



NATIONAL TELECOMMUNICATION CORPORATION

HEADQUARTERS G-5/2 ISLAMABAD

EPADS E-TENDER DOCUMENTS

**Supply, Installation, Testing and Commissioning of DRS Links
at NTC Lahore on Turnkey DDP Site Basis**

EPADS E-Tender Notice #HQ/ADV-28/ 2025-26

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SECTION-I

INSTRUCTIONS TO THE BIDDERS

1 INVITATION TO e-BIDS

Tender Notice No. HQ/ADV-28/ 2025-26

National Telecommunication Corporation (NTC), invites electronic bids from the contractor's / service providers, registered with Income Tax and Sales Tax Department having relevant experience for supply of following services:

Tender No.	Description of Service	Last Date & Time of Bid Submission	Bid Opening Date & Time
28	Supply, Installation, Testing and Commissioning of DRS Link at NTC Lahore on Turnkey DDP Site Basis	19-02-2026 @ 1100 Hrs.	19-02-2026 @ 1130 Hrs.

Bidding documents as per regulations, containing detailed terms and conditions, specifications and requirements etc. are available for the registered bidders on EPADS at (www.eprocure.gov.pk).

Electronic bids must be submitted through EPADS on or before the bid closing date and time, as specified in the table. Manual bids will not be accepted. Electronic bids will be opened on the same day, at least 30 minutes after the bid closing time, as indicated in the table.

Note: Notification of the GRC constituted in terms of Rule-48 of PPRA rules, 2004 is provided on EPADS at www.eprocure.gov.pk and on www.ntc.net.pk

Director (Procurement)

Room # 05, Ground Floor, NTC HQs, Sector G-5/2 Islamabad

Phone: 051-9245833, 9245975 Fax: 051-9245719

www.ntc.net.pk

2 GENERAL INTRODUCTION



- 2.1 National Telecommunication Corporation was established in 1996 under Pakistan Telecommunication Re-Organization Act 1996. NTC has a definite mandate to provide basic telecommunication services to its designated customers, which include Federal and Provincial Governments, their departments, autonomous organizations and defense services throughout the country.

3 SCOPE OF WORK

- 3.1 Supply, Installation, Testing and Commissioning of Two Microwave /DRS links between NTC Regional Office Race Course Lahore and PKLI Hospital Lahore on DDP Turnkey Site Basis as per Bill of Quantity at **Annex-A** and Technical Specifications at **Annex-B1 to B5**.
- 3.2 For the execution of the work the bidder shall undertake to supply all hardware and software including equipment, installation material, interfacing units etc., as detailed in (Annex-A), which shall be necessary to make the equipment fully functional & operative. Any other item (i.e., hardware or software) or any other entity which may not have specifically been mentioned in the Bill of Quantity (Annex-A), but which is/are necessary to meet the Specifications at **Annex-B1 to B5** and site requirements shall be provided by the bidder without any extra cost to NTC. Following items (but not limited to) shall be required for the execution of the work: -
- i) Hardware
 - ii) Software
 - iii) Power cabling
 - iv) Installation materials
 - v) Services (Engineering, Installation, Integration, Support, etc.)
 - vi) Documentation
 - vii) Local Training
- 3.3 The offered/quoted equipment shall comply & be in accordance with the Technical Specifications and evaluation criteria as enunciated in technical specifications at Annex-B1, B2, B3, B4 and B5).
- 3.4 The bidder shall be responsible to carryout Link Budgeting and Offer Maximum obtainable capacity with required availability as per Technical Specifications.

General Instructions

- 3.5 The bidder shall undertake to:
- a. Keep NTC informed of technological and other developments in the products offered and methods of incorporating such developments economically to NTC's network.
 - b. The proposed equipment (hardware and software) should be field proven. The Supplier has to provide list of installed base references in Pakistan, including the contact persons.
 - c. Equipment shall be flexible, efficient, rapid, accurate and reliable.
 - d. Equipment shall be fully compatible with the future services and environments of the NTC network.
 - e. Equipment shall have low power consumption and compact design. The bidder shall indicate the power consumption, size, weight and space requirement of the offered system.

- f. Equipment shall be the latest state-of-the-art technology, currently available in the international market.
- g. The bidder shall conduct physical site survey at his own risk & cost to design the solution, prior to offering the solution to NTC.

System Installations

- a. The bidder shall supply, install and configure the supplied equipment.
- b. The bidder shall provide all cables, connectors, and installation materials required on turn key basis.
- c. Wiring / cabling shall be of flexible design that can be easily added, rearranged or removed.
- d. Minor modifications in the building like making holes in the wall; roof or floors required for the execution of the works, shall be done by the bidder.

Maintenance Support

- a. The bidder shall recommend the type of routine / preventive & corrective maintenance tests and their duration, giving the test set ups and their procedures in the PAT (Provisional Acceptance Testing) document.
- b. The bidder will clearly indicate the point of presence in Pakistan for maintenance purpose.
- c. The bidder will specify briefly first, second and third line of maintenance support along with down time.
- d. The bidder will maintain sufficient quantity of spares at the bidder's point of presence in Pakistan during warranty period. In case of failure of a component or whole system the equipment will be replaced within 24 hrs with a new one.
- e. The bidder will provide comprehensive hardware and software support to NTC during the warranty period (24 months).

4 QUALIFICATION CONDITIONS OF BIDDERS

Invitation to submission of sealed bids is open to all firms in Pakistan who meet following conditions: -

- 4.1 The firm must be registered with Tax Authorities and active Tax payer for Income Tax and Sales Tax.
- 4.2 The firm must be authorized by Original Equipment Manufacturer (OEM) against the quoted item.
- 4.3 Have relevant experience of supply, Installation, Testing and Commissioning of Microwave / DRS links in Pakistan. The incumbent bidder shall provide all the record of its previous installations along with contracts/purchase orders detail (i.e., amount, date & time of completion, description of items) & contact details of concerned person for reference & verification. The relevant experience of the incumbent bidder will be evaluated on the basis of its supply record & will be considered for further evaluation. If any bidder is found in-experienced or its previous supply record is irrelevant than the said bidder will not be considered for further evaluation & will be knocked out from the competition.
- 4.4 The firm must provide undertaking on at-least PKR 200/- Judicial Paper that:
 - a) The firm is not black listed from any government organization.

- b) The firm does not have any linkage with India and/or Israel regarding ownership, sponsoring etc.

4.5 The bidder must fully comply to the tender clauses as per [Annex-C](#).

Note: Prospective Bidder Must Provide Valid Documentary Proof including CVs against serial # (4.1-4.5) along with the bid. Non-Submission of any of above document will lead to Consideration of a firm as NON-RESPONSIVE & Sub-sequent NON-CONSIDERATION for the evaluation.

5 COST OF TENDERING

The bidder shall bear all costs associated with the preparation and submission of its bid and the NTC will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the tendering process.

6 CLARIFICATIONS OF TENDER DOCUMENTS

- 6.1 A prospective bidder requiring any clarification(s) regarding technical and commercial aspects of the tender document may notify to NTC on EPADS platform only, however, in case of further clarification/ understanding are required, the bidder may contact following NTC Officers:

Divisional Engineer (Procurement)-I	Director (Procurement)
Tel: 051-9245864, Fax: 051-9245977	Tel: 051-9245833, Fax: 051-9245977
Email: shaukat.ali@ntc.org.pk	Email: kashif.nawaz@ntc.org.pk

- 6.2 The concerned NTC officer will respond to any request for clarification on EPADS, which receives well before (approximate 05 working days or more) to the deadline for the submission of bids.

7 AMENDMENT OF TENDER DOCUMENTS

- 7.1 At any time prior to the deadline for submission of bids, the NTC may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the tender documents by issuing addendum/ amendment on EPADS.
- 7.2 Any addendum/ amendment thus issued shall be part of the tender documents. To afford bidders reasonable time in which to take an addendum into account in preparing their bids, the NTC may at its discretion extend the deadline for submission of bids.

8 PREPARATION OF BID

- 8.1 Bids should be prepared considering “**Single Stage - One Envelope**” procedure.
- Bid documents and all correspondence will be in English language.
 - The bid should have a covering letter on letter pad of the firm. All pages of the bid shall be initialed/ signed and official seal be affixed by the person(s) authorized to sign. In addition, all the pages of the submitted bid must be numbered. Complete bid shall be scanned and uploaded on EPADS.
- 8.2 Following documents shall be submitted with the proposal:
- Duly filled Financial Proposal as per [Annex-A](#).
 - Technical Compliance Sheet as per [Annex-B1 to Annex-B5](#).

- c. Datasheets, Brochures and technical Manuals to certify compliance of quoted equipment.
- d. Link Budgeting of the quoted Microwave Link.
- e. Duly filled technical compliance statement as per [Annex-C](#).
- f. Valid Bid Security.
- g. Documentary evidence (Certificates, Undertaking) as per Qualification Criteria.
- h. Company Profile.
- i. Purchase Order/Contracts for Verification of experience.

NOTE: Every participant bidder shall submit all above mentioned documents and samples. Non-submission of any of above documents or samples at the time of bid opening will lead to declaration of bidder as non-responsive & non-consideration for further evaluation.

9 LANGUAGE OF BID DOCUMENTS

- 9.1 Bid documents and all correspondence will be in English language.
- 9.2 The bid should have a covering letter on printed and scanned letter pad of the firm. All pages of the bid shall be initialed/signed and official seal be affixed by the person(s) authorized to sign.

10 PRICE

- 10.1 Prices should be quoted in Pak Rupees as per [Annex-A](#).
- 10.2 The price quoted should be firm, final, and clearly typed without any ambiguity.
- 10.3 The price should include all the applicable government taxes, duties etc.
- 10.4 The bidder shall be deemed to have obtained all information as to all the requirements thereto which may affect the bid price.
- 10.5 For the purposes of comparison of bids quoted in different currencies, the price shall be converted into Pak Rupees. The rate of exchange shall be the selling rate, prevailing on the date of opening of (financial part of) bids, as notified by the State Bank of Pakistan on that day.

11 TENDER SECURITY / EARNEST MONEY

- 11.1 The bidder shall furnish tender security amounting to **PKR. 1,000,000/- (Pak Rupees One Million Only)** in the form of Pay Order or Deposit at Call or a Bank guarantee as per [Annex-D](#) issued by a scheduled bank of Pakistan in favor of NTC valid for a period of 120 days.
- 11.2 The Original Bid Security shall be delivered in person or sent by the registered mail which should reach the office of Director (Procurement) Room # 05, Ground Floor, NTC HQ, G-5/2 Islamabad on or before **1100 hours on February 19,2026**. Any online bid for which original bid security does not reach before deadline of the bid shall be rejected by the NTC as non-responsive.
- 11.3 Scanned Copy of bid security shall be uploaded by the bidder on EPADS before deadline of bid submission. Any bid not accompanied by bid security shall be rejected by the NTC as non-responsive.
- 11.4 The bid securities / earnest money of the unsuccessful bidders will be returned upon award of contract to the successful bidder or on expiry of validity of tender

- security whichever is earlier. The bid securities of bidders, who are not in competition, can be returned earlier at NTC discretion upon receiving a request.
- 11.5 The tender security of the successful bidder will be returned when the bidder has furnished the required Performance Security and signed contract agreement.
- 11.6 All correspondence regarding release/extension of bid security shall be made with Director (Procurement) NTC HQ.
- 11.7 The bid security may be forfeited:
- If a bidder withdraws their bid during the period of bid validity.
 - If the bidder does not accept the correction of their bid price.
 - In the case of successful bidder, if bidder fails to furnish the required performance security or sign the contract agreement.
 - If bidder does not respond to clarifications called by NTC.

12 VALIDITY OF BIDS

Bid shall remain valid for a period of **120 days** from the date of tender opening.

13 DEADLINE FOR SUBMISSION OF BID

- 13.1 The bid shall be uploaded in PDF format on PPRA EPADS website i.e. www.eprocure.gov.pk on or before **1100 hours on February 19, 2026**.
- 13.2 The bidders are required to follow procedure of EPADS and for any clarification/assistance regarding EPADS they may contact PPRA Helpline UAN: 051-111-137-237.
- 13.3 Bid received other than EPADS i.e. hard/Soft copy delivery in person or through e-mail or fax or registered mail will be not accepted by NTC.

14 MODIFICATION & WITHDRAWAL OF BID

- 14.1 Any bidder may modify or withdraw their bid after bid submission provided that written notice of the modification or withdrawal is received by the concerned officer prior to the deadline for submission of bids.
- 14.2 No bid may be modified or withdrawn by a bidder after the deadline for submission of bids.

15 OPENING OF BID

- 15.1 The NTC tender committee will open/download the bids at **1130 hours on dated February 19, 2026** in the presence of bidders' representatives who choose to attend, at NTC HQ G-5/2 Islamabad.
- 15.2 The bidder's name, bid prices, any discount, the presence or absence of tender security, and such other details as the committee at its discretion may consider appropriate, will be announced at the tender opening.
- 15.3 The tender committee will resolve any issue raised by the bidders, on the spot.
- 15.4 NTC reserves the right to reject any one or all bids prior acceptance of a bid / proposal.
- 15.5 NTC reserves the right to reject any one or all bids as per Public Procurement Rules, 2004 33(1).

16 RESPONSIVENESS OF BIDS

- 16.1 The tender security is submitted.
- 16.2 The bid is valid till required period.
- 16.3 The bid prices are firm during its validity and inclusive of all taxes, duties etc.
- 16.4 The bidder is eligible to tender and possesses the requisite experience, skilled graduates and financial health.
- 16.5 The bid does not deviate from basic tender requirements.
- 16.6 The bid is generally in order etc.

Note: "Any bidder found non-compliant in any of above-mentioned conditions will be declared as non-responsive and will not be considered for further Evaluation proceedings. A bidder once declared "non-responsive" shall not subsequently be made responsive by the NTC."

17 EVALUATION CRITERION FOR MOST ADVANTAGEOUS BIDDER

- 17.1 The tender evaluation committee will evaluate and compare only the bids previously determined to be substantially responsive.
- 17.2 Evaluation will be carried out on **qualification, quality and cost basis**.
- 17.3 The **Most advantageous bidder** shall be the one fully compliant to **qualification criteria, compliant to quality criteria** and **highest ranked** in cost evaluation criteria as defined below:

17.4 Qualification Evaluation Criteria:

In first step, the technical bids shall be evaluated on the basis of conditions for qualification set out in Clause 4 above. The bidders fully compliant to qualification criteria, shall be declared as qualified. **Any firm found non-compliant in any of these conditions will be declared as disqualified and will not be considered for further evaluation proceedings.**

17.5 Quality Evaluation Criteria:

After determining the qualification, the technical bids will be examined in detail whether the quoted bid complies to the technical requirements in Bill of Quantity at **Annex-A** and Technical Specifications at **Annex-B1 to Annex-B5**. For this purpose, the bidder's data submitted with the bid will be compared with terms and conditions set forth in the tender documents; NTC at its discretion may ask supported documents & clarification in case compliance is not evident from the literature/documents submitted.

17.6 Cost Evaluation Criteria:

Cost evaluation of the financial bids shall be carried out by comparison of bids' evaluated prices as per bill of quantity at **Annex-A**. The bidder with lowest financial price will be declared as **highest ranked** and so on.

- 17.7 Any effort by a bidder to influence NTC in the tender evaluation, bid comparison or order award decision may result in the rejection of their bid.
- 17.8 Any minor informality or non-conformity or irregularity in the bid which does not constitute a material deviation may be waived by NTC, provided such waiver does not prejudice or affect the relative ranking of any other bidders.

18 CLARIFICATIONS / CORRECTIONS OF BID

- 18.1 To assist in the examination, evaluation and comparison of the bids the committee, at its discretion, may ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.
- 18.2 Arithmetical errors will be rectified on the following basis:
If there is a discrepancy between unit price and total price that is obtained by the multiplying the unit price and quantity, the unit price shall prevail and total price shall be corrected. If there is a discrepancy between the words and figures the amount in words shall prevail. If there is a mistake in addition / totaling that can be corrected.
- 18.3 If the bidder does not accept the corrected amount of bid, their bid will be rejected and its tender security forfeited.

19 COMMERCIAL COMPLIANCE STATEMENT

The bidder will furnish a compliance certificate with the bid as per enclosed format ([Annex-B](#)).

20 VARIATION ORDER

NTC reserves the right to place variation order (increase or decrease or delete in the quantities of BOQ). The bidder shall be bound to accept the variation order by NTC.

21 AWARD CRITERIA & NTC'S RIGHT

- 21.1 The bid of eligible and commercially compliant bidder with financially lowest evaluated cost shall be considered as **most advantageous bid**. Contract will be awarded to most advantageous bid on **as-a-whole basis**.
- 21.2 The NTC reserves the right to accept or reject any bid, and to annul the tendering process and reject all bids, at any time prior to award of order, without thereby incurring any liability to the affected bidders or any obligation to inform the affected bidders of the grounds for the NTC's action.

22 NOTIFICATION OF AWARD & SIGNING OF CONTRACT AGREEMENT

- 22.1 Prior to expiration of the period of tender validity prescribed by NTC, the NTC will notify the successful bidder Letter of Intent (LoI) through EPADS that their tender has been accepted.
- 22.2 Within 5 days from the date of furnishing of acceptable performance security under the condition of contract, the formal contract shall be executed with the successful bidder. If the successful bidder does not accept LOI of NTC within the bid validity period, NTC may confiscate the bid security.

SECTION-II

TERMS & CONDITIONS OF CONTRACT

1 PERFORMANCE SECURITY

- 1.1 The successful bidder shall furnish to the NTC a performance security equivalent to 10% of the contract value in the shape of Pay order or CDR or bank guarantee valid for a period of 15 months as per [Annex-D](#) prior to the signing of contract. Performance security shall be released upon successful completion of one-year warranty period/issuance of FAC.
- 1.2 The performance security shall be further extended if the delivery/completion of work is delayed. Furthermore, the contractor shall extend the bank guarantee (if required) to cover the warranty period.
- 1.3 Failure of the successful bidder to furnish performance security shall constitute sufficient grounds for the annulment of the award and forfeiture of the tender security.
- 1.4 All the correspondence regarding release of performance guarantee shall be made with Director (Procurement) NTC HQ.

2 CONTRACTOR'S RESPONSIBILITIES

The Contractor shall be responsible for the following:

- 2.1 Link Budgeting, Line of Site clearance and successful planning of the links.
- 2.2 Supply, Installation, Testing and Commissioning of DRS Links at NTC Lahore on Turnkey DDP Site Basis as per contract.
- 2.3 All types of transportation for delivery of software / solution at final destination will be the responsibility of the contractor.
- 2.4 The contractor shall not subcontract the whole of the works. The contractor shall not subcontract any part of the works without the consent of the NTC.
- 2.5 The Contractor shall execute the basic and detailed design and the implementation activities necessary for successful installation & commissioning of the solution in compliance with the provisions of the Contract or, where not so specified, in accordance with good industry practice.
- 2.6 The Contractor shall conduct an engineering survey of sites and shall submit the Project implementation schedule to NTC Project Director NTC within 02 x week after signing the contract.
- 2.7 The contractor shall provide the detailed literature for the installed solution in the form of hard copies and soft copies as mentioned in the BOQ, covering all the details of the solution and their operations, maintenance procedures.
- 2.8 The contractor shall carryout installation and commissioning according to the implementation schedule, including all action/activities and inform/update Project Director of NTC.
- 2.9 The contractor shall be responsible

3 NTC's RESPONSIBILITIES

NTC shall be responsible for the following:

- 3.1 Project Director shall arrange to provide the requisite data and site access for implementation of the project.

- 3.2 Project Director shall assist in timely and satisfactory completion of the project in their areas of jurisdiction as per SOW.
- 3.3 Project Director shall be responsible to verify the delivery BOQ against contract, to issue Provisional Acceptance Certificate & Final Acceptance Certificate and to coordinate with any third party (if required).
- 3.4 Project Director shall be responsible to verify the delivery challans of the delivered equipment by the contractor.
- 3.5 Project Director shall be responsible to execute Provisional Acceptance Testing of the links through the Contractor.
- 3.6 Project Director shall be responsible to issue Link wise Provisional Acceptance Certificate & Final Acceptance Certificate.

4 TRANSPORTATION / PACKING

All types of transportation for delivery of equipment / solution at final destination will be the responsibility of the contractor. Contractor shall ensure proper / international packing of equipment to avoid deterioration of equipment etc.

5 TIME FOR COMPLETION

The contractor shall complete supply, installation, testing, and commissioning all equipment within **14 (Fourteen) Weeks** from the date of signing of contract.

6 WARRANTY

- 6.1 The Contractor warrants that all goods, equipment, and works delivered and executed under the Contract are:
 - a. Brand new, unused, and incorporate the latest improvements in design and materials;
 - b. Free from defects in material, workmanship, or construction;
 - c. Not refurbished, stolen, obsolete, or smuggled.(The Contractor shall furnish a written undertaking to this effect at the time of delivery or submission of completion documents.)
- 6.2 The warranty shall remain valid for a period of one (01) year, commencing from the date of issuance of the Provisional Acceptance Certificate (PAC) by NTC for the respective system or work.
- 6.3 NTC shall promptly notify the Contractor in writing of any claims arising under this warranty. Upon such notification, the Contractor shall, at its own cost and risk, repair or replace the defective item(s), equipment, or work(s) within a reasonable time, not exceeding seven (07 to 14) calendar days.
- 6.4 If the Contractor fails to remedy the defect(s) within the specified time after receipt of notice, NTC shall be entitled to take remedial actions as deemed necessary, at the risk and expense of the Contractor, without prejudice to any other contractual rights or remedies available to NTC.
- 6.5 Without prejudice to any other clause of this Contract, the Contractor shall promptly correct, at no additional cost to NTC, any defect in work previously corrected if it reoccurs or is found to have been improperly rectified, provided that such notice is issued within the original twelve (12) months warranty period.

- 6.6 If no defect or discrepancy is reported by the designated Consignee(s) during the warranty period, the performance security submitted by the Contractor shall be released by Director (Procurement), NTC HQs, after completion of formalities.

7 LIQUIDATED DAMAGES

Unless the failure to complete the delivery is caused by force majeure or delay is not on part of NTC, the contractor shall pay to NTC Headquarters as liquidated damages a sum up equivalent to @ 0.5% per week of the delayed portion to a maximum of 10% of contract value and the same will be recovered from the Contractor at the time of payment. In case of force majeure the LD charges may be waived off by NTC on receipt of request from contractor with documentary evidences. If the delay is on the part of NTC, and agreed by NTC, then for that time no liquidated damages will be paid to NTC. NTC shall have discretion to impose/waive off LD Charges based on the performance of contractor.

8 ACCEPTANCE CERTIFICATE

- 8.1 The contractor shall provide Provisional Acceptance Testing (PAT) documents of the equipment part to the Project Director for vetting and approval of CTO NTC HQs through DE(M&I) NTC HQs after signing of the contract.
- 8.2 Upon completing the supply, installation and commissioning of all the equipment, the contractor shall notify the Project Director in writing to initiate the Provisional Acceptance Test (PAT) of the equipment part. The Project Director shall nominate a committee to conduct the PAT. The approved PAT Team shall carry out PAT in accordance with the approved PAT protocols, verifying the installed equipment against the contract BOQ and specifications.
- 8.3 The contractor shall do all necessary arrangements for the PAT testing as per approved PAT protocols. Upon successful completion of the PAT, the nominated team will sign the PAT report, confirming compliance.
- 8.4 After the successful conduct of the PAT, the Project Director NTC shall issue Provisional Acceptance Certificate (PAC) based on the PAT results. If the PAC is not issued within one (01) week of the PAT, the Project Director shall provide reasons of the delay within one week after receiving a formal request from the contractor.
- 8.5 Any discrepancies or deficiencies identified during the PAT or work inspection will be communicated to the contractor, who shall address them promptly, but no later than fourteen (14) working days from the date of notification. In such cases, the PAC will only be issued upon successful rectification of the discrepancies and completion of the required tests to the satisfaction of the PAT team.
- 8.6 Delays in issuing the Provisional Acceptance Certificate (PAC) will be attributed to the contractor only if discrepancies identified during the PAT remain unresolved by the contractor.
- 8.7 The Provisional Acceptance Certificate (PAC) will be valid for warranty period of 12 months.
Any Minor / Non-service affecting discrepancies shall be appended with PAC as Annexure.

9 NIL DISCREPANCY CERTIFICATE

- 9.1 Upon successful issuance of the Provisional Acceptance Certificate (PAC) for a site, and subsequent resolution of Any Minor / Non-service affecting discrepancies the Project Director shall issue a Nil Discrepancy Certificate (NDC) in favor of the contractor for that specific site, after being fully satisfied with the completeness of the work executed thereon.
- 9.2 Issuance of the NDC shall not absolve the contractor of their obligations during the warranty period.

10 TERMS OF PAYMENT

- 10.1 All payments against equipment and services shall be processed on site-wise basis by Finance Wing NTC HQs through Director (Procurement) NTC HQs in following manner:
- 60 % payment** of the equipment value shall be made upon delivery of equipment duly verified by NTC Project Director.
 - 35% payment** of the equipment value shall be made upon issuance of Provisional Acceptance Certificate by Project Director.
 - 05% payment** of the contract value shall be made upon issuance of Nil Discrepancy Certificate (NDC) by Project Director.
 - 100%** payment of the Contractual services shall be made upon issuance of Provisional Acceptance Certificate.
- 10.2 The Contractor will submit the commercial invoice & sales tax invoice in triplicate to Director (Procurement) NTC HQs. The Contractor will clearly mention NTN & GST number of both supplier & purchaser on the invoice (NTC NTN # 1218153-6, NTC GST # 07-01-9802-013-64).
- 10.3 All the payments will be made by Finance Wing NTC HQs through Director (Procurement) NTC HQs subject to Invoice verification by Project Director.
- 10.4 All the payments shall be made through cross cheque in the Pak Rupees.
- 10.5 Taxes will be deducted as per government rules at the time of payment.

11 CONTRACTOR'S NEGLIGENCE

- 11.1 The contractor will indemnify NTC against actual losses, subject to limitation of liability not exceeding 10% of the contract value for loss and / or damage to property and / or persons of NTC arising from negligence errors or omissions or default and / or infidelity during period of this contract and arising out of and in the course of the performance by the contractor of its obligations under this contract. However, the said clause will be governed by prevailing laws of Islamic Republic of Pakistan.

12 FINAL ACCEPTANCE CERTIFICATE

The contractor may notify the NTC concerned officer at-least 15 days before the expiry of warranty period for the issuance of final acceptance certificate. Upon such notification from contractor, the Project Director will issue Final Acceptance Certificate, for each site, in favor of contractor subject to satisfactory completion of warranty period as per requirement of contract. Alternatively, the NTC concerned officer

will notify the contractor for the discrepancies that still remain un-resolved and contractor will rectify the discrepancies.

13 DEFAULT BY CONTRACTOR

- 13.1 If the contractor fails to provide the services, refuses or fails to comply with a valid instruction of the NTC, the NTC may give notice and stating the default.
- 13.2 If the contractor has not taken all practicable steps to remedy the default within 14 days after receipt of NTC notice, the NTC may by a second notice cancel the contract and confiscate the performance security.

14 ARBITRATION AND APPLICABLE LAW

- 14.1 This Agreement shall be governed under Pakistani law and the Courts at Islamabad shall have exclusive jurisdiction over any matter that may be referred to a Court under this Agreement.
- 14.2 In the event that any dispute arises between the Parties under this Agreement, one Party shall issue notice to the other Party to mutually negotiate a resolution to the dispute. If the negotiations fail to resolve the dispute within seven (7) days of receipt of the notice, the dispute shall be referred to the Managing Director, National Telecommunication Corporation ("MD") or their nominee who shall provide a personal hearing to Contractor and render a decision thereon within a period of thirty (30) days. In the personal hearing conducted pursuant to this clause, the Contractor shall not be represented by a legal practitioner within the meaning of the Legal Practitioners and Bar Councils Act, 1973.
- 14.3 If the Contractor is aggrieved of the decision of the MD or their nominee rendered under clause (ii) hereof, the Contractor may refer the dispute to arbitration within thirty (30) days of the date of the decision of the MD or their nominee under the Arbitration Act, 1940 or any law that the Arbitration Act, 1940 is repealed, amended, or modified by at the time of referral of the dispute to arbitration. The arbitration shall be conducted before a Sole Arbitrator to be appointed by the consent of the Parties. The seat and venue of arbitration shall be at the National Telecommunication Corporation Headquarters, Sector G-5/2, Islamabad. The arbitration and the award thereof shall be conducted in the English language.
- 14.4 The costs and fees of the Sole Arbitrator shall be shared by the Parties equally. A Party shall bear the costs and fees of its legal practitioners and other personnel that a Party engages for the arbitration unless otherwise awarded by the Sole Arbitrator.

15 FORCE MAJEURE

- 15.1 The Contractor shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.
- 15.2 If either party is temporarily rendered unable, wholly or in part by Force Majeure to perform its duties or accept performance by the other party under the Contract it is agreed that on such party, giving notice with full particulars in writing of such Force majeure to the other party within 14 (fourteen) days after the occurrence of the cause relied on, then the duties, of such party as far as they are affected by such Force Majeure shall be suspended during the continuance of any inability so caused

but for no longer period and such cause shall as for as possible be removed with all reasonable speed. Neither party shall be responsible for delay caused by Force Majeure.

- 15.3 The terms "Force Majeure" as used herein shall mean Acts of God, strikes, lockouts or other industrial disturbance, act of public enemy, war, blockages, insurrections, riots, epidemics, landslides, earthquakes, fires, storms, lightning, flood, washouts, civil disturbances, explosion, Governmental Export/Import Restrictions (to be supported by a letter from the relevant Authority and verified by the Diplomatic Mission in Pakistan), Government actions/restrictions due to economic and financial hardships, change of priorities and any other cause similar to the kind herein enumerated or of equivalent effect, not within the control of either party and which by the exercise of due care and diligence either party is unable to overcome.
- 15.4 The term of this Contract shall be extended for such period of time as may be necessary to complete the work which might have been accomplished but for such suspension. If either party is permanently prevented wholly or in part by Force Majeure for period exceeding 12 (twelve) months from performing or accepting performance, the party concerned shall have the right to terminate this contract immediately giving notice with full particulars for such Force Majeure in writing to the other party, and in such event, the other party shall be entitled to compensation for an amount to be fixed by negotiations and mutual agreement
- 15.5 If a Force Majeure situation arises, the Contractor shall promptly notify NTC in writing of such conditions and the cause thereof. Unless otherwise directed by NTC in writing, the supplier shall continue to perform its obligations under the contract as far as is reasonably practicable, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

16 TERMINATION FOR INSOLVENCY

The NTC may at any time terminate the contract by giving written notice to the contractor, without any compensation to contractor. If the contractor becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to action to the NTC.

17 TERMINATION FOR CONVENIENCE

The NTC may send a written notice to the contractor and terminate the contract in whole or in part any time for its convenience. The notice of termination shall specify that the termination is for the NTC's convenience, the extent to which performance or work under the contract is terminated and the date upon which such termination becomes effective.

18 PROJECT DIRECTOR / ENGINEER IN CHARGE

Director Development (Central) NTC Lahore

19 DEBARMENT / BLACKLISTING OF FIRM

- 19.1 As per clause-19 of the PPRA rules 2004, NTC reserves the right of debarment 'or' blacklisting of a firm, association, corporation, joint venture, company, partnership or any other legal entity subject to any of the following acts: -
- Consistent failure to provide satisfactory performance.
 - Contractor becomes insolvent.
 - Existence of judicial decision against a contractor in respect of a corrupt or collusive practice.
 - Submission of false and spurious documents, making false statements and allegations to gain undue advantage.
 - Commission of fraud.
 - Contractor abandons the contract.
 - Contractor without reasonable excuse fails to commence the work 'or' suspends the progress of work for 14 days.
 - Contractor is not executing the work in accordance with the contract or is persistently or flagrantly neglecting to carry out their obligations under the contract.
 - Commission of embezzlement, criminal breach of trust, theft, cheating, forgery, bribery, falsification or destruction of records, receiving stolen property, false use of trademark, securing fraudulent registration with sales tax authorities, Pakistan Engineering council etc, giving false evidence, furnishing of false information of serious nature.
- 19.2 Managing Director NTC will constitute a committee comprising of three NTC officers and they will investigate the matter in connection with allegation of corrupt, fraudulent, coercive or collusive practices or illegally harassment or threat. Moreover, the committee shall also accord adequate opportunity of being heard to the contractor who is to be debarred / blacklisted. The said committee will forward its clear recommendations for the approval of Managing Director NTC.
- 19.3 The debarment shall be for a reasonable specified period of time, commensurate with the seriousness of the cause. However, the debarment period shall not exceed from three years. Moreover, NTC also reserves the right of permanent blacklisting of a contractor subject to severity of the corrupt or fraudulent practices.

20 REPEAT ORDER

NTC may place Repeat Order on the contractor as per PPRA Rules 2004.

21 INTEGRITY

- 21.1 The Contractor hereby declares that it has not obtained or induced the procurement of this Contract or a right, interest, privilege or other obligation or benefit under this Contract from Government of Pakistan or any administrative subdivision or agency thereof or any other owned or controlled by it (GoP) through any corrupt business practice.
- 21.2 Without limiting the generality of the foregoing the Contractor represents and warrants that it has fully declared the brokerage, commission, fees etc, paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural

or juridical person, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or including the procurement of this Contract or a right, interest, privilege or other obligation or benefit under this Contract in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

- 21.3 The Contractor accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this Clause.

22 DECLARATION OF BENEFICIAL OWNERS' INFORMATION

The "Declaration of Beneficial Owners' Information of Public Procurement Contract Awarded Regulations, 2022" require that the contractor shall be bound to provide beneficial ownership information as per Performa attached as [Annex-E](#).

ANNEX-A: BILL OF QUANTITY

**SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF DRS LINKS
AT NTC LAHORE ON TURNKEY DDP SITE BASIS**

S#	Description	A/U	Qty	Unit Rate Without Tax	Unit Rate with Tax	Total Amount with Tax
1	Indoor Units: Hybrid Microwave / IP Digital Radio System XPIC Link with 200 Mbps Capacity with following: a. GE /FE and E1 Interfaces b. EOW/IP Phone with Sets c. Multiplexing Modules & Modems d. Software and Licenses e. SFP Modules f. Grounding kit & Power cables g. Roxtech h. Installation Material As per Technical Specifications at Annex-B1	No.	4			
2	Outdoor Units: Outdoor Units for XPIC Configuration As per Technical Specifications at Annex-B1	No.	8			
3	Dish Antennas As per Technical Specifications at Annex-B1	No.	4			
4	LAYER-2 Managed Switch with SFPs as per Technical Specifications at Annex-B2	No.	1			
5	Local Management Terminals as per Annex-B3	No.	2			
6	Rectifier as per Technical Specifications at Annex-B4	No.	2			
7	Battery Banks as per Technical Specifications at Annex-B4	No.	2			
8	Guy Mast Tower	Meter	15			
9	Critical Spares @ 10 percent S. No 1 to 2	LOT	1			
10	Low Loss Cable	Meter	200			
11	Supply, Installation, Testing and Commissioning of all the equipment at S. No 1 to 10 above on Turnkey Basis above	JOB	1			
Total Amount Annex-A in PAK Rupees Including of Taxes						

ANNEX-B1: DRS LINKS SPECIFICATIONS

Technical Specifications of two SD XPIC DRS Links between NTC Race Course and PKLI DHA PH-VI Lahore							
Bidder's Name							
Bidder's Quoted Brand							
S.No	Title	Description	Marks	Bidder's Statement			
				F C	P C	N C	Bidder's Quoted Feature
1	Manufacturer						
1.1	OEM	Equipment must be Manufactured by state of the art, world renowned OEM having proven deployment experience in requisite ODU Configuration required below	M				
2	IDU Parameters						
2.1	Type	Hybrid Microwave / IP Digital Radio System (IP-DRS)	M				
2.2	Capacity	Total Capacity: 200 Mbps each Link (02 x Link = total 400 Mbps); E1's: 16; Ethernet: Total capacity minus Utilized by E1's; The bidder should quote Maximum capacity that can be achieved on given Parameters (Refer to note below)	M**				
2.3	IP Interface	02 x GE (1000 BASE-T)	M				
2.4		01 x GE (1000 BASE-X)					
2.5		02 X GE (1000 Base -X)	100				
2.6	Management Interface	Ethernet OAM	50				
2.7	Modulation Schemes Supported	QPSK- 4096 QAM	50				
2.8	Automatic Transmit Power Control	ATPC Range = 27 dB or better	30				
2.9	Adaptive Coding & Modulation	ACM Capability to ensure link availability in extreme weather	30				
2.10	Cross Polarization Interference Canceller	XPIC Technology for double spectral efficiency supported by IDU	M				
2.11	Receiver Sensitivity	(-80 dBm at 10 ⁻⁶ BER)	50				
2.12	EOW	DRS Equipment support EOW & Provisioning of EOW /IP / Digital Set	50				

2.13	IDU Operating Band	6 to 42 GHz	100				
2.14	Traffic	Support Radio Traffic Aggregation	10				
2.15	Streams	MIMO	20				
2.16	Supported RF Directions	≥ 5	10				
2.17	Feature	Pseudo Wire Emulation	10				
2.18	TDM	STM-1 Optical	20				
2.19		16 X E1s	M				
2.20	Protection	SNCP/MSP/ERPS	20				
2.21	Bandwidth Management	Ethernet Bandwidth distribution by IDU	100				
3	ODU Parameters						
3.1	ODU Configuration	2 x (1+1) SD frequency reuse with XPIC	M				
3.2	ODU Channel Bandwidth compliance	7/14/28/56/112 MHz	M				
3.3	Operating Frequency Band	8335/8461 MHz	M				
		8349/8475 MHz					
3.4	Max Transmit Power	29dBm	M				
3.5	Performance	High power efficiency	20				
4	Link Budget Analysis Parameters						
4.1	Coordinates of NTC Race Course Road Exchange Lahore and existing Self Support Tower Height	31°31'34.45" N 74°19'54.27" E: 120 Feet	M; Link budget to be verified by NTC				
4.2	Coordinates of PKLI site and existing Guy wire Tower Height (installed at roof of 9th Floor at PKLI)	31°27'20.74" N 74°27'48.58" E: 20 Feet					
4.3	Bit Error Rate	10 ⁻⁶ BER					
4.4	Frequency*	As per above clauses					
4.5	Bandwidth						
4.6	Free Space Loss, Hybrid/Ckt Branching Loss, Net Path loss, TX Power (Watts/dBm), EIRP, Annual Rain (%-Sec)	Bidder should specify/Propose					
4.7	Flat Fade Margin	25 dBm or above	M				
4.8	Higher Fade Margin	Relative Marking	70				
4.9	Availability	99.999%	M				
5	High Performance Antenna						
5.1	Antenna Make	Renowned Manufacturer's High quality /High Performance Antenna	M				
5.2	Operating Frequency Band	7/8 GHz as per Clause 3 bands	M				

5.3	Antenna Size/Diameter	Bidder should specify as per requirement; Minimum (1.2 & 0.9 Meters) at both sites	M				
5.4	Low, Mid and High Gain	Bidder Should Specify according to the quoted Antenna	30				
5.5	Polarization	Dual	M				
5.6	VSWR	(+1 or specify)	10				
5.7	Wind Velocity Operational	110 KM/H or better	20				
5.8	Wind Velocity Survival	200 KM/H or better	20				
6	Maintenance & Management						
6.1	Local Management	02 x LMT's for local Maintenance & Management	M				
6.2		GUI/Web based management through LMT's	20				
6.3		Fault Management, Configuration management, Performance management, Maintenance management and other NMS Features	65				
6.4	Centralized Management	NMS for Centralized Management	M				
6.5	LED Indicators	IDU LED Indicators for Operation, Fault, Power on etc. (Bidder Should Specify All)	15				
7	Power						
7.1	Nominal Operating Voltage	(-48 V DC)	M				
7.2	Power consumption per terminal	Bidder should specify	20				
8	Environmental						
8.1	ODU Temperature Range	(-10 °c to +55 °c)	20				
8.2	IDU Temperature Range	(-5 °c to +50 °c)	20				
8.3	Humidity (non condensing)	(5% to 85%)	20				
TOTAL			1000				
Technical Evaluation Criteria and explanation to above stated clauses		Bidder must calculate and provide link budget Analysis and quote only those items i.e. ODU, IDU & Annetta which are feasible for commissioning of the link. NTC will accept feasible solutions only in terms of capacity, RF Directions, availability, fade Margin etc.					
		The bidder is required to survey the sites for verification of coordinates, site requirements and also propose whether existing Tower heights are adequate or otherwise propose requisite tower heights for LOS clearance. The bidder can quote optional rates of Guy type towers if required.					
		** Refer to clause # 2.2, The bidder must quote Maximum capacity that can be achieved on given frequency slot, distance, BERT and availability. This clause is relative and can be relaxed by NTC evaluation committee					

	<p>Bidder must clearly state which features are subject to software license and also quote their price in the bid documents. Otherwise, any complied feature shall be considered default BoQ requirement of NTC.</p> <p>Bidder's Statement column must be properly filled to clearly state the available feature/compliance as fully complied (FC), partially complied (PC) or not complied (NC) or better feature is available, Tick the relevant box. The bidder must Fully comply to all Mandatory clauses (Denoted as "M" in Marks column) failing to do so will Technically disqualify the bidder, Moreover, the bidder should score 75 % or more of the total marks given in "Marks" column. The compliance of above specification must be supported by data sheet of product to certify the Compliance.</p>
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ANNEX-B2: LAYER-2 MANAGED SWITCH SPECIFICATIONS

S.No	Title	Description					Bidder's Quoted Feature
			Marks	FC	PC	NC	
1	Performance						
1.1	Switching Capacity (Duplex)	≥128 Gbps	50				
1.2	Forwarding Rate	≥94 Mpps	50				
1.3	ACL Rules	128K	50				
1.4	VLAN ID Support	4096	M				
1.5	MAC Address Table	32k	M				
1.6	ARP	4K	10				
1.7	Buffer (Chip)	2 MB	20				
1.8	QoS queues	8 Hardware queues	20				
2	Interfaces						
2.1	1000 base-X / T Combo SFP based ports	24 x ports	M				
2.2	10000 base-X Optical GE SFP+ port	4 x ports	M				
3	General						
3.1	Interoperability	With All major vendor Equipment	M				
4	Layer-2 Features						
4.1	Spanning Tree	STP-802.1D, RSTP 802.1w, MSTP 802.1S	M				
4.2	LACP	link Aggregation Control Protocol	15				
4.3	VLAN	Port-Based & MAC VLAN	10				
4.4	Multicasting	IEEE 802.1ak Multiple Registration Protocol (MRP)/ Multicast VLAN Registration protocol (MVRP)	10				
4.5		IGMP v1, v2, v3	15				
4.6		IGMP Snooping	10				
4.7	Port Mirroring	One to One & One to Many	20				
4.8	Any ring protocol with ≤ 50ms recovery time	ITU-T G.8032v1/v2 (ERPS)	M				
4.9	Q-in-Q	IEEE 802.1ad standard	10				
5	Qos, ACL/Security						
5.1	Queue Management	strict Priority	10				
5.2		Weighted Round Robin (WRR)	10				
5.3		SP + WRR	10				
5.4	ACL Based on :	IEEE 802.1p Priority	10				
5.5		IPv4, Protocol Type, TCP/UDP Port	15				
5.6		VLAN ID, MAC Address	10				
5.7	Security	SSH V2	M				
5.8		IP-Mac-Port Binding	10				
5.9		ARP inspection & Spoofing Prevention	10				
5.10		BPDU Attack Protection	10				
5.11		Denial of Service Attack Prevention	10				

5.12		ARP Attack Prevention	10				
5.13	Rate/Bandwidth Limitation	Interface-based & VLAN-based	20				
5.14	DHCP	Client, Server, Snooping	15				
6 Accounting and Authentication							
6.1	IEEE 802.1x	IEEE 802.1X Authentication (Network Access Control)	M				
6.2	AAA	RADIUS Accounting	10				
6.3		RADIUS and TACACS + authentication for switch access	M				
7 L3 Features							
7.1	L3 Features	Support Static inter-Vlan Routing entries	10				
7.2		RFC 2338 VRRP	5				
7.4		RIP, OSPF	M				
7.6		Routing (upto 4K FIB)	M				
8 Management							
8.1	Management	Web-based GUI	25				
8.2		CLI based Console access	M				
8.3		Telnet Client/ SSH access	20				
8.4		TFTP Client	10				
8.5		SNTP/NTP Client	10				
8.6		SNMPv2c/v3	M				
8.7		SNMP Traps	10				
8.8		RMON V1/V2 support	10				
8.9		LLDP	10				
8.10		Syslog	10				
8.11	Operation, Administration & Management (OAM)	Loop Back Diagnostics, Cable Diagnostics	15				
8.12		Uni directional link Detection (UDLD) Bidirectional Forwarding Direction (BFD)	10				
8.13		IEEE 802.3ah/802.1ag Connectivity Fault Management (CFM)	10				
8.14		ITU-T g.8013/y.1731(Functions & mechanisms for Ethernet)	10				
9 Power							
9.1	Power Supply AC (Optional)	Inbuilt Support for 220volt AC	10				
9.2	Power Supply DC	Inbuilt Support for -48volt DC Power Supply	M				
9.4	Power in Watt	Bidder should specify at full capacity	10				
10 Environmental							
10.1	Operating Environment	-5°C to +50°C	10				
10.2	Humidity non condensing	5% to 95%	10				
Total			655				

Note	<p>Bidder's Statement Colum must be properly filled to clearly state the available feature/ compliance as fully complied (FC) partially complied (PC) or not complied (NC) or better feature is available. Tick the relevant box. The bidder must fully comply to all Mandatory clauses, (Denoted as "M" in Marks column) failing to do so will. Technically disqualify the bidder, Moreover, the bidder should score 75% or more the total marks given in "Marks" column. The compliance of above specification must be supported by data sheet of product to certify the Compliance.</p>
	<p>Bidder must clearly state which features are subject to software license and also quote their price in the bid documents. Otherwise, any complied feature shall be considered default BoQ requirement of NTC.</p>
	<p>Bidder must quote price of 1000Base-X and 10000 Base-X SFP Modules in BOQ</p>

**ANNEX-B3: TECHNICAL SPECIFICATIONS OF LOCAL MANAGEMENT
TERMINAL (LMT)**

S.No	Title	Description	Marks	Bidder's Statement			
				FC	PC	NC	Bidder's Quoted Feature
1	Brand	HP (ProBook), Dell (Latitude) Lenovo (Think Book) or Equivalent	M				
2	System Processor	Intel Core i7 14th Generation (Equivalent or above)	M				
		With Built-in TPM 2.0					
		Security Chip					
3	Graphics	Integrated Graphics	M				
4.1	Ports/Interface	USB 3.1 above or latest	M				
4.2		Type-C (Latest Gen)	M				
4.3		HDMI (Latest Gen)	M				
4.4		Ethernet LAN 100/1000 Built in	M				
5	Wireless Communications	802.11a/b/g/n/ac /6 , Bluetooth 5 and Above	M				
6	Memory	8 GB DDR5 or with latest bus speed (expandable up to 32 GB)	M				
7	Hard Drive	512 GB SSD (NVMe) Latest Gen or above (expandable)	M				
8	Keypad	Standard keypad with Backlight	M				
9	Camera	HD Built-in	M				
10	Display	Anti-glare 15/15.6" FHD or Above	M				
11	Display Resolution	Full HD or Above	M				
12	Sound	Built in Stereo speakers, microphone	M				
13	Operating System	Windows 11 Pro or above	M				
14	Batteries	Internal Battery with minimum 6 hours backup (Min 3 Cell Li-ion battery)	M				
15	Power Adaptor	As per Product	M				
16	Carrying Bag	Standard	M				
17	Warranty	One Year warranty from Supplier	M				
Note	<p>Bidder's Statement column must be properly filled to clearly state the available feature/compliance as fully complied (FC), partially complied (PC) or not complied (NC) or better feature is available, Tick the relevant box. The bidder must Fully comply to all Mandatory clauses (Denoted as "M" in Marks column) failing to do so will Technically disqualify the bidder. The compliance of above specification must be supported by data sheet of product to certify the Compliance.</p>						

ANNEX-B4: RECTIFIER

Sr	Title	Description	Marks	Bidder's Statement			
				FC	PC	NC	Bidder's quoted feature
1	Supported Input Parameters						
1.1	Nominal Input Voltage	Single ϕ 220 Volts	M				
1.2	Input Voltage Range	185 ~ 276 VAC	20				
1.3	Input Frequency	50 Hz	M				
1.4	Supported Input Frequency Range	45 Hz ~ 65 Hz	10				
1.5	Input Power Factor	0.9 or better	10				
1.6	THD	5%	10				
1.7	Input Protection	Transients Protection	10				
1.8		Main Fuse in lines	10				
2	Output						
2.1	Nominal Output Voltage	53 V DC	M				
2.2	DC Output Capacity	$\geq 60A$	M				
2.3	Float Voltage Range	48 ~ 57.6 V	30				
2.4	Design	Preferably Modular	20				
2.5		Bidder should specify maximum output capacity of rectifier	20				
2.6		Modules works in Load sharing mode	20				
2.7	No of Module/ Redundancy	(N+1) Modules; N=1,2,3	M				
2.8	Protection	Over Voltage Shut Down	10				
2.9		Short Circuit Proof	10				
2.10		High Temperature Protection	10				
3	Alarms, Display & Maintenance						
3.1	Overall Efficiency	91% or better	20				
3.2	Alarms	Low Mains input	10				
3.3		Rectifier Failure	10				
3.4		Low input voltage Alarm	10				

Sr	Title	Description	Marks	Bidder's Statement			
				FC	PC	NC	Bidder's quoted feature
3.5		Low Battery voltage Alarm	10				
3.6		High Temperature Alarm / Shut down	10				
3.7		BLVD	20				
3.8		Alarms Extension to Controller / NMS	20				
3.9	Display	Input Voltage	10				
3.10		Total Load Current	10				
3.11		Battery Charging status	10				
4	Environmental						
4.1	Temperature Range	(0 °c to +50 °c)	10				
4.2	Humidity (non condensing)	(5% to 85%)	10				
4.3	Cooling	Through Fan (Built-in)	10				
4.4	Fan speed	Temperature & Current Regulated	10				
4.5	Acoustic Noise	< 48 dba	10				
TOTAL			380				
Note	<p>Bidder's Statement column must be properly filled to clearly state the available feature/compliance as fully complied (FC), partially complied (PC) or not complied (NC) or better feature is available, Tick the relevant box. The bidder must Fully comply to all Mandatory clauses (Denoted as "M" in Marks column) failing to do so will Technically disqualify the bidder, Moreover, the bidder should score 75 % or more of the total marks given in "Marks" column. The compliance of above specification must be supported by data sheet of product to certify the Compliance.</p> <p>Rectifier Should be able to charge 100 AH Battery Bank apart from feeding the load</p>						

ANNEX-B5: BATTERY BANK

Sr	Title	Description	Marks	Bidder's Statement			
				FC	PC	NC	Bidder's Quoted Feature
1	Battery Type / Chemistry	Lithium-ion (LiFePO ₄ - Lithium Iron Phosphate)	M				
		Brand	M				
		Origin	M				
		Weight					
2	Nominal Voltage	48 V DC (Nominal 51.2 V DC, 16 Cells × 3.2 V)	M				
3	Nominal Capacity	100 Ah minimum	25				
4	Cell Chemistry Type	LiFePO ₄ (Lithium Iron Phosphate). Bidder to Specify	25				
5	Cycle Life (@ 25 °C, 80% DOD)	≥ 3000 cycles. Bidder to Specify	M				
6	Float Voltage Range	54.4 V ± 0.2 V	15				
7	Cut-off Voltage	43.2 V (minimum)	10				
8	Operating Temperature	-10 °C to +55 °C (indoor ≤ 45 °C)	M				
9	Storage Temperature	-20 °C to +45 °C	10				
10	Self-Discharge @ 25°C	Less than 1% after 30 days storage	25				
11	Depth of Discharge (DOD)	Up to 90 %	M				
12	Battery Management System (BMS)	Integrated;	M				
13	Communication Interface	Dry Contact*2/ RS485/ CAN/FE/ Modbus / SNMP Protocols	M				
14	Enclosure Protection	IP 20 (indoor) or IP 54 (rack mount cabinet)	25				
15	Mounting Type	Rack mount	15				
16	Safety Certification	Mandatory. UL 1973, UL 1642, IEC 62133, CE, and UN38.3. Bidder will Certify	M				
17	Transportation Certification	Required	10				
18	Fire & Thermal Protection	Cell-level isolation, thermal fuse	15				
19	Efficiency	≥ 95 % round-trip	M				
20	Expected Design Life	≥ 20 years at temperature 20 Celsius.	M				
21	Expected service life	≥18 years at temperature @ 20 Celsius. Bidder will specify	M				
		30 Celsius. Bidder will specify	5				
		40 Celsius. Bidder will specify	5				
		50 Celsius. Bidder will specify	5				

Sr	Title	Description	Marks	Bidder's Statement			
				FC	PC	NC	Bidder's Quoted Feature
22	Monitoring System	Local & Remote monitoring & alarms indications (via BMS)	M				
23	Future Solar Integration	Must support hybrid power controller interface	50				
24	Methods for detecting battery theft	Gyroscope, anti-theft cable, communication	20				
25	Compliance Documentation	Test reports, UN 38.3 certificate, datasheet required	15				
Total			275				
Note	<p>Bidder's Statement column must be properly filled to clearly state the available feature/compliance as fully complied (FC), partially complied (PC) or not complied (NC) or better feature is available, Tick the relevant box. The bidder must Fully comply to all Mandatory clauses (Denoted as "M" in Marks column) failing to do so will Technically disqualify the bidder, Moreover, the bidder should score 75 % or more of the total marks given in "Marks" column. The compliance of above specification must be supported by data sheet of product to certify the Compliance.</p>						

ANNEX-C: COMMERCIAL COMPLIANCE STATEMENT

Clause.#	Description	Complied	Not Complied	Partially complied
1	Invitation To e-Bids			
2	General Introduction			
3	Scope Of Work			
4	Qualification Conditions Of Bidders			
5	Cost Of Tendering			
6	Clarifications Of Tender Documents			
7	Amendment Of Tender Documents			
8	Preparation Of Bid			
9	Language Of Bid Documents			
10	Price			
11	Tender Security / Earnest Money			
12	Validity Of Bids			
13	Deadline For Submission Of Bid			
14	Modification & Withdrawal Of Bid			
15	Opening Of Bid			
16	Responsiveness Of Bids			
17	Evaluation Criterion For Most Advanta-			
18	Clarifications / Corrections Of Bid			
19	Commercial Compliance Statement			
20	Variation Order			
21	Award Criteria & NTC's Right			
22	Notification Of Award & Signing Of Contract Agreement			
	Contract Conditions			
1	Performance Security			
2	Contractor's Responsibilities			
3	NTC's Responsibilities			
4	Transportation / Packing			
5	Time For Completion			
6	Warranty			
7	Liquidated Damages			
8	Acceptance Certificate			
9	Nil Discrepancy Certificate			
10	Terms Of Payment			
11	Contractor's Negligence			
12	Final Acceptance Certificate			
13	Default By Contractor			
14	Arbitration And Applicable Law			
15	Force Majeure			
16	Termination For Insolvency			
17	Termination For Convenience			

Clause.#	Description	Complied	Not Complied	Partially complied
18	Project Director / Engineer In Charge			
19	Debarment / Blacklisting Of Firm			
20	Repeat Order			
21	Integrity			
22	Declaration Of Beneficial Owners' Information			

ANNEX-C: BID SECURITY FORMAT

Bank Guarantee No.-----
Dated at Islamabad, the -----
Amount _____
Validity _____

To,

THE MANAGING DIRECTOR,
NATIONAL TELECOMMUNICATION CORPORATION
HEAD QUARTERS G-5/2
ISLAMABAD.

Dear Sir,

WHEREAS M/S _____ (hereinafter called the Tenderer) have requested us through _____ Bank Ltd., to furnish Bid Security by way of Bank Guarantee in your favour in the sum of _____ (IN FIGURE) _____ (IN WORDS) against your Tender Notice No. _____ dated _____ for supply / installation of _____.

WE HEREBY AGREE AND UNDERTAKE:

- i. To make unconditional payment _____ to you on demand without further question or reference to the Tenderer in case of withdrawal or modification of bid or any default or non-execution of the Contract or refusal to accept order by the Tenderer from the date of opening of bids until the expiry of the validity of their offer,
- iii. To keep this guarantee in full force from (date) _____ upto _____ (date) _____ the date until which the Tenderer's offer is valid.
- iii. To extend the period of guarantee if such extension be necessary beyond the date stated in para (ii) and as so desired by the tenderer.

Any claim arising out of this guarantee must be lodged with this Bank within the period the guarantee is valid and before the date of its expiry. After this date the guarantee will be considered null and void and should be returned to us.

Yours faithfully,

Name of the Bank: _____
Authorized officer's Signature & Seal: _____

ANNEX-D: PERFORMANCE BOND FORMAT

Bank Guarantee No.-----
Date of Issue -----
Valid upto -----
Value (Rs.) -----

FROM: _____
TO,

THE MANAGING DIRECTOR,
NATIONAL TELECOMMUNICATION CORPORATION
HEAD QUARTERS G-5/2
ISLAMABAD.

SUBJECT: B/G AND DATE FOR _____ ON BEHALF OF _____ FOR DUE
AND FAITHFUL PERFORMANCE ORDER NO. _____
DATED _____.

Whereas M/s _____ (hereinafter called the Supplier) have re-
quested us to furnish a Bank Guarantee in your favour in the sum _____ (IN WORDS)
_____ as performance security against order

No. _____ dated _____ to be concluded between the Supplier and National Tele-
communication Corporation HQs G-5/2 Islamabad.

WE HEREBY AGREE:

- 1). To make an un-conditional payment of _____ to you on demand without any further question or reference to the Supplier upon failure of the Supplier to perform the Order for which you will be the sole judge.
- 2). To keep this guarantee valid in full force from this date upto the time of the due and faithful completion of the Order under reference (the schedule of implementation shall be as described in the Purchase order and its subsequent amendments) or till _____ whichever date is later. The faithful completion of the order by the Supplier will be intimated by the NTC.
- 3). To extend the period of the enforceability of this guarantee if such extension be necessary or desired by you of us. All claims thereunder must be submitted to the Bank of _____ on or before the expiry date mentioned in this guarantee are the date mentioned in its extensions issued from time to time, after which this guarantee will become null and void and should be returned to us. Irrespective of its return, we shall consider ourselves fully discharged from any obligation there under after the said expiry date.

Dated This Day of

Authorized Signature: _____
& Seal of bank

Witness: _____

Sworn & Sign before me
this day of.... ..

by. _____

ANNEX-E: DECLARATION OF BENEFICIAL OWNER INFORMATION

Declaration of Ultimate Beneficial Owners Information for Public Procurement Contracts

1. Name
2. Father's Name/Spouse's Name
3. CNIC/NICOP/Passport no.
4. Nationality
5. Residential address
6. Email address
7. Date on which shareholding, control or interest acquired in the business.
8. In case of indirect shareholding, control or interest being exercised through intermediary companies, entities or other legal persons or legal arrangements in the chain of ownership or control, following additional particulars to be provided:

1	2	3	4	5	6	7	8	9	10
Name	Legal form (Company/Limited Liability Partnership/Association of Persons/Single Member Company/ Partnership Firm/ Trust/Any other individual, body corporate (to be specified))	Date of incorporation/ registration	Name of registering authority	Business Address	Country	Email address	Percentage of shareholding, control or interest of BO in the legal person or legal arrangement	Percentage of shareholding, control or interest of legal person or legal arrangement in the Company	Identity of Natural Person who ultimately owns or controls the legal person or arrangement

9. Information about the Board of Directors (details shall be provided regarding number of shares in the capital of the company as set opposite respective names).

1	2	3	4	5	6	7	8
Name and surname (In Block Letters)	CNIC No. (in case of foreigner, Passport No)	Father's/ Husband's Name in full	Current Nationality	Any other Nationality (ies)	Occupation	Residential address in full or the registered/ principal office address for a subscriber other than natural person	Number of shares taken by each subscriber (in figures and words)
			Total number of shares taken (in figures and words)				

10. Any other information incidental to or relevant to Beneficial Owner(s).

Name & signature

(Person authorized to issue notice on behalf of the company)