

# **PUNJAB SKILLS DEVELOPMENT FUND**

## **Tender Document**

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**“Provisioning, installation and commissioning of the Network Equipment to PSDF”**

**July 14, 2017**



**Submission Date for Sealed Bids: August 7<sup>th</sup>, 2017 (11:00 am)**

21-A, H-Block, Dr. Mateen Fatima Road, Gulberg-II Lahore, Pakistan.

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## **1- Invitation to bids**

Punjab Skills Development Fund (PSDF) is a section 42, not-for-profit Company set up under the Companies Ordinance 1984 by the Government of the Punjab. Sealed bids/proposals will be invited from Network providing firms/companies (hereafter called as bidders) for the supply, installation and commissioning of Network Equipment. All interested and eligible bidders are requested to go through complete document and provide the required information and documents mentioned in this document.

## **2- Instruction to bidders**

The selection of Provisioning, installation and commissioning of the Networks Equipment providing firms/companies will base on Least Cost Selection Method. PSDF will adopt single stage two envelopes bidding procedure.

The bid shall be a single package consisting of two separate envelopes, containing separately the financial and the technical proposals. The envelopes shall be marked as “Financial Proposal” and “Technical Proposal”. In the first instance, the “Technical Proposal” shall be opened and the envelope marked as “Financial Proposal” shall be retained unopened in the custody of the PSDF. The PSDF shall evaluate the technical proposal in the manner prescribed in the section - 7 given in the document, without reference to the price and shall reject any proposal which does not conform to the specified requirements. During the technical evaluation no amendments in the technical proposal shall be permitted. After the evaluation and approval of the technical proposals, the PSDF shall open the financial proposals of the technically accepted bids, publically at a time, date and venue announced and communicated to the bidders in advance, within the bid validity period. The financial bids found technically nonresponsive shall be returned un-opened to the respective bidders. The technical and financial proposal will be evaluated on the basis of PSDF evaluation criteria as provided in section 7 and 8 of the document.

This document has different sections carrying information of eligibility, technical evaluation and terms of references to assist potential printing contractors to develop their technical proposals. Bidders those will found eligible and qualify in technical evaluation will be short-listed for financial bids.

## **3- Conditions for eligibility**

The successful bidder, fulfilling the following criteria, will be considered as eligible bidder for the bidding process of Provisioning, installation and commissioning of the Networks Equipment supply;

- a) The supplier or company must have local presence, an office in Pakistan preferably in Lahore. (office address on signed letter head)
- b) The company must have done business of supply of international branded Network Equipment that will be provided through the bid. (Declaration on signed letter head)
- c) Minimum 10 years of experience of providing, installation and commissioning of Network Equipment. Documentary proof (copies of contract or work order by clients or delivery receipts) should be furnished.
- d) Evidence of company’s registration / incorporation (Copy required)

- e) Affidavit on stamp paper, declaring that the company is not black listed by any Govt. agency / authority (Original required)
- f) Income Tax, GST, PST (if applicable) registration (Copy required)
- g) Have authorized top level partnership (Gold partnership/Top tier) of original manufacturer to sell and provide service \ warrantees and maintenance services of the international branded Network Equipment.
- h) The quoted Equipment should not be locally assembled or fabricated but must be imported from original manufacturer or not from any grey channel.

Kindly fill all annexures required for the above qualification criteria and attach the supporting documentary evidences as mentioned in each annexure;

And also sign the declaration form at the end of document and attach with your other documents.

#### **4- Scope of job**

- a) Bidder will submit complete specifications of required Network Equipment with pictures in technical proposal for approval of PSDF. After technical qualification and approval of specifications, the qualified bidders will be called for its financial proposal opening.
- b) PSDF will raise the purchase order for the provision of all approved Network Equipment and the successful bidder will provide, install and commission the required Network Equipment in stipulated time.
- c) PSDF can increase the quantity of required Equipment.

#### **5- Terms of Reference**

To provide Network Equipment, successful bidder will agree on following terms of references:

- a) Successful bidder will share financial bids for the required Network items with agree delivery time. A penalty at the uniform rate of 5% of the value of the purchase order on each day delay will be involved in case of delay in the delivery of the complete equipment.
- b) If the bidder completely fails to deliver the material a week after prescribed period of delivery, the CDR will be forfeited and purchase order will be considered cancel.
- c) The technical & inspection committee/team of PSDF will inspect and check the Network Equipment supplied at the time of the delivery. Payment will be made on receipt of satisfactory report from the said technical & inspection committee/team.
- d) Successful bidder will bound to provide the Network items within agreed timelines after issuance of work order.
- e) PSDF reserves the right to increase the number of Network items as per the requirement.
- f) Income tax and 1/5<sup>th</sup> of GST (if applicable) will be deducted in accordance with the provisions of Government Rules amended time to time.
- g) In case of any dispute regarding quantity, quality of service and specification, the decision of the PSDF shall be final & binding.

- q) The payment for the Network items will be made on the successful delivery, installation and commissioning of Network items as per PSDF rules.
- r) Delivery Location: Unless otherwise 'agreed', delivery of the material against this Order shall be made at Lahore Office i.e. 21-A, H-Block, Dr. Mateen Fatima Road, Gulberg-II, Lahore.

## **6- Guidelines**

- a) Only short-listed applicants fulfilling the eligibility criteria will be considered for technical evaluation. The financial proposal will be called from technically qualified bidders.
- b) All documents and information received by PSDF from applicants will be treated in strictest confidence.
- c) Documents submitted to PSDF will not be returned.
- d) All expenses related to participation in this bidding document shall be borne by the applicants.
- e) Documents shall be submitted in hard copies in a sealed envelope marked as "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL" for 'Provision of Stationery and General Items'. The envelope containing hard copies of technical proposal and financial proposal shall be received on the postal address given below.
- f) The closing date and time for receipt of bidding proposal is 7<sup>th</sup> August, 2017 (**11:00 AM**).
- g) Sealed proposals received thereafter will not be accepted.
- h) PSDF reserves the right to request submission of additional information from applicants in order to clarify/further understand aspects of technical proposal, if required.
- i) PSDF reserves the right to verify any information provided by the applicants.
- j) Questions about this technical proposal can be made only in writing: a letter or an e-mail and must be asked by or before COB 27<sup>th</sup> July, 2017. For any other related information please contact the undersigned.

### Postal Address

IT Department  
Punjab Skills Development Fund  
21-A, H-Block, Dr. Mateen Fatima Road, Gulberg-II Lahore  
E-mail: IT@psdf.org.pk  
Phone: +92-42-35752408-10  
Fax: +92-42-35752190

## **7- Technical evaluation criteria**

This document is governed by the procedure approved by PSDF management. The technical proposal of eligible organisations will be evaluated using the required specifications of Network Equipment attached as annexure – C. A bidder cannot offer more than one option, matching the exact specifications is required as given in annexure – C.

## 8- Financial Evaluation

The financial proposals of only eligible bidders with technically qualified specifications will be opened. Financial bid evaluation will be done on the basis of lowest offered bid price of Provisioning, installation and commissioning of the Networks Equipment given in Financial Bid Form “annexure – F”.

## 9- Declaration

Kindly provide the declaration as per format provided below at the end of proposal.

I, \_\_\_\_\_ hereby declare that:

- all the information provided in the technical proposal is correct in all manners and respects
- and I am duly authorised by the Governing body/Board/Management to submit this proposal on behalf of "[Click here and type the name of organization]"

|                |  |
|----------------|--|
| Name           |  |
| Designation    |  |
| Signature      |  |
| Date and Place |  |

## 9- Submission of Bids (Technical and Financial Proposal)

Complete bid containing technical and financial proposal along with CDR; all required information and documentary evidences may be submitted before 11:00 AM on 7<sup>th</sup> August, 2017. Technical proposals will be publically opened on the same day i.e. 17<sup>th</sup> August, 2017 at 11:30 AM in the presence of bidder’s representatives who wish to attend it. CDRs of disqualified bidders will be returned after award of contract.

### Call Deposit Receipt (CDR)

CDR of five percent (5%) for the total bid price of offered Provisioning, installation and commissioning of the Networks Equipment, in the form of pay order or demand draft favouring Punjab Skills Development Fund. The CDR should be valid for a period not less than 6 months and enclosed in financial bid. CDR must be enclosed in financial proposal.

**Cover Letter for the Submission of Technical Proposal**

[Firm letterhead]

[Date]

To

Chief Executive Officer

[Address mentioned in Guide lines]

**Re:** Technical Proposal in respect of [Insert title of assignment]

Dear Sir,

We offer to provide the Services for [Insert title of assignment] in accordance with your Tender for Proposal dated [Insert Date of Tender advertised]. We hereby submit our technical Proposal including the required documents in a sealed envelope.

We hereby declare that all the information and statements made in these proposals are true and accept that any misinterpretation contained therein may lead to our disqualification. Our proposal is binding upon us and subject to the modifications resulting from contract negotiations. We undertake that we will initiate the services as per the client's request if our proposal is accepted. We understand that you are not bound to accept any or all proposals you receive.

Thank you.

Yours sincerely,

Signature

Name and title of signatory:

**Important Note:** The competent authority may reject all bids or proposals at any time prior to the acceptance of a bid or proposal. PSDF shall upon request communicate to any bidder, the grounds for its rejection of all bids or proposals, but shall not be required to justify those grounds. The bids should be submitted in sealed envelope clearly mentioned **“TECHNICAL AND FINANCIAL PROPOSALS FOR Provisioning, installation and commissioning of the Networks Equipment TO PSDF”**

**Annexures**

**Annex – A**

| <b>Organization Information</b> |   |                            |  |
|---------------------------------|---|----------------------------|--|
| <b>S #</b>                      | <b>Required Information</b>   | <b>Response</b>            |  |
| 1                               | Legal name of the organization  |                            |  |
| 2                               | Year of Registration / Establishment of the Organisation  |                            |  |
| 3                               | National Tax Number   |                            |  |
|                                 | General / Punjab Sales Tax Number   |                            |  |
| 5                               | What is the legal status of your organisation? Tick the relevant box (one box only). (Attach Copy/Copies of Registration Certificate/s) | Public Sector Organisation |  |
|                                 |   | Section 42 Company         |  |
|                                 |   | Public Ltd. Company        |  |
|                                 |   | Private Ltd. Company       |  |
|                                 |   | Private Partnership Firm   |  |
|                                 |   | Others (Please specify)    |  |
| 6                               | Name and designation of 'Head of Organization'  |                            |  |
| 7                               | Mobile:   |                            |  |
|                                 | Phone/s:  |                            |  |
|                                 | Email:  |                            |  |
|                                 | Fax:  |                            |  |
|                                 | Address of organization:  |                            |  |
|                                 | Website address:  |                            |  |
| 8                               | Name and designation of 'Contact Person':   |                            |  |
|                                 | Phone/s:  |                            |  |
|                                 | Mobile:   |                            |  |
|                                 | Email:  |                            |  |
|                                 | Fax:  |                            |  |
|                                 | Address of printing set up  |                            |  |
|                                 | Phone/s:  |                            |  |
|                                 | Mobile:   |                            |  |
|                                 | Email:  |                            |  |
|                                 | Fax:  |                            |  |

**Annex – B**

| <b>Eligibility Response Checklist</b> |  |  |   |
|---------------------------------------|--|--|---|
| <b>Sr. No.</b>                        | <b>Necessary Eligibility Information</b>   | <b>Response/Elaboration</b>                  |   |
| 1                                     | Certificate of Registration / Incorporation (Copy required)  |  | Copies Attached   |
|                                       |  |  | Copies Not Attached   |
| 2                                     | Regular tax payer<br>Attach copy of tax returns of last year   |  | Copies Attached   |
|                                       |  |  | Copies Not Attached   |
|                                       |  |  | Not applicable. Public sector organisation  |
| 3                                     | Mention National Tax Number (NTN) or General / Punjab Tax Number (GST, PST) in the name of Organization and provide a copy of registration   | National Tax Number (NTN)                    |   |
|                                       |  | General / Punjab Sales Tax Number (GST, PST) |   |
| 4                                     | The supplier or company must have local presence, registered office in Pakistan and an office in Lahore  |  | Profile or evidence of letter head is Attached  |
|                                       |  |  | Not Attached  |
| 5                                     | Has your firm ever blacklisted by any government authority or any bi-lateral/multi-lateral financial institution?<br>(MUST attach an undertaking by your firm's authorised person with this document)                      |  | We solemnly declare that our organization or any member of consortium has never been suspended/debarred or blacklisted. |
|                                       |  |  | Our organization has been blacklisted once or more than once.   |
| 6                                     | The company must have done business of Provisioning, installation and commissioning of the Networks Equipment  |  | Profile or evidence of letter head is Attached  |
|                                       |  |  | Not Attached  |
| 7                                     | Minimum 10 years' experience of providing, provisioning, installation and commissioning of the Networks Equipment. Documentary proof (copies of contract or work order or contact details of clients) should be furnished. |  | Copies Attached   |
|                                       |  |  | Copies Not Attached   |
|                                       | Have authorized top level partnership (gold partnership/top tier) of original manufacturer to sell and provide service warrantees and maintenance services of the network equipment.                                       |  | Copies Attached   |
|                                       |  |  | Copies Not Attached   |

**Annex – C**

| <b>Relevant Experience</b> |   |  |
|----------------------------|---|--|
| <b>Sr. #</b>               | <b>Required Information</b>   | <b>Response</b><br><b>(Please provide exact information with organization name, location/s and duration)</b><br><br>Provide data in sequence given below |
| 1                          | Name of Organizations with addresses  | i.   |
|                            |   | ii.  |
|                            |   | iii.   |
|                            |   | iv.  |
|                            |   | v.   |
| 2                          | Start and end dates of providing network equipment (For example – Jan 2005 to September 2013) | i.   |
|                            |   | ii.  |
|                            |   | iii.   |
|                            |   | iv.  |
|                            |   | v.   |
| 3                          | Number of items provided  | i.   |
|                            |   | ii.  |
|                            |   | iii.   |
|                            |   | iv.  |
|                            |   | v.   |

List of current business with other organizations including government organizations **Annex-D**

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| Sr. No | Name of Company/Organization | Current Business/Scope of Work | No of Employee | Annual Contract Volume | Approximate value of Business |
|--------|------------------------------|--------------------------------|----------------|------------------------|-------------------------------|
| 1      |                              |                                |                |                        |                               |
| 2      |                              |                                |                |                        |                               |
| 3      |                              |                                |                |                        |                               |
| 4      |                              |                                |                |                        |                               |
| 5      |                              |                                |                |                        |                               |

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| Technical Evaluation Criteria |   |              |                    |  |
|-------------------------------|---|--------------|--------------------|--|
| S. No.                        | Descriptions  | Total Points | Categorized Points | Remarks<br>(Attachment of relevant evidence in each case is mandatory. In case of non-compliance no mark will be awarded)  |
| <b>1</b>                      | <b>Relevant Experience</b>  | <b>10</b>    |                    | Documentary proof (copies of contract or work order or contact details of clients) should be furnished.  |
|                               | Experience of providing Networks Equipment items more than 10 years                           |              | 10                 |  |
|                               | Experience of providing Networks Equipment items more than 7 years but less than 10 years     |              | 5                  |  |
|                               | Experience of providing Networks Equipment items less than 7 years                            |              | 0                  |  |
|                               | <b>Current Contracts</b>  | <b>10</b>    |                    | Documentary proof (copies of contract or work order or contact details of clients) should be furnished.  |
|                               | Currently working with at least 3 clients<br>If fulfils completely                            |              | 10                 |  |
|                               | If one or more but less than three  |              | 5                  |  |
|                               | If currently no contract with any client  |              | 0                  |  |
|                               | <b>Experience with Govt, Semi Government or Autonomous bodies<br/>If greater than 3 years</b> | <b>5</b>     |                    |  |
|                               | If one or more but less than 3 years  |              | 3                  |  |
|                               | If less than 1 year   |              | 0                  |  |
| <b>2</b>                      | <b>Financial Capability</b>   | <b>15</b>    |                    | Copy of last financial audit report done by ICAP/SBP registered auditing firm or bank statement of one year.   |
|                               | Annual turnover of Networks Equipment Items company should be greater than 15 million         |              | 15                 |  |
|                               | If less than 15 million but greater than 10 million but less than 15 million                  |              | 10                 |  |
|                               | If less than 10 million but greater than 5 million  |              | 7                  |  |
|                               | If less than 5 million but greater than 3 million   |              | 5                  |  |
|                               | If less than 3 million  |              | 0                  |  |
| <b>4</b>                      | <b>Company Establishment</b>  | <b>10</b>    |                    | Share copy of registration or letter of incorporation<br>Share copy of registration of delivery van and details of driver<br>Company profile showing the complete list of key management |
|                               | If establishment of company is old, greater than 7  |              | 10                 |  |
|                               | If greater than 5 but less than 7   |              | 5                  |  |

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|          |  |           |    |  |
|----------|--|-----------|----|--|
|          | If less than 5   |           | 0  | staff with designations and contact details.<br>Or complete list key management staff with designations and contact details on company letter head with sign and stamp by authorities  |
|          | <b>Number of key management staff if 7 and above</b>                                   | <b>10</b> |    |  |
|          | If 5 and above   |           | 7  |  |
|          | If 3 and above   |           | 5  |  |
|          | If less than 3   |           | 0  |  |
|          | <b>Clients with Company</b>  |           |    | Company profile showing the total clients.<br>Or detail of clients on company letter head with sign and stamp by authorities<br><br>Company profile showing the total Govt clients.<br>Or detail of details of clients on company letter head with |
|          | Number of total clients<br>If 10 and above   | <b>10</b> |    |  |
|          | If 7 and above   |           | 7  |  |
|          | If 5 and above   |           | 5  |  |
|          | Less than 5  |           | 0  |  |
|          | Number of Govt, Semi Govt or Autonomous clients, If 5 and above                        | <b>5</b>  |    |  |
|          | 3 and above  |           | 3  |  |
|          | 1 and above  |           | 2  |  |
| <b>5</b> | <b>Quality</b>   | <b>15</b> |    |  |
|          | Warranty of Networks Equipment offered by bidder, if equal or greater than 36 months   |           | 10 | Attach offered warranty period on signed company letter head   |
|          | If greater than 24 months but less than 36 months                                      |           | 5  |  |
|          | If less than 24 months   |           | 0  |  |
|          | <b>Higher Level Certified Staff (Expert) Attained from the participating principal</b> |           | 5  | Provide details of certifications i.e CCIE, HCIE etc.  |
|          | <b>Working Staff</b>   |           |    | Company profile showing the number or details of Stationery and General Items staff.<br>Or number/details of Stationery and General Items staff on company letter head with sign and stamp by authorities  |
|          | Total number of working staff held with the company in total. 15 and above             | <b>10</b> |    |  |
|          | 10 and above   |           | 7  |  |
|          | 7 and above  |           | 5  |  |
|          | 5 and above  |           | 3  |  |
|          | Less than 5  |           | 0  |  |

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|                             |            |  |  |
|-----------------------------|------------|--|--|
| <b>Total Points Awarded</b> | <b>100</b> |  |  |
|-----------------------------|------------|--|--|

| <b>Key Management Staff of Company</b> |                                 |                    |                          |                                   |
|--|---------------------------------|--------------------|--------------------------|-----------------------------------|
| <b>Sr #</b>                            | <b>Name of Management Staff</b> | <b>Designation</b> | <b>Area of Expertise</b> | <b>Number of years in company</b> |
|  |                                 |                    |                          |                                   |
|  |                                 |                    |                          |                                   |
|  |                                 |                    |                          |                                   |

May like to add more columns

## Specification of Network Equipment

### Item # 1 Firewall (Qty=1)

- Firewall should support UTM features including firewall, DPI, IPS, antivirus, anti-spam and content filtering services with one year subscription license.
- 4 x GE (RJ-45) and 2 x GE combo (RJ45+SFP) ports and at-least 2 I/O expansion slots for future expansion.
- Firewall performance: 2 Gbps or higher.
- IPS throughput: 900 Mbps or higher.
- IPSec VPN throughput: 400 Mbps or higher.
- Number of concurrent sessions: 2 Million or higher.
- Atleast 50 Virtual firewalls supported.
- Authentication methods (local, RADIUS, TACACS, SecureID, AD, CA, LDAP, and Endpoint Security)
- Recognition of viruses, Trojan horses, and malware hidden in applications through combination of application identification and virus scanning
- Defense against DDoS attacks, such as the SYN flood and UDP flood attacks
- VPN technologies: IPSec VPN, SSL VPN, L2TP VPN, MPLS VPN, and GRE
- IPv4: static routing, RIP, OSPF, BGP, and IS-IS
- IPv6: RIPng, OSPFv3, BGP4+, IPv6 IS-IS, IPv6 RD, and ACL6
- Transparent, routing, or hybrid working mode and high availability (HA), including the Active/Active and Active/Standby mode
- PBR Policy Based Routing
- Firewall should have dual Power Supplies.
- 3 Year License, Warranty and Support Subscription

### Item # 2 Access Switch (Qty=2)

- 48 x10/100/1000Base-T Ethernet PoE+ ports, 4 x 10Gig SFP+ ports, provide at least 370W PoE power
- Switching capacity at-least 300Gbps or higher, forwarding throughput 140 Mpps or higher
- 16K or higher MAC address tables, 4K active VLAN, Mac-based, Port-based, protocol-based, and IP subnet-based VLAN assignment, MAC Flapping detection, Voice VLAN or equivalent
- IGMP snooping v1/v2/v3, MLD snooping v1/v2, multicast VLAN replication
- Should provide Static route, RIP, RIPng, OSPF features
- Bidirectional ACL, port-based ACL, VLAN-based ACL, CPU defense, DAI (Dynamic ARP Inspection), DHCP Snooping, Ingress and egress traffic shaping and VLAN based traffic limit, flow mirroring
- SNMPv1/v2c/v3, Telnet, RMON, SSHv2, web management and automatic configuration
- 3 Year License, Warranty and Support Subscription

### **Item # 3Core Switch (Qty=1)**

- 48 x10/100/1000Base-T Ethernet PoE+ ports, 4 x 10Gig SFP+ ports, provide at least 370W PoE power
- Switching capacity at-least 300Gbps or higher, forwarding throughput 140 Mpps or higher
- 16K or higher MAC address tables, 4K active VLAN, Mac-based, Port-based, protocol-based, and IP subnet-based VLAN assignment, MAC Flapping detection, Voice VLAN or equivalent
- IGMP snooping v1/v2/v3, MLD snooping v1/v2, multicast VLAN replication
- Should provide Static route, RIP, RIPng, OSPF features
- Bidirectional ACL, port-based ACL, VLAN-based ACL, CPU defense, DAI (Dynamic ARP Inspection), DHCP Snooping, Ingress and egress traffic shaping and VLAN based traffic limit, flow mirroring
- SNMPv1/v2c/v3, Telnet, RMON, SSHv2, web management and automatic configuration
- Core Switch should have dual Power Supplies.
- 3 Year License, Warranty and Support Subscription

### **Item # 4WLAN Controller (Qty=2)**

- Support IETF 5415 CAPWAP protocol
- Support 802.11a, 802.11b, 802.11g, 802.11n, 802.11e, 802.11d, 802.11ac, Support transmit rate selection and channel selection
- Number of managed APs per controller  $\geq$  250
- Packet forwarding capacity  $\geq$  4Gbps
- Support authentication based on MAC, 802.1x (EAP-PAP, EAP-MD5, EAP-PEAP, EAP-TLS, EAP-TTLS) Portal MAC+Portal
- Support built-in portal server and can support user number more than 1k
- Support both centralized forwarding and local forwarding
- Support automatic or manual channel and power adjustment
- Support load balancing based on traffic and user
- Rouge device scan, identification, defense, and countermeasures, which includes dynamic blacklist configuration and detection of rogue APs, STAs, and network attacks.
- Support GUI-based web system management: and the web system supports local GUI-based configurations
- 3 Year License, Warranty and Support Subscription

### **Item # 5 WLAN Access Point (Qty=6)**

- Fully comply IEEE802.11a/b/g/n/ac standard, support working in both 2.4G and 5G meanwhile, data rate min 1.75Gbps, and support 3x3MIMO
- Min. Antenna Gain: Min 4dBi on 2.4GHz and 5dBi on 5GHz
- Should be able to work in controller based and standalone mode.
- Should have 2 x GE ports and supports PoE.
- Must support at least 250 users.
- Wireless Intrusion Detection System (WIDS) and Wireless Intrusion Prevention System (WIPS), including rogue device detection and countermeasure, attack detection and dynamic blacklist, and STA/AP blacklist and whitelist

- 802.1x authentication, MAC address authentication, and Portal authentication
- DHCP snooping, Dynamic ARP Inspection (DAI), IP Source Guard (IPSG), Support STBC, LDPC, MLD & MRC.
- 3 Year License, Warranty and Support Subscription

## Item # 6 Passive Items & Works

- New Branded Equivalent To (Toten, Dell Or Hp) 42 U Server Rack 800X1000 with Internationally Branded 6 port PDU with 32Amp - Qty x 1
- New Branded Equivalent To (Toten, Dell Or Hp) 42 U Data Rack 600X900 with with internationally Branded 6 port PDU with 32Amp - Qty x 1
- New Branded Equivalent To (Toten, Dell Or Hp) 6 U Data Cabinet with 6 port PDU with 32Amp Qty x 2
- Equalent To (3M, Cable Matters or TRENDnet) 48 Port loaded Patch Panel Qty x 2
- OFC 8 Core Indoor Multimode (Per meter)- Qty x 100
- OFDF 8 Port Rack Mount with Couplers – Qty x 2
- OFDF 24 Port Rack Mount with Couplers – Qty x 1
- Pigtailed SC – Qty x 16
- Patch Cords SC to LC 2 Meter – Qty x4
- Pigtailed SC Multi mode – Qty x 16
- Duct (40 X40) -10ft length
- Fibre Cable splicing - Qty x 32

## Item # 7 Services

- Installation, Configuration and Commissioning of Entire Network Equipment
- Fiber Cable laying, ducting, Patch panels installation, termination and splicing
- Servers and Data Racks cable dressing harnessing and management
- Complete Configurations of Firewall, APs, WLAN Controllers and switches
- WLAN Controllers must be configured as Failover
- Single Signin of Domain Users on all APs with existing Domain Controller
- Configuration of Links load Balancing of all Internet Connections
- End User Technical Training
- Complete Documentation network layout and configuration of the deployed equipment

| <b>Item# (use exact item number as mentioned in specifications in annex F)</b> | <b>Quantity</b>                    | <b>Unit Price of Item (without Taxes)</b> | <b>Unit Price of Item with Taxes (if any, also mention tax type and percentage)</b> | <b>Total Price of Item with taxes (if any)</b> |
|--|------------------------------------|---|---|--|
| Item # 1<br>Firewall   | 1                                  |   |   |  |
| Item # 2<br>Access Switch  | 2                                  |   |   |  |
| Item # 3<br>Core Switch  | 1                                  |   |   |  |
| Item # 4<br>WLAN Controller  | 2                                  |   |   |  |
| Item # 5<br>WLAN Access Point  | 6                                  |   |   |  |
| Item # 6<br>Passive Items & Works  | As per specified in Annex Item # 6 |   |   |  |
| Item # 7<br>Services   | As per specified in Annex Item # 6 |   |   |  |