

GOVERNMENT OF PAKISTAN
HQ NATIONAL LOGISTIC CORPORATION
INVITATION TO TENDER
FOR ESTABLISHMENT OF DATA CENTER AT DISASTER RECOVERY SITE ON
FOR RAWALPINDI BASIS
INSTRUCTION TO TENDERERS - WORDS OF CAUTION

1. **Participation of Tender.** The tender can be participated by following: -
 - a. **OEMs (Original Equipment Manufacturers)**
 - b. **OEM Authorized Dealers / Re-Sellers having OEM Authorization Letter with sustained financial capability**
2. **Eligibility / Bid Qualification Criteria.** The bidder must prove his eligibility by completing the Bid Qualification Criteria as following.

Ser	Check List	Yes / No
a.	Tender Fee	
b.	Bid Security	
c.	Copy of NTN / STRN and Active Tax Filler with 100% compliance	
d.	Certificate to compliance to the GSR	
e.	Authorization Letter from OEM	
f.	Complete Tech Data of Equipment	
g.	90 x Days Offer Validity	
h.	Confirmation to Delivery Period (120 x Days)	
i.	Comparison Chart (NLC Specification and Firm Offer)	
j.	Not Blacklisting Affidavit	
k.	Certificate to accept all conditions of tender	
l.	List of Major Clients	
m.	Hierarchy of the firm along with portfolio of owner & top management be attached	

3. **Special Conditions**

- a. Bidder must provide the Authorization Letter from OEM / Authorize Dealer / Re-Seller
- b. Quoted items / equipment should be Branded and Brand New.
- c. Firms are only allowed to quote only 1 x variant / model of item being quoted.
- d. Offer should also accompany complete technical data of the equipment.
- e. Firms must provide all relevant import documents to the purchaser (If Required).
- f. Offers must be prepared on firm's letter head, accompanied by the schedule to tender duly completed / signed / stamped by authorized executive (by name) of the firm without which the offer will not be entertained.
- g. In case, any firm fail to supply the tendered store as per the Letter of Acceptance / contract Agreement, The NLC has the right to take punitive action against defaulter firm that include confiscation of its bid security, Performance Bank Guarantee and ban to participate in the tender etc.

h. **Technical Team**

- (1) Bidder to provide details of team being engaged for execution of the said project. Team details must include experience of technical resources having prior experience to execute similar projects.
- (2) Bidders not having expertise of executing similar projects will be technically disqualified outright.

i. **Layouts and Designs/Documents with Technical Bid:-**

- (1) Mandatory Drawings/Documents with Technical Bid
- (2) The bidder shall submit the following preliminary drawings/documents as part of the Technical Bid:
 - (a) Single Line Diagram (SLD) of the proposed electrical power distribution system.
 - (b) Overhead Cable Tray Layout, clearly indicating separate routing for power and data/communication cabling.
 - (c) Server Room / Equipment Placement Layout, clearly showing the proposed placement of the POD and all associated electrical equipment/switchgear, including AVRs, ATSSs, MDBs, Auto Phase

Correction Panel, and other proposed equipment within the designated Server Room/equipment areas.

- (4) The drawings shall be prepared considering the available site dimension, equipment clearances, accessibility, operation and maintenance requirements, and the overall proposed system architecture.
- (5) Submission of the above drawing/documents is mandatory. Any bid submitted without these documents shall be considered technically non-responsive and shall be rejected outright.

4. **Rejection of Bid.** A bid will be rejected under following circumstances: -

- a. Bids not qualifying the bid evaluation criteria as mention above.
- b. Offers not accompanied with complete technical specifications of items being offered and not supported with detailed technical brochures.
- c. Non responsive bid to any single required criteria / specification
- d. Non submission of Tender Fee & Bid Security
- e. Late submission of tender from given date & time
- f. Offers not complying with the special instructions (para 3 & 4) in addition to other conditions

5. **Particulars and Specifications.** Standard particulars, and specifications for Establishment of Data Centers for Data Recovery Sites required are attached at **Annex 'A'**. The bid must conform to the asked specifications and acceptance criteria.

6. **Delivery of Tender.** The original copy of the tender is to be enclosed in double cover. (i) Technical Offer (ii) Commercial Offer, separately. The covers should be sealed and bear tender Enquiry Number and date of opening, while the outer cover should bear only address of this office without any indications.

7. **Date and Time for Submission of Tender.**

- a. Tender must reach at HQ NLC, Harding Road, Rawalpindi by the date and time specified in tender notice by hand or by post.
- b. Tender must be dropped in the tender box before given time.
- c. NLC will not be responsible for delay occurring in post.

8. **Price**

- a. The firms must quote prices inclusive of all taxes, packing, delivery and installation charges at Rawalpindi as per format attached at **Annex “B”**
- b. The price must be quoted in **PAK RUPEE** in figures and words at the appropriate space of the schedule to tender.
- c. Additional information, if any, must be linked with entries on the Schedule to Tender.
- d. Prices quoted should be firm and final.
- e. Tax exemption (if any) may be provided with the tender documents.
- f. Firm's financial offer must be on letter head duly signed and stamped by executive authority, otherwise offer will be rejected
- g. 0.25% of the value of contract agreement will be provided by the firms at the time of signing of contract as stamp duty.
- h. In case of increase in tax by GOP, the additional tax will be paid by purchaser.

9. **Validity of Offers.** The validity period of quoted rates must be indicated and should be at-least 90 days from the date of opening the tender without any condition, extendable for further processing of the case, if required.

10. **Delivery Period.** Equipment must be delivered installed within 120 x days after issuance of LOA (Letter of Acceptance) or Award of Contract (whichever is earlier) at prescribe location, beyond which Late Delivery Charges will apply.

11. **Packing.** Unless a method of packing is indicated in the specification in the schedule to tender form, the method of packing proposed by supplier must be described in schedule to the tender form. Contractors are at liberty to quote for additional alternative sizes and description of packs and these must be described in the schedule of tender. Packing should be such that item shall not damage in transit till place of delivery. **SAFE DELIVERY OF ITEMS IS SOLE RESPONSIBILITY OF FIRM.**

12. **Inspection**

- a. **Pre-Delivery Inspection**

- (1) Pre-delivery inspection may be carried out at firm's premises before supply, by team of HQ NLC (If Required).
 - (2) Inspection will include Quantity, Quality, Conformation to the agreed specification as per LOI / Contract agreement.
 - (3) Firm will dispatch the items / equipment to prescribed location as mentioned in schedule of tender.
 - (4) Inspection (If Required) should preferably be kept at Rawalpindi / Islamabad. Inspection out of Rawalpindi / Islamabad will be carried out on the expenses of firm including travelling, boarding / lodging etc.
- b. **Final Inspection.** Final Inspection will be carried out by the consignee after delivery & installation for any damages / breakages during transportation and successful functioning.
12. **Arbitration.** Any bidder feeling aggrieved by any act of procuring agency after submission of his bid and prior to award of the contract may lodge a written complaint to procurement agency under Rule - 48 PPRA.
13. **Risk and Expense.** Failure to supply the goods quoted or failure to meet the commitment made regarding delivery schedule, specifications, short supplies etc will authorize HQ NLC to purchase the items at firm's risk and cost.
14. **Force Majeure.** The supplier will not be held responsible for any delay occurring the supply of contracted stores due to event of force majeure such as Act of God, War, Riots, Civil Commotion's Strikes, lock out or disturbance directly affecting the supply over which the supplier has no control. In such an event the contractor shall inform the Purchaser within 15 days of the happening in writing. Non-availability of raw material for the manufacture of stores or the export permit for the export of the contracted stores from the country of its origin shall not constitute Force Majeure.
15. **Late Delivery.** Late Delivery charges will be imposed @ 2% per month or no of days delayed on total cost of contract with effect from original delivery date.
16. **Terms of Payment**

- a. 100% Payment will be made after delivery and Final Inspection after installation and issuance of CRV (Certified Receipt Voucher) by the consignee.
 - b. No advance payment is allowed
17. **Tender Fee and Bid Security**. Both will be prepared in the shape of bank draft in favor of “**National Logistics Corporation HQ Main Account**” and submitted as following: -
 - a. **Tender Fee**. Rs 2,000/- must be attached with Technical offer.
 - b. **Bid Security**. Rs 1,000,000/- must be attached with Technical offer.
18. **Bank Guarantee**
 - a. Performance Bank guarantee valuing 5% of the contract value must be provided / deposited by the successful firm for award of contract, within 15 days from the signing of the contract / issuance of Letter of Intent (whichever is earlier).
 - b. The Guarantee should be from a schedule bank of “AA” rating and valid till one month after warranty period.
 - c. Performance Bank Guarantee should be as per format provided by NLC and the currency of PBG should be same as the currency of financial offer.
19. **Warranty Period**. The **warranty period** of equipment will be one year starting from the date of CRV. Firm will give comprehensive warranty (duly supported by the OEM).
20. **Comparison Chart**. Firms will also attach comparison chart along with their offer on following lines: -

NLC Specification	Firms Specification	Complied with or Not
21. **Evaluation**: Technical offer of bidders found eligible and qualified as per “**Bid Qualification criteria**” will be evaluated as per specifications (Annex “A”). Financial offers of technically approved bidders will be opened and bidder with the lowest financial proposal will be considered most advantageous bid.

General Manger Procurement, HQ NLC

NL-2

HEADQUARTERS NATIONAL LOGISTIC CORPORATION

GENERAL CONDITIONS GOVERNING CONTRACT

- c. Tender will be opened at HQ NLC, Harding Road, AFIRM, Rawalpindi at Date and Time mentioned in the newspaper add.
- d. Tender will be submitted in accordance with PPRA Rule 27 (b) i.e. Single Stage – Two Envelope Procedure
- e. Detail of equipment required to be procured is as under :-

Ser	Item	Quantity
	POD / Containment. It must include all containment components (but not limited to) cable trough, railings, front and side doors, room/ceiling panels, lights, and all type of sensors. Following outlined spares are the minimum quantity outline, however OEM may increase any spare (s) as per their design/solution	
1.	IT Racks	
a.	Indoor Closed Cabinet Kit	3
b.	Blanking Panel	60
c.	Door Open Emergency Ventilation Kit	3
2.	Access Control System	3
a.	3 in 1 Access Reader - IP66 Type	6
3.	Cooling Units	
a.	Rack Mount Split DX 12.8kW - IEC/US Power Type	2
4.	Power System	
a.	PDM Rack Mount 3P Power Input	2
b.	Rack Mount UPS 20kVA 380V3P IEC Power Type	2
c.	VRLA Batteries	4
d.	Smart PDU Monitoring	2
5.	DCIM System	
a.	Monitoring Host - Rack Mount Type	1

b.	Touch Display Panel	1
c.	Sensor - Temperature & Humidity	6
d.	Sensor - Smoke or Fire	3
e.	Sensor - Leaking none Positioning Type	1
f.	Sensor - Door Status	6
g.	16 Port Networks Switch	1
6.	Remote monitoring of existing System (hardware equipment and software with perpetual license)	1
Existing Equipment. The following equipment is available at the NLC Store at Amangarh/Nowshera. The successful bidder shall be responsible for its safe transportation to Rawalpindi, cleaning, installation, testing, and commissioning, including all associated costs. All allied spares, accessories, and consumables required to make the equipment fully functional shall be supplied by the successful bidder and quoted against “movement, installation, testing and commissioning of existing equipment”.		
7.	Transformer Tap Off DB	1
8.	Phase Correction Panel with AVR Bypass	1
9.	ATS Panel	1
10.	Main DB/ MDB	1
11.	AC Units	2
12.	5Kg CO2 Gas cylinders	2
13.	Anti rodent device	1
14.	Ceiling Lights 1"x 4"	6
15.	Overhead cable tray	118 ft
Other Equipment. The successful bidder shall be responsible for the supply, installation, integration, testing, and commissioning of the following equipment. The scope shall include all required equipment, allied accessories, consumables, terminations, and associated works necessary to make each item fully functional and operational.		
1.	Generator set with weather and sound proof canopy	1
2.	Automatic Voltage Regulator	1

3.	ESD Flooring for Server Room	
4.	CCTV Surveillance System	
5.	Biometric Device	1
6.	Power cable	1
7.	Dedicated Earthing / Grounding System	3
8.	Additional Equipment/ Spares	
9.	Civil & Allied Work	
Network Equipment		
1.	Firewall	1
2.	OFC Cable	50 Meter
3.	ODF	2
4.	ODF / Fiber Termination	2
5.	Fiber Patch Cord	20
6.	Fiber Patch Cord	20
7.	CAT6 Cable	2 Roll
8.	Patch Panel	2
9.	Cable Manager	2
10.	RJ-45 Connector	1 Box
11.	Existing Firewall License	
12.	Services	1

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Address_____

Telephone_____

Code Used_____

From: _____

To:

THE DIRECTOR GENERAL

NATIONAL LOGISTIC CORPORATION QMG's BRANCH

R.A. BAZAAR GHQ RAWALPINDI

Dear Sir,

I/We hereby offer to supply to the Director General NLC, the stores as per detail in the Scheduled hereto or such portion thereof as you may specify in the contract at the prices given in the said schedule and agree to hold this offer open till _____. I/We shall be bound by a communication of acceptance dispatched within the prescribed time.

2. I/We have understood the instructions to Tenders and Conditions of Contract as laid down in form NL-2 to "General Conditions Governing Contracts" and have thoroughly examined the specificity/drawing and or pattern quoted in the schedule hereto and am/are fully aware to the nature of the stores required and my/our offer is to supply stores strictly in accordance with the requirements.

3. Recommended technical manual/ data are also enclosed with the offer.

4. The following pages have been added to and form part of this tender:-

Your faithfully

(Signature of Tendered)

Address_____

Dated _____

Signature of witness_____

Address_____

SPECIFICATIONS

INTRODUCTION

National Logistics Corporation (NLC) intends to establish a **Disaster Recovery (DR) Data Center** to provide redundancy and disaster recovery capability for its existing Main Data Center located at **NLC Headquarters, Rawalpindi**.

The project broadly comprises the **supply, installation, integration, testing, and commissioning** of a complete Data Center infrastructure. The scope includes, but is not limited to, the following:

1. Data Center POD and associated infrastructure.
2. Generator and Automatic Voltage Regulator (AVR).
3. ATS, MDBs, distribution panels, and other associated electrical switchgear.
4. Complete power distribution and cabling system.
5. Earthing and grounding system.
6. Network and communication cabling.
7. Overhead cable trays and associated cable-management system.
8. ESD flooring and associated grounding.
9. CCTV, access control, monitoring, and other associated systems as specified in this RFP.
10. All civil, electrical, mechanical, and allied works required to make the DR Data Center **fully operational and ready for use**.

Detailed technical requirements and the complete scope of work are provided in the subsequent sections of this RFP.

LOCATION AND PREMISES FOR DR DATA CENTER

The proposed **Disaster Recovery Data Center** shall be established at **Chakbeli Road, Rawalpindi**.

The Data Center POD and associated equipment shall be installed within an **existing room measuring approximately 9 ft × 16 ft**. The successful bidder shall utilize the available space efficiently while ensuring adequate equipment clearances, accessibility, maintainability, cable routing, ventilation/cooling requirements, and safe operation of the installed systems.

Bidders are advised to **visit and survey the proposed site prior to submission of their bids** to verify the available space, existing infrastructure, cable routes, equipment placement, and other site conditions. The detailed scope of work/ BOQ/ Technical requirements is specified in this document.

QUERY REGARDING PROJECT

For any query related to BOQ/RFP/ Project, please approach following officer: -

Mr. Shahid Hussain

shahid.hussain3@nlc.com.pk / 0333-3456706

SCOPE OF WORK/ BOQ

Se r	Equipment	Description	Qt y
POD / Containment. It must include all containment components (but not limited to) cable trough, railings, front and side doors, room/ceiling panels, lights, and all type of sensors. Following outlined spares are the minimum quantity outline, howeve OEM may increase any spare (s) as per their design/solution			
1	IT Racks		
	Indoor Closed Cabinet Kit	42U indoor closed cabinet kit, dimension 600mm(W)*1200mm(D)*2000mm(H). Including rugged metal support frame, mounting flange, top panel with cable entry glands, bottom panel with brush, wheels and cups, sandwich type transparent front door with thermal insulation, split rear doors. IP55 protection.	3
	Blanking Panel	Quick installation type tool free blanking panel 1U height	60
	Door Open Emergency Ventilation Kit	Emergency ventilation kit of door open type, activated by over-temperature setpoint.	3
2	Access Control System	Access controller, management of users, logs and access authorization, 2 door type. (One with each IT Rack)	3
	3 in 1 Access Reader - IP66 Type	3 in 1 access control reader, supporting fingerprint, RFID card, and pin. IP66 protection	6
3	Cooling Units		
	Rack Mount Split DX 12.8kW - IEC/US Power Type	12.8kW rack mount type indoor unit, 208-240V/1P-2P/50-60Hz split DX w/ Heat, EC fan. 12U height with KSF18AC Air Cooled Condenser 18kW Single Circuit Built-in Compressor	2
4	Power System		
	PDM Rack Mount 3P Power Input	Rack mount PDM, 80A 3P power input, including power meters, surge protection, and power distribution & management Braches of 2x UPS, 2x Cooling, 1 x UPS Bypass, 8 x PDU, and 1x surge protection 9U height	2
	Rack Mount UPS 20kVA 380V3P IEC Power Type	UPS rack mount, 20kVA high frequency type, output PF 1.0, 220V/220V, 3U height SNMP card for modular UPS system.	2
	VRLA Batteries	Rack mount battery package, VRLA type, 16 x 12V/9AH batteries. 2U height.	4
	Smart PDU Monitoring	Rated input current 32A, 20-bit C13 output socket, 4-bit C19 output socket with indicator, with total meter (hot-swapped IP-2017 digital current meter), vertical mount, with web, SNMP protocol	2
5	DCIM System		

	Monitoring Host - Rack Mount Type	Integrated monitoring host , communicates with sensors(temperature & humidity, smoke, leaking, door open) and equipment (cooling, ups and power meters).	1
	Touch Display Panel	Industrial touch display, minimum 10 inch. For 1U type host. IP55 protection level.	1
	Sensor - Temperature & Humidity	Temperature and humidity sensor, RS-485 type	6
	Sensor - Smoke of Fire	Smoke sensor for fire sensing, dry contact type with alarm light.	3
	Sensor - Leaking none Positioning Type	Water flooding sensor, none positioning type.	1
	Sensor - Door Status	Door status sensor, dry contact type.	6
	16 Port Networks Switch	Rack mount switch router, 16 network port.	1
6	Remote monitoring of existing System (hardware equipment and software with perpetual license)	Centralized monitoring System, deployed on premises to manage following distributed MDCs including hardware and software integrated together. Supports SNMP Protocol to support 20 nodes: - a. 3 x Attom Smart Rack installed in 3 x remote sites b. 2 x Attom POD Solution installed at 1 x remote site c. Option to include future smart cabinets in 3 x remote sites	1

Existing Equipment.

The following equipment is available at the NLC Store at Amangarh/Nowshera. The successful bidder shall be responsible for its safe transportation to Rawalpindi, cleaning, installation, testing, and commissioning, including all associated costs.

All allied spares, accessories, and consumables required to make the equipment fully functional shall be supplied by the successful bidder and quoted against “**movement, installation, testing and commissioning of existing equipment**”.

1	Transformer Tap Off DB	This equipment shall be provided/made available by NLC . The successful bidder shall be responsible for their installation, interconnection, termination, integration, testing, and commissioning , as applicable, to make the complete Data Center system fully operational.	1
2	Phase Correction Panel with AVR Bypass		1
3	ATS Panel	The successful bidder shall provide all required cable glands, copper thimbles/lugs, sleeves, ferrules, connectors, termination	1
4	Main DB/ MDB		1

		accessories, mounting hardware, fasteners, supports, earthing/bonding accessories, and other allied materials/consumables necessary for complete installation and integration. All such accessories and associated installation works shall be deemed included in the bidder's quoted price, and no additional payment shall be admissible for materials or accessories required to complete the installation, testing, and commissioning of the above equipment.	
5	AC Units	Sequence Controller and Commissioning: The successful bidder shall supply, install, configure, test, and commission 1 x sequence controller for coordinated/automatic sequential operation of both AC units, including duty/standby operation and automatic changeover, where supported. The bidder shall also provide the required refrigerant gas and pipes (if required), for complete commissioning of the AC units. After installation, the refrigerant piping/system shall be pressure/leak tested using nitrogen prior to charging and commissioning. All required nitrogen, refrigerant, accessories, consumables, tools, and associated works shall be included in the bidder's scope and quoted price.	2
6	5Kg CO2 Gas cylinders		2
7	Anti rodent device	Power Point for Anti-Rodent System: The successful bidder shall provide and install a dedicated power point/socket at each location where an anti-rodent device is installed. The scope shall include all required power cabling, socket, conduit, termination, and associated accessories.	1
8	Ceiling Lights 1"x 4"	Lights shall be provided by NLC. The successful bidder shall be responsible for their installation, wiring, testing, and commissioning at the designated locations. All required suspension chains/rods, mounting brackets, supports, power cabling, conduits, switches, connectors, terminations, and allied accessories shall be supplied by the successful bidder. Provision and extension of power supply up to each light fixture shall also be the successful bidder's responsibility and shall be included in the quoted price.	6
9	Overhead cable tray	Cable Tray Installation Accessories: The successful bidder shall provide all required threaded rods, support brackets, clamps, fasteners, nuts, bolts, washers, anchors, couplers, hangers, and other allied accessories required for proper suspension, support, and installation of the cable trays. All materials and associated installation works shall be included in the bidder's quoted price.	11 8 ft

Other Equipment. The successful bidder shall be responsible for the supply, installation, integration, testing, and commissioning of the following equipment. The scope shall include all required equipment, allied accessories, consumables, terminations, and associated works necessary to make each item fully functional and operational.			
1	Generator set with weather and sound proof canopy	Rating: Minimum 66KVA Make: Perkins/ Cummins or equivalent (UK/US/European origin/ manufactured). Fuel Type: Diesel Engine Starting: Auto and option of manual ignition start Canopy Type: Sound Proof Canopy ,Weather Proof Starter Type: Electric Starter Battery: (24 Volt or 12 Volts Lead Acid Battery) as per DG Set requirement Battery Charger: Static (For Trickle and boost charging) Exhaust System: Heavy Duty preferably residential silencer Cooling Type: Water cooled: Radiator Governor: electronics Alternator: STAMFORD, Mecc Alte, Leroy-Somer or equivalent (UK/US/European origin/ manufactured). Generator Base. Successful Bidder will construct genset base as per generator size	1
2	Automatic Voltage Regulator	Supply, installation, testing, and commissioning of 100 kVA, 3-Phase Automatic Voltage Regulator (AVR) suitable for continuous 24x7 Data Center operation , complete with all required accessories and protections. Make: DataTurk or equivalent internationally recognized make Rating: 100 KVA Type: Micro Processor Control Efficiency: ≥98% Input: 3-Phase, 4-Wire, 50 Hz Input Voltage Range: Wide input range suitable for local utility conditions; bidder to specify Operation: Suitable for continuous 24x7 duty Bypass: Manual/automatic bypass arrangement for maintenance/emergency operation Display: Digital/LCD display for input/output voltage, current, frequency and operating status Protection: Over-voltage, under-voltage, overload, short circuit, phase failure/reversal and over-temperature protection, as applicable Enclosure: Robust floor-mounted enclosure suitable for indoor electrical installation Communication: RS-485/Modbus or equivalent interface for DCIM/BMS integration, where available Protection Class: IP21 CE Approved	1

		The AVR shall be supplied complete with all necessary breakers/protection devices, control components, internal wiring, terminals, communication interface, mounting accessories, and associated components required for safe and reliable operation. The bidder shall submit the OEM technical datasheet, input/output voltage range, regulation accuracy, efficiency, overload capability, protection features, dimensions, communication protocol, and applicable compliance certificates with the Technical Bid.	
3	ESD Flooring for Server Room	Supply, installation, testing, and commissioning of complete ESD (Electrostatic Discharge) flooring system for the Server Room having approximate dimensions of 9 ft × 16 ft. The ESD flooring shall be commercial/data-center grade, anti-static/static-dissipative, suitable for installation in an IT/Server Room environment. The scope shall include ESD flooring/tiles, conductive adhesive or required underlay, copper grounding strips/tapes, edge finishing, skirting, joints, and all other materials/accessories required for complete installation. A dedicated ESD grounding/earthing point shall be provided and connected to the ESD flooring through an appropriate copper grounding strip/conductor. The grounding point shall be connected to the Data Center protective earthing system at an approved location to provide a continuous and effective path for dissipation of electrostatic charge. The successful bidder shall carry out continuity and resistance testing of the installed ESD flooring and its earthing connection after installation and submit the test results to the Client/Consultant. All required materials, accessories, terminations, testing, and associated works shall be included in the bidder's quoted price.	

4	CCTV Surveillance System	IP-Based CCTV Surveillance System Supply, installation, testing, and commissioning of a complete IP-based CCTV surveillance system for continuous 24x7 monitoring and recording of the Server Room premises, including internal and external areas. The system shall comprise a minimum of 2 x IP cameras with the following specifications: • Camera Resolution: Minimum 4 MP • Camera Type: Fixed Bullet IP cameras, as appropriate for installation location • Day/Night Operation: True Day/Night with IR/night-vision capability • Power: PoE/PoE+ preferred • NVR: Commercial/enterprise-grade Network Video Recorder fully compatible with the proposed cameras • NVR Capacity: Minimum 4 channels or higher • Recording: Continuous 24 hours/day, 7 days/week for all installed cameras • Recording Retention: Minimum 15 days continuous recording for all cameras at the specified resolution • Storage: Sufficient surveillance-grade HDD capacity to meet the required retention period The bidder shall include all required PoE switch (if required), HDDs, power supplies, CAT-6 cabling, connectors, conduits, mounting accessories, software/licenses, configuration, and all other accessories necessary to provide a complete and operational CCTV system.	
5	Biometric Device	3-in-1 Biometric Access Control System Supply, installation, testing, and commissioning of 3-in-1 biometric access control reader supporting Fingerprint, RFID Card, and PIN/Password authentication for the Server Room door. The complete solution shall include, but not be limited to, biometric reader, electromagnetic lock, exit push button, door sensor, power supply/controller with battery backup, mounting brackets, communication/power cabling, conduits, connectors, and all other accessories required for complete installation and operation. The bidder shall ensure that the proposed system is fully compatible with the type and construction of the Server Room door. All necessary installation, configuration, integration, testing, and commissioning shall be included in the bidder's scope.	1
6	Power cable	Power Cabling, Routing and Associated Works	1

	The successful bidder shall be responsible for the supply, laying, installation, termination, testing, and commissioning of all power cables required to make the complete Data Center electrical system fully operational. The scope shall cover the complete power distribution path from the transformer and generators up to the ATS, associated switchgear, Main Distribution Board (MDB), and subsequently to the Server Room POD and other connected loads. The bidder shall carry out detailed load calculations and determine the required cable sizes, lengths, routes, voltage-drop considerations, protection requirements, and associated accessories based on the proposed equipment and actual site conditions. The bidder is therefore advised to carry out a detailed site survey prior to submission of the bid. Vendor may submit calculations along with the technical offer. The quoted price shall include the complete quantity of cables and all associated works required for successful completion of the project. No additional payment shall be admissible for any increase in cable quantities, lengths, accessories, terminations, or associated works required to complete the system over and above the quantities/prices quoted in the Financial Bid. Cable Routing and Associated Civil Works Power cables from the transformer and generators up to the Server Room/electrical distribution system shall be routed through suitably sized heavy-duty UPVC conduits/pipes, wherever underground routing is required. The successful bidder shall also provide and construct all required cable manholes/pull pits along the underground cable route. Approximately 4 to 6 manholes are anticipated; however, the actual quantity may vary depending upon the final generator placement, cable routing, site conditions, and approved detailed design. Any variation in the required number of manholes necessary for proper execution of the approved system shall be deemed included in the bidder's quoted price. All associated materials and accessories, including but not limited to cable glands, copper thimbles/lugs, sleeves, ferrules, cable markers, termination kits, clamps, supports, UPVC fittings, connectors, earthing/bonding accessories, and other consumables required for complete installation and termination shall be within the successful bidder's scope. Design Load The bidder shall calculate and verify the required cable ratings based on the proposed system architecture and, at minimum, the following connected loads:	
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		a. 2 x 20 kVA UPS Units b. 2 x 12.8 kW Precision Cooling Units c. 1 x 1.5 Ton Air-Conditioning Unit d. 0.5 kW Lighting Load The bidder shall consider applicable diversity, derating factors, installation method, ambient temperature, grouping, voltage drop, short-circuit withstand capacity, protective device coordination, and future operational requirements, as applicable. Indicative Cable Sizes Based on the preliminary design, the following copper power cables are envisaged. These sizes are indicative/minimum design guidance and shall be verified by the bidder through detailed calculations: a. 4C × 25 mm² Copper Cable – Transformer to Transformer Tap-Off DB and Transformer Tap-Off DB to ATS/Auto Phase Correction Panel. b. 4C × 25 mm² Copper Cable – Generator to ATS. c. 4C × 25 mm² Copper Cable – ATS to Main Distribution Board (MDB). d. 4C × 25 mm² Copper Cable – Main Distribution Board (MDB) to Server Room POD. e. Power cables for the air-conditioning unit, lighting, and other auxiliary loads – appropriately sized by the bidder according to the connected load, installation conditions, and applicable electrical standards. The bidder may propose higher or otherwise appropriately calculated cable sizes where justified by detailed engineering calculations. Any proposed deviation from the above indicative sizes shall be clearly identified and technically justified in the Technical Bid. All financial implications arising from the bidder's proposed cable sizes, quantities, routes, lengths, and associated accessories shall be fully incorporated in the Financial Bid. Cable Make and Quality All power cables shall be 100% copper conductor cables of appropriate voltage grade, insulation, and construction suitable for the intended application and installation environment. Cables shall be manufactured by a reputable and established manufacturer such as FAST Cables Pakistan or equivalent, subject to approval by KCBL/Consultant.	
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		The successful bidder shall submit relevant manufacturer datasheets, technical specifications, and cable sizing calculations for approval prior to procurement and installation.	
7	Dedicated Earthing / Grounding System	The successful bidder shall design, supply, install, test, and commission a complete earthing and grounding system for the Data Center in accordance with applicable IEC/IEEE standards and internationally accepted data-center electrical practices. A total of 3 x dedicated earthing points/pits shall be provided for the following: a. Generator Earthing – 1 No. Dedicated earthing point/pit for grounding of the generator body/frame and associated metallic parts, appropriately bonded with the overall electrical earthing system. b. Data Center Equipment / SRG Earthing – 1 No. Dedicated earthing point/pit for the Server Room POD, racks, MDBs/DBs, ATS, AVR, Auto Phase Correction Panel, cable trays, metallic enclosures, and other electrical/IT equipment requiring protective or equipment grounding. An appropriately sized Main Earthing/Grounding Bar (MEB/MGB) shall be installed within the Server Room, from which individual equipment grounding/bonding connections shall be provided. c. ESD Flooring Earthing – 1 No. Dedicated grounding point for the ESD flooring system, including copper grounding strips/tapes and suitable grounding conductor. The ESD flooring shall be properly bonded to the designated grounding system to provide a controlled path for dissipation of electrostatic charge. General Requirements Each earthing system shall include all required earth electrodes/pits, copper conductors/strips, earth bars, inspection chambers with covers, clamps, connectors, lugs/thimbles, test links, bonding conductors, identification labels, corrosion protection, and all associated accessories required for a complete installation. The bidder shall determine the type, size, number and depth of earth electrodes and conductor sizes based on soil conditions, fault-current requirements, applicable standards, and detailed engineering calculations. All exposed conductive parts, equipment enclosures, racks, cable trays, POD structure, switchgear bodies, and other metallic components shall be properly bonded to establish an equipotential	3

		grounding system. Dedicated functional earth points shall not remain electrically isolated where such isolation would create a potential difference or electrical safety hazard; bonding with the overall facility earthing system shall be carried out in accordance with the approved design and applicable standards. The bidder shall achieve an earth resistance of less than 1 Ω for the Data Center earthing system, where practicable and subject to site/soil conditions and approved design. Earth resistance shall be measured using an approved earth resistance tester after installation. The successful bidder shall submit the earthing layout, conductor sizing, bonding scheme, earth-pit details, test methodology, and final earth resistance test reports for approval and project record. All materials, civil works, excavation, backfilling, terminations, testing, labeling, and reinstatement shall be included in the bidder's quoted price.	
8	Additional Equipment/Spares	Additional Works at Main Data Center – HQ NLC Rawalpindi In addition to the equipment and works specified above, the successful bidder shall supply, install, integrate, test, and commission the following equipment/works at the existing Main Data Center, Headquarters NLC, Rawalpindi. The bidder shall mandatorily visit the Data Center prior to submission of the bid to inspect the existing infrastructure, verify site conditions, understand the existing electrical and associated systems, and clarify the detailed scope of work with the ICT Team. a. Bypass Panels for Existing 100 kVA AVR – Quantity 2 Supply, installation, testing, and commissioning of 2 x bypass panels for the existing 100 kVA AVRs, one in each Electrical Room. The bypass arrangement shall allow the respective AVR to be completely isolated from the electrical system while maintaining power supply to the downstream load, enabling safe maintenance, repair, or replacement of the AVR. The bidder shall include all required breakers, interlocks, cabling, terminations, accessories, labeling, and associated modification/integration works. b. Manual Bypass for Existing Generator Synchronization Panel – Quantity 1 The Data Center is presently equipped with an existing synchronization panel serving 2 x 100 kVA generators. The bidder shall design, provide and integrate a suitable manual bypass arrangement/panel enabling the synchronization panel to be safely bypassed in the event of panel failure, troubleshooting, or planned maintenance. The arrangement shall permit operation of the	

	generator supply through the bypass system while safely isolating the synchronization panel. All necessary breakers, mechanical/electrical interlocks, control modifications, cabling, terminations, and accessories required for complete integration shall be included in the bidder's scope. c. Shoe Cover Machine Rolls – Quantity 2 Supply of 2 x compatible shoe-cover rolls for the existing automatic shoe-cover machine installed at the Data Center. d. NVR Storage Expansion – 2 x 10 TB HDDs. Supply and installation of 2 x 10 TB surveillance-grade internal hard disk drives compatible with the existing NVR. The bidder shall install, configure, initialize, and test the drives to enhance CCTV recording retention. Compatibility with the existing NVR shall be verified by the bidder prior to procurement. e. Deep Cleaning and Servicing of Existing Generators – Quantity 2 Carry out comprehensive deep cleaning of the existing 2 x generators, including generator body, engine compartment, radiator, and associated accessible components. The scope shall include thorough cleaning of the radiators and provisioning/top-up or replacement of radiator coolant, as required. All consumables, cleaning materials, coolant, manpower, tools, and associated works required for completion of the activity shall be included in the bidder's scope. f. UPS Batteries (12V, 9Ah Batteries) – Quantity 280 Supply and installation of 12V, 9AH (VRLA) suitable and fully compatible with the existing UPS. Battery shall be brand new, genuine, and of a reputable international brand such as Leoch OR long. Manufacturing date shall preferably not be older than 6 months at the time of delivery. The bidder shall include replacement, installation, termination, testing, and commissioning in the quoted price with replacement warranty of 1 year. g. SNMP Card for Existing Alerex UPS (Net Agent 9 internal (CY-504 series) – Quantity 1 Supply, installation, configuration, testing, and commissioning of SNMP fully compatible with the existing Alberex 6 kVA UPS. The card shall support remote UPS monitoring through LAN/Web interface, including UPS status, input/output parameters, battery status, alarms/events, and configurable alert notifications. All required accessories, licenses/software, network configuration, and integration with the existing UPS shall be included in the bidder's scope. h. AC Sequence Controller for AC Units. Quantity 2	
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		Supply, installation, configuration, testing, and commissioning of 1 x sequence controller for automatic sequential operation of 2 x AC units, supporting duty/standby operation, automatic changeover, and periodic rotation. i. AVR Controller Card: Qty 3 Supply, installation, configuration, testing, and commissioning of Controller Card, compatible with the existing 100 kVA DataTurk AVR. The card shall be genuine/OEM-approved, new and unused, including all required accessories and configuration necessary to restore complete AVR functionality.	
9	Civil & Allied Work	The successful bidder shall construct suitable bases/foundations for the generator and Transformer Tap-Off DB, and provide the required cable trench/underground route from the transformer and generator up to the Server Room. 3 ft x 3 ft cable manholes shall be provided at suitable locations, particularly near the generator, transformer tap off DB, and Server Room entrance, to facilitate safe laying, pulling, inspection, and maintenance of power cables. All excavation, backfilling, reinstatement, materials, and allied civil works shall be included in the bidder's scope. Server Room Civil Works: The successful bidder shall dismantle and remove the existing window, close the opening with proper brick masonry, plastering, and finishing, and apply matching paint to achieve a uniform finish. The existing false ceiling shall be completely dismantled and removed by the successful bidder. Necessary surface preparation and painting shall be carried out, including black paint on the exposed ceiling, to provide a neat and finished appearance suitable for the Server Room.	
Network Equipment			
1	Firewall	Enterprise-grade Next Generation Firewall (NGFW), purpose-built hardware appliance Firewall Throughput: Minimum 35 Gbps IPS Throughput: Minimum 8 Gbps NGFW Throughput: Minimum 6 Gbps Threat Protection Throughput: Minimum 5 Gbps IPsec VPN Throughput: Minimum 30 Gbps Concurrent Sessions: Minimum 10 Million New Sessions/sec: Minimum 350,000 SSL Inspection: Minimum 6 Gbps	1

		Interfaces: Minimum 8 × 10G SFP+, 4 × 1G SFP and 8 × 1G/2.5G/5G RJ45 or equivalent VPN: IPsec VPN with IKEv1/IKEv2, route-based and policy-based VPN SD-WAN: Integrated application-aware SD-WAN with link monitoring, load balancing and automatic failover Routing: Static Routing, PBR, OSPF, BGP, RIP and IPv4/IPv6 High Availability: Active-Passive and Active-Active HA with session/state synchronization Application Control: Application identification and policy-based application control IPS/IDS: Integrated Intrusion Prevention/Detection System Anti-Malware/Antivirus: Gateway-level malware and antivirus protection Web Filtering: Category-based URL/Web filtering with HTTPS inspection DNS Security: DNS filtering and malicious-domain protection Authentication: LDAP/Active Directory, RADIUS and TACACS+ integration Management: Web GUI, CLI, SNMP and centralized management capability Logging & Reporting: Comprehensive traffic, security and event logging with Syslog/SIEM integration IPv6: Full IPv6 firewall, routing and security support Hardware Warranty: Minimum 3 Years OEM Warranty OEM Technical Support: 24×7 OEM Technical Support for 3 Years UTM/Security Licenses: 3-Year OEM subscription/license package IPS License: 3-Year subscription including signature/database updates Antivirus/Anti-Malware License: 3-Year subscription including regular updates Web/DNS Filtering License: 3-Year subscription Application Control: 3-Year subscription/license including application database updates SSL/Deep Inspection: Supported throughout the subscription period Security Intelligence/Threat Feed: 3-Year OEM subscription for continuously updated threat intelligence Firmware/OS Updates: 3-Year entitlement to OEM firmware/software updates and security patches Centralized Management: Required licenses/subscriptions, if applicable, for 3 years License Validity: All quoted security/UTM subscriptions shall remain valid for at least 3 years from the date of commissioning/activation	
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		License & Support Inclusion: Bidder shall quote hardware + 3-year OEM warranty + 3-year 24x7 support + all required UTM/security licenses as a complete solution	
2	OFC Cable	12 Core Single-Mode Optical Fiber Cable with OFC enclosures (Good brand like corning or equivalent)	50 Meter
3	ODF	12-Core ODF complete with couplers and fiber pigtails (Good brand like corning or equivalent)	2
4	ODF / Fiber Termination	4-Core fiber termination complete with couplers and pigtails	2
5	Fiber Patch Cord	SC-LC Single-Mode Fiber Patch Cord, 5 Meter	20
6	Fiber Patch Cord	LC-LC Single-Mode Fiber Patch Cord, 5 Meter	20
7	CAT6 Cable	CAT6 UTP Network Cable	2 Roll
8	Patch Panel	24-Port CAT6 Patch Panel	2
9	Cable Manager	24-Port / 1U Horizontal Cable Manager	2
10	RJ-45 Connector	RJ-45 Network Connectors, CAT6 compatible	1 Box
11	Existing Firewall License	The following licenses/support subscriptions are required for the existing Fortinet firewalls: a. UTM Security License – 3 Years for 2 x FortiGate 121G Firewalls. b. Forti Care Premium Support – 3 Years for the existing 1 x FortiGate 100F Firewall.	
12	Services	End to End Deployment with cable laying, ducting, splicing, configuration and testing	1
Layouts and Designs / Technical Team			
1	Layouts and Designs	Mandatory Drawings/Documents with Technical Bid The bidder shall submit the following preliminary drawings/documents as part of the Technical Bid: a. Single Line Diagram (SLD) of the proposed electrical power distribution system. b. Overhead Cable Tray Layout , clearly indicating separate routing for power and data/communication cabling. c. Server Room / Equipment Placement Layout , clearly showing the proposed placement of the POD and all associated electrical equipment/switchgear, including AVRs, ATSS, MDBs, Auto Phase Correction Panel , and other proposed equipment within the designated Server Room/equipment areas.	

		The drawings shall be prepared considering the available site dimensions, equipment clearances, accessibility, operation and maintenance requirements, and the overall proposed system architecture. Submission of the above drawings/documents is mandatory. Any bid submitted without these documents shall be considered technically non-responsive and shall be rejected outright.	
2	Technical Team	Bidder to provide details of team being engaged for execution of the said project. Team details must include experience of technical resources having prior experience to execute similar projects. Bidders not having expertise of executing similar projects will be technically disqualified outright.	

Annex “B”

Tender No:

1. Financial offer must be as per following formats: -

Ser	Equipment	Qty	Unit Price excl Taxes	Unit Price incl Taxes	Unit Price excl Taxes	Total Price incl Taxes
POD / Containment. It must include all containment components (but not limited to) cable trough, railings, front and side doors, room/ceiling panels, lights, and all type of sensors. Following outlined spares are the minimum quantity outline, however OEM may increase any spare (s) as per their design/solution						
1.	IT Racks					
a.	Indoor Closed Cabinet Kit	3				
b.	Blanking Panel	60				
c.	Door Open Emergency Ventilation Kit	3				
2.	Access Control System	3				
a.	3 in 1 Access Reader - IP66 Type	6				
3.	Cooling Units					
a.	Rack Mount Split DX 12.8kW - IEC/US Power Type	2				
4.	Power System					
a.	PDM Rack Mount 3P Power Input	2				
b.	Rack Mount UPS 20kVA 380V3P IEC Power Type	2				
c.	VRLA Batteries	4				
d.	Smart PDU Monitoring	2				

5.	DCIM System					
a.	Monitoring Host - Rack Mount Type	1				
b.	Touch Display Panel	1				
c.	Sensor - Temperature & Humidity	6				
d.	Sensor - Smoke of Fire	3				
e.	Sensor - Leaking none Positioning Type	1				
f.	Sensor - Door Status	6				
g.	16 Port Networks Switch	1				
6.	Remote monitoring of existing System (hardware equipment and software with perpetual license)	1				

Existing Equipment.

The following equipment is available at the NLC Store at Amangarh/Nowshera. The successful bidder shall be responsible for its safe transportation to Rawalpindi, cleaning, installation, testing, and commissioning, including all associated costs.

All allied spares, accessories, and consumables required to make the equipment fully functional shall be supplied by the successful bidder and quoted against **“movement, installation, testing and commissioning of existing equipment”**.

7.	Transformer Tap Off DB	1				
8.	Phase Correction Panel with AVR Bypass	1				
9.	ATS Panel	1				
10.	Main DB/ MDB	1				
11.	AC Units	2				
12.	5Kg CO2 Gas cylinders	2				
13.	Anti rodent device	1				
14.	Ceiling Lights 1"x 4"	6				
15.	Overhead cable tray	118 ft				

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Other Equipment. The successful bidder shall be responsible for the supply, installation, integration, testing, and commissioning of the following equipment. The scope shall include all required equipment, allied accessories, consumables, terminations, and associated works necessary to make each item fully functional and operational.

1.	Generator set with weather and sound proof canopy	1				
2.	Automatic Voltage Regulator	1				
3.	ESD Flooring for Server Room					
4.	CCTV Surveillance System					
5.	Biometric Device	1				
6.	Power cable	1				
7.	Dedicated Earthing / Grounding System	3				
8.	Additional Equipment/ Spares					
9.	Civil & Allied Work					

Network Equipment

1.	Firewall	1				
2.	OFC Cable	50 Meter				
3.	ODF	2				
4.	ODF / Fiber Termination	2				
5.	Fiber Patch Cord	20				
6.	Fiber Patch Cord	20				
7.	CAT6 Cable	2 Roll				
8.	Patch Panel	2				
9.	Cable Manager	2				
10.	RJ-45 Connector	1 Box				

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11.	Existing Firewall License					
12.	Services	1				

Note

- a. Price is required to be quoted on **FOR Rawalpindi** basis, which must include delivery, installation charges, and all taxes / duties.
Brochure / manufacture specifications (in original) must be attached
- b. Firm must submit their financial offer as per above mentioned schedule to tender otherwise offer will be rejected.