shall also include CIL HQ (tentatively 20 devices of CIL HQ) in addition to ECL. Separate reports and certificates for both entities shall be submitted.

3- Item No. 19 (b) & 22 (b): Batteries are intended for replacement of the initial batteries (item no 19 a & 22 a) after 2 years and shall be supplied, installed, and commissioned as per requirement and after confirmation from RailTel.

Bidder has to quote for the released batteries. Buyback of old batteries (released batteries during initial & replacement installation phase) at the RailTel's accepted rate shall be mandatory for the bidder if RailTel advised. Amount against buyback of batteries shall be deducted from the bidder's invoice.

4- Locations mentioned in ECL's RFP are tentative and may be changed. Some of the locations may be shifted at the discretion of ECL during the contract period of 5 years. Such shifted locations will be made ready by the bidder at the accepted rate (passive works: LAN & Electrical cabling, Earthing etc), but at extra cost within the admissible balance or variation of quantity, within 15 days from the date of information. Shifting of active devices (Router, switch, firewall, rack, UPS with battery & rack, surge protector etc) including dismantling from old location, transportation, Installation & commissioning at new location shall be done by bidder within 15 days from the date of information, on free of cost.

5- Item no 1-13 includes supply, installation and commissioning with all licenses for 5 years.

6- For item no 70-73, list of locations will be provided later and as per RailTel's requirement.

7- The bidder shall obtain monthly/quarterly SLA sign-off from each Area Office.

8- The quantities mentioned are tentative and subject to change. Datacom equipment, UPS, batteries, and other items shall be supplied only after obtaining confirmation from the Executive-in-Charge of the project. The balance quantities may be required at a later stage of the project, and the bidder shall supply the same in accordance with RailTel's requirements.

RAILTEL

SOR-B:

S/N	Items description	Unit	Unit Rate, excl GST	Qty	Total Rs
1	Supply, Installation, Testing and Commissioning of Video Conferencing endpoints with connectivity and required licenses. With 02 Nos. microphones at each location. Warranty: 5 years	Nos	10,32,089.03	23	2,37,38,048
2	Supply, Installation, Testing and Commissioning of Display units (65 inch) with 5 years warranty	Nos	1,00,800.00	6	6,04,800
3	Supply, Installation, Testing and Commissioning of Display units (75 inch) with 5 years warranty	Nos	2,25,000.00	16	36,00,000
4	Supply, Installation and Commissioning of Switch 8 port 10/100/1000 Base TX + 2 X 1 G, with 5 years warranty	Nos	75,000.00	23	17,25,000
5	Supply, Installation and Commissioning of server for storage of Video recording (min for 6 months). Warranty 5 years	Nos	15,57,000.00	1	15,57,000
6	Supply, Installation and Commissioning of Online UPS- System 2 KVA with single phase Input & Single-Phase Output, SNMP card with 5 years Warranty with 4 hrs backup and isolation Transformer	Set	62,730.00	23	14,42,790
7 (a)	Supply, Installation and Commissioning of battery set (6 Nos of 12 V-42AH Battery) for 2KVA UPS against Item 7 with 2yrs Warranty. The OEM should be reputed like Exide / Amraraaja or equivalent.	Set	37,710.00	23	8,67,330
7 (b)	Supply, Installation and Commissioning of battery set (6 Nos of 12 V-42AH Battery) for 2KVA UPS against Item 7 with 2yrs Warranty, as a replacement of item no 7 (a) after 2 years of warranty period. The OEM should be reputed like Exide / Amraraaja or equivalent.	Set	37,710.00	23	8,67,330
8	Supply, Installation and Commissioning of customized Battery Rack with space for mounting UPS and Isolation Transformer	Nos	3,960.00	23	91,080
9	Supply, installation & commissioning of Single-Phase Surge protector Class C Device for switching surge protection as per standard IEC 61643. Warranty: 5 years	Nos	15,300.00	23	3,51,900
10	Minimum 05 licenses for Cloud-based video conferencing Services (10 concurrent VC sessions) against item no 1	Monthly	21,772.00	60	13,06,320
Total Rs, excl GST					3,61,51,598

Note:

1- Separate PO will be issued for SOR-B. Bidder can be participated in either SOR-A or SOR-B or SOR-C or in all three.

If a bidder participated in more than one EOI, the bidder should have minimum cumulative average annual financial turnover during the last 3 years, ending 31st March of the previous financial year of at least 30% of the total advertised value of all the SORs of EOI in which they have participated.

Same will be applicable for technical evaluation.

2- Item No. 7 (b): Batteries are intended for replacement of the initial batteries (item no 7 a) after 2 years and shall be supplied, installed, and commissioned as per requirement and after confirmation from RailTel.

Buyback of old batteries (released batteries during initial & replacement installation phase) at the RailTel's accepted rate shall be mandatory for the bidder. Amount against buyback of batteries shall be deducted from the bidder's invoice.

3- Locations mentioned in ECL's RFP are tentative and may be changed. Some of the locations may be shifted at the discretion of ECL during the contract period of 5 years. Such shifted locations will be made ready by the bidder as per customer timeline, on free of cost. It includes shifting of active devices (Router, switch, firewall, rack, UPS with battery & rack, surge protector, display etc) including dismantling from old location, transportation, Installation & commissioning at new location.

4- All LAN and electrical cabling required to commission the services shall be done by bidder at his own cost. Work shall be executed as per instruction of site in-charge of RailTel and to the complete satisfaction of the customer.

5- Bidder shall provide, free of cost, shifting of the total VC endpoints and associated equipment, wherever technically feasible, during the contract period.

6- Bidder shall generate and submit detailed reports related to the availability and performance of associated equipment and systems. The reports shall also include Video Conferencing (VC) performance metrics, such as details of VC sessions conducted, audio and video latency, packet loss, jitter, call quality parameters and any other performance indicators as specified by ECL from time to time, whenever required by ECL.



SOR-C:

S/N	Item description	Unit	Unit Rate, excl GST	Qty	Amount, Rs
Carrier Grade Switching Solution					
1	Type-1 with 5 years warranty	Nos	5,40,000.00	57	3,07,80,000.00
2	Type-2 with 5 years warranty	Nos	95,000.00	49	46,55,000.00
Carrier Grade Routing Solution					
3	Type-1 with 5 years warranty	Nos	14,50,000.00	6	87,00,000.00
4	Type-2 with 5 years warranty	Nos	53,00,000.00	1	53,00,000.00
5	Type-3 with 5 years warranty	Nos	4,35,000.00	3	13,05,000.00
6	Type-4 with 5 years warranty	Nos	8,50,000.00	17	1,44,50,000.00
7	Type-5 with 5 years warranty	Nos	1,45,000.00	254	3,68,30,000.00
8	Type-6 with 5 years warranty	Nos	5,35,500	11	58,90,500.00
Switch					
9	Supply, Installation and Commissioning of Switch 8 port 10/100/1000 Base TX + 2 X 1 G, with 5 year warranty	Nos	75,000.00	254	1,90,50,000.00
10	Supply, Installation and Commissioning of fiber switch with 5 year warranty	Nos	34,865.67	15	5,22,984.98
Other items					
11	Supply, Installation and Commissioning of Power plant, (Warranty: Charger 5 years & Battery 2 years)	Nos	4,07,759.79	13	53,00,877.25
12	Supply, Installation and Commissioning of Rack-19" 9U	Nos	7,380.04	251	18,52,389.33

13	Supply, Installation and Commissioning of UPS-6.0 KVA online UPS with single phase input & single-Phase Output, SNMP card with 5 years Warranty with 4 hrs backup and isolation Transformer	Nos	1,90,324.80	19	36,16,171.20
14 (a)	Supply, Installation and Commissioning of Battery bank 12 V-65 AH (16 Nos) with 2 years warranty against item no 19. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	1,06,200.00	17	18,05,400.00
14 (b)	Supply, Installation and Commissioning of Battery bank 12 V-65 AH (16 Nos) with 2 years warranty against item no 19, as a replacement of item no 20 (a) after 2 years of warranty period. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	1,06,200.00	17	18,05,400.00
15	Supply, Installation and Commissioning of Customized Battery Rack for item no 3	Nos	9,450.00	17	1,60,650.00
16	Supply, Installation and Commissioning of Online UPS- System 2 KVA with single phase Input & Single Phase Output, SNMP card with 5 years Warranty with 4 hrs backup and isolation Transformer	Set	62,730.00	254	1,59,33,420.00
17 (a)	Supply, Installation and Commissioning of Battery Set (6 Nos of 12 V-42AH Battery) with 2 years warranty for 2KVA UPS against Item no 22. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	37,710.00	235	88,61,850.00
17 (b)	Supply, Installation and Commissioning of Battery Set (6 Nos of 12 V-42AH Battery) with 2 years warranty for 2KVA UPS against Item no 22, as a replacement of item no 23 (a) after 2 years of warranty period. The OEM should be reputed like Exide / Amraraja or equivalent.	Set	37,710.00	235	88,61,850.00

18	Supply, Installation and Commissioning of Customised battery rack	Nos	3,960.00	235	9,30,600.00
19	Supply, installation & commissioning of Single Phase Surge protector Class C Device for switching surge protection as per standard IEC 61643. Warranty: 5 years	Nos	15,300.00	252	38,55,600.00
20	Supply, Installation and Commissioning of Desktop PC-with 5yrs onsite support	Set	53,405.48	3	1,60,216.44
21	Supply, Installation & Commissioning of Laser printer color: with 8 MB internal memory & 5yrs onsite support	Nos	11,587.39	1	11,587.39
22	Supply, Installation & Commissioning of Laser Printer B&W with Scanner with 5yrs onsite support	Nos	16,186.20	2	32,372.40
23	Supply, Installation & Commissioning of LED Wall Mounted Monitor (75 inch)-with 5yrs onsite support	Nos	2,52,000.00	2	5,04,000.00
24	Air condition 1.5-ton split RailTel's POP locations	Nos	46,950.00	12	5,63,400.00
25	3KVA automatic Voltage Stabilizer input range 110-280VAC	Nos	9,500.00	12	1,14,000.00
26	Supply of Line Card for MX480/960 series router MPC7E-MRATE with 5 years warranty (Make: Juniper, Card: Line card)	Nos	85,00,000.00	4	3,40,00,000.00
27	Supply of 4X10G MIC card for MPC2E with 5 years warranty (Make: Juniper, Card: Line card)	Nos	31,50,000.00	4	1,26,00,000.00
28	Supply of Dual Rate 10G Pluggable Transceiver for 10GE & OC192, 1310nm for 10 Km Transmission, from same OEM of item no 1, 3-6	Nos	17,067.42	16	2,73,078.73
29	Supply of 100G QSFP + LR optics (SM Distance Supported up to 10 Kms) from same OEM of item no 1, 3-6.	Nos	2,75,000.00	12	33,00,000.00

30	Supply of 40G QSFP + LR optics (SM Distance Supported up to 10 Kms) from same OEM of item no 1, 3-6.	Nos	2,15,000.00	20	43,00,000.00
31	Supply of 40G QSFP + LR optics (SM Distance Supported up to 40 Kms)	Nos	47,200.00	136	64,19,200.00
32	Supply of 40G QSFP LR +MPO to LC*4 (SM breakout cable 10 mtr) Patch chord.	Nos	7,506.07	4	30,024.28
33	QSFP28 25G BIDI 40 KM	Pair	36,610.16	30	10,98,304.80
34	Supply of 10 G SFP - 80Km UD.	Nos	16,757.86	50	8,37,893.16
35	Supply of 10 G SFP - 40Km UD.	Nos	7,855.25	84	6,59,841.30
36	Supply of 10 G SFP - 20Km UD.	Nos	1,350.00	124	1,67,400.00
37	Supply of 10 G SFP - 80Km BD.	Nos	20,065.09	188	37,72,236.17
38	Supply of 10 G SFP - 40Km BD.	Pair	4,300.00	405	17,41,500.00
39	Supply of 10 G SFP - 20Km BD.	Pair	8,814.67	264	23,27,072.88
40	Supply of 10 G SFP - 10Km with same OEM of item no 1, 3-6.	Nos	5,500.00	20	1,10,000.00
41	Supply of 1000Base-LX Transceiver from same OEM of item no 1, 3-8.	Nos	4,500.00	50	2,25,000.00
42	Supply of 1 G SFP - 20Km UD.	Nos	825.00	1248	10,29,600.00
43	Supply of Laptop with 5 years warranty	Nos	68,288.09	15	10,24,321.40
44	Supply of AC TO DC converter 10A 230V i/p 48v o/p, Warranty: 1 year	Nos	2,627.13	20	52,542.60
45	Supply of Chairs with 5 years warranty	Nos	12,150.00	10	1,21,500.00
46	Supply of Cabinet with 5 years warranty	Nos	37,800.00	6	2,26,800.00
47	Supply of Optical Power Meter with 5 years warranty	Nos	8,100.00	13	1,05,300.00
48	Supply of Clamp Meter with 5 years warranty	Nos	9,900.00	13	1,28,700.00
49	Supply of LC TO LC 20 mtr Patch chord	Nos	190.61	200	38,122.00

50	Supply of LC TO LC 10 mtr Patch chord	Nos	150.15	569	85,435.35
51	Supply of LC TO SC 10 MTR Patch chord	Nos	148.20	543	80,472.60
52	Supply of LC TO LC 5 mtr Patch chord	Nos	129.68	360	46,684.80
53	Supply of 5dB attenuator LC-LC	Nos	260.33	306	79,660.98
54	Supply of Patch Chord (LC-FC 10Mtr.)	Nos	157.95	494	78,027.30
55	Supply of Patch Chord (LC-SC 20Mtr.)	Nos	190.13	200	38,026.00
56	Supply of Patch Chord (LC-SC 5Mtr.)	Nos	129.68	500	64,840.00
57	Supply of SC-SC 0 dB coupler	Nos	69.23	250	17,307.50
58	FMS SC type 24F(Bi-directional)	Nos	4,536.00	12	54,432.00
59	FMS SC type 48F(Bi-directional)	Nos	7,890.48	14	1,10,466.72
60	CAT6 Cable 100 mtr	mtr	37.61	610	22,942.10
61	LAN Cabling (LAN Cabling at all customer site mentioned under SOR, as per site requirement with supply & installation of UTP CAT6 Cable, I/O Box, RJ45, Patch Panel, Patch Cord with Laying of CAT6 Cable in casing Capping including supply of Casing Capping. Typically but not limited to 5 I/O box per site. Detailed Specification for CAT 6 UTP Cable, Patch Panel)	Nos	21,609.66	175	37,81,689.88
62	Electrical works (Electrical fitting like 2 nos LED of 25 watts of standard make, fixing switch board with 3 (15/5 Amp) socket & 5 electrical switches and fuse and A/C indicator (if required) Restoration of floor, walls, door/window fittings of existing customer sites (if required)	Nos	4,633.71	175	8,10,898.65
63	Extension of AC Mains from Main Source to UPS Input point with 16 A dual pole MCB and UPS to Rack with provision of two nos distribution board with 3 nos 15 A socket and fuse in each board.	Nos	8,860.01	175	15,50,501.12

64	Maintenance Free Earthing	Nos	25,200.00	175	44,10,000.00
65	Renovation of NOC at the MCL HQ	LS	6,85,350.90	1	6,85,350.90
66	Security Audit, annually	Nos	11,25,000.00	5	56,25,000.00
67	Integration of GIS mapping	Months	27,000.00	60	16,20,000.00
Total (Rs), excl GST					27,56,03,442.22

Note:

1- Separate PO will be issued for SOR-C. Bidder can be participated in either SOR-A or SOR-B or SOR-C or in all three.

If a bidder participated in more than one EOI, the bidder should have minimum cumulative average annual financial turnover during the last 3 years, ending 31st March of the previous financial year of at least 30% of the total advertised value of all the SORs of EOI in which they have participated.

Same will be applicable for technical evaluation.

2- The security audit shall be conducted annually by an STQC or CERT-In empanelled agency. First preference will be STQC. A CERT-In empanelled agency may be engaged only after confirmation/permission from RailTel.

3- Item No. 17 (b): Batteries are intended for replacement of the initial batteries (item no 17 a) after 2 years and shall be supplied, installed, and commissioned as per requirement and after confirmation from RailTel.

Bidder has to quote for the released batteries. Buyback of old batteries (released batteries during initial & replacement installation phase) at the RailTel's accepted rate shall be mandatory for the bidder if RailTel advised. Amount against buyback of batteries shall be deducted from the bidder's invoice.

4- Locations mentioned in ECL's RFP are tentative and may be changed. Some of the locations may be shifted at the discretion of ECL during the contract period of 5 years. Such shifted locations will be made ready by the bidder at the accepted rate (passive works: LAN & Electrical cabling, Earthing etc), but at extra cost within the admissible balance or variation of quantity, within 15 days from the date of information. Shifting of active devices (Router, switch, firewall, rack, UPS with battery & rack, surge protector etc) including dismantling from old location, transportation, Installation & commissioning at new location shall be done by bidder within 15 days from the date of information, on free of cost.

5- Item no 1-8 includes supply, installation and commissioning with all licenses for 5 years.

6- For item no 61-63, list of locations will be provided later and as per RailTel's requirement.

7- The bidder shall obtain monthly/quarterly SLA sign-off from each Area Office.

8- The quantities mentioned are tentative and subject to change. Datacom equipment, UPS, batteries, and other items shall be supplied only after obtaining confirmation from the Executive-in-Charge of the project. The balance quantities may be required at a later stage of the project, and the bidder shall supply the same in accordance with RailTel's requirements on same rate and Terms & conditions.

ANNEXURE-21: Specification**1- For Item no 1 of SOR-A & 1 of SOR-C:**

S. No.	Minimum Technical Specifications	Compliance (Yes / No)
1	Architecture Requirement	
1.1	The Solution should support non-blocking Layer 2 switching and Layer 3 routing	
1.2	Solution should not have any single point of failure like power supplies and fans etc. should have 1:1/N+1 inbuilt level of redundancy	
2	Hardware and Interface Requirement	
2.1	Solution should have 48 x 1G/10/25G (SFP+/SFP28) ports and 8 x 40/100G QSFP+/QSFP28 Ports.	
2.2	Solution should have 16GB RAM and 32GB Internal Flash/ Storage	
2.3	Solution should support minimum 4Tbps of switching capacity and minimum 2Bpps Forwarding Rate	
2.4	Solution should have 32MB Buffer Size	
3	Layer2 Features	
3.1	The Solution should support 802.3ad based standard port/link aggregation, Jumbo frames, storm control	
3.2	The Solution should support at least 64K ARP entries	
3.3	The Solution should support 64 LAG groups and up to 32 ports per LAG.	
3.4	Solution should support IEEE Standards of Ethernet: IEEE 802.1ak, 802.1ad, 802.1p, 802.1Q, 802.1Q-in-Q, 802.1s, 802.1w, IEEE 802.1x, 802.3ad, 802.3x	
3.5	The Solution should support minimum 256K MAC addresses	
3.6	The Solution should support EVPN Multihoming (ESI-LAG)	
4	L3 Features	
4.1	The Solution should support 256K IPv4 and 128K IPv6 routes and 64K multicast routes	
4.2	The Solution should support Layer3 routing protocols like Static, RIP, OSPF, RIPnG, OSPFv3 , BGP, MBGP, VxLAN from day 1	
4.3	The Solution should support IGMP v1, v2, v3, IGMP snooping, PIM SM, PIM- SSM, PIM-DM, Multicast Source Discovery Protocol (MSDP)	
4.4	The Solution should support for L3VPN, BGP, VXLAN	
5	Availability	
5.1	Solution should provide gateway level of redundancy in IPv4 and IPv6 using HSRP/ VRRP	
5.2	Solution should support for BFD For Fast Failure Detection	
6	Security	
6.1	The Solution should support Control plane denial-of-service (DoS) protection	
6.2	The Solution should support filtering based on source and destination address	
6.3	The Solution should support for various ACL/ filters like port based, Vlan based and routed filters/ACL	
6.4	The Solution should support for external database for AAA using TACACS+ / Radius	
6.5	The Solution should support for Role Based access control (RBAC) for restricting host level network access as per policy defined	
6.6	Solution should support MAC limiting	
6.7	Solution should support Proxy ARP, DHCP Snooping, Distributed denial of service (DDoS) Protection	
6.8	Solution Should support IP Source Guard, DAI and IPv6 Security feature like IPv6 RA Guard and IPv6 Neighbour Discovery Inspection	
7	Virtualization Features	

7.1	The Solution should support Network Virtualisation using Virtual Over Lay Network using VXLAN	
7.2	The Solution should support VXLAN & EVPN for supporting Spine - Leaf architecture to optimise the east - west traffic flow.	
7.3	The Solution should support stacking of minimum 2 switches.	
7.4	The Solution should support minimum 400Gbps of stacking/Virtual Chassis/VSS/vPC/MC-LAG. All accessories should be provided to achieve the stacking bandwidth from Day-1.	
8	Quality of Service	
8.1	The Solution should support minimum 8 number of hardware queues per port	
8.2	The Solution system should support 802.1P classification and marking of packet CoS, DSCP etc.	
8.3	The Solution should support for different type of QoS features for real time traffic differential treatment using WRED and SP Queuing	
8.4	The Solution should support Flow control of Ethernet ports to control traffic rates during congestion by allowing congested nodes to pause link operation at the other end for receiving traffic as per IEEE 802.3x	
9	Management	
9.1	Solution should support for embedded RMON/RMON-II for central NMS management and monitoring	
9.2	Solution should provide remote login for administration Telnet, SSHv2	
9.3	Solution should support for management and monitoring status using different type of Industry standard NMS using SNMP V2 and V3	
9.4	Solution should support for basic administrative tools like Ping and traceroute	
9.5	Solution should support central time server synchronization using Network Time Protocol NTP V4	
10	Certifications	
10.1	Hardware should be ROHS compliant, WEEE, EN 55032 and CISPR	
10.2	The Solution should be IPv6 (IPv6 Logo ready/ USGv6/IPv6 Ready) compliant.	
10.3	Hardware/Hardware's OS/Hardware's Series should be EAL 3/NDPP/ NDcPP certified under Common Criteria.	
11	Warranty	
11.1	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support centre. OEM should have an India toll-free number reflected on the official website.	
11.2	OEM should have not announced the "End of Sale" and "End of Life" for the proposed product.	
12	Power Supply	
12.1	Hardware should have power supply arrangement without any external adaptors with redundant/dual feeds power supply -48 V DC supply and hot swappable.	

2- For Item no 2 of SOR-A & 2 of SOR-C

S. No.	Detailed Technical Specifications	Compliance (Yes / No)
1	Hardware and interface requirements	
1.1	Solution should be a stackable switch with minimum 24 x 10/100/1000Base-T ports and 4 x 1G/10G SFP+ uplink ports	
1.2	Solution should have Out of Band Management Port and and console port.	
2	General requirements	

2.1	Solution should support a long distance stacking upto 10KM with minimum stacking bandwidth of 40Gbps. Stack should support minimum 4 switches in a single stack.	
2.2	Solution should have minimum 4 GB DRAM and 4 GB Flash	
2.3	Solution should support Non-blocking hardware architecture & Modular OS	
3	Performance requirements	
3.1	Solution should support a switching bandwidth of 128 Gbps for line rate performance of a fully populated switch	
3.2	Solution should have minimum 95 Mpps Forwarding rate for line rate performance of a fully populated switch	
4	Layer 2 Switching	
4.1	Solution should support minimum 32K MAC addresses per system	
4.2	Solution should support Jumbo frames – 9,000 bytes & minimum 1K active VLANs.	
4.3	Solution should support IEEE Standards of Ethernet: 802.1ak(MVRP),802.1ab(LLDP), 802.1d(STP), 802.1ad, 802.1Q, 802.1s(MSTP) , 802.1w(RSTP), IEEE 802.1X , 802.3ad(LACP) , 802.3x , L2PT,802.3az	
5	Layer 3 Routing	
5.1	Solution should support IPv4 and IPv6 static routing	
5.2	Solution should support VRRP, RIP v1/v2, OSPF v1/v2, BGP ,IS-IS, RIPng and BFD by adding a license if required in future.	
5.3	Solution should support MLD , MLDv2	
5.4	Solution should support IGMP v1, v2, v3 , IGMP Snooping , MLD snooping	
5.5	Solution should support PIM-SM, PIM-SSM, PIM-DM	
6	Quality of Service (QoS) requirements	
6.1	Solution should support Marking, policing, and shaping	
6.2	Solution should support WRED , 802.1p	
6.3	Solution should support Strict priority (SP), Weighted Deficit Round-Robin (WDRR) or Equivalent	
6.4	Solution shall support minimum eight hardware queues per port.	
6.5	The Solution must support L2-L4 traffic classification, including MAC address (L2), VLAN (L2), IP address (L3), DSCP (L3), and TCP/UDP port (L4) based filtering, prioritization, and access control for efficient traffic management and QoS enforcement.	
7	System Management and Administration	
7.1	Solution should support for embedded RMON/RMON-II for central NMS management and monitoring	
7.2	Solution should be manageable through CLI, SSHv2 and HTTP/HTTPS	
7.3	Solution should support FTP/TFTP/Secure Copy for upgrading the operating System	
7.4	Solution should support TELNET , SSH , DNS , NTP ,SNMPv1 , SNMPv2c and SNMPv3	
7.5	Solution should support IEEE 802.3ah.	
7.6	Solution should support port mirroring and minimum number of monitoring sessions should be 4.	
7.7	Solution should have configuration rollback feature	
8	Security features	
8.1	Solution Should support Port, VLAN and Router based Access control lists (ACLs)	
8.2	Solution support minimum 500 Security Access Control Entries	
8.3	Solution should support MAC limiting	
8.4	Solution should support Proxy ARP , DHCP Snooping	
8.5	Solution Should support IP Source Guard , DAI and IPv6 Security feature like IPv6 RA Guard and IPv6 Neighbour Discovery Inspection ,Control plane DoS protection	
8.6	Solution should support L2-L4 ACL	
8.7	Solution should support RADIUS, TACACS+ authentication , NTP	

9	Environmental Requirements	
9.1	Solution should support operating temperature 0° to 50°C	
9.2	Solution should support relative humidity of 5% to 90% noncondensing	
10	Certifications	
10.1	The Solution should be IPv6 (IPv6 Logo ready/ USGv6) certified or IPv6 Ready	
10.2	Hardware/hardware series should be tested for its Operating System for EAL 3/NDPP/NDcPP or above under Common Criteria Certification	
10.3	Hardware should be UL-60950-1 or better, FCC Part 15, VCCI, EN 55024/55032, EN 300386, CAN/CSA 22.2 No.60950-1 or better, Reduction of Hazardous Substances (ROHS) certified	
11	Warranty	
11.1	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
11.2	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
12	Power Supply	
12.1	Hardware Should have AC power supply arrangement in chassis without any external adaptors with power supply: AC power supply 100 to 240 V AC with 50 to 60 Hz	

3- For Item no 3 of SOR-A:

S. No.	Detailed Technical Specifications	Compliance (Yes / No)
1	Hardware and interface requirements	
1.1	Solution should be a stackable switch with minimum 24 x 10/100/1000Base-T ports and 4 x 1G/10G SFP+ uplink ports	
1.2	Solution should have Out of Band Management Port and console port.	
2	General requirements	
2.1	Solution should support a long distance stacking upto 10KM with minimum stacking bandwidth of 40Gbps. Stack should support minimum 4 switches in a single stack.	
2.2	Solution should have minimum 4 GB DRAM and 4 GB Flash	
2.3	Solution should support Non-blocking hardware architecture & Modular OS	
3	Performance requirements	
3.1	Solution should support a switching bandwidth of 128 Gbps for line rate performance of a fully populated switch	
3.2	Solution should have minimum 95 Mpps Forwarding rate for line rate performance of a fully populated switch	
4	Layer 2 Switching	
4.1	Solution should support minimum 32K MAC addresses per system	
4.2	Solution should support Jumbo frames – 9,000 bytes & minimum 1K active VLANs.	
4.3	Solution should support IEEE Standards of Ethernet: 802.1ak(MVRP), 802.1ab(LLDP), 802.1d(STP), 802.1ad, 802.1Q, 802.1s(MSTP), 802.1w(RSTP), IEEE 802.1X, 802.3ad(LACP), 802.3x, L2PT, 802.3az	
5	Layer 3 Routing	
5.1	Solution should support IPv4 and IPv6 static routing	
5.2	Solution should support VRRP, RIP v1/v2, OSPF v1/v2, BGP, IS-IS, RIPng and BFD by adding a license if required in future.	
5.3	Solution should support MLD, MLDv2	
5.4	Solution should support IGMP v1, v2, v3, IGMP Snooping, MLD snooping	

5.5	Solution should support PIM-SM, PIM-SSM, PIM-DM	
6	Quality of Service (QoS) requirements	
6.1	Solution should support Marking, policing, and shaping	
6.2	Solution should support WRED , 802.1p	
6.3	Solution should support Strict priority (SP), Weighted Deficit Round-Robin (WDRR) or Equivalent	
6.4	Solution shall support minimum eight hardware queues per port.	
6.5	The Solution must support L2-L4 traffic classification, including MAC address (L2), VLAN (L2), IP address (L3), DSCP (L3), and TCP/UDP port (L4) based filtering, prioritization, and access control for efficient traffic management and QoS enforcement.	
7	System Management and Administration	
7.1	Solution should support for embedded RMON/RMON-II for central NMS management and monitoring	
7.2	Solution should be manageable through CLI, SSHv2 and HTTP/HTTPS	
7.3	Solution should support FTP/TFTP/Secure Copy for upgrading the operating System	
7.4	Solution should support TELNET , SSH , DNS , NTP ,SNMPv1 , SNMPv2c and SNMPv3	
7.5	Solution should support IEEE 802.3ah.	
7.6	Solution should support port mirroring and minimum number of monitoring sessions should be 4.	
7.7	Solution should have configuration rollback feature	
8	Security features	
8.1	Solution Should support Port, VLAN and Router based Access control lists (ACLs)	
8.2	Solution support minimum 500 Security Access Control Entries	
8.3	Solution should support MAC limiting	
8.4	Solution should support Proxy ARP , DHCP Snooping	
8.5	Solution Should support IP Source Guard , DAI and IPv6 Security feature like IPv6 RA Guard and IPv6 Neighbour Discovery Inspection ,Control plane DoS protection	
8.6	Solution should support L2-L4 ACL	
8.7	Solution should support RADIUS, TACACS+ authentication , NTP	
9	Environmental Requirements	
9.1	Solution should support operating temperature 0° to 50°C	
9.2	Solution should support relative humidity of 5% to 90% noncondensing	
10	Certifications	
10.1	The Solution should be IPv6 (IPv6 Logo ready/ USGv6) certified or IPv6 Ready	
10.2	Hardware/hardware series should be tested for its Operating System for EAL 3/NDPP/NDcPP or above under Common Criteria Certification	
10.3	Hardware should be UL-60950-1 or better, FCC Part 15, VCCI, EN 55024/55032, EN 300386, CAN/CSA 22.2 No.60950-1 or better, Reduction of Hazardous Substances (ROHS) certified	
11	Warranty	
11.1	The product should be supplied with a 6 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
11.2	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
12	Power Supply	
12.1	Hardware Should have AC power supply arrangement in chassis without any external adaptors with power supply: AC power supply 100 to 240 V AC with 50 to 60 Hz	

4- For Item no 4 of SOR-A & 3 of SOR-C:

S No.	Detailed Technical Specifications	Compliance (Yes/No)
1	The Hardware should be standalone/ modular and 19" rack mountable	
2	The Solution should have 16GB RAM and 32GB Flash/ SSD	
3	The hardware should have hot swappable Redundant Power Supply	
	Interfaces	
5	The Solution should support minimum 20 x 1/10Gbps SFP+ & 4 x 40/100G Fully loaded ports from day 1.	
	Protocols - IPv4, IPv6, MPLS	
6	The Solution should have flexibility to support both Metro-Ethernet and IP/MPLS features	
7	The Solution should support the following: OSPF, BGP, IS-IS, PIM-SM, NGMVPN, IGMP, MPLS, L2VPN, EVPN-VxLAN, EVPN with Multi-Homing, L3VPN, Segment Routing, SRv6, BGP-LS/LU, VPLS, RSVP, BFD, Link and Node protection, 32 Way ECMP, high precision timing, segment routing, network slicing.	
8	IPv4 Routing, IPv6 Routing Border Gateway Protocol, Intermediate System-to-Intermediate System [IS-IS], Open Shortest Path First [OSPF], IGMP, PIM SSM, OSPFv3 for IPv6, PTP Transparent and Primary, IEEE 1588v2 boundary clock, support for any overlay, underlay, PTP.	
	Performance	
9	The Solution should have min performance of 300 Gbps Full Duplex	
10	The Solution should have 500k IPv4 RIB, 500K IPv6 RIB, 8K Multicast routes, 150k MAC and 100 MPLS VRF, 5 label stack depth	
	Equipment shall support	
10	MPLS OAM, Ethernet OAM protocols - CFM (IEEE 802.1ag), Link OAM (IEEE 802.3ah), ITU Y.1731	
	QOS Features	
	Solution shall support the Traffic Classification using various parameters:	
11	IP Precedence, 802.1p, MPLS EXP, DSCP, WRED, Priority queuing, Traffic Conditioning: Committed Access Rate/Rate limiting, Q-in-Q, 4k VLAN	
12	Solution shall support Strict Priority Queuing or Low Latency Queuing to support real time application like Voice and Video with minimum delay and jitter	
13	Solution should support 32k VoQ or 32k Hardware Queues.	
	Security	
14	Solution support Access Control List to filter traffic based on Source & Destination IP Subnet, Source & Destination Port, Protocol Type (IP, UDP, TCP, ICMP etc.), Port Range	
15	The Solution shall support IETF Netflow-v9 or sFlow or equivalent feature.	
16	The Solution must support multiple multi-level privilege levels for remote access (e.g. console or telnet), secure boot, temper proof design, cryptographic digital identity and device attestation.	
	Debug, Alarms & Diagnostics	
17	Display of input and output error statistics on all interfaces	
18	Display of Input and Output data rate statistics on all interfaces	
19	Should support PCEP, Secure boot, Zero Touch Provisioning (ZTP), TWAMP and Netconf, telemetry support	
	Management	
20	Solution shall support latest version of Secure Shell for secure connectivity	
21	Telemetry and SNMP	
22	Event and system history logging functions shall be available	
23	Operating Temperature -20 to + 60 degrees, Relative Humidity: 5% to 90% non-condensing, automated monitoring, diagnosis and remediation of service.	

	Certification	
24	The product offered should be CE/MEF 2.0 or higher compliant	
	Warranty	
25	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
26	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
	Power Supply	
27	Hardware should have power supply arrangement without any external adaptors with redundant/dual feeds power supply -48 V DC supply and hot swappable	

5- For Item no 5 of SOR-A:

S No.	Detailed Technical Specifications	Compliance (Yes/No)
1	The Hardware should be standalone/ modular and 19" rack mountable	
2	The Solution should have 16GB RAM and 32GB Flash/ SSD	
3	The hardware should have hot swappable Redundant Power Supply	
	Interfaces	
5	The Solution should support minimum 20 x 1/10Gbps SFP+ & 4 x 40/100G Fully loaded ports from day 1.	
	Protocols – IPv4, IPv6, MPLS	
6	The Solution should have flexibility to support both Metro-Ethernet and IP/MPLS features	
7	The Solution should support the following: OSPF, BGP, IS-IS, PIM-SM, NGMVPN, IGMP, MPLS, L2VPN, EVPN-VxLAN, EVPN with Multi-Homing, L3VPN, Segment Routing, SRv6, BGP-LS/LU, VPLS, RSVP, BFD, Link and Node protection, 32 Way ECMP, high precision timing, segment routing, network slicing.	
8	IPv4 Routing, IPv6 Routing Border Gateway Protocol, Intermediate System-to-Intermediate System [IS-IS], Open Shortest Path First [OSPF], IGMP, PIM SSM, OSPFv3 for IPv6, PTP Transparent and Primary, IEEE 1588v2 boundary clock, support for any overlay, underlay, PTP.	
	Performance	
9	The Solution should have min performance of 300 Gbps Full Duplex	
10	The Solution should have 500k IPv4 RIB, 500K IPv6 RIB, 8K Multicast routes, 150k MAC and 100 MPLS VRF, 5 label stack depth	
	Equipment shall support	
10	MPLS OAM, Ethernet OAM protocols - CFM (IEEE 802.1ag), Link OAM (IEEE 802.3ah), ITU Y.1731	
	QOS Features	
	Solution shall support the Traffic Classification using various parameters:	
11	IP Precedence, 802.1p, MPLS EXP, DSCP, WRED, Priority queuing, Traffic Conditioning: Committed Access Rate/Rate limiting, Q-in-Q, 4k VLAN	
12	Solution shall support Strict Priority Queuing or Low Latency Queuing to support real time application like Voice and Video with minimum delay and jitter	
13	Solution should support 32k VoQ or 32k Hardware Queues.	
	Security	
14	Solution support Access Control List to filter traffic based on Source & Destination IP Subnet, Source & Destination Port, Protocol Type (IP, UDP, TCP, ICMP etc.), Port Range	
15	The Solution shall support IETF Netflow-v9 or sFlow or equivalent feature.	

16	The Solution must support multiple multi-level privilege levels for remote access (e.g. console or telnet), secure boot, temper proof design, cryptographic digital identity and device attestation.	
	Debug, Alarms & Diagnostics	
17	Display of input and output error statistics on all interfaces	
18	Display of Input and Output data rate statistics on all interfaces	
19	Should support PCEP, Secure boot, Zero Touch Provisioning (ZTP), TWAMP and Netconf, telemetry support	
	Management	
20	Solution shall support latest version of Secure Shell for secure connectivity	
21	Telemetry and SNMP	
22	Event and system history logging functions shall be available	
23	Operating Temperature -20 to + 60 degrees, Relative Humidity: 5% to 90% non-condensing, automated monitoring, diagnosis and remediation of service.	
	Certification	
24	The product offered should be CE/MEF 2.0 or higher compliant	
	Warranty	
25	The product should be supplied with a 6 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
26	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
	Power Supply	
27	Hardware should have power supply arrangement without any external adaptors with redundant/dual feeds power supply -48 V DC supply and hot swappable	

6- For Item no 6 of SOR-A:

S No.	Detailed Technical Specifications	Compliance (Yes/No)
1	The Hardware should be standalone/ modular and 19" rack mountable	
2	The Solution should have 16GB RAM and 32GB Flash/ SSD	
3	The hardware should have hot swappable Redundant Power Supply	
	Interfaces	
5	The Solution should support minimum 20 x 1/10Gbps SFP+ & 4 x 40/100G Fully loaded ports from day 1.	
	Protocols - IPv4, IPv6, MPLS	
6	The Solution should have flexibility to support both Metro-Ethernet and IP/MPLS features	
7	The Solution should support the following: OSPF, BGP, IS-IS, PIM-SM, NGMVPN, IGMP, MPLS, L2VPN, EVPN-VxLAN, EVPN with Multi-Homing, L3VPN, Segment Routing, SRv6, BGP-LS/LU, VPLS, RSVP, BFD, Link and Node protection, 32 Way ECMP, high precision timing, segment routing, network slicing.	
8	IPv4 Routing, IPv6 Routing Border Gateway Protocol, Intermediate System-to-Intermediate System [IS-IS], Open Shortest Path First [OSPF], IGMP, PIM SSM, OSPFv3 for IPv6, PTP Transparent and Primary, IEEE 1588v2 boundary clock, support for any overlay, underlay, PTP.	
	Performance	
9	The Solution should have min performance of 300 Gbps Full Duplex	
10	The Solution should have 500k IPv4 RIB, 500K IPv6 RIB, 8K Multicast routes, 150k MAC and 100 MPLS VRF, 5 label stack depth	

	Equipment shall support	
10	MPLS OAM, Ethernet OAM protocols - CFM (IEEE 802.1ag), Link OAM (IEEE 802.3ah), ITU Y.1731	
	QOS Features	
	Solution shall support the Traffic Classification using various parameters:	
11	IP Precedence, 802.1p, MPLS EXP, DSCP, WRED, Priority queuing, Traffic Conditioning: Committed Access Rate/Rate limiting, Q-in-Q, 4k VLAN	
12	Solution shall support Strict Priority Queuing or Low Latency Queuing to support real time application like Voice and Video with minimum delay and jitter	
13	Solution should support 32k VoQ or 32k Hardware Queues.	
	Security	
14	Solution support Access Control List to filter traffic based on Source & Destination IP Subnet, Source & Destination Port, Protocol Type (IP, UDP, TCP, ICMP etc.), Port Range	
15	The Solution shall support IETF Netflow-v9 or sFlow or equivalent feature.	
16	The Solution must support multiple multi-level privilege levels for remote access (e.g. console or telnet), secure boot, temper proof design, cryptographic digital identity and device attestation.	
	Debug, Alarms & Diagnostics	
17	Display of input and output error statistics on all interfaces	
18	Display of Input and Output data rate statistics on all interfaces	
19	Should support PCEP, Secure boot, Zero Touch Provisioning (ZTP), TWAMP and Netconf, telemetry support	
	Management	
20	Solution shall support latest version of Secure Shell for secure connectivity	
21	Telemetry and SNMP	
22	Event and system history logging functions shall be available	
23	Operating Temperature -20 to + 60 degrees, Relative Humidity: 5% to 90% non-condensing, automated monitoring, diagnosis and remediation of service.	
	Certification	
24	The product offered should be CE/MEF 2.0 or higher compliant	
	Warranty	
25	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
26	OEM should have not announced the "End of Sale" and "End of Life" for the proposed product.	
	Power Supply	
27	Hardware Should have AC power supply arrangement in chassis without any external adaptors with redundant power supply and hot swappable: AC power supply 100 to 240 V AC with 50 to 60 Hz	

7- For Item no 7 of SOR-A:

S No.	Detailed Technical Specifications	Compliance (Yes/No)
1	The Hardware should be standalone/ modular and 19" rack mountable	
2	The Solution should have 16GB RAM and 32GB Flash/ SSD	
3	The hardware should have hot swappable Redundant Power Supply	
	Interfaces	

5	The Solution should support minimum 20 x 1/10Gbps SFP+ & 4 x 40/100G Fully loaded ports from day 1.	
	Protocols – IPv4, IPv6, MPLS	
6	The Solution should have flexibility to support both Metro-Ethernet and IP/MPLS features	
7	The Solution should support the following: OSPF, BGP, IS-IS, PIM-SM, NGMVPN, IGMP, MPLS, L2VPN, EVPN-VxLAN, EVPN with Multi-Homing, L3VPN, Segment Routing, SRv6, BGP-LS/LU, VPLS, RSVP, BFD, Link and Node protection, 32 Way ECMP, high precision timing, segment routing, network slicing.	
8	IPv4 Routing, IPv6 Routing Border Gateway Protocol, Intermediate System-to-Intermediate System [IS-IS], Open Shortest Path First [OSPF], IGMP, PIM SSM, OSPFv3 for IPv6, PTP Transparent and Primary, IEEE 1588v2 boundary clock, support for any overlay, underlay, PTP.	
	Performance	
9	The Solution should have min performance of 300 Gbps Full Duplex	
10	The Solution should have 500k IPv4 RIB, 500K IPv6 RIB, 8K Multicast routes, 150k MAC and 100 MPLS VRF, 5 label stack depth	
	Equipment shall support	
10	MPLS OAM, Ethernet OAM protocols - CFM (IEEE 802.1ag), Link OAM (IEEE 802.3ah), ITU Y.1731	
	QOS Features	
	Solution shall support the Traffic Classification using various parameters:	
11	IP Precedence, 802.1p, MPLS EXP, DSCP, WRED, Priority queuing, Traffic Conditioning: Committed Access Rate/Rate limiting, Q-in-Q, 4k VLAN	
12	Solution shall support Strict Priority Queuing or Low Latency Queuing to support real time application like Voice and Video with minimum delay and jitter	
13	Solution should support 32k VoQ or 32k Hardware Queues.	
	Security	
14	Solution support Access Control List to filter traffic based on Source & Destination IP Subnet, Source & Destination Port, Protocol Type (IP, UDP, TCP, ICMP etc.), Port Range	
15	The Solution shall support IETF Netflow-v9 or sFlow or equivalent feature.	
16	The Solution must support multiple multi-level privilege levels for remote access (e.g. console or telnet), secure boot, temper proof design, cryptographic digital identity and device attestation.	
	Debug, Alarms & Diagnostics	
17	Display of input and output error statistics on all interfaces	
18	Display of Input and Output data rate statistics on all interfaces	
19	Should support PCEP, Secure boot, Zero Touch Provisioning (ZTP), TWAMP and Netconf, telemetry support	
	Management	
20	Solution shall support latest version of Secure Shell for secure connectivity	
21	Telemetry and SNMP	
22	Event and system history logging functions shall be available	
23	Operating Temperature -20 to + 60 degrees, Relative Humidity: 5% to 90% non-condensing, automated monitoring, diagnosis and remediation of service.	
	Certification	
24	The product offered should be CE/MEF 2.0 or higher compliant	
	Warranty	
25	The product should be supplied with a 6 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	

26	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product. Power Supply
27	Hardware Should have AC power supply arrangement in chassis without any external adaptors with redundant power supply and hot swappable: AC power supply 100 to 240 V AC with 50 to 60 Hz

8- For Item no 8 of SOR-A & 4 of SOR-C:

S No.	Detailed Technical Specifications	Compliance (Yes/No)
1	The Hardware should be modular and 19” rack mountable.	
2	The Solution should have minimum 128 GB RAM and 400 GB SSD / Flash storage	
3	The Solution should support hot-swappable redundant power supplies and redundant fans	
4	The Solution should support redundant control plane / redundant Routing Engine architecture for high availability and non-stop operations	
5	The hardware should have minimum 2 free slot available for future interface / line card /RE Card expansion.	
	Interfaces	
6	The Solution should support minimum 16 x 40/50/100G QSFP28 ports fully populated from day 1 with 100G Long Range Transceivers	
	Protocols – IPv4, IPv6, MPLS	
7	The Solution should support both Metro-Ethernet and IP/MPLS services	
8	The Router should support OSPF, OSPFv3, BGP, IS-IS, PIM-SM, PIM-DM, PIM-SSM, IGMP, MPLS, L2VPN, EVPN-VXLAN, EVPN Multihoming, L3VPN, Segment Routing, SRv6, BGP-LS, RSVP, BFD and MPLS-TE	
9	The Solution should support IPv4 and IPv6 routing with overlay and underlay networking capabilities	
10	The Solution should support IEEE 1588v2 boundary clock and PTP features	
	Performance	
11	The Solution should support minimum routing capacity of 4.8 Tbps	
12	The Solution should support line-rate forwarding on all interfaces	
13	The Solution should support minimum 12 Million IPv4 routes and 12 Million IPv6 routes	
14	The Solution should support ECMP, VRF and deep label stack capability	
	Equipment shall support	
15	The Solution should support MPLS OAM and Ethernet OAM protocols including IEEE 802.1ag, IEEE 802.3ah and ITU-T Y.1731	
16	The Solution should support TWAMP and performance monitoring features	
	QoS Features	
17	The Solution shall support traffic classification using IP Precedence, IEEE 802.1p, MPLS EXP and DSCP	
18	The Solution shall support policing, shaping, WRED, priority queuing and hierarchical QoS	
20	The Solution should support minimum 32K hardware queues / VoQs	
	Security	
21	The Solution shall support ACL filtering based on source/destination IP, protocol type and port numbers	
22	The Solution shall support control plane protection features	
23	The Solution shall support MACsec encryption on supported interfaces	
24	The Solution should support Trusted Platform Module (TPM) 2.0 for secure hardware-based cryptographic operations and platform integrity	

25	The Solution shall support NetFlow v9, IPFIX , NetFlow/sFlow/jFlow	
	Debug, Alarms & Diagnostics	
26	The Solution should display interface statistics including packet errors and utilization	
27	The Solution should support telemetry, Netconf and streaming analytics	
28	The Solution should support Zero Touch Provisioning (ZTP),	
29	The Solution should support PCEP and TWAMP	
	Management	
30	The Solution shall support SSHv2 for secure management connectivity	
31	The Solution shall support SNMP v1/v2/v3 and Syslog	
32	The Solution shall support REST API, NETCONF and automation tools	
33	The Solution shall support event logging and audit trail features	
	Environmental	
34	Operating Temperature of hardware should support 0°C to 40°C or better	
	Certification	
35	The proposed product should be MEF compliant and support relevant IEEE standards	
36	The product should comply with RoHS, CE and safety standards	
	Warranty	
37	The Hardware should be supplied with 5 years warranty and 24x7 TAC support	
38	OEM should have India-based support presence and toll-free support availability	
39	OEM should not have announced End-of-Sale (EOS) or End-of-Life (EOL) for the proposed product	
	Power Supply	
40	Hardware should have power supply arrangement without any external adaptors with redundant/dual feeds power supply -48 V DC supply and hot swappable	

9- For Item no 9 of SOR-A & 5 of SOR-C:

S. No	Detailed Technical Specifications	Compliance (Yes / No)
1	General requirements	
1.1	Hardware should have a modular OS architecture	
1.2	The proposed solution shall facilitate all applications like voice, video, and data to run over an IP infrastructure.	
2	Hardware and interface requirements	
2.1	Solution should have at least 6 x 1G Copper Ports and 6 x 1G SFP Fiber ports. All Ports must support both LAN and WAN protocols.	
2.2	Solution should have 4GB RAM and 8GB internal Flash	
2.3	Management/Console: RJ-45 Console port & USB 3.0 port.	
3	Performance requirements	
3.1	Solution should have a minimum routing performance of Minimum 2Gbps	
3.2	Solution should have minimum IPS throughput 400Mbps	
3.3	Solution should have IPsec VPN Throughput of minimum 500Mbps	
3.4	Solution should have a NGFW features with minimum throughput 400Mbps	
3.5	The Solution should support minimum 1000 IPsec Tunnels & 512K IPv4/IPv6 routes.	
4	Quality of Service (QoS) requirements	
4.1	Solution should support 802.1p, DSCP , EXP , Marking, policing, Shaping , WRED ,maximum bandwidth and guaranteed bandwidth	
5	Routing protocol support	

5.1	The Solution should support IPv4 and IPv6 routing , VRRP , Policy Based Routing , Static Routes , RIPv1 & RIPv2 , OSPF, IS-IS , BGP & MPLS	
6	Multicast Features	
6.1	IGMP v1/v2/v3 and PIM-SM, PIM-DM , PIM-SSM , MSDP , Reverse Path Forwarding (RPF) from Day-1	
7	MPLS Features	
7.1	Layer 2 and Layer 3 VPN, LDP, RSVP and mVPN/ NGMVPN	
8	Security features (From Day 1)	
8.1	The Solution should support AAA using RADIUS or TACACS , role based access mechanisms.	
8.2	The Solution should have MD5 and SHA-1 authentication , DES (56-bit), 3DES (168-bit), AES (256-bit) encryption	
8.3	The Solution should support Packet Filters/ACL & Network address translation Static NAT , Source NAT , Destination NAT & PAT.	
8.4	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC),	
8.5	Solution should support 200 IPsec tunnels	
8.6	Solution should support minimum 10000 MAC address	
8.7	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC)	
9	Management and Troubleshooting	
9.1	The Solution should have Console, Telnet and Web for management	
9.2	The Solution should support SNMPv2 and SNMPv3 , Extensive debugs on all protocols , Real-time traffic-interface/sub interface statistics , IPSLA/RPM	
10	Certifications	
10.1	Safety certifications UL 60950-1 , ROHS , FCC & EMC certifications FCC Class A	
10.2	Hardware/Hardware's Series should be IPv6 Logo Ready or USGv6 Certified	
10.3	Hardware should be EAL 3/NDPP/ NDcPP certified under Common Criteria.	
11	Environmental & Power	
11.1	Operating Temperature: 0° C to 40° C & Operational Humidity: 10% to 90% non-condensing	
11.2	MTBF: above 200,000 hours.	
12	Warranty	
12.1	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
12.2	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
13	Power Supply	
13.1	Hardware Should have AC power supply arrangement in chassis without any external adaptors with power supply: AC power supply 100 to 240 V AC with 50 to 60 Hz	

10- For Item no 10 of SOR-A:

S. No	Detailed Technical Specifications	Compliance (Yes / No)
1	General requirements	
1.1	Hardware should have a modular OS architecture	
1.2	The proposed solution shall facilitate all applications like voice, video, and data to run over an IP infrastructure.	
2	Hardware and interface requirements	

2.1	Solution should have at least 6 x 1G Copper Ports and 6 x 1G SFP Fiber ports. All Ports must support both LAN and WAN protocols.	
2.2	Solution should have 4GB RAM and 8GB internal Flash	
2.3	Management/Console: RJ-45 Console port & USB 3.0 port.	
3	Performance requirements	
3.1	Solution should have a minimum routing performance of Minimum 2Gbps	
3.2	Solution should have minimum IPS throughput 400Mbps	
3.3	Solution should have IPSec VPN Throughput of minimum 500Mbps	
3.4	Solution should have a NGFW features with minimum throughput 400Mbps	
3.5	The Solution should support minimum 1000 IPSec Tunnels & 512K IPv4/IPv6 routes.	
4	Quality of Service (QoS) requirements	
4.1	Solution should support 802.1p, DSCP, EXP, Marking, policing, Shaping, WRED, maximum bandwidth and guaranteed bandwidth	
5	Routing protocol support	
5.1	The Solution should support IPv4 and IPv6 routing, VRRP, Policy Based Routing, Static Routes, RIPv1 & RIPv2, OSPF, IS-IS, BGP & MPLS	
6	Multicast Features	
6.1	IGMP v1/v2/v3 and PIM-SM, PIM-DM, PIM-SSM, MSDP, Reverse Path Forwarding (RPF) from Day-1	
7	MPLS Features	
7.1	Layer 2 and Layer 3 VPN, LDP, RSVP and mVPN/ NGMVPN	
8	Security features (From Day 1)	
8.1	The Solution should support AAA using RADIUS or TACACS, role based access mechanisms.	
8.2	The Solution should have MD5 and SHA-1 authentication, DES (56-bit), 3DES (168-bit), AES (256-bit) encryption	
8.3	The Solution should support Packet Filters/ACL & Network address translation Static NAT, Source NAT, Destination NAT & PAT.	
8.4	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC),	
8.5	Solution should support 200 IPsec tunnels	
8.6	Solution should support minimum 10000 MAC address	
8.7	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC)	
9	Management and Troubleshooting	
9.1	The Solution should have Console, Telnet and Web for management	
9.2	The Solution should support SNMPv2 and SNMPv3, Extensive debugs on all protocols, Real-time traffic-interface/sub interface statistics, IPSLA/RPM	
10	Certifications	
10.1	Safety certifications UL 60950-1, ROHS, FCC & EMC certifications FCC Class A	
10.2	Hardware/Hardware's Series should be IPv6 Logo Ready or USGv6 Certified	
10.3	Hardware should be EAL 3/NDPP/ NDcPP certified under Common Criteria.	
11	Environmental & Power	
11.1	Operating Temperature: 0° C to 40° C & Operational Humidity: 10% to 90% non-condensing	
11.2	MTBF: above 200,000 hours.	
12	Warranty	
12.1	The product should be supplied with a 6 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
12.2	OEM should have not announced the "End of Sale" and "End of Life" for the proposed product.	

13	Power Supply	
13.1	Hardware Should have AC power supply arrangement in chassis without any external adaptors with power supply: AC power supply 100 to 240 V AC with 50 to 60 Hz	

11- For Item no 11 of SOR-A & 6 of SOR-C:

S. No	Detailed Technical Specifications	Compliance (Yes / No)
1	General requirements	
1.1	Hardware should have a modular architecture	
1.2	The proposed solution shall facilitate all applications like voice, video, and data to run over an IP infrastructure.	
2	Hardware and interface requirements	
2.1	Solution should have at least 8 x 1G RJ45 and 4 x 1/10G SFP+ ports supporting both LAN and WAN protocols.	
2.2	Solution should have 4GB RAM and 32GB internal storage/SSD/Flash	
2.3	Management/Console: RJ-45 Console port & USB 3.0 port.	
2.4	Solution should have redundant hot swappable internal AC power supply from Day 1.	
3	Performance requirements	
3.1	Solution should have a minimum 10 Gbps routing performance.	
3.2	Solution should have minimum IPS throughput 1.5 Gbps	
3.3	Solution should have IPsec VPN Throughput of minimum 4 Gbps	
3.4	Solution should have a NGFW features with minimum throughput 2 Gbps	
3.5	The Solution should support minimum 2000 IPsec Tunnels & 1Mn IPv4/IPv6 routes.	
4	Quality of Service (QoS) requirements	
4.1	Solution should support Class-based queuing with prioritization	
4.2	Solution should support 802.1p, DSCP, EXP, WRED, Marking, policing, and shaping	
5	Routing protocol support	
5.4	Solution should have IPv4 & IPv6 Static Routing, Policy Based Routing, RIPv1 & v2, OSPF, IS-IS, BGP & MPLS	
5.6	Solution Should support IEEE 802.1ag, and IEEE 802.3ah	
5.7	Solution Should support Bidirectional Forwarding Detection (BFD), VRRP/HSRP	
6	Multicast Features	
6.1	IGMP v1/v2/v3 and PIM-SM, PIM-DM, PIM-SSM, MSDP, Reverse Path Forwarding (RPF) from Day-1	
7	MPLS Features	
7.1	Solution must support Layer 2 and Layer 3 VPN, MPLS, RSVP.	
8	Security features (From Day 1)	
8.1	Solution should support AAA using RADIUS or TACACS	
8.2	Solution should support Tunnels (both GRE and IPsec)	
8.3	Solution should have DES (56-bit), 3DES (168-bit), AES (256-bit) encryption	
8.4	Solution should support MD5 and SHA-1 authentication	
8.5	Solution should support Network address translation (NAT) & PAT.	
8.6	Solution should support 2000 IPsec tunnels	
8.7	Solution should support minimum 10000 MAC address	
8.8	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC)	
10	Management and Troubleshooting	

10	Solution should have Console, Telnet and Web for management & Router should have role based access mechanisms.	
10	Solution should support SNMPv2 and SNMPv3	
10	Solution should support Extensive debugs on all protocols	
10	Solution should support Real-time traffic-interface/sub interface statistics & IPSLA/ Real-Time Performance Monitor	
11	Certifications	
11	Safety certifications UL 60950-1 , ROHS , FCC & EMC certifications FCC Class A	
11	Hardware/Hardware's Series should be IPv6 Logo Ready or USGv6 Certified	
11	Hardware should be EAL 3/NDPP/ NDcPP certified under Common Criteria.	
11	Environmental & Power	
11	Operating Temperature: 0° C to 40° C & Operational Humidity: 10% to 90% non-condensing	
11	MTBF: above 2,00,000 hours.	
12	Warranty	
12	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
12	OEM should have not announced the "End of Sale" and "End of Life" for the proposed product.	
13	Power Supply	
13.1	Hardware Should have AC power supply arrangement in chassis without any external adaptors with redundant power supply & hot swappable: AC power supply 100 to 240 V AC with 50 to 60 Hz	

12- For Item no 12 of SOR-A & 7 of SOR-C:

S. No	Detailed Technical Specifications	Compliance (Yes / No)
1	General requirements	
1.1	Hardware should have a modular OS architecture	
1.2	The proposed Solution shall facilitate all applications like voice, video, and data to run over an IP infrastructure.	
2	Hardware and interface requirements	
2.1	Solution should have at least 6 x 1G Copper Ports and 2 x 1G SFP Fiber ports. All Ports must support both LAN and WAN protocols.	
2.2	Solution should have 4GB RAM and 8GB internal Flash	
2.3	Management/Console: RJ-45 Console port & USB 3.0 port.	
3	Performance requirements	
3.1	Solution should have a minimum routing performance of Minimum 1Gbps	
3.2	Solution should have minimum IPS throughput 200Mbps	
3.3	Solution should have IPsec VPN Throughput of minimum 300Mbps	
3.4	Solution should have a NGFW features with minimum throughput 200Mbps	
3.5	The Solution should support minimum 200 IPsec Tunnels & 256K IPv4/IPv6 routes.	
4	Quality of Service (QoS) requirements	
4.1	Solution should support 802.1p, DSCP , EXP , Marking, policing, Shaping , WRED ,maximum bandwidth and guaranteed bandwidth	
5	Routing protocol support	
5.1	The Solution should support IPv4 and IPv6 routing , VRRP , Policy Based Routing , Static Routes , RIPv1 & RIPv2 , OSPF, IS-IS , BGP & MPLS	

6	Multicast Features	
6.1	IGMP v1/v2/v3 and PIM-SM, PIM-DM , PIM-SSM , MSDP , Reverse Path Forwarding (RPF) from Day-1	
7	MPLS Features	
7.1	Layer 2 and Layer 3 VPN, LDP, RSVP and mVPN/ NGMVPN	
8	Security features (From Day 1)	
8.1	The Solution should support AAA using RADIUS or TACACS , role based access mechanisms.	
8.2	The Router should have MD5 and SHA-1 authentication , DES (56-bit), 3DES (168-bit), AES (256-bit) encryption	
8.3	The Solution should support Packet Filters/ACL & Network address translation Static NAT , Source NAT , Destination NAT & PAT.	
8.4	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC),	
8.5	Solution should support 200 IPsec tunnels	
8.6	Solution should support minimum 10000 MAC address	
8.7	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC)	
9	Min License	
9.1	IPS, Gateway level Anti-virus/Anti-Malware/Anti-Bot, IPsec, antivirus security URL filtering and antispam, advance threat protection	
10	Management and Troubleshooting	
10.1	The Solution should have Console, Telnet and Web for management	
10.2	The Solution should support SNMPv2 and SNMPv3 , Extensive debugs on all protocols , Real-time traffic-interface/sub interface statistics , IPSLA/RPM	
11	Certifications	
11.1	Safety certifications UL 60950-1 , ROHS , FCC & EMC certifications FCC Class A	
11.2	Hardware/Hardware's Series should be IPv6 Logo Ready or USGv6 Certified	
11.3	Hardware should be EAL 3/NDPP/ NDcPP certified under Common Criteria.	
12	Hardware (service terminating device) should be class-I MII	
13	Environmental & Power	
13.1	Operating Temperature: -20° C to 60° C & Operational Humidity: 10% to 90% non-condensing	
13.2	MTBF: above 2,00,000 hours.	
14	Warranty	
14.1	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
14.2	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
15	Power Supply	
15.1	Hardware Should have AC power supply arrangement in chassis: AC power supply 100 to 240 V AC with 50 to 60 Hz	

13- For Item no 13 of SOR-A:

S. No	Detailed Technical Specifications	Compliance (Yes / No)
1	General requirements	
1.1	Hardware should have a modular OS architecture	

1.2	The proposed Solution shall facilitate all applications like voice, video, and data to run over an IP infrastructure.	
2	Hardware and interface requirements	
2.1	Solution should have at least 6 x 1G Copper Ports and 2 x 1G SFP Fiber ports. All Ports must support both LAN and WAN protocols.	
2.2	Solution should have 4GB RAM and 8GB internal Flash	
2.3	Management/Console: RJ-45 Console port & USB 3.0 port.	
3	Performance requirements	
3.1	Solution should have a minimum routing performance of Minimum 1Gbps	
3.2	Solution should have minimum IPS throughput 200Mbps	
3.3	Solution should have IPsec VPN Throughput of minimum 300Mbps	
3.4	Solution should have a NGFW features with minimum throughput 200Mbps	
3.5	The Solution should support minimum 200 IPsec Tunnels & 256K IPv4/IPv6 routes.	
4	Quality of Service (QoS) requirements	
4.1	Solution should support 802.1p, DSCP, EXP, Marking, policing, Shaping, WRED, maximum bandwidth and guaranteed bandwidth	
5	Routing protocol support	
5.1	The Solution should support IPv4 and IPv6 routing, VRRP, Policy Based Routing, Static Routes, RIPv1 & RIPv2, OSPF, IS-IS, BGP & MPLS	
6	Multicast Features	
6.1	IGMP v1/v2/v3 and PIM-SM, PIM-DM, PIM-SSM, MSDP, Reverse Path Forwarding (RPF) from Day-1	
7	MPLS Features	
7.1	Layer 2 and Layer 3 VPN, LDP, RSVP and mVPN/ NGMVPN	
8	Security features (From Day 1)	
8.1	The Solution should support AAA using RADIUS or TACACS, role-based access mechanisms.	
8.2	The Router should have MD5 and SHA-1 authentication, DES (56-bit), 3DES (168-bit), AES (256-bit) encryption	
8.3	The Solution should support Packet Filters/ACL & Network address translation Static NAT, Source NAT, Destination NAT & PAT.	
8.4	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC),	
8.5	Solution should support 200 IPsec tunnels	
8.6	Solution should support minimum 10000 MAC address	
8.7	Ethernet, 802.1q VLAN, Point-to-Point Protocol (PPP), Multilink Point-to-Point Protocol (MLPPP), Frame Relay, Multilink Frame Relay (MLFR), High-Level Data Link Control (HDLC)	
9	Min License	
9.1	IPS, Gateway level Anti-virus/Anti-Malware/Anti-Bot, IPsec, antivirus security URL filtering and antispam, advance threat protection	
10	Management and Troubleshooting	
10.1	The Solution should have Console, Telnet and Web for management	
10.2	The Solution should support SNMPv2 and SNMPv3, Extensive debugs on all protocols, Real-time traffic-interface/sub interface statistics, IPSLA/RPM	
11	Certifications	
11.1	Safety certifications UL 60950-1, ROHS, FCC & EMC certifications FCC Class A	
11.2	Hardware/Hardware's Series should be IPv6 Logo Ready or USGv6 Certified	
11.3	Hardware should be EAL 3/NDPP/ NDcPP certified under Common Criteria.	
12	Environmental & Power	

12.1	Operating Temperature: -20° C to 60° C & Operational Humidity: 10% to 90% non-condensing	
12.2	MTBF: above 2,00,000 hours.	
13	Warranty	
13.1	The product should be supplied with a 6 years Product warranty. The OEM should have a 24x7 support center. OEM should have an India toll-free number reflected on the official website.	
13.2	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	
14	Power Supply	
14.1	Hardware Should have AC power supply arrangement in chassis without any external adaptors with power supply: AC power supply 100 to 240 V AC with 50 to 60 Hz	

14- For Item no 14 of SOR-A & 9 of SOR-C (Switch – 8+2 Port, AC operated):

S No	Description	Compliance (Yes/ No)
1	Physical Specification: 8*10/100/1000 Mbps RJ 45 ports +2*10/100/1000 Mbps Combo ports + 1 Console port, LED Based	
2	SFP ports of the switch should be populated with same OEM make one pair of 1G BIDI 20KM SFP	
3	General Specification: 1. At least 20 Gbps Switching Fabric/Non-Bloking 2. The LAN switch shall have minimum packet forwarding rate of 14.88 million packets per second at 64-byte packet length. 3. The LAN switch shall support minimum 8K MAC address. 4. The LAN switch shall have 255 IGMP groups. 5. Switch should support Dying Gasp for quick trouble shooting during power failures or system shut downs.	
	Layer-2 Features	
4	It shall support edge port in STP/RSTP/MSTP mode.	
5	It shall support centralized VLAN Management. VLANs created on the Core Switches shall be propagated to all the other switches automatically, thus reducing the overhead of creating / modifying / deleting VLANs in all the switches in turn eliminating the configuration errors & troubleshooting. It shall support Generic VLAN Registration Protocol (GVRP) / VTP or any other industry standard protocol for VLAN pruning and management.	
6	It shall support spanning-tree root guard to prevent other edge switches becoming the root bridge.	
7	It shall support IGMP snooping v1, v2 and v3.	
8	The LAN switch shall support IEEE 802.1Q VLAN encapsulation. Minimum 250 VLANs.	
9	It shall support Optical Transceiver Digital Diagnostic Monitoring and Support 802.3ah link layer remote loopback and discovery.	
10	It shall support LLDP / LLDP-MED exchange link and device information in multi-vendor networks.	
11	It shall Support for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops and support Unidirectional Link Detection (UDLD) or any other industry equivalent protocol.	
12	It shall support configuration rollback to replace current configuration with any saved configuration file.	

13	It shall support Auto sensing speed on 10/100/1000 ports, auto negotiating half/full-duplex on all ports and Auto-MDIX.	
14	It shall support Link Aggregation Protocol (LACP) as per IEEE 802.3ad.	
15	It shall Support for Detection of Unidirectional links and to disable them to avoid problems such as spanning tree loops and support Unidirectional Link Detection (UDLD) or any other industry equivalent protocol.	
16	It shall support dual homing network topology.	
17	Network Security Features: 1. The LAN switch shall support IEEE 802.1x to allow dynamic, port-based security, providing user authentication. 2. It shall support unicast MAC filtering to prevent the forwarding of any type of packet with a matching MAC address. 3. It shall support unknown unicast and multicast port blocking to allow tight control by filtering packets that the switch has not already learned how to forward. 4. It shall support IGMP filtering to provide multicast authentication by filtering out no subscribers and limits the number of concurrent multicast streams available per port. 5. It shall support for SSHv2, SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions. 6. It shall support Port Mirroring based on port basis / VLAN basis to support intrusion prevention system deployment in different VLANs. It shall support bidirectional data on mirror port which allows IDS to take action when an intruder is detected. 7. It shall support RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration. 8. It shall support MAC address notification to allow administrators to be notified of users added to or removed from the network. 9. It shall support port security to secure the access to an access or trunk port based on MAC address. After a specific timeframe, the aging feature should remove the MAC address from the switch to allow another device to connect to the same port. 10. It shall support BPDU filtering feature, to shut down Spanning Tree Protocol Port Fast-enabled interfaces when BPDUs are received to avoid accidental topology loops. 11. It shall support multilevel security on console access to prevent unauthorized users from altering the switch configuration. 12. It shall support Spanning-Tree Root Guard (STRG) to prevent edge devices not in the network administrator's control from becoming Spanning Tree Protocol root nodes.	
18	ACL: SIP/DIP, IP Protocol, IP Priority (DSCP, TOS, Precedence), MAC-ACL and IP-ACL, Based on user defined profile, ACL on VLAN	
19	Quality Of Service (QoS) like Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR).	
20	AC Power Supply 100 to 240 V AC with 50 to 60 Hz and equipped with 3 pin plug OR DC Power supply -48V + 10% variation	
21	Surge Protection - Differential mode : ± 2 kV and Common mode ± 4 kV .	
22	OEM shall be having valid ISO 9000 & ISO 14000 certification on the date of opening of bid	
23	EMI CERTIFICATE of FCC/IC / CE or equivalent	
24	SAFETY CERTIFICATE of UL or equivalent	
25	On Site OEM Warranty (Year) - 5 years	

15- For Item no 15 of SOR-A & 10 of SOR-C (Fiber Switch):

S. No	Specification	Complied (Yes/No)
1	Should have minimum 24 x GE SFP based ports.	
2	Should have minimum 4 nos. SFP+ based 10 GE ports.	
3	Should have at least 64 Gbps full duplex line rate traffic.	
4	Should have support for 802.3x flow control.	
5	Should support 802.1D spanning tree control/RSTP support and MSTP support.	
6	Should support management features viz. Web-based GUI/SSH, SNMP, TFTP Client System Log.	
7	Should support Auto MDI-II/MDI-X uplink for all the twisted pair ports.	
8	Should support 802.1Q VLAN, 802.1p Priority queues, Should support Dying Gasp for quick trouble shooting during power failures or system shut downs	
9	Should support port mirroring, jumbo frame & should have at least 16K MAC address	
10	Should support console port and telnet-based management.	
11	Should have power supply arrangement as given below in chassis without any external adaptors: (i) AC power supply 100 to 240 V AC with 50 to 60 Hz or (ii) -48 V DC Supply or both.	
12	Should support Port-based VLAN, Guest VLAN, 802.1Q Tagged VLAN & Voice VLAN along with Management VLAN.	
13	Should support ITU-T G.8032 Ethernet Ring protection for Loop Protection and fast convergence time (Sub 50 ms) in ring topologies/ IEEE 802.1W RSTP for Sub Second failover. Industry Standard IEEE 802.1W RSTP is standard for Ring /STP topology.	
14	Switch should support Surge Protection on power input and on Ethernet ports as per EN61000-4-5.	
15	Should support Quality of Service (QoS) features viz. Priority Queue, Class of Service (CoS), Rate Limiting (Bandwidth Control), Strict Priority Queue (SPQ), Weighted Round Robin (WRR) or better, DOS attack prevention.	
16	IPv6 feature should be ready from day 1 and Static route	
17	Minimum Operating Temperature 0 to 50 degree.	
18	The switch should have EMC certification as per CE/FCC standards.	
19	Switch shall be with Rack Mountable clamps for standard 19-inch rack mountable.	
20	The Switch shall be designed for continuous operations. Supports 802.3ah link layer remote loopback and discovery.	

21	Should support port Trunking of at least 2 Nos. GE/10GE ports.	
22	Switch should support LLDP or similar functionality.	
23	Should support following security features viz.: i) SSL (HTTPS)/SSH, ii) Broadcast/Multicast/Unicast Storm Control, iii) DoS Attack Prevention/ DAI	
24	Switch should support following SNMP traps or syslog i) Interface UP & Down ii) Optical Power SFP threshold alarms iii) STP Topology Changes and New root bridge iv) LLDP table changes	
25	Note: - In the specification wherever support for a feature has been asked for, it will mean that the feature should be available without RailTel requiring any other hardware/software/licenses. Thus, all hardware/software/licenses required for enabling the support/feature shall be included in the offer.	
26	Warranty: The device should be provided with advanced hardware replacement warranty and ongoing software upgrades for all major and minor releases for a period of 5 year.	

16- For Item no 16 of SOR-A & 11 of SOR-C (Power plant):

Technical Specification - Power Plant Battery Charger:

A. For Battery Charger:

The technical specification of SMPS based power plant battery charger 230V AC/ 48V/ DC 150 Amp. Ultimate Capacity with 25 Amp. (2+1) configuration, Single Phase with two battery paths for VRLA maintenance free battery along with lightning Protection Unit (LPU) and surge Protection device and DCDB (with all connecting materials) for telecom use should conform to RDSO Specification No. RDSO/SPN/TL/23/99 (Ver.4) or latest or TEC/GR/FLA/SMP-001/06 June 2010 or latest or BSNL Specs No: BSNL/Specification/ SMP-001/01/Rev-I/Septemeber.2015 or latest.

NOTE: The chargers should be provided with minimum two (02) nos. of potential free contacts on which the following alarms (on "NO" contacts) should be extended (One for alarm and one for redundant).

- i) AC Mains fail
- ii) Low D.C voltage (at 46 Volt preferably adjustable).

B: For Lightning & Surge Protection of Battery Charger :

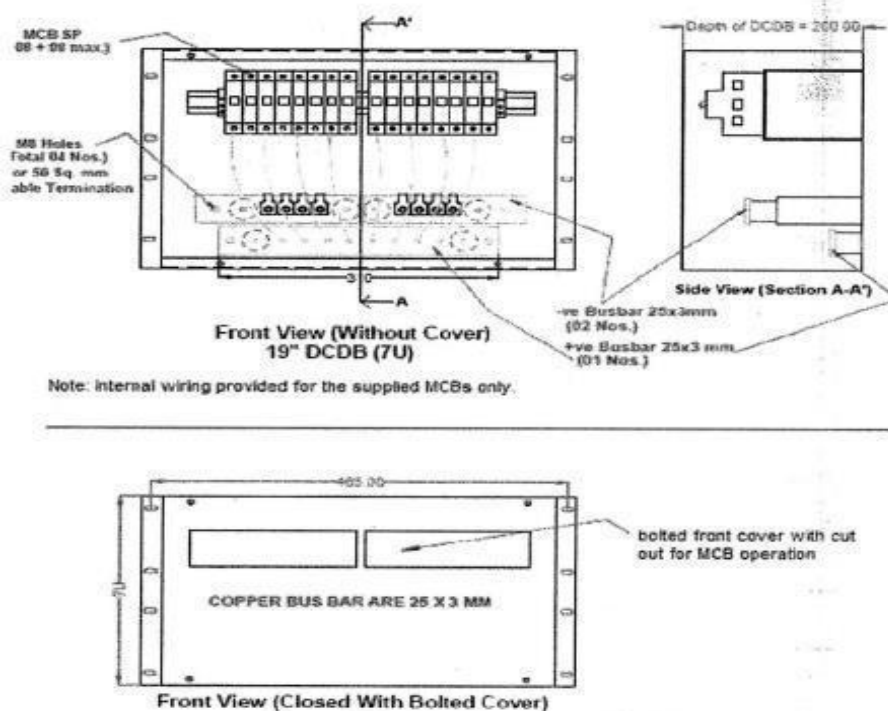
The technical specification of Lightning Protection Unit (LPU) and Surge protection Devices (SPD) for SMPS based power plant battery charger 48V for telecom use should confirm to TEC GR No. TEC/GR/FA/LSP-001/02/JUN-2017 or latest Or RDSO Specification of LPU & SPD as given in RDSO Specification No. RDSO/SPN/TL/23/99 (Ver 4) or Latest.

C: TECHNICAL REQUIREMENTS & SPECIFICATIONS for VRLA maintenance free Battery set:

The technical specification of 48V/300 AH VRLA maintenance free battery set comprising of 2Vx24 cells 300 AH capacity each should generally conform to TEC spec. No. TEC/GR/TX/BAT-001/04 June 2011 with latest Amdt. Or RDSO specification No. IRS: S-93/96 (A) with Amdt.-1 or Latest.

D. DC distribution Box (DCBD):

**WALL/RACK MOUNTED DUAL POWER SUPPLY D.C.
DISTRIBUTION BOX**



The following shall be the part of this box:

1. Nuts/Bolts for fixing the DCDB on rack (min 4 Nos.).
2. Bolts/screws for fixing of the box cover on base unit (Min 4 numbers).
3. Bolts/screws (Brass make for cable fixing on +ve and –ve Bus bar (Min.8 number)
4. Arrangement for fixing MCBs on the base unit of distribution box.
5. The material shall be MS with minimum 1.6mm thickness powder coated in light grey colour.
6. The MCBs to be supplied are only six Nos. SP16/20/32 & two nos. 40/63A of reputed make like Havells/MDF Legrand/Indo Kup etc. along with input feeds from bus bars using thimbles etc.
7. Cable entry holes should preferably be provided with suitable soft material (rubber type) to prevent the damage to the cables from hard metal of the box.
8. The min. dimensions of copper bus bars shall be 25x3 sq mm for 100 Amp.
9. The +ve and –ve bus bars (made of copper) should be painted with red and blue color respectively all over except near the point of contracts of cable thimbles.

Special Note :Scope of Installation & Commissioning of SMPS based battery chargers.

- 1 Otherwise conforming to TEC/RDSO Technical specification, Bidders are encouraged to offer Chargers with minimum foot print.
- 2 The length (Average) and specifications of cable used for each site will be as under: Please find herewith the scope of installation, length of cable and specifications of cable used for each site. The cable will be multi-strand copper cable as per BIS specification.

Scope of installation	Length of cable (maximum)	Specification of cable for 25A single phase (2+1) battery charger
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AC main to charger	25Mtr	16 sq.mm. copper (Red & black)
Charger to load	25Mtr	35 sq. mm. copper, (Red &Black)
Charger to battery	25Mtr	35 sq.mm copper, (Red &Black)
Earth cable	25Mtr	16 sq. mm. copper (green)

* All the cables as per minimum specifications (for satisfactory commissioning for rated capacity) referred above required for installation and commissioning of Battery Chargers & Battery sets, as per the site requirement shall have to be supplied by the vendor.

- 3 All the materials such as DCDB with all accessories, ladder, GI/PVC conduit pipes, channels, necessary hardware etc. thus required for the purpose of installation and commissioning of Battery Chargers as well as batteries shall be provided by the vendor. RailTel shall only provide the AC point from where the AC supply is to be tapped for the battery chargers.

Scope of Installation & Commissioning of VRLA batteries

- Bidder has to erect and commission the battery bank.
- Bidder has to record the individual cell and output voltages in charge mode.
- Bidder has to visit during final commissioning and integration with charger as and when required.

17- For Item no 17 of SOR-A & 12 of SOR-C (9U Rack):

S No	Specification	Compliance (yes/ No)
1	19" Rack: 9U 600mmwidth/500mm depth, Steel frame structure design, metal top cover with 2 fan provision and cable entry provision covered with edge protected rubber grommet, bottom cover with cable entry provision covered with edge protected rubber grommet provide, Powder coated finish Texture Matt – 60 to 80Um	
2	Corrosion Resistance: Salt spray test according to ISO 9227 (NSS test) and IEC EN 60068-2-11 (Ka test) for 168 hours: degree of Rusting Ri1 according to ISO 4628-3, propagation ≤1 mm according to ISO 4628-8.	
3	Front glass single door with cam lock & key	
4	Front panel mounting hardware. – 1 No.	
5	Cantilever Tray 255mm D – 1 No.	
6	230V A/C 90 CFM fan mounted on top cover - 2 Nos.	
7	PDU 6 sockets 6A Sockets– 1 No.	
8	Horizontal Cable Manager 1U with PVC loops – 1 No.	

18- For Item no 18 of SOR-A & 13 of SOR-C (6 KVA UPS):

6 KVA Online UPS System with Battery Bank for 4 hrs Backup		
Characteristic	Specification	Compliance (Yes/No)
Capacity	6KVA, 5400 Watt (1Øinput/ 1Ø output)	

Topology	True Online Double Conversion UPS	
Technology	IGBT Based	
Isolation Transformer	UPS should be delivered with inbuilt Isolation Transformer @Input/Output side of the UPS	
INPUT		
Input Facility	1Ø, 2-wire & Ground, (Phase & Neutral + Ground)	
Input Voltage Range	1Ph,L-N+PE (175 to 270 Vac on full load)	
Input Frequency Range	45 ~55Hz	
Input Power Factor	≥0.99	
OUTPUT		
Power Factor	0.9	
Nominal Output Voltage	220/230/240Vac shall be available with +/-1% regulation in battery mode	
Voltage regulation	± 1% static, ± 5% for Dynamic Load	
Nominal Frequency	50Hz±2% (Synchronized to Mains)	
Waveform	Sine wave	
Crest factor	3:1	
Total harmonic distortion (THDv)	< 3% (linear load); <5% (nonlinear load)	
Output Short Circuit Protection	Electronic, trip	
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: < 4ms	
Maintenance Bypass	Automatic & Manual	
Output Connection	Terminal at bottom or Indian Socket	
DC Ripple factor	≤1%	
Efficiency	Overall (AC to AC) : ≥87%	
Overload Protection	>100% ~ 110%: for 5 mins;	
	>110% ~ 125%: for 1 min;	
Surge Protection	UPS shall have an inbuilt SPD for protection against high surges, transient over-voltages, and voltage spikes, ensuring safety of the UPS and connected equipment	
BATTERY & BATTERY BANK CHARGER		
DC BUS voltage	120 VDC or Higher	
Battery Configuration & Technology	Minimum VAh should be 12480 VAh for 240mins of Backup @ Running Load of 2000 Watt.	
	Batteries should deliver 1400 Cycles @30% DOD, Battery OEM Declaration should be enclosed.	
Batteries Type & Make	SMF BATTERY & Make: AmaraRaja/HBL/Exide/Quanta	
Battery IEC Standard	Batteries should be complied to IEC 60896 standard , Test Report to be submitted	
Battery Housing	Compact and space-efficient MS Steel Open Racks, complete with interconnectors, shall be provided. The UPS Battery Rack shall be adequately designed and structurally reinforced to house the UPS unit on top of the rack while ensuring safe operation, accessibility, and load-bearing capability.	
Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available SNMP should be provided for remote Monitoring of UPS Health	

Remote Monitoring	Remote Monitoring Software to be provided , Bidder/OEM should have prior experience of supplying CMS for UPS System-PO Copies & Completion Report for CMS System of UPS (For Monitoring more than 100 UPS Systems) to be Enclosed (From any Govt. or PSU organisation in PAN India)	
Cold Start	should be provided	
Environmental		
Operating Temperature	0-50 deg C with full load	
Type of Cooling	Forced Air	
Noise Level	<55 dBA at 1 meter distance	
Auto Start, Cold Start & EPO	Shall be available	
Humidity	0%-95% non condensing	
INGRESS PROTECTION	IP 20	
MEASUREMENTS (ON LCD)	Input & Output Voltage, Input & Output Frequency, Bypass: Voltage & Frequency, Battery Level Indicator, Load Level indicator, Fault codes, , Overload, Short circuit, Low Battery.	
CERTIFICATIONS		
BIS	BIS Certificate to be submitted for the quoted Model	
CERTIFICATIONS	1)ISO9001 , 2)ISO 14001 ,3)ISO 45001 , 4)ISO 50001 , 5)ISO 20000 , 6)ISO 27001 7)SNMP/Network Management Interface shall comply with IEC 62443-4-1:2018 (Secure Product Development Lifecycle Requirements). 8)SNMP/Network Management Interface shall comply with IEC 62443-4-2:2019 (Technical Security Requirements for IACS Components). Valid compliance certificates/declarations shall be provided along with the bid/offer.	
SUPPORT		
Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.	

19- For Item no 21 of SOR-A & 16 of SOR-C (2 KVA UPS):

2 KVA Online UPS System with Battery Bank for 4 hrs Backup		
Characteristic	Specification	Compliance (Yes/ No)
Capacity	2KVA, 1800 Watt (1Øinput/ 1Ø output)	
Topology	True Online Double Conversion UPS	
Technology	IGBT Based	
Isolation Transformer	UPS should be delivered with inbuilt Isolation Transformer @Input/Output side of the UPS	
INPUT		
Input Facility	1Ø, 2-wire & Ground, (Phase & Neutral + Ground)	
Input Voltage Range	1Ph,L-N+PE (175 to 270 Vac on full load)	

Input Frequency Range	45 ~55Hz	
Input Power Factor	≥0.99	
OUTPUT		
Power Factor	0.9	
Nominal Output Voltage	220/230/240Vac shall be available with +/-1% regulation in battery mode	
Voltage regulation	± 1% static, ± 5% for Dynamic Load	
Nominal Frequency	50Hz±2% (Synchronized to Mains)	
Waveform	Sine wave	
Crest factor	3:1	
Total harmonic distortion (THDv)	< 3% (linear load); <5% (nonlinear load)	
Output Short Circuit Protection	Electronic, trip	
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: < 4ms	
Maintenance Bypass	Automatic & Manual	
Output Connection	Terminal at bottom or Indian Socket	
DC Ripple factor	≤1%	
Efficiency	Overall (AC to AC) : ≥87%	
Overload Protection	>100% ~ 110%: for 5 mins;	
	>110% ~ 125%: for 1 min;	
Surge Protection	UPS shall have an inbuilt SPD for protection against high surges, transient over-voltages, and voltage spikes, ensuring safety of the UPS and connected equipment	
BATTERY & BATTERY BANK CHARGER		
DC BUS voltage	72 VDC or Higher	
Battery Configuration & Technology	Minimum VAh should be 3024 Vah (12V-42Ah-6 Nos) for 240mins of Backup @ Running Load of 400 Watt.	
	Batteries should deliver 1400 Cycles @30% DOD, Battery OEM Declaration should be enclosed.	
Batteries Type & Make	SMF BATTERY & Make: AmaraRaja/HBL/Exide/Quanta	
Battery IEC Standard	Batteries should be complied to IEC 60896 standard , Test Report to be submitted	
Battery Housing	Compact and space-efficient MS Steel Open Racks, complete with interconnectors, shall be provided. The UPS Battery Rack shall be adequately designed and structurally reinforced to house the UPS unit on top of the rack while ensuring safe operation, accessibility, and load-bearing capability.	
Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available SNMP should be provided for remote Monitoring of UPS Health	
Remote Monitoring	Remote Monitoring Software to be provided , Bidder/OEM should have prior experience of supplying CMS for UPS System-PO Copies & Completion Report for CMS System of UPS (For Monitoring more than 100 UPS Systems) to be Enclosed (From any Govt. or PSU organisation in PAN India)	

Cold Start	should be provided	
Environmental		
Operating Temperature	0-50 deg C with full load	
Type of Cooling	Forced Air	
Noise Level	<55 dBA at 1 meter distance	
Auto Start, Cold Start & EPO	Shall be available	
Humidity	0%-95% non condensing	
INGRESS PROTECTION	IP 20	
MEASUREMENTS (ON LCD)	Input & Output Voltage, Input & Output Frequency, Bypass: Voltage & Frequency, Battery Level Indicator, Load Level indicator, Fault codes, , Overload, Short circuit, Low Battery.	
CERTIFICATIONS		
BIS	BIS Certificate to be submitted for the quoted Model	
CERTIFICATIONS	1)ISO9001 , 2)ISO 14001 ,3)ISO 45001 , 4)ISO 50001 , 5)ISO 20000 , 6)ISO 27001 7)SNMP/Network Management Interface shall comply with IEC 62443-4-1:2018 (Secure Product Development Lifecycle Requirements). 8)SNMP/Network Management Interface shall comply with IEC 62443-4-2:2019 (Technical Security Requirements for IACS Components). Valid compliance certificates/declarations shall be provided along with the bid/offer.	
SUPPORT		
Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.	

20- For Item no 24 of SOR-A & 19 of SOR-C (Surge protector for Class C):

S. No.	Specification	Compliance (Yes/ No)
1	Description: Compact 1-phase Type 2 (or 3) surge protector - 230 V - Pluggable	
2	Standards compliance: IEC 61643-11 / EN 61643-11 / UL1449 ed.5	
3	Certification: UL Recognized	
4	Technology: MOV	
5	SPD configuration: Single phase	
6	Remote signalling of disconnection: Option DS240S-320 : output on changeover contact	

7	SPD type : 2	
8	Network: 230 V single-phase	
9	AC system: TN	
10	Max. AC operating voltage : 320 Vac	
11	Residual Current : < 0.5 mA	
12	Max. discharge current : 40 kA	
13	Total Maximum discharge current : 80 kA	
14	Admissible short-circuit current: 10 000 A	

21- For Item no 25 of SOR-A & 20 of SOR-C (Desktop):

S. No	Category	Feature / description / parameter	Description of requirement /specifications
1	Processor	Processor Make	AMD or Intel
2		Generation	9.0 or higher
3		No. of Cores per processor	4 or higher
4		Processor Base Frequency (GHz)	2.4 or higher
5		Cache (MB)	4 or higher
6	Memory	Type of RAM	DDR4
7		RAM Size (GB)	8 or more
8		RAM Speed (MHz)	2666 or more
9		RAM expandability up to (using spare DIMM slots in GB)	32
10	Graphics	Graphics Type	Integrated
11	Storage	HDD Capacity (GB)	1000 @ 7200 rpm
12	Audio	Internal Speaker	Yes
13		Audio In	Yes
14		Audio Out	Yes
15		Microphone In	Yes
16	Drive	Optical Drive	yes
17	Connectivity	Number of Ethernet ports	1
18		Type of Ethernet Ports	10/100/1000 on board integrated Gigabit port
19	Ports	USB port 2.0/3.0	4 or more
20		HDMI port	1
21	Operating System	Operating System (Factory pre-loaded)	Windows 10 professional

22	Display	LED Backlit Monitor size (inches)	21.5 or more
23		Monitor resolution (pixels)	1600x900, 1920x1080
24	Input Devices	Mouse Connectivity	Wired
25		Type of mouse	Optical Scroll
26		Keyboard Connectivity	Wired
27		Type of Keyboard	Standard
28	Warranty	On Site	5 years

22- For Item no 26 of SOR-A (Desktop 27 inch):

S. No	Category	Feature / description / parameter	Description of requirement /specifications
1	Processor	Processor Make	AMD or Intel
2		Generation	Intel Core i7-13700
3		No. of Cores per processor	16 or higher
4		Processor Base Frequency (GHz)	5.2 or higher
		Cache (MB) L3	30Mb
5		Cache (MB) L2	20 Mb
6	Memory	Type of RAM	DDR4
7		RAM Size (GB)	16 or more
8		RAM Speed (MHz)	3200 or more
9		RAM expandability up to (using spare DIMM slots in GB)	32
10	Graphics	Graphics Type	Intel UHD Graphics 770, Integrated
11	Storage	HDD Capacity (GB)	1 TB PCIe NVMe M.2 SSD
12	Audio	Internal Speaker	Yes
13		Audio In	Yes
14		Audio Out	Yes
15		Microphone In	Yes
16	Drive	Optical Drive	Optional
17	Connectivity	Number of Ethernet ports	1
18		Type of Ethernet Ports	10/100/1000 on board integrated Gigabit port
19	Ports	USB port 2.0/3.0	4 or more
20		HDMI port	1
21	Operating System	Operating System (Factory pre-loaded)	Windows 10 or 11 professional
22	Display	LED Backlit Monitor size (inches)	27 or more
23		Monitor resolution (pixels)	1600x900, 1920x1080
24		Mouse Connectivity	Wired

25	Input Devices	Type of mouse	Optical Scroll
26		Keyboard Connectivity	Wired
27		Type of Keyboard	Standard
28	Wireless	Wi-Fi	6 or more
29		Bluetooth	V5.3
30	Warranty	On Site	5 years

23- For Item no 27 of SOR-A & 21 of SOR-C (Colour Printer):

S. No	Category	Description of requirement / specifications
1	Type of machine	Multifunctional machine
2	Print	Laser
3	Print color	Color
4	RAM Size (MB)	64 or Higher
5	Print Speed	20 PPM for A4 or higher
6	Resolution	1200 x 1200 dpi or higher
7	Tray Capacity	Input 150 sheets; Output:100 sheets
8	Paper Size	A4
9	Networking Feature Availability	Yes
10	Interface	USB 2.0/3.0
11	Network Interface	Ethernet 10/100
12	Warranty	05 years on site by OEM

24- For Item no 28 of SOR-A & 22 of SOR-C (B&W Printer):

S. No	Category	Description of requirement / specifications
1	Type of machine	Multifunctional machine
2	Print	Laser
3	Print color	Monochrome
4	RAM Size (MB)	64 or Higher
5	Print Speed	20 PPM for A4 or higher
6	Resolution	600 x 600 dpi or higher
7	Tray Capacity	Input 150 sheets; Output:100 sheets
8	Paper Size	A4
9	Duplex	Automatic
10	Scanning feature availability	Yes
11	Duplexing Feature availability	Yes
12	Networking Feature Availability	Yes
13	Interface	USB 2.0/3.0
14	Network Interface	Ethernet 10/100
15	Warranty	05 years on site by OEM

25- For Item no 29 of SOR-A (B&W Printer):

S. No	Category	Description of requirement / specifications
1	Type of machine	Multifunctional machine
2	Print	Laser
3	Print color	Monochrome
4	RAM Size (MB)	64 or Higher
5	Print Speed	20 PPM for A4 or higher
6	Resolution	600 x 600 dpi or higher
7	Tray Capacity	Input 150 sheets; Output:100 sheets
8	Paper Size	A4
9	Duplex	Automatic
10	Scanning feature availability	Yes
11	Duplexing Feature availability	Yes
12	Networking Feature Availability	Yes
13	Interface	USB 2.0/3.0
14	Network Interface	Ethernet 10/100
15	Warranty	06 years on site by OEM

26- For Item no 30 of SOR-A & 23 of SOR-C (LED Display, 75-inch, 5 years Warranty):

S. No.	Details	Specification		Compliance (Yes/ No)
1	General features	Screen Size	75	
2		Brightness (cd/m²)	440	
3		Contrast Ratio	1200:1	
4		Dynamic Contrast Ratio	300,000:1	
5		Response Time (ms)	8.0	
6		Display resolution (H x V, pixels)	3840 x 2160	
7		HDR (High Dynamic Range) compatibility	Yes (HDR10,HLG,Dolby Vision)	
8		Aspect Ratio	16:9	
9		Portrait/Tilt Compatibility	Yes	
10	Display features	Dimming type	Frame Dimming	
11		Display Device	LCD	
12		Panel Type	IPS	
13		Backlight type	Direct LED	
14		TRILUMINOS Display	TRILUMINOS PRO	
15		Color gamut (DCI-P3)	92%	
16		Picture Processor	4K HDR Processor X1	
17		Operation time	24/7	
18		Deep Black Non-Glare coating	No	
19		Haze (%)	1%	
20		Viewing Angle (Right/Left)	178 (89/89) degree	
21		Viewing Angle (Up/Down)	178 (89/89) degree	
22	Video Specs	Video Processing	4K X-Reality PRO	
23		Motion enhancer	Motion flow XR 240 (Native 60Hz)	

24		HDMI Signal	4096 x 2160p (24, 60Hz), 3840 x 2160p (24, 30, 60Hz), 1080p (24, 30, 60Hz), 1080i (60Hz), 720p (24, 30, 60Hz), 480p	
25	Audio Specs	Speaker Position	Down Firing	
26		Audio Power Output	10W + 10W	
27	Professional features	Pro mode	Yes	
28		HDMI auto wake-up	Yes	
29		HTML5 platform	Yes	
30		Multicast/IPTV	Yes	
31		Operating System	Android TV	
32		On-board Storage (GB)	16GB	
33	Network Specs	Wi-Fi Direct	Yes	
34		Wi-Fi Certified	Yes	
35		Wireless LAN	Integrated	
36	Convenience features	USB playback codecs	MPEG1:MPEG1/MPEG2PS:MPEG2/MPEG2TS(HDV,AVCHD):MPEG2,AVC/MP4 (XAVC S): AVC, MPEG4, HEVC/AVI:Xvid, Motion Jpeg/ASF (WMV):VC1/ MOV:AVC, MPEG4, Motion Jpeg/MKV:Xvid, AVC, MPEG4, VP8.HEVC/WEBM:VP8/3GPP:MPEG4, AVC/MP3/ASF (WMA)/LPCM/WAV/MP4AAC/FLAC/JPEG	
37		On Screen Clock	Yes	
38		Sleep Timer	Yes	
39		On/Off Timer	Yes	
40		Chromecast built-in	Yes	
41		Apple AirPlay	Yes	
42	Control Specs	IP Control	Yes	
43		RS-232C Control	Yes	
44		HDMI-CEC	Yes	
45	Inputs and outputs	HDCP	HDCP2.3 (for HDMI1/2/3/4)	
46		Composite Video Input (s)	1 (Side, Mini jack)	
47		HDMI inputs total	4 (4Side)	
48		Analog Audio Input (s) (Total)	1 (Side Analog Conversion)	
49		Digital Audio Output (s)	1 (Side)	
50		USB ports	2 (Side)	
51		Ethernet inputs	1 (Side)	
52	Design features	VESA® Hole Pitch (W x H)	300 x 300 mm	
53	Environment specs	Rated Power Consumption	306 W	
54		Power Consumption (in Standby)	0.5 W	
55		Dynamic Backlight Control	Yes	
56	Warranty	Power Saving Mode / Back Light Off Mode	Yes	
57		on site by OEM	05 years	

27- For Item no 31 of SOR-A (LED Display, 75-inch, 6 years Warranty):

S. No.	Details	Specification	Compliance (Yes/ No)
1	General features	Screen Size	75

2		Brightness (cd/m²)	440	
3		Contrast Ratio	1200:1	
4		Dynamic Contrast Ratio	300,000:1	
5		Response Time (ms)	8.0	
6		Display resolution (H x V, pixels)	3840 x 2160	
7		HDR (High Dynamic Range) compatibility	Yes (HDR10, HLG, Dolby Vision)	
8		Aspect Ratio	16:9	
9		Portrait/Tilt Compatibility	Yes	
10	Display features	Dimming type	Frame Dimming	
11		Display Device	LCD	
12		Panel Type	IPS	
13		Backlight type	Direct LED	
14		TRILUMINOS Display	TRILUMINOS PRO	
15		Color gamut (DCI-P3)	92%	
16		Picture Processor	4K HDR Processor X1	
17		Operation time	24/7	
18		Deep Black Non-Glare coating	No	
19		Haze (%)	1%	
20		Viewing Angle (Right/Left)	178 (89/89) degree	
21		Viewing Angle (Up/Down)	178 (89/89) degree	
22	Video Specs	Video Processing	4K X-Reality PRO	
23		Motion enhancer	Motion flow XR 240 (Native 60Hz)	
24		HDMI Signal	4096 x 2160p (24, 60Hz), 3840 x 2160p (24, 30, 60Hz), 1080p (24, 30, 60Hz), 1080i (60Hz), 720p (24, 30, 60Hz), 480p	
25	Audio Specs	Speaker Position	Down Firing	
26		Audio Power Output	10W + 10W	
27	Professional features	Pro mode	Yes	
28		HDMI auto wake-up	Yes	
29		HTML5 platform	Yes	
30		Multicast/IPTV	Yes	
31		Operating System	Android TV	
32		On-board Storage (GB)	16GB	
33	Network Specs	Wi-Fi Direct	Yes	
34		Wi-Fi Certified	Yes	
35		Wireless LAN	Integrated	
36	Convenience features	USB playback codecs	MPEG1:MPEG1/MPEG2PS:MPEG2/MPEG2TS(HDV,AVCHD):MPEG2,AVC/MP4 (XAVC S): AVC, MPEG4, HEVC/AVI:Xvid, Motion Jpeg/ASF (WMV):VC1/ MOV:AVC, MPEG4, Motion Jpeg/MKV:Xvid, AVC, MPEG4, VP8.HEVC/WEBM:VP8/3GPP:MPEG4, AVC/MP3/ASF (WMA)/LPCM/WAV/MP4AAC/FLAC/JPEG	
37		On Screen Clock	Yes	
38		Sleep Timer	Yes	
39		On/Off Timer	Yes	
40		Chromecast built-in	Yes	
41		Apple Air Play	Yes	
42	Control Specs	IP Control	Yes	

43		RS-232C Control	Yes	
44		HDMI-CEC	Yes	
45	Inputs and outputs	HDCP	HDCP2.3 (for HDMI1/2/3/4)	
46		Composite Video Input (s)	1 (Side, Mini jack)	
47		HDMI inputs total	4 (4Side)	
48		Analog Audio Input (s) (Total)	1 (Side Analog Conversion)	
49		Digital Audio Output (s)	1 (Side)	
50		USB ports	2 (Side)	
51		Ethernet inputs	1 (Side)	
52	Design features	VESA® Hole Pitch (W x H)	300 x 300 mm	
53	Environment specs	Rated Power Consumption	306 W	
54		Power Consumption (in Standby)	0.5 W	
55		Dynamic Backlight Control	Yes	
56		Power Saving Mode / Back Light Off Mode	Yes	
57	Warranty	on site by OEM	06 years	

28- For Item no 32 of SOR-A:

S. No.	Specification	Compliance (Yes/No)
1	The Firewall should be Hardware based, Reliable, purpose-built security appliance with hardened operating system supporting State full policy inspection technology.	
2	Firewall appliance must have 4 x 10GE SFP+ slots , 6 x 1GE SFP slots & 12 x 1GE RJ45 interfaces available from day one, populated from day 1 with min 2 nos 10 GE SFP+ transceiver module (long range 10km, LC connector, SMF, 1310nm, 0°C to 85°C). All these interfaces should be available simultaneously. Appliance must have 1x400 GB SSD from day one	
3	Firewall shall be able to protect the user from the malicious content upload or download by any application. The Firewall Device must have the hardens physical networking appliances by generating, storing, and authenticating cryptographic keys to protect against malicious software and phishing attacks	
4	Threat Prevention (including FW, IPS, Application Control & Antivirus) throughput must be at least 2.5 Gbps with real-world / enterprise MIX traffic	
5	NGFW (including FW, IPS, Application Control) throughput must be at least 3 Gbps with real-world / enterprise MIX traffic	
6	NGFW should support 900 site-to-site VPN Tunnels & 30 Gbps of VPN throughput.	
7	NGFW should support more than 100,000 new sessions per second	
8	NGFW should support at least 3 Million concurrent sessions	
9	The NGFW solution should support NAT64, NAT46 and DHCPv6.	
10	The proposed system should be able to operate in Transparent (Access) mode and NAT/ Route mode simultaneously	
11	The physical interface should be capable of link aggregation as per IEEE 802.3ad standard, allowing the grouping of interfaces into a larger bandwidth 'trunk'. It should also allow for high availability (HA) by automatically redirecting traffic from a failed link in a trunk to the remaining links in that trunk.	
12	The NGFW should support WAN links load balancing and fail- over for at least 4 links	

13	The proposed system should have integrated Traffic Shaping functionality for both inbound and outbound traffic.	
14	The proposed firewall must support at least 3 Gbps of SSL Inspection throughput along with IPS feature enabled.	
15	Proposed NGFW must not require reboot to push security policies or any signature (IPS, Anti-malware etc.) update.	
16	The NGFW shall be able to support various form of user Authentication methods simultaneously, including: Local Database, LDAP, RADIUS/TACACS+, Windows AD.	
17	The NGFW should readily available integration with SDN platforms - Kubernetes, VMware ESXi and NSX, OpenStack, Cisco ACI, Nuage Networks and Nutanix	
18	IPS throughput should be at least 5 Gbps or better for Enterprise MIX traffic	
19	The IPS should be able to inspect SSL sessions by decrypting the traffic	
20	The IPS system should have at least 10,000 signatures	
21	In event if IPS should cease to function, it should fail open by default and be configurable so that crucial network traffic should not be blocked and NGFW should continue to operate while the IPS problem is being resolved	
22	Signatures should have severity level defined to it so that the administrator can understand and decide which signatures to enable for what traffic (e.g. for severity level: high medium low)	
23	Solution should be ready for the post-quantum threats to include Post Quantum Cryptography with NIST-approved algorithms like ML-KEM and emerging algorithms like BIKE, HQC, and Frodo to protect against emerging threats , including harvest-now, decrypt-later attacks	
24	NGFW should have capabilities to limit number of parameters in URL, number of cookies in request, number of headers lines in request, total URL and Body parameters in length to block advanced HTTP layer attacks.	
25	The appliance should have at least 4000 + application signatures database readily available and must to create custom application signature.	
26	Should be able to block, allow or monitor only using AV signatures and file blocking based on per firewall policy based or based on firewall authenticated user groups with configurable selection of the following services and their equivalent encrypted versions, wherever applicable: HTTP, SMTP, POP3, IMAP, FTP, CIFS, NNTP, SSH, MAPI	
27	NGFW must include Anti-bot capability using IP reputation DB, terminates botnet communication to C & C servers also. Vendor needs to add additional license if it is required.	
28	The solution must includes Anti-Malware for defence against known and unknown file-based threats. Anti-malware services should span both antivirus and file sandboxing to provide multi-layered protection in real-time with threat intelligence	
29	NGFW should have functionality of Content Disarm and Reconstruction (CDR) or Similar Technology to remove all malicious attachments / active content from attachment in real-time before passing it to user.	
30	The proposed solution should utilize a state-full attack analysis to detect the entire infection lifecycle, and trace the stage-by-stage analysis of an advanced attack, from system exploitation to outbound malware communication protocols leading to data exfiltration.	
31	NGFW should be able to monitor encrypted traffic to detect APTs hidden in SSL traffic.	
32	The proposed NGFW shall have built-in high availability (HA) features without extra cost/license or hardware component	
33	The NGFW shall support stateful session maintenance in the event of a fail-over to a standby unit.	
34	High Availability feature must be supported for either NAT/Route, Transparent or Hybrid mode	
35	The NGFW must support both Active-Passive and Active-Active High Availability options.	

36	The NGFW must provide Load sharing mode along with the redundancy in case multiple virtual firewalls are created on it.	
37	The NGFW shall support interface link monitoring failover	
38	The NGFW shall support external device ping probe failover	
39	The HA solutions should support salient firmware upgrade process that ensures minimum downtime	
40	The NGFW must have provision of fail-over and generate alert in case of high memory utilisation on primary appliance.	
41	The NGFW must have capability to perform security inspection in networks where forward traffic and return traffic follow different paths.	
42	The NGFW should have web-based management tool also support SSH, Telnet to manage.	
43	The NGFW should have mechanism to alert administrator for any critical events if occurs through different channel like email/SMS etc.	
44	Solution should allow administrator to create multiple administrative profile based on the requirement.	
45	The solution should allow administrators to capture the packet using built-in capture tool to select a packet and view its header and payload information in real-time. Once captured it should gives option to filter the packets by different fields or through the search bar. The capture can be saved as a PCAP file that you can use with a third-party application, such as Wireshark, for further analysis.	
46	The solution should be quoted with support for all necessary licenses for IPS, Advanced Malware Protection, Application Control, URL, DNS Filtering & Antispam signatures. The support should include hardware warranty and technical support from OEM.	
47	The OEM of the offered products must have a valid ISO 9001:2015 and ISO27001. Certificate from OEM should be attached with the technical bid.	
48	The OEM should not have been blacklisted/debarred by Central/State/PSU or any government body in last 3 years.	
49	5 years Warranty, Support & Subscription: Unified Threat Protection (UTP) (IPS, Advanced Malware Protection, Application Control, URL, DNS & Video Filtering, Antispam Service, and FortiCare Premium)	

29- For Item no 33 of SOR-A (Net flow analyser):

S. No.	Flow Monitoring System - Technical Specifications	Compliance (Yes/ No)
1	The proposed solution shall deliver Flow Monitoring (NetFlow analysis) on a single, integrated platform. The same platform shall be license-extensible, enabling future incorporation of Network Monitoring, Network Configuration Management (NCM) and Application Performance Monitoring (APM) through additional licenses, supporting incremental scope expansion without re-platforming or replacement.	
2	The solution shall run natively on a hardened Linux platform as a 64-bit application to fully utilise the server resources on which it is installed, and shall be capable of complete functionality in an air-gapped, offline environment with no dependency on internet connectivity or external cloud services, as required for secure and critical railway infrastructure.	
3	The OEM and the offered platform shall hold valid ISO 27001:2022 (information security management), ISO 9001:2015 (quality management) and ISO 14001:2015 (environmental management) certifications, with application-security aligned to OWASP Top 10 and MITRE-referenced controls. Vulnerability Assessment and Penetration Testing (VAPT) by a CERT-In empanelled auditor shall be completed before go-live, and	

	the report submitted to the buyer. Valid supporting certificate documents shall be submitted with the bid.	
4	The OEM shall provide support for all upgrades and updates during the contract period. The OEM shall maintain an India-based support centre with a dedicated support email and toll-free number in India, and shall submit an escalation matrix along with the bid.	
5	The OEM shall provide on-site configuration and training for a minimum of 3 days along with complete training material.	
6	The solution shall be a natively-unified observability platform, architected to integrate full-stack monitoring, log analytics, application performance monitoring, flow analytics, compliance tracking, network path tracing and telemetry correlation within a single cohesive system, without requiring any third-party plugins, tool-switching or modular bolt-ons. The platform shall expose a documented REST API for northbound integration with third-party systems such as SIEM and ITSM.	
7	The solution shall provide a unified architectural design offering common functions including but not limited to event and alarm management, auto-discovery of the network environment (via SNMP v1/v2c/v3 and equivalent protocols), correlation, automated root-cause analysis, and reporting and analytics.	
8	The solution shall include an embedded, native AI/ML intelligence engine as an integral component of the offered platform, powering predictive analytics, dynamic-baseline anomaly detection, automated root-cause analysis and closed-loop self-healing. The intelligence engine shall be native to the solution and shall not depend on any external or third-party AI service.	
9	The solution shall provide future scalability of the whole system without major architectural changes, and shall support High Availability with redundancy and automatic failover.	
10	The solution shall be built on open, standards-based, interoperable and portable data layers, avoiding proprietary database lock-in and single-OEM dependency, in line with the Government of India policy on adoption of open-source software. Enterprise-grade performance, reliability and security shall be assured and validated under Vulnerability Assessment and Penetration Testing by a CERT-In empanelled auditor (to be completed before go-live). All system data, including telemetry, flow and configuration data, shall reside within sovereign (India-located) infrastructure, with no egress to foreign jurisdictions at any time.	
11	The solution shall provide interactive end-to-end network path mapping with hop-by-hop performance analysis, threshold-based alerting and historical trend insights. It shall correlate node-level metrics with service impact, enrich paths with metadata (e.g., ISP information, geo, IP), present a live topology and digital-twin visualisation, and support policy enforcement with contextual visualisations.	
12	The solution shall provide role-based custom dashboards for different user classes such as management, administrator and report users, with granular Role-Based Access Control (RBAC), tamper-evident audit logging, and multi-tenant operation with strict per-tenant data segregation.	
13	The solution shall provide predictive analytics and advanced statistical transformations over selected KPIs, including but not limited to anomaly detection, forecasting, capacity-exhaustion and threshold-breach prediction, moving average, median function, logarithmic-scale transformation and delta/derivative functionality, enabling proactive intervention before service impact.	
14	The solution shall provide network health-monitoring reports with settable periodicity (24 hours, 1 week, 1 month), with scheduled report generation, export to PDF, CSV and Excel, and automated email distribution to defined recipient groups.	
15	The solution shall provide multiple alerting and notification mechanisms, including email, SMS, SNMP trap, syslog and webhook to third-party systems, with alert deduplication and suppression.	
16	The solution shall provide the ability to overlay alerts on reported metrics to understand alert-triggering behaviour across multiple drill-down pages.	

17	The solution shall offer a wide variety of intuitive widget visualisations to represent telemetry data effectively, including line chart, area chart, stacked bar, horizontal bar, vertical bar, pie, donut, top-N, grid/table, sparkline, tree map, Sankey, bubble, heatmap, geo-map and gauge.	
18	The solution shall include a dynamic runbook automation engine enabling creation, modification and execution of automation runbooks from the UI, and shall support self-healing through closed-loop auto-remediation that executes pre-approved runbooks on defined trigger conditions, with full audit trail and operator override.	
19	The solution shall support macros that automatically provide the probable root cause, potential impact and recommended resolution steps whenever an alert is triggered, along with the likely reasons behind the alert occurrence.	
20	The solution shall support custom plugin development using Go, Python or an equivalent extensibility and software-development-kit framework, enabling tailored data-collection logic and protocol-support extensions.	
21	The proposed traffic-monitoring system shall be able to track all network flow (including NetFlow v1 to v9, J-Flow, sFlow and IPFIX) on the network for both IPv4 and IPv6 traffic, identify malicious behaviour, and provide visibility of all IP conversations.	
22	The system shall provide details of applications, hosts and conversations consuming WAN bandwidth, to isolate and resolve problems.	
23	The system shall provide baseline network-flow policy to detect anomalies in traffic-usage behaviour.	
24	The solution shall provide a flow-data explorer with the capability to analyse extracted data using multiple columns, chart types, group-by operators and filters, and shall provide dashboard-to-flow-data-explorer drill-down capability.	
25	The solution shall monitor and report on a variety of unique protocols (used across the deployed solution) per day, and display utilisation data for each protocol individually. This capability shall be available uniquely for each monitored interface.	
26	The solution shall retain historical rate data and IP-to-IP, IP-to-protocol and protocol-to-protocol conversation data for a minimum of 3 months (most recent) in its long-term operating data store. All data in that store shall have a maximum granularity window of 15 minutes.	
27	Future scalability: the system shall be capable of supporting at least 15,000 network flows per second on a single server, with the capability to capture each unique traffic conversation.	
28	The solution shall include advanced traffic-visualisation widgets such as Sankey diagrams, bubble charts, geo-maps and tree maps, providing intuitive, multi-dimensional views of network traffic for enhanced analytical interpretation and reporting.	
29	The solution shall support Next-Generation Network-Based Application Recognition (NBAR2) or an equivalent deep-packet-inspection or signature-based Layer-7 application-recognition capability, enabling precise identification and categorisation of application traffic for detailed monitoring and analysis.	
30	The solution shall support Border Gateway Protocol (BGP) enabled flow collection, enhancing accuracy in network traffic routing analytics and peering management.	
	Server Requirement (Hardware Type: Intel). Indicative minimum configuration:	
	vCPU: minimum 32 cores	
	RAM: minimum 40 GB	
	GPU: minimum 8 GB discrete GPU card, to support the AI-based predictive analytics and self-healing (intelligence engine) workloads	
	Storage: minimum 4 TB	
	NIC: minimum 1x 1G	
	Hypervisor support: VMware ESXi / KVM / Hyper-V	
	Warranty and support: 5 years	
	Any other requirement for commissioning of the system shall be provided.	
	A virtual machine may be created for the purpose of the NetFlow Analyser or any other purpose; the buyer's decision shall be final in this regard.	

30- For Item no 34 of SOR-A:

S No	Feature Specification	Compliance (Yes/ No)
1	The Solution must must offer Appliance based/Software Centralized Management / Orchestrator / Controller to manage the proposed Firewall from central location.	
2	The central management solution must have capability to manage 30nos. firewalls from day one, and should be scalable by adding license in future if required.	
3	Central controller should be able to update security license, firmware, updates for all the proposed firewalls from single console.	
4	All proposed firewall configuration back-up should be possible from central management solution it-self.	
5	Should leverage automated REST API, scripts, connectors, and automation stitches	
6	It also should have automatic configuration revision feature (Automatically backing up the configuration of branch devices, if there is a change)	
7	Should support HTML based Web UI as well as CLI (SSH) restricted to Trusted Host(s) only	
8	The Web UI should have provision to restrict Admin access from certain IP and not from all IPs.	
9	Centralized Management / Orchestration / Controller should have the feature of implementing global policies and Global objects, to be distributed among all Security feature of proposed firewall.	
10	The management platform must be accessible via a web-based interface and with no need for additional management client software. Should support predictable performance with all security services enabled, should include centralized administration and configuration management of firewalls. In case centralized management in not available, administrator should be able to configure firewall directly from GUI with complete feature parity.	
11	The proposed Management solution should allow policy rule creation for application control, user-based control, threat prevention, Anti-virus, file filtering, content filtering, QoS, scheduling and all security feature at single place.	
12	Should support role-based access control (RBAC) to restrict access to management functions based on user roles	
13	Server Requirement: vCPU: Min 8 Core RAM: min 16GB Storage: Min 1TB NIC: Min 1x 1G Hypervisor support: Vmware Esxi/KVM/Hyper-V Warranty & Support: 5 years Any other requirement for commissioning of system	

31- For Item no 35 of SOR-A (Server for NMS):

Sl. No.	Parameter	Minimum Required Specification	Compliance (Yes/No)
1	Operating System	Ubuntu Operating System support	
2	Virtualization Platform	VMware / Hyper-V Virtualization Platform Support	
3	Hardware Type	Intel Xeon Scalable Processor based	
4	Processor	2.5Ghz or above	
5	vCPU (core)	Minimum 8 Cores	
6	Memory (GB)	Minimum 64 GB DDR5	
7	Storage (GB)	2150	
8	NIC	Minimum 1 NIC	
9	Storage Hardware Recommendation	Enterprise SSD Storage / SAN Storage Support with RAID 0/1/5/10 Configuration	
10	Storage Controller	Enterprise RAID Controller	
11	Power Supply	Dual Redundant Power Supply	
12	Form Factor	1U Enterprise Rack Mount Server	
13	Operating Temperature	10°C to 35°C	
14	Form Factor	Max. 1U rack mounted with sliding rails	
15	Ethernet ports	4* 10G SFP+ Ports, 2 x 1GbE	
16	I/O slots	Up to 3 x PCIe Gen4 (x16/x8/x8)	
17	LCD panel	Should display system ID, status information and system error code followed by descriptive text. LCD background should light up in different colours during normal system operation & error conditions.	
18	Server security	Should provide effective protection, reliable detection & rapid recovery using: - Silicon-based Hardware Root of Trust - Signed firmware updates - Secure default passwords - Configuration and firmware drift detection - Persistent event logging including user activity - Secure alerting - Automatic BIOS recovery - Rapid OS recovery - System erase	
19	Warranty	6 years On-site comprehensive warranty with 24x7x365 remote hardware support.	

32- For Item no 42 of SOR-A & 31 of SOR-C (40G QSFP, 40Km):

Specification	Details	Compliance (Yes / No)
Form Factor	QSFP+	
Data Rate	40 Gigabit Ethernet	

Connector Type	Duplex LC PC/UPC	
Fiber Type	Single-Mode Fiber (SMF)	
Maximum Distance	40KM	
Tx output Power Range	-7.6 dBm to 2.3 dBm	
Receiver input power, each lane (minimum)	-13.7 dBm	
Receiver input power, each lane (maximum)	2.3 dBm	
Digital Optical Monitoring (DOM)	Supported	
Transmitter wavelengths (range)	1264.5 nm through 1277.5 nm 1284.5 nm through 1297.5 nm 1304.5 nm through 1317.5 nm 1324.5 nm through 1337.5 nm	
Power Consumption	3.5 W	
Operating Temperature	0°C to 70°C	
Storage Temperature	-40°C to 85°C	
Compliance Standards	IEEE 802.3ba	

33- For Item no 43 of SOR-A & 32 of SOR-C (40G QSFP LR +MPO to LC*4):

Specification	Details	Compliance (Yes / No)
Fiber Type	9/125µm Single Mode OS2	
Fiber Count	8-Fiber	
Connector Type	MPO Female to 4x LC Duplex	
Polish	APC to UPC	
Cable Length	10 m.	
Cable Diameter	MPO:3.0mm, Fan-out:2.0mm	
Insertion loss	MPO≤0.7dB, LC≤0.3dB	
Return Loss	MPO≥55dB, LC≥50dB	
Polarity	Type B (Crossover)	
Durability	≥500 times	
Jacket Material	LSZH	
Jacket Color	Yellow	
Environment	Operating: -20°C to 70°C Storage: -40°C to 85°C	
Application	Optical switching interframe connections High-density fiber card edge access 40G and 10G interconnect Data Center Cabling	

34- For Item no 53 of SOR-A & 43 of SOR-C (Laptop, 5 years warranty):

S. No	Category	Feature / description / parameter	Description of Specifications
1	Processor	Processor Make	Intel

2		Generation	12.0 or higher
3		No. of Cores per processor	10 or higher
4		Processor Base Frequency (Ghz)	2.4 or higher
5		Processor Description	Intel Core i7 or higher
6		Cache (MB)	20 or higher
7	Memory	Type of RAM	DDR4/ DDR5
8		RAM Size (GB)	8 or more
9		RAM Speed (MHz)	2666 or more
10	Graphics	Graphics Type	Integrated
11	Storage	SSD Capacity (GB)	512 or more
12	Audio	Internal Speaker	Yes
13		Audio In	Yes
14		Audio Out	Yes
15		Microphone In	Yes
16	Connectivity	Wireless Connectivity and Bluetooth	Wi-Fi 6, Wi-Fi 802.11b/g/n, Wi-Fi 802.11ac, Bluetooth 4.2 or higher,
17		Number of Ethernet ports	1
18		USB 3.2, USB-C, HDMI	1
19	Operating System	Operating System (Factory pre-loaded)	Windows 10/ 11 professional
20	Display	LED Backlit screen size (inches)	14 or more
21		panel resolution (pixels)	1920x1080 or higher
22	Webcam	HD Camera (pixels)	720p / 1080p or higher
23	Warranty	On site	05 years

35- For Item no 54 of SOR-A (Laptop, 6 years warranty):

S. No	Category	Feature / description / parameter	Description of Specifications
1	Processor	Processor Make	Intel
2		Generation	13.0 or higher

3		No. of Cores per processor	10 or higher
4		Processor Base Frequency (Ghz)	2.4 or higher
5		Processor Description	Intel Core i7 or higher
6		Cache (MB)	20 or higher
7	Memory	Type of RAM	DDR4/ DDR5
8		RAM Size (GB)	16 or more
9		RAM Speed (MHz)	2666 or more
10	Graphics	Graphics Type	Integrated
11	Storage	SSD Capacity (GB)	512 or more
12	Audio	Internal Speaker	Yes
13		Audio In	Yes
14		Audio Out	Yes
15		Microphone In	Yes
16	Connectivity	Wireless Connectivity and Bluetooth	Wi-Fi 6, Wi-Fi 802.11b/g/n, Wi-Fi 802.11ac, Bluetooth 4.2 or higher,
17		Number of Ethernet ports	1
18		USB 3.2, USB-C, HDMI	1
19	Operating System	Operating System (Factory pre-loaded)	Windows 10/ 11 professional
20	Display	LED Backlit screen size (inches)	14 or more
21		panel resolution (pixels)	1920x1080 or higher
22	Webcam	HD Camera (pixels)	720p / 1080p
23	Warranty	On site	06 years

36- For Item no 55 of SOR-A & 44 of SOR-C (AC-DC converter):

S. No.	Features	Compliance (Yes/No.)
1	Protections- Short circuit/ Overload/ Over voltage/ Over temperature	
2	Forced air cooling by built-in DC fan	
3	Withstand 300VAC surge input for 5 seconds	
4	Built-in cooling fan Off-On control	

5	Built-in constant current limiting circuit	
6	100% full load burn in test.	
7	Led indicator for power on.	
8	Fixed switching frequency at 900KHz	
9	High reliability	
10	1 year warranty	
11	OUTPUT DC Voltage- 48V	
12	Rated Current- 7.3A	
13	Rated Power- 350.4W	
14	Setup Rise Time - 1000ms, 50ms/230VAC 1000ms, 50ms/ 115VAC at full load	
15	INPUT Voltage Range- 90 ~ 132VAC / 180 ~ 264VAC by switch 254 ~ 370VDC	
16	Efficiency- 87.5% : Frequency Range- 47 ~ 63Hz	
17	AC Current - 7A/115VAC 4A/230VAC : Leakage Current- <3.5mA /240VAC	
18	Overload- 105 ~ 135% rated output power	
19	Protection type - Constant current limiting, recovers automatically after fault condition is removed	
20	Over Voltage- 57.6 ~ 67.2V	
21	Over Temperature- 90°C•}5°C(3.3~7.5V); 85°C•}5°C(12~15V); 80°C•}5°C(24V);75°C•}5°C(27~48V) (TSW1) Detect on case	
22	Function- Fan off/on control - RTH2 $\geq$ 50°C FAN ON, $\leq$ 45°C FAN OFF (3.3 ~ 7.5V)	
23	Working Temperature- -20 ~ +60°C(Refer to output load rating curve)	
24	Working Humidity - 20 ~ 90% RH non-condensing	
25	Safety Standards - UL60950-1 equivalent	

37- For Item no 56 of SOR-A & 45 of SOR-C (Chair):

Mid-back or high back ergonomic executive chair suitable for control room / office use.

Fixed Armrests on both sides.

Seat and backrest with high-density PU foam and fabric / PU upholstery.

Revolving chair with swivel mechanism and height-adjustable with pneumatic gas lift mechanism.

Die-cast aluminum base with castor wheels.

Minimum load capacity: 120 kg.

Chair design and strength to comply with BIFMA / relevant IS standards.

38- For Item no 57 of SOR-A & 46 of SOR-C (Cabinet):

Primary Material: Engineered Wood/MDF with wood veneer finish - Colour options to be finalized by customer from catalogue.

Back Panel: MDF / hardboard with proper groove fixing

Height: 180 - 210 cm

Width: 80 - 95 cm

Depth: 45 - 50 cm

Soft-close hinged doors – full height

Internal Configuration:

- a. Minimum 4–6 adjustable shelves
- b. Shelf load capacity: ≥ 25 kg per shelf

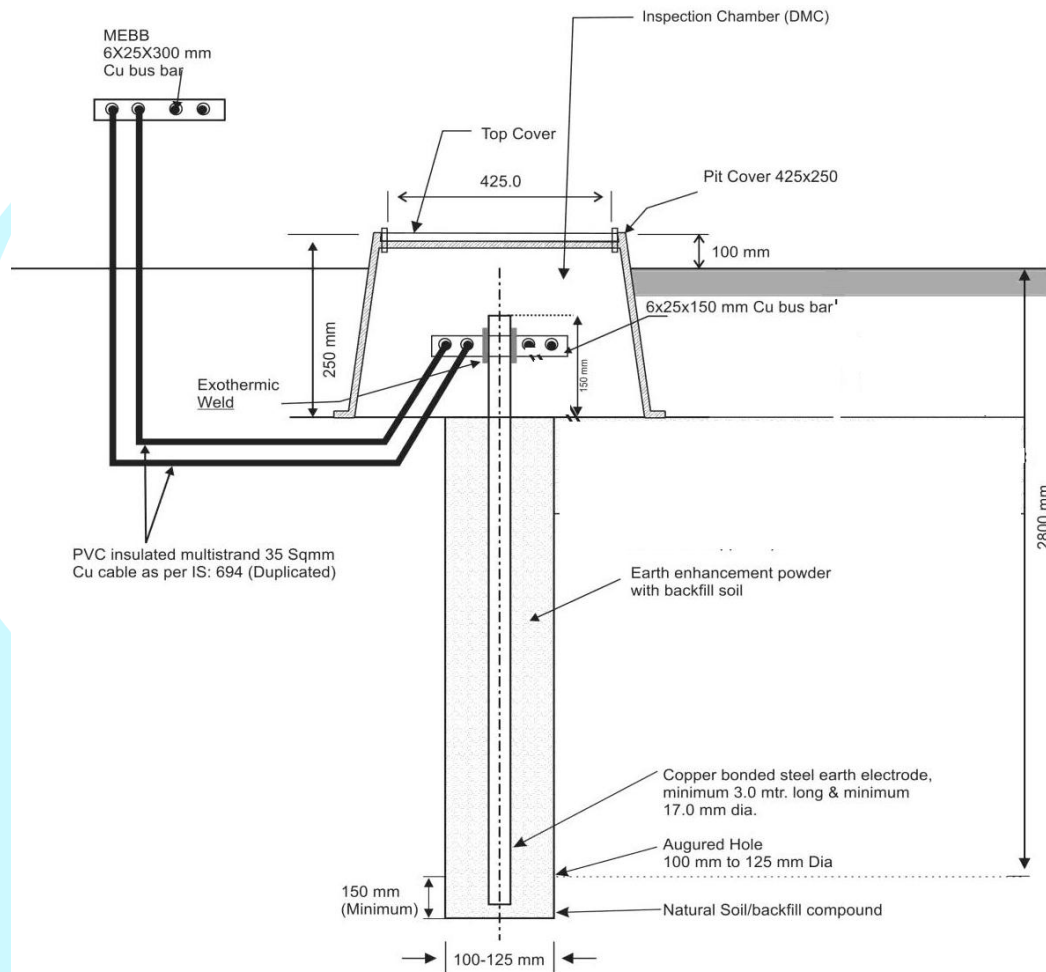
39- For Item no 58 of SOR-A & 47 of SOR-C (Optical Power meter):

S No	Technical Specifications/Parameters	Required Value
1	Wavelength Range (nm)	830 nm to 1650 nm
2	Wavelength calibrated (nm)	850-1650 nm
3	Measurement Range	Min +10 to –65dBm
4	Protection against high optical power	Min for defined range
5	Calibration	Auto-self check when unit is turned ON
6	Resolution	0.01 dB
7	Accuracy	$\pm 5\%$
8	Sensor Type	To be defined by the manufacturer

40- For Item no 73 of SOR-A & 64 of SOR-C (Maintenance Free Earthing):

Maintenance Free Earthing system for SECL which consists of earthing kit-1 set consisting (i) Earth electrodes of copper clad steel alloy of 10 feet (3 mtr) long, 17 mm dia and copper thickness of 250 microns -01 nos (ii) Earth enhancing compound in 30 kg pack -01 no (iii) copper tape of 25mmX6mmX300 mm with 99% purity - 02 nos and another of 25mmX6mmX150mm to terminate on earth electrode. The earthing material shall be inspected by RailTel official. The material should be procured from RDSO approved vendor.

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41- For Item no 74 of SOR-A & 65 of SOR-C (Renovation of NOC at the ECL HQ & MCL HQ):

Including Required Wooden Partition, Ply Boxing, Wall putty, Painting, False Ceiling Work, PVC Flooring, required masonry works, electrical fittings, Wooden work (Repairing of Windows and Doors), Interior Decoration with Vertical Blind and Curtain, Almirah, Conference Table, with Supply and Installation of 2 No 2T AC with Suitable Stabilizer, etc at ECL HQ Asansol. OEM of AC – Hitachi /LG/VOLTAS or equivalent

42- For Item no 75 of SOR-A (Renovation of NOC at the CIL HQ):

Including required electrical fittings with supply of materials and extension board, Cat-6 cabling through PVC pipe with supply, dressing of cables etc.

43- For Item no 8 of SOR-C:

Sl. No.	Description	Compliance (Yes/ No)
1	Solution with minimum 4x10G SFP+ port & 4x1G SFP Port, capable of delivering 5Gbps ILL link at customer locations.	

2	Solution shall have minimum of 44 Gbps (full duplex) forwarding bandwidth at layer 2 Routing fabric.	
3	Solution shall have minimum 45 million packets (64 Byte packets) per second forwarding rate.	
4	Solution shall have a minimum of 16K MAC address space.	
5	Solution should support minimum 250 VLANs.	
6	Hardware should have inbuilt power AC power supply 110 VAC to 240 VAC	
7	Should support Dual Images.	
8	Should support Optical Transceiver Digital Diagnostic Monitoring.	
9	Should support port mirroring and jumbo frame.	
10	Should support following security features viz.:	
	i) Broadcast/Multicast/Unicast Storm Control,	
	ii) Control plane DoS Attack Prevention	
11	Solution should support following SNMP traps or Syslog:-	
	i. Interface UP & Down.	
	ii. Optical power SFP threshold alarms.	
	iii. STP Topology Changes and New root bridge.	
	iv. LLDP table changes.	
	v. Power Supply (Primary and Secondary) down and Up alarms in case of redundant power supply.	
	vi. Threshold traps like CPU, Chassis Temperature and Memory.	
	vii. CFM and LFM alarms.	
12	Solution should comply to following Temperature performance parameters:	
	I) Operating Temperature - min -40 degree Celsius to -65 degree celsius	
	II) Storage Temperature - min -40 to 70 °C (-40 to 158 °F)	
13	The Hardware shall be designed for continuous operations with have a dual fan system. The vendor shall state if it is a fan less architecture.	
14	Should be IPv6 feature ready from day 1.	
15	Device should have IP SLA monitoring (or equivalent functionality) for Latency, Packet drop, Jitter etc. and should also support SNMP polling for IP SLA monitoring.	

16	Solution should support following Metro Ethernet Features.	
	i. ITU-T G.8032 Ethernet Ring Protection designed for loop protection.	
	ii Should support multiple Ring up to 8 ring (Main and Sub Ring) protection failover within 50 ms. Or ITU-T G.8032 v2.	
19	Solution should support following MPLS/IP Features.	
	ii. The Solution shall support MPLS-FRR or IP-FRR to ensure high availability	
	iii. The solution shall support Ethernet protection based on ITU-T G.8032 with OAM (Ethernet OAM compliant with IEEE 802.3ah/Y.1731) features like LFM, CFM and Performance monitoring.	
	iv. The solution shall support point to point VPWS or multipoint Virtual Private LAN service	
	v. The LAN shall support an IGMP/IGMPv3 snooping function.	
	vi. The solution shall support PIM-SM. Static RP/BSR/Auto-rp support is required.	
	vii. The solution shall support policy QoS including - policy based classification, bandwidth control and scheduling.	
20	Solution should support following features Scaling values.	
	i. Should support maximum 32K number of IPv4 Routes	
	ii. Should support maximum 8K number of IPv6 Routes	
	iii. Should support 5 level of MPLS Labels lookup	
	iv. Should support maximum 128 No of L3 VRF/L2VPN	
	v. Should support MPLS label-Switching router (LSR & LER) functionality	
	vi. Any Licenses, software required for meeting the requirement should be available from day 1 and bidder to consider in the offer.	
	vii. The OEM shall ensure that the use of third-party optics shall not be explicitly blocked on the Router. Router must support all MSA complied optics available in market	
	viii. Solution should support GRE tunnels (RFC 2784) or equivalent for creating tunnel on IP	
21	Warranty: 5 years	

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Specification for SOR-B

1- For Item no 1 (VC end point):

Bidder shall provide the following:

- i. High-Definition Video Conferencing Services at 23 locations of ECL.
- ii. MPLS-VPN shall be provided by RailTel. Bidder shall be responsible for integration with video endpoints and Video Conferencing facility.
- iii. Video Conference Licenses for adding Desktop / Laptops on normal video conferencing calls with the supplied end points, enabling connection from remote offices via the internet to the provided VC system.
- iv. Video Conference End Point with 02 Nos. microphones at each location.
- v. Professional Display of suitable size (location will be provided by customer/ RailTel) at 22 locations of ECL.
- vi. 2 KVA UPS with 2 hours battery backup (location will be provided by customer/ RailTel) at 22 locations of ECL.
- vii. Required server(s) – hosted at RailTel's own premises, along with suitable connectivity to enable internal and Public IP-based VC connectivity – shall be provided by RailTel.
- viii. Any other hardware/ software required for complete functioning of the system.

C. Features of the VC System and Platform:

- i. The VC System should support connecting to soft VC platforms such as Microsoft Teams, Bharat VC, Zoom, Google Meet, etc., directly through URLs from the endpoint codec.
- ii. The VC system should support Point to Point (P2P) and Multipoint calls on Full HD resolution (720p and 1080p) and should support FHD display.
- iii. Should be capable of dialling any pin and password protected IP based H.323 and SIP calls.
- iv. Proposed solution's hardware and software should be upgradable to meet the future requirement without any degradation in the quality of video conferences. Successful bidder should arrange to upgrade the OS/Firmware/Software/ subscription as and when required
- v. The video conferencing from CIL VC locations should be capable to connect to multiple point in India & abroad in one VC session. Minimum no. of participant in one VC room should be 48 for IP based P2P and 1000 for cloud platform
- vi. User should be capable of sharing the content wirelessly from Laptop (Windows and MacOS) and Mobile/Tablet (Android and IOS)
- vii. Support AES 128-bit dynamic encryption algorithm, H.235 video conference encryption standard to ensure the security of the conference.
- viii. The VC System should have Latest video standards H.264, H.265 or higher able to View the Presentation that is being shown in the VC call, Add and disconnect call, should have at least 2 x HDMI or equivalent port inputs to connect Full HD cameras and laptops/PC for presentations, should have at least 2 no.'s of HDMI output to connect Full High-Definition display devices, should support audio output, Should support and provide at least 2 Microphone with each VC system

ix. Successful bidder has to supply and install the necessary licenses, software and operating systems to meet the requirement/specifications of this document. The cost of such licenses/subscriptions, etc should be included in VC system cost. RailTel will not pay any additional cost/charges for the same.

x. Presentation display facility shall be available at all 23 locations, with at least one spare HDMI/presentation cable provided at each endpoint.

xi. Recording facility of Video Conferences should be available and should be carried out at the Video Conferencing Server/local server/system of M/s RailTel, as per requirement/ intimation, without any additional cost, and the recording should be maintained for a period of minimum 6 months.

xii. Should support control of a conference like adding participants, removing participants, muting participant's video and/ or audio, lock a conference.

D. Connectivity:

i. MPLS-VPN connectivity of minimum 4 Mbps shall be provided by RailTel at each of the 23 locations to support High Definition video conferencing.

ii. M/s RailTel may provision MPLS-VPN bandwidth of more than 4 Mbps, as deemed necessary under the proposed technical solution, to ensure optimal performance and quality of video conferencing.

iii. All intermediate components required to maintain seamless connectivity between the video endpoints and the central server, shall be supplied and maintained by bidder.

E. Video Conference End Point: Each of the Video Conference End Point shall contain the following items.

i. Should have at least one or more HD cameras, the camera must have a minimum resolution of 1080p 30 fps with 10X optical zoom, the Camera and codec should be from the same manufacturer. Codec should support IPv4 and IPv6 from day one on both H.323 and SIP

ii. Compatible Codec – which shall facilitate VC through any soft VC link

iii. Two microphone units.

iv. Remote unit (touch panel) to fully support and control all VC functions.

v. Compatible Cable assembly for laptop/desktop presentations.

vi. Other accessories as required.

F. Desktop/Laptop based video conferencing license:

i. Shall have facility to connect 1000 users

ii. Shall have facility to have 06 nos. host

iii. Shall support connections through Desktop, Laptop, and Smartphones.

iv. Administrative access shall be provided to ECL for scheduling and conducting Desktop/ Laptop-based video conferencing sessions.

H. Required Operational Features:

i. Operators at M/s RailTel's server location shall connect, manage, and monitor:

a. Video conferencing across all 23 locations

- b. Public IP-based external VC sessions connected to the 23-location system, and
- c. Desktop/Laptop-based VC sessions (including VC through URLs) integrated with the 23-location VC system.
- ii. The system shall support a minimum of five simultaneous VC sessions among the 23 locations.

Illustrative example of simultaneous sessions:

- a. Locations 1, 3, 10 & 22 – 9:30 AM to 11:30 AM
- b. Locations 2, 11, 21 & 23 – 10:00 AM to 11:30 AM
- c. Locations 4, 9, 14, 18 & 20 – 9:30 AM to 12:00 PM
- d. Locations 5, 6 & 19 – 10:00 AM to 02:00 PM
- e. Locations 7, 8, 12, 13, 15 & 17 – 10:00 AM to 01:00 PM
- iii. The following offices shall be connectable through IP-based video conferencing:
 - a. Ministry of Coal, Govt. of India
 - b. Other Ministries, Govt. of India
 - c. National Informatics Centre (NIC)
 - d. State Government Offices
 - e. Coal India Limited
 - f. Subsidiary companies of Coal India Limited
 - g. Other PSUs as required
 - h. Other organizations
- iv. Complete battery replacement for all UPS units during the contract period shall be under the scope of bidder.

2- For Item no 2 (LED Display, 65 inch):

S. No.	Details	Specification		Compliance (yes/ No)
1	General Features	Screen Size	65	
2		Brightness (cd/m ²)	350	
3		Contrast Ratio	1200:1	
4		Dynamic Contrast Ratio	400,000:1	
5		Response Time (ms)	8.0	
6		Display resolution (H x V, pixels)	3840 x 2160	
7		HDR (High Dynamic Range) compatibility	Yes (HDR10, HLG)	
8		Aspect Ratio	16:9	
9		Portrait/Tilt Compatibility	Yes	
10	Display features	Dimming type	Frame Dimming	
11		Display Device	LCD	
12		Panel Type	IPS	
13		Backlight type	Direct LED	

14		Color gamut (NTSC)	69%	
15		Picture Processor	4K Processor X1	
16		Operation time	16/7	
17		Haze (%)	1 %	
18		Viewing Angle (Right/Left)	178 (89/89) degree	
19		Viewing Angle (Up/Down)	178 (89/89) degree	
20		Video Processing	4K X-Reality PRO	
21		Motion enhancer	Motion flow XR	
22	Video Specs	HDMI Signal	4096 x 2160p (24, 50, 60 Hz), 3840 x 2160p (24, 25, 30, 50, 60 Hz), 1080p (30, 50, 60 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (30, 50, 60 Hz), 720/24p, 576p, 576i 480p, 480i	
23	Audio Specs	Speaker Position	Down Firing	
24		Audio Power Output	10W + 10W	
25	Professional features	Pro settings	Yes (Simple Pro settings menu)	
26		HDMI auto wake-up	Yes	
27		Operating System	Android TV	
28		On-board Storage (GB)	16GB	
29	Network Specs	Wi-Fi Certified	Yes	
30		Wireless LAN	Integrated	
31	Convenience features	USB playback codecs	MPEG1:MPEG1/MPEG2 PS:MPEG2/MPEG2 WEBM:AV1/AC4/ogg/AAC	
32		On Screen Clock	Yes	
33		Sleep Timer	Yes	
34		On/Off Timer	Yes	
35		Chromecast built-in	Yes	
36		Apple AirPlay	Yes	
37	Control Specs	IP Control	Yes	
38		RS-232C Control	Yes	
39		HDMI-CEC	Yes	
40	Inputs and outputs	HDCP	HDCP2.3 (for HDMI1/2/3)	
41		Composite Video Input (s)	1 (Side, Mini jack)	
42		HDMI inputs total	3 (3Side)	
43		Analog Audio Input (s) (Total)	1 (Side Analog Conversion)	
44		Digital Audio Output (s)	1 (Side)	
45		USB ports	2 (Side)	
46		Ethernet inputs	1 (Side)	
47	Design features	VESA® Hole Pitch (W x H)	300 x 300 mm	
48	Environment Specs	Rated Power Consumption	226W	
49		Power Consumption (in Standby)	0.5 W	
50		Dynamic Backlight Control	Yes	

51		Power Saving Mode / Back Light Off Mode	Yes	
52	Warranty	on site by OEM	05 years	

3- For Item no 3 (LED Display, 75 inch):

S. No.	Details	Specification		Compliance (yes/ No)
1	General Features	Screen Size	65	
2		Brightness (cd/m ²)	350	
3		Contrast Ratio	1200:1	
4		Dynamic Contrast Ratio	400,000:1	
5		Response Time (ms)	8.0	
6		Display resolution (H x V, pixels)	3840 x 2160	
7		HDR (High Dynamic Range) compatibility	Yes (HDR10, HLG)	
8		Aspect Ratio	16:9	
9		Portrait/Tilt Compatibility	Yes	
10	Display features	Dimming type	Frame Dimming	
11		Display Device	LCD	
12		Panel Type	IPS	
13		Backlight type	Direct LED	
14		Color gamut (NTSC)	69%	
15		Picture Processor	4K Processor X1	
16		Operation time	16/7	
17		Haze (%)	1 %	
18		Viewing Angle (Right/Left)	178 (89/89) degree	
19		Viewing Angle (Up/Down)	178 (89/89) degree	
20	Video Specs	Video Processing	4K X-Reality PRO	
21		Motion enhancer	Motion flow XR	
22		HDMI Signal	4096 x 2160p (24, 50, 60 Hz), 3840 x 2160p (24, 25, 30, 50, 60 Hz), 1080p (30, 50, 60 Hz), 1080/24p, 1080i (50, 60 Hz), 720p (30, 50, 60 Hz), 720/24p, 576p, 576i 480p, 480i	
23	Audio Specs	Speaker Position	Down Firing	
24		Audio Power Output	10W + 10W	
25	Professional features	Pro settings	Yes (Simple Pro settings menu)	
26		HDMI auto wake-up	Yes	
27		Operating System	Android TV	
28		On-board Storage (GB)	16GB	
29	Network Specs	Wi-Fi Certified	Yes	
30		Wireless LAN	Integrated	

31	Convenience features	USB playback codecs	MPEG1:MPEG1/MPEG2 PS:MPEG2/MPEG2 WEBM:AV1/AC4/ogg/AAC	
32		On Screen Clock	Yes	
33		Sleep Timer	Yes	
34		On/Off Timer	Yes	
35		Chromecast built-in	Yes	
36	Control Specs	Apple AirPlay	Yes	
37		IP Control	Yes	
38		RS-232C Control	Yes	
39	Inputs and outputs	HDMI-CEC	Yes	
40		HDCP	HDCP2.3 (for HDMI1/2/3)	
41		Composite Video Input (s)	1 (Side, Mini jack)	
42		HDMI inputs total	3 (3Side)	
43		Analog Audio Input (s) (Total)	1 (Side Analog Conversion)	
44		Digital Audio Output (s)	1 (Side)	
45		USB ports	2 (Side)	
46		Ethernet inputs	1 (Side)	
47	Design features	VESA® Hole Pitch (W x H)	300 x 300 mm	
48	Environment Specs	Rated Power Consumption	226W	
49		Power Consumption (in Standby)	0.5 W	
50		Dynamic Backlight Control	Yes	
51	Warranty	Power Saving Mode / Back Light Off Mode	Yes	
52		on site by OEM	05 years	

4- For Item no 4 (Switch – 8+2 Port, AC operated):

S. No.	Detailed Technical Specifications	Compliance (Yes / No)
1	Hardware and interface requirements	
1.1	Switch should support with minimum 8 x 10/100/1000BaseT POE/PoE+ and 2 x 1G/10G SFP+ uplink ports	
1.2	Switch should have out of Band Management Port and console port.	
2	General requirements	
2.1	Switch should have minimum 4 GB DRAM and 4 GB Flash	
2.2	Switch should support Modular OS	
2.3	Switch should support a long distance stacking up to 10KM with minimum stacking bandwidth of 40Gbps. Switch should support minimum 4 switches in a single stack.	
3	Performance requirements	
3.1	Switch should support a switching bandwidth of 60 Gbps	
3.2	Switch should have minimum 44 Mpps Forwarding rate.	
4	Layer 2 Switching	
4.1	Switch should support minimum 32K MAC addresses per system	
4.2	Switch should support Jumbo frames – 9,000 bytes & minimum 1K active VLANs.	

4.3	Switch should support IEEE Standards of Ethernet: 802.1ak(MVRP),802.1ab(LLDP), 802.1d(STP), 802.1ad, 802.1Q, 802.1s(MSTP) , 802.1w(RSTP), IEEE 802.1X , 802.3ad(LACP) , 802.3x , L2PT,802.3az	
4.4	The switch should support fast and perpetual PoE	
5	Layer 3 Routing	
5.1	Switch should support IPv4 and IPv6 static routing	
5.2	Switch should support VRRP, RIP v1/v2, OSPF v1/v2, BGP ,IS-IS, RIPng and BFD by adding a license if required in future.	
5.3	Switch should support MLD , MLDv2	
5.4	Switch should support IGMP v1, v2, v3 , IGMP Snooping , MLD snooping	
5.5	Switch should support PIM-SM, PIM-SSM, PIM-DM	
6	Quality of Service (QoS) requirements	
6.1	Switch should support Marking, policing, and shaping	
6.2	Switch should support WRED , 802.1p	
6.3	Switch should support Strict priority (SP), Weighted Deficit Round-Robin (WDRR) or Equivalent	
6.4	Switch shall support minimum eight hardware queues per port.	
6.5	The switch must support L2-L4 traffic classification, including MAC address (L2), VLAN (L2), IP address (L3), DSCP (L3), and TCP/UDP port (L4) based filtering, prioritization, and access control for efficient traffic management and QoS enforcement.	
7	System Management and Administration	
7.1	Switch should support for embedded RMON/RMON-II for central NMS management and monitoring	
7.2	Switch should be manageable through CLI, SSHv2 and HTTP/HTTPs	
7.3	Switch should support FTP/TFTP/Secure Copy for upgrading the operating System	
7.4	Switch should support TELNET , SSH , DNS , NTP ,SNMPv1 , SNMPv2c and SNMPv3	
7.5	Switch should support IEEE 802.3ah.	
7.6	Switch should support port mirroring and minimum number of monitoring sessions should be 4.	
7.7	Switch should have configuration rollback feature	
8	Security features	
8.1	Switch Should support Port, VLAN and Router based Access control lists (ACLs)	
8.2	Should support minimum 500 Security Access Control Entries	
8.3	Switch should support MAC limiting	
8.4	Switch should support Proxy ARP , DHCP Snooping	
8.5	Switch Should support IP Source Guard , DAI and IPv6 Security feature like IPv6 RA Guard and IPv6 Neighbour Discovery Inspection ,Control plane DoS protection	
8.6	Switch should support L2-L4 ACL	
8.7	Switch should support RADIUS, TACACS+ authentication , NTP	
9	Environmental Requirements	
9.1	Switch should support operating temperature 0° to 50°C	
9.2	Switch should support relative humidity of 5% to 90% noncondensing	
10	Certifications and compliances	
10.1	Should be Reduction of Hazardous Substances (ROHS)	
10.2	Should have FCC 47 CFR Part 15 ,CISPR 35 , VCCI-CISPR 32 ,EN 55032 ,IEC/EN 61000 & EN 55035 ,ICES-003 / ICES-GEN ,CISPR 24 & CISPR 32	
11	Warranty	

11.1	The product should be supplied with a 5 years Product warranty. The OEM should have a 24x7 support centre. OEM should have an India toll-free number reflected on the official website.	
11.2	OEM should have not announced the “End of Sale” and “End of Life” for the proposed product.	

5- For Item no 5 (Server for storage):

Sl. No.	Parameter	Minimum Required Specification	Compliance (Yes/No)
1	Operating System	Ubuntu Operating System support	
2	Virtualization Platform	VMware / Hyper-V Virtualization Platform Support	
3	Hardware Type	Intel Xeon Scalable Processor based	
4	Processor	2.5Ghz or above	
5	vCPU (core)	Minimum 16 Cores	
6	Memory (GB)	Minimum 64 GB DDR5	
7	Storage (GB)	2150	
8	NIC	Minimum 1 NIC	
9	Storage Hardware Recommendation	Enterprise SSD Storage / SAN Storage Support with RAID 0/1/5/10 Configuration	
10	Storage Controller	Enterprise RAID Controller	
11	Power Supply	Dual Redundant Power Supply	
12	Form Factor	1U Enterprise Rack Mount Server	
13	Operating Temperature	10°C to 35°C	
14	Form Factor	Max. 1U rack mounted with sliding rails	
15	Ethernet ports	4* 10G SFP+ Ports, 2 x 1GbE	
16	I/O slots	Up to 3 x PCIe Gen4 (x16/x8/x8)	
17	LCD panel	Should display system ID, status information and system error code followed by descriptive text. LCD background should light up in different colours during normal system operation & error conditions.	
18	Server security	Should provide effective protection, reliable detection & rapid recovery using: - Silicon-based Hardware Root of Trust - Signed firmware updates - Secure default passwords - Configuration and firmware drift detection - Persistent event logging including user activity - Secure alerting - Automatic BIOS recovery - Rapid OS recovery - System erase	
19	Warranty	5 years On-site comprehensive warranty with 24x7x365 remote hardware support.	

6- For Item no 6 (2KVA UPS):

2 KVA Online UPS System with Battery Bank for 4 hrs Backup		
Characteristic	Specification	Compliance (Yes/ No)
Capacity	2KVA, 1800 Watt (1Øinput/ 1Ø output)	
Topology	True Online Double Conversion UPS	
Technology	IGBT Based	
Isolation Transformer	UPS should be delivered with inbuilt Isolation Transformer @Input/Output side of the UPS	
INPUT		
Input Facility	1Ø, 2-wire & Ground, (Phase & Neutral + Ground)	
Input Voltage Range	1Ph,L-N+PE (175 to 270 Vac on full load)	
Input Frequency Range	45 ~55Hz	
Input Power Factor	≥0.99	
OUTPUT		
Power Factor	0.9	
Nominal Output Voltage	220/230/240Vac shall be available with +/-1% regulation in battery mode	
Voltage regulation	± 1% static, ± 5% for Dynamic Load	
Nominal Frequency	50Hz±2% (Synchronized to Mains)	
Waveform	Sine wave	
Crest factor	3:1	
Total harmonic distortion (THDv)	< 3% (linear load); <5% (nonlinear load)	
Output Short Circuit Protection	Electronic, trip	
Transfer time	Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: < 4ms	
Maintenance Bypass	Automatic & Manual	
Output Connection	Terminal at bottom or Indian Socket	
DC Ripple factor	≤1%	
Efficiency	Overall (AC to AC) : ≥87%	
Overload Protection	>100% ~ 110%: for 5 mins;	
	>110% ~ 125%: for 1 min;	
Surge Protection	UPS shall have an inbuilt SPD for protection against high surges, transient over-voltages, and voltage spikes, ensuring safety of the UPS and connected equipment	
BATTERY & BATTERY BANK CHARGER		
DC BUS voltage	72 VDC or Higher	
Battery Configuration & Technology	Minimum VAh should be 3024 Vah (12V-42Ah-6 Nos) for 240mins of Backup @ Running Load of 400 Watt. Batteries should deliver 1400 Cycles @30% DOD, Battery OEM Declaration should be enclosed.	
Batteries Type & Make	SMF BATTERY & Make: HBL/Exide/Quanta	
Battery IEC Standard	Batteries should be complied to IEC 60896 standard , Test Report to be submitted	
Battery Housing	Compact and space-efficient MS Steel Open Racks, complete with interconnectors, shall be provided. The UPS Battery Rack shall be adequately designed and structurally reinforced to house the UPS unit	

	on top of the rack while ensuring safe operation, accessibility, and load-bearing capability.	
Interfaces	Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available SNMP should be provided for remote Monitoring of UPS Health	
Remote Monitoring	Remote Monitoring Software to be provided , Bidder/OEM should have prior experience of supplying CMS for UPS System-PO Copies & Completion Report for CMS System of UPS (For Monitoring more than 100 UPS Systems) to be Enclosed (From any Govt. or PSU organisation in PAN India)	
Cold Start	should be provided	
Environmental		
Operating Temperature	0-50 deg C with full load	
Type of Cooling	Forced Air	
Noise Level	<55 dBA at 1 meter distance	
Auto Start, Cold Start & EPO	Shall be available	
Humidity	0%-95% non condensing	
INGRESS PROTECTION	IP 20	
MEASUREMENTS (ON LCD)	Input & Output Voltage, Input & Output Frequency, Bypass: Voltage & Frequency, Battery Level Indicator, Load Level indicator, Fault codes, , Overload, Short circuit, Low Battery.	
CERTIFICATIONS		
BIS	BIS Certificate to be submitted for the quoted Model	
CERTIFICATIONS	1)ISO9001 , 2)ISO 14001 ,3)ISO 45001 , 4)ISO 50001 , 5)ISO 20000 , 6)ISO 27001 7)SNMP/Network Management Interface shall comply with IEC 62443-4-1:2018 (Secure Product Development Lifecycle Requirements). 8)SNMP/Network Management Interface shall comply with IEC 62443-4-2:2019 (Technical Security Requirements for IACS Components). Valid compliance certificates/declarations shall be provided along with the bid/offer.	
SUPPORT		
Web/Window base Support	It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.	

7- For Item no 9 (Surge protector for Class C):

S. No.	Specification	Compliance (Yes/ No)
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1	Description: Compact 1-phase Type 2 (or 3) surge protector - 230 V - Pluggable	
2	Standards compliance: IEC 61643-11 / EN 61643-11 / UL1449 ed.5	
3	Certification: UL Recognized	
4	Technology: MOV	
5	SPD configuration: Single phase	
6	Remote signalling of disconnection: Option DS240S-320 : output on changeover contact	
7	SPD type : 2	
8	Network: 230 V single-phase	
9	AC system: TN	
10	Max. AC operating voltage : 320 Vac	
11	Residual Current : < 0.5 mA	
12	Max. discharge current : 40 kA	
13	Total Maximum discharge current : 80 kA	
14	Admissible short-circuit current: 10 000 A	

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