



BIDS AND AWARDS COMMITTEE I

Supplemental/Bid Bulletin No. 1

**SUPPLY, DELIVERY AND INSTALLATION OF MANAGED NETWORK SERVICES
– NETWORK BACKHAUL FOR THE BUREAU OF CUSTOMS (BOC)**

Bid Reference No.: GPG-B1-2019-237

Approved Budget for the Contract: P 96,749,226.04

This **Supplemental/Bid Bulletin No. 1** is being issued to Amend the Bidding Documents, advise concerned parties on the new schedule of submission and opening of bids, amendments to some provisions of the Bidding Documents and reply to queries raised by suppliers through letters/emails for the information of all bidders for the aforesaid project.

A) ISSUANCE OF AMENDED BIDDING DOCUMENTS:

i. Due to the changes in Bid Reference No., an Amended Invitation to Bid and Amended Bidding Documents will be issued together with this Supplemental Bid Bulletin 1. Bidders are instructed to obtain and use the Amended Bidding Documents.

ii. Bidders who previously bought Bidding Documents are asked to return them so it can be replaced with Amended Bidding Documents.

1. NEW BID REFERENCE NO.

| FROM | TO |
|------------------------|------------------------|
| GPG-B1-2019-273 | GPG-B1-2019-237 |

2. NEW SCHEDULE OF SUBMISSION AND OPENING OF BIDS

| FROM | TO |
|-----------------------------|--------------------------------------|
| Until Further Notice | September 27, 2019 10:00 AM |

3. AMENDMENT TO BIDDING DOCUMENTS

| 12.1 (a) Technical Documents | |
|---|--|
| (ii) Duly signed and completed Technical Bid Form. Bidder must use, accomplish and submit the Technical Bid Form attached as Annex V . | (ii) Duly signed and completed Technical Bid Form. Bidder must use, accomplish and submit the Technical Bid Form attached as Annex V . <i>(Please use the Annex V of the Amended Bidding Documents).</i> |
| (iii) Duly signed/conformed Terms of Reference of BOC attached as Annex V-A . | (iii) Duly signed/conformed Terms of Reference of BOC attached as Annex V-A . |

| | |
|--|---|
| | (Please use the Annex V-A of the Amended Bidding Documents). |
| (iv) Duly signed/conformed Coverage and Bandwidth attached as Annex V-A1 . | (iv) Duly signed/conformed Coverage and Bandwidth attached as Annex V-A1 . (Please use the Annex V-A1 of the Amended Bidding Documents). |
| (v) Product Brochure and/or Technical Data Sheet of the equipment being offered showing compliance to the technical specifications. Managed Network Equipment 1. Head Office MPLS Router (for the 350 Mbps backhaul) 2. Head Office Layer 3 Switch (for a switching room/aggregator/"meet-me" room) 3. BOC Large Port MPLS Router (for ports with 40 Mbps required bandwidth) 4. BOC Small/Medium Port MPLS Router (for ports 20 Mbps required bandwidth) 5. 5x BOC Large Port Layer 3 Switch 6. Direct Internet Service Router Specifications Supply of Wireless Access Points and Controller 1. Access Point Equipment 2. Wireless LAN Controller 3. PoE Switch | (v) Product Brochure and/or Technical Data Sheet of the equipment being offered showing compliance to the technical specifications. Managed Network Equipment 1. Head Office MPLS Router (for the 600 Mbps backhaul) 2. Head Office Layer 3 Switch (for a switching room/aggregator/"meet-me" room) 3. BOC Large Port MPLS Router (for ports with 100 Mbps required bandwidth) 4. BOC Small/Medium Port MPLS Router (for ports 8 and 40 Mbps required bandwidth) 5. L3 Switch (Small/Medium Ports) 6. 5x BOC Large Port Layer 3 Switch 7. Direct Internet Service Router Specifications Supply of Wireless Access Points and Controller 1. Access Point Equipment 2. Wireless LAN Controller 3. PoE Switch (Please use the BDS of the Amended Bidding Documents). |
| (vi) Copy of Sales Invoice or Certificate of Acceptance evidencing that bidder has sold Internet Protocol (IP) based/ Networking / IT Equipment in the Philippines for at least 5 years. | (vi) Copy of Sales Invoice or Certificate of Acceptance evidencing that bidder has sold Internet Protocol (IP) based/ Networking and/or IT Equipment in the Philippines for at least 5 years. (Please use the BDS of the Amended Bidding Documents). |

| | |
|--|---|
| <p>(vii) Notarized Certification from Bidder/Service Provider indicating the following statements:</p> <ol style="list-style-type: none"> 1. That it has peering to Local Internet Exchange or other local ISPs for local routing and connectivity to contents hosted in the Philippines. 2. That it has IP peering connections to regional IP upstream providers which enables to regionalize internet traffic within Asia pacific region. 3. That it has a direct peering and exchanges IP traffic at PH OpenIX. 4. That it will document all network segment such as but not limited to local loop, cable systems, peering connection to local and global Internet Providers in Asia and US, and other Internet-related requirements like IP addresses, domain names, etc. 5. That it has at least five international gateways, two (2) in the US and three (3) in Asia, and that it owns and manages the cable system capacities that connects its IP network in the Philippines to the five international gateways. | <p>(vii) Notarized Certification from Bidder/Service Provider indicating the following statements:</p> <ol style="list-style-type: none"> 1. That it has peering to Local Internet Exchange or other local ISPs for local routing and connectivity to contents hosted in the Philippines. 2. That it has IP peering connections to regional IP upstream providers which enables to regionalize internet traffic within Asia pacific region. 3. That it has a direct peering and exchanges IP traffic at PH OpenIX. 4. That it will document all network segment such as but not limited to local loop, cable systems, peering connection to local and global Internet Providers in Asia and US, and other Internet-related requirements like IP addresses, domain names, etc. 5. That it has at least five international gateways, two (2) in the US and three (3) in Asia, and that it owns and manages the cable system capacities that connects its IP network in the Philippines to the five international gateways. <p><i>(Please use the BDS of the Amended Bidding Documents).</i></p> |
| <p>(viii) Certificates of Performance Evaluation issued by at least three (3) clients with similar projects per Annex VI with a rating of at least "SATISFACTORY".</p> <ol style="list-style-type: none"> 1. Issued by bidder's Single Largest Completed Contract (SLCC) Client per submitted Annex I-A. 2. Issued by Department of Information and Communications Technology (DICT). 3. Issued by a Client with similar projects. <p><u>Note: If DICT is your SLCC submit additional two (2) Certificate of Performance Evaluation issued by clients other than DICT with similar project to complete the three (3) clients requirement.</u></p> | <p>(viii) Certificates of Performance Evaluation issued by at least three (3) clients with similar projects per Annex VI with a rating of at least "SATISFACTORY".</p> <ol style="list-style-type: none"> a) Issued by bidder's Single Largest Completed Contract (SLCC) Client per submitted Annex I-A. b) Issued by Two (2) Clients with similar projects. <p><i>(Please use the Annex VI of the Amended Bidding Documents).</i></p> |

| | |
|--|---|
| <p>(ix) Proof of Authority of the bidder's authorized representative/s:</p> <p>a) FOR SOLE PROPRIETORSHIP (IF OWNER OPTS TO APPOINT A REPRESENTATIVE): Duly notarized Special Power of Attorney.</p> <p>b) FOR CORPORATIONS, COOPERATIVE OR THE MEMBERS OF THE JOINT VENTURE: Duly notarized Secretary's Certificate evidencing the authority of the designated representative/s.</p> <p>IN THE CASE OF UNINCORPORATED JOINT VENTURE: Each member shall submit a separate Special Power of Attorney and/or Secretary's Certificate evidencing the authority of the designated representative/s.</p> | <p>(ix) Proof of Authority of the bidder's authorized representative/s:</p> <p>a) FOR SOLE PROPRIETORSHIP (IF OWNER OPTS TO APPOINT A REPRESENTATIVE): Duly notarized Special Power of Attorney.</p> <p>b) FOR CORPORATIONS, COOPERATIVE OR THE MEMBERS OF THE JOINT VENTURE: Duly notarized Secretary's Certificate evidencing the authority of the designated representative/s.</p> <p>IN THE CASE OF UNINCORPORATED JOINT VENTURE: Each member shall submit a separate Special Power of Attorney and/or Secretary's Certificate evidencing the authority of the designated representative/s.</p> <p><i>(Please use the BDS of the Amended Bidding Documents).</i></p> |
| <p>(x) Omnibus Sworn Statements using the form prescribed (Annex VII).</p> <p>a) Authority of the designated representative</p> <p>b) Non-inclusion in blacklist or under suspension status</p> <p>c) Authenticity of Submitted Documents</p> <p>d) Authority to validate Submitted Documents</p> <p>e) Disclosure of Relations</p> <p>f) Compliance with existing labor laws and standards</p> <p>g) Bidders Responsibilities</p> <p>h) Did not pay any form of consideration</p> | <p>(iii) Omnibus Sworn Statements using the form prescribed (Annex VII).</p> <p>a) Authority of the designated representative</p> <p>b) Non-inclusion in blacklist or under suspension status</p> <p>c) Authenticity of Submitted Documents</p> <p>d) Authority to validate Submitted Documents</p> <p>e) Disclosure of Relations</p> <p>f) Compliance with existing labor laws and standards</p> <p>g) Bidders Responsibilities</p> <p>h) Did not pay any form of consideration</p> <p><i>(Please use the Annex VII of the Amended Bidding Documents).</i></p> |
| <p>13.1 Financial Bid Form</p> | |
| <p>Completed and signed Financial Bid Form. Bidder must use, accomplish and submit Financial Bid Form (Annex VIII).</p> <p>The ABC is inclusive of VAT. Any proposal with a financial component exceeding the ABC shall not be accepted.</p> | <p>Completed and signed Financial Bid Form. Bidder must use, accomplish and submit Financial Bid Form (Annex VIII).</p> <p><i>(Please use the Annex VIII of the Amended Bidding Documents).</i></p> <p>The ABC is inclusive of VAT. Any proposal with a financial component exceeding the ABC shall not be accepted.</p> |

12.1 (b) Technical Documents

| | |
|--|--|
| <p>...XXX...</p> <p>(ii) Duly signed and completed Technical Bid Form. Bidder must use, accomplish and submit the Technical Bid Form attached as follows:</p> <p><u>Annex V-A – Various Printing Equipment</u></p> <p>Annex V-B – 3D Laser Scanning Device</p> <p>(iii) Duly signed/conformed Terms of Reference of BFP-NHQ attached as follows:</p> <p><u>Annex V-A1 – Various Printing Equipment</u></p> <p>Annex V-B1 – 3D Laser Scanning Device</p> <p>...XXX...</p> | <p>...XXX...</p> <p>(ii) Duly signed and completed Technical Bid Form. Bidder must use, accomplish and submit the Technical Bid Form attached as follows:</p> <p><u>Revised Annex V-A – Various Printing Equipment</u></p> <p>Annex V-B – 3D Laser Scanning Device</p> <p>(iii) Duly signed/conformed Terms of Reference of BFP-NHQ attached as follows:</p> <p><u>Revised Annex V-A1 – Various Printing Equipment</u></p> <p>Annex V-B1 – 3D Laser Scanning Device</p> <p>...XXX...</p> |
|--|--|

Clause 20.3

| | |
|---|---|
| <p align="right">20.3</p> <p>Each Bidder shall submit the following in one (1) big envelope duly labeled containing two sets of envelopes;</p> <p>First envelope must contain three (3) copies of Eligibility and Technical documents duly marked as “Original Copy”, “Duplicate Copy” and “Triplicate Copy”.</p> <p>Second envelope must contain three (3) copies of Financial documents duly marked as “Original Copy”, “Duplicate Copy” and “Triplicate Copy”.</p> <p>Separate envelope for each lot being bid.</p> <p>All envelopes and folders must be labeled as specified below</p> | <p align="right">20.2 and 20.3</p> <p>Each Bidder shall submit the following in one (1) big envelope duly labeled containing two sets of envelopes;</p> <p>First envelope must contain three (3) copies of Eligibility and Technical documents duly marked as “Original Copy”, “Duplicate Copy” and “Triplicate Copy”.</p> <p>Second envelope must contain three (3) copies of Financial documents duly marked as “Original Copy”, “Duplicate Copy” and “Triplicate Copy”.</p> <p><u>NOTE: Financial Bid Form for each lot must be put in separate sealed folders (in Triplicate copies) duly marked.</u></p> <p>All envelopes and folders must be labeled as specified below</p> |
|---|---|

4. BIDDER'S QUERY

IPC (IP Converge Data Services, Inc.)

| Page Number | Item Number | Description | Clarifications | BOC Response |
|-------------|-------------|---|--|---|
| 5 | 4.1.1 | The equipment shall support non-blocking switching structure with switching capacity of the system $\geq 80\text{Gbps}$ | The heading says that: "4.1.1. Head office MPLS Router (for the 350Mbps backhaul)" ,Client to confirm which router capacity do we need to follow, 350Mbps or 80Gbps? | This requirement is deleted the router capacity is now minimum of 600 mbps . <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) of BOC was revised as included in this Amended Bidding Documents.</i> |
| 5 | 4.1.1 | The equipment shall support minimum of 8 service slots with rack unit $\leq 2\text{U}$ | with the required capacity, the required service slot will not be aligned. Please confirm the number of service slot. | The equipment shall support minimum of 2 service slots with rack unit $\leq 2\text{U}$ <i>The Technical Bid Form (Annex V, and Terms of Reference (Annex V-A) of BOC was revised as included in this Amended Bidding Documents.</i> |
| 6 | 4.1.3 | The equipment shall support non-blocking switching structure with switching capacity of the system $\geq 80\text{Gbps}$ | The heading says that: "4.1.3. BOC Large Port MPLS Router (for ports with 40Mbps required bandwidth)" , Client to confirm which router capacity do we need to follow, 350Mbps or 80Gbps? | This requirement is deleted the router capacity is now minimum of 100 mbps . <i>The Technical Bid Form (Annex V) and Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| 6 | 4.1.3 | The equipment shall support minimum of 8 service slots with rack unit $\leq 2\text{U}$ | with the required capacity, the required service slot will not be aligned. Please confirm the number of service slot. | The equipment shall support minimum of 2 service slots with rack unit $\leq 2\text{U}$ <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| 9 | 4.1.6 | The equipment shall support non-blocking switching structure with switching capacity of the system $\geq 80\text{Gbps}$ | On page 13, under coverage and bandwidth, its says that direct internet bandwidth is 400Mbps , Client to confirm which router capacity do we need to follow, 350Mbps or 80Gbps? | This requirement is deleted the router capacity is now minimum of 40 mbps . <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| 9 | 4.1.6 | The equipment shall support minimum of 8 service slots with rack unit $\leq 2\text{U}$ | with the required capacity, the required service slot will not be aligned. Please confirm the number of service slot. | The equipment shall support minimum of 2 service slots with rack unit $\leq 2\text{U}$ <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |

| | | | | |
|----|-------|---|--|---|
| 6 | 4.1.2 | The equipment shall support minimum 48 * 10ge SFP+ and 6 * 40GE port | Type and number of optics required for each switch requirement. | This is a minimum requirement, Type and number of optics required will depend on the design of the bidder. |
| 10 | 4.2.2 | Support 6*GE RJ45 electrical port + 2*GE combo port, supporting 8-port POE power supply (802.3af) | What is the use case for the 6*GE RJ45 electrical port + 2*GE combo port, supporting 8-port POE power supply | This requirement is deleted. <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |

| ITB Clause | Bid Data Sheet (BDS) | Questions/Clarifications | BOC Response |
|--|--|--|---|
| Page 34 - 12.1 Class "B" Document: (For Joint Venture) | a) For Joint Ventures, Bidder to submit either: (i) Copy of the JOINT VENTURE AGREEMENT (JVA) in case the joint venture is already in existence, or (ii) Copy of Protocol/ Undertaking of Agreement to Enter into Joint Venture signed by all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful. (Annex III) | If we do JV for this project, will we be allowed to JV with the Incumbent of the Primary Bandwidth provider. This project pertains to the secondary bandwidth thus as long as we can prove that we will provide a different route that is not the same to the primary provider, will the agency accept this scenario? | Joint Venture with the Incumbent of the Primary Bandwidth provider is allowed provided that bidder submits proof that it will provide a different route and will not use any common facility of the network provider. |
| Page 38 - Item 4 of 12.1 Class "B" Document: (For Joint Venture) | That it will document all network segment such as but not limited to local loop, cable systems, peering connection to local and global Internet Providers in Asia and US, and other Internet-related requirements like IP addresses, domain names, etc. | Can you please expound, if this is related to the Network we will provide BoC, if yes then all of the connection are locally peered? | Document must be provided to ensure that the network under bid will not use existing BOC network facilities, or have any common components and routes. |

| | | | |
|---|---|--|---|
| <p>Page 70 - Item 1 - Managed Network Equipment TECHNICAL BID FORM</p> | <p>Supply, Delivery and Installation of Managed Network Services – Network Backhaul for the Bureau of Customs (BOC) per Technical Specifications and Project Requirements under BOC Terms of Reference dated as of 19 June 2019 attached as Annex V-A.</p> <p>1. Head Office MPLS Router (for the 350 Mbps backhaul)</p> | <p>is it for 350mbps or 340mbps as listed in the Annex V-A1 (page 1 of 4)</p> | <p>This requirement is deleted the router capacity is now minimum of 600 mbps.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>Page 73 - Item 8 - REQUIREMENTS IF AWARDED THE CONTRACT TECHNICAL BID FORM</p> | <p>Training Minimum of 5 days for 10 employees; Place to be provided by BOC</p> | <p>We just want to clarify that the training will be for the equipments we will provide for this project</p> | <p>Administration Training with Certification for equipment brand provided for <u>5</u> BOC employees;</p> <p>Place to be provided by BOC.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>Terms of Reference Page 75 - item 3.2</p> | <p>The Service Provider shall provide and manage a Multi- Protocol labeling Switching (MPLS) backhaul network that will interconnect the BOC head office, and all major ports and BOC sites enumerated here; and, a 200 Mbps direct internet link in the BOC main office. The delivery of the redundant MPLS and internet links shall include installation and delivery of new equipment (please refer to Section VII Part B for a list of coverage and bandwidth requirements per site).</p> | <p>is the 200mbps correct?</p> | <p>This requirement is deleted the router capacity is now minimum of 400 mbps.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |

| | | | |
|---|--|--|--|
| <p>Terms of Reference Page 75 - item 3.16</p> | <p>The service provider or its partner(s) shall operate a Network Operations Center (NOC) that has a team of certified network professionals which includes MEF-CECP (MEF - Carrier Ethernet Certified Professionals) and CCIE for 24x7 operations to monitor, troubleshoot and maintain the BOC MPLS service/network. The Service Provider must ensure that the NOC has relevant processes and systems in place on Quality Management, Information Security Management, Service Management, and Business Continuity. Bidder to submit supporting documents, names of team members and verifications of MEF.</p> | <p>How many MEF-CECP and CCIE personnel is required?</p> | <p>Minimum of 1 MEF-CECP personnel and 1 CCIE personnel or One (1) personnel with both MEF-CECP and CCIE Certification</p> |
| <p>Additional Clarifications/Questions</p> | | <p>Please confirm that project kick off or start will be upon delivery and commissioning of all connectivity.</p> | <p>Project Kick-off will be on or before delivery of needed equipment. Start of 24 Months subscription will be the after the delivery, commissioning and acceptance of <u>ALL</u> connectivity.</p> |
| <p>Additional Clarifications/Questions</p> | | <p>If there will be discrepancy with the Technical Bid form against the scanned terms of reference which should we follow? (rates, bandwidth, description, etc...)</p> | <p>The Terms of Reference of BOC will prevail.</p> |

| ITEM | REQUIREMENT DESCRIPTION (HO MPLS ROUTER) | VENDOR CLARIFICATIONS | BOC RESPONSE |
|-------|--|---|--|
| 4.1.1 | Head Office MPLS Router (For the 350 MPLS backhaul) | | |
| | The equipment shall support non-blocking switching structure with switching capacity of the system ≥ 80 Gbps. | This is a switch functionality and not a function of an MPLS Router. Can we disregard this requirement? | This requirement is deleted the router capacity is now minimum of 600 mbps . <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | The equipment shall support minimum 8 service slots with rack unit $\leq 2U$. | The number of service slot is more than the required bandwidth throughput which is 350Mbps and this require higher capacity router. Can we propose a router with two (2) service slot but with the same capacity as the required 350Mbps? | The equipment shall support minimum of 2 service slots with rack unit $\leq 2U$ <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | The equipment shall support ADSL A/M, ADSL B/J, EPON, G.SHDSL, GPON, ISDN, CE1/CT1, E1/T1, POS/CPOS, VDSL, E1-IMA as the WAN Interfaces. | Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The forwarding performance of NAT + ACL + QOS shall be ≥ 1800 Mbps. | The bandwidth requirement is 350Mbps. With our propose device we can cater the 1800Mbps forwarding performance by using additional boost license. Do we need to include it in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support 802.1d (STP), 802.1w (RSTP), 802.1s (MSTP) standard. | The requirement is for MPLS Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |

| | | |
|---|---|---|
| The equipment shall support static MAC address and dynamic MAC address. | The requirement is for MPLS Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support MAC address limit, LLDP and transparent bridge. | The equivalent of transparent bridge requirement is bridge domain. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support minimum 128 VLANs, 2048 MACs | The requirement is for MPLS Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support route backup and circular DCC. | The equivalent of DCC requirement is dialer access-link. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support ISDN PRI/BRI interface. | Our propose device can support this feature by using additional module. Since the requirement is MPLS router with 350Mbps, the ISDN PRI/BRI capacity is not enough to cater the required bandwidth. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support NAT, NAT ALG, Netstream. | Netflow is the equivalent of Netstream. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support IPv4 VRRP, VRRP6 | VRRP for ipv6 is not supported but the equivalent of this feature is HSRP for ipv6. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support local CCC, SVC VLL, Martini VLL, and inter-domain Martini VLL | VPLS is the equivalent feature of this requirement. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |

| | | | |
|-------------|---|---|---|
| | The equipment shall support IPsec tunnels >= 4000. | For more than 1000 IPsec tunnels, an HSEC license must be purchased. Do you need more than 1000 IP Sec Tunnels? If yes, do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | | | |
| ITEM | REQUIREMENT DESCRIPTION (HO L3 Switch) | VENDOR CLARIFICATIONS | BOC RESPONSE |
| 4.1.2 | Head Office Layer 3 Switch (for a switching room/aggregator/"meet-me" room) | | |
| | The equipment shall support Port aggregation and Multi-Chassis LAG (MC-LAG) | The equivalent of MC-LAG is VPC. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support web management | The equivalent web management requirement is DCNM. The DCNM will require separate license and server. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support automatic configuration. | The equivalent of the automatic configuration requirement is DCNM. The DCNM will require separate license and server. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | | | |
| ITEM | REQUIREMENT DESCRIPTION (BOC Large Port MPLS) | VENDOR CLARIFICATIONS | BOC RESPONSE |
| 4.1.3. | BOC Large Port MPLS Router (for ports with 40Mbps required bandwidth) | | |

| | | |
|---|--|---|
| <p>The equipment shall support non-blocking switching structure with switching capacity of the system ≥ 80Gbps.</p> | <p>This is a switch functionality and not a function of an MPLS Router. Can we disregard this requirement?</p> | <p>This requirement is deleted the router capacity is now minimum of 100 mbps. <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>The equipment shall support minimum 8 service slots with rack unit $\leq 2U$.</p> | <p>The number of service slot is more than the required bandwidth throughput which is 40Mbps and this require higher capacity router. Can we propose a router with two (2) service slot but with the same capacity as the required 40Mbps?</p> | <p>The equipment shall support minimum of 2 service slots with rack unit $\leq 2U$ <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>The equipment shall support 3GE (2 combo) WAN Interface.</p> | <p>The proposed device has two (2) x 1GE combo ports. To cater the the 3GE (2 combo) WAN interface requirement we need additional NIM module. Do we need to include this in the proposal?</p> | <p>Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification.</p> |
| <p>The equipment shall support ADSL A/M, ADSL B/J, EPON, G.SHDSL, GPON, ISDN, CE1/CT1, E1/T1, POS/CPOS, VDSL, E1-IMA as the WAN Interfaces.</p> | <p>Our propose device can support this feature by using additional module. Do we need to include this in the proposal?</p> | <p>Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification.</p> |
| <p>The forwarding performance of NAT + ACL + QOS shall be ≥ 1800 Mbps.</p> | <p>The bandwidth requirement is 40Mbps. With our propose device we can cater the 1800Mbps forwarding performance by using additional boost license. Do we need to include it in the proposal?</p> | <p>Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification.</p> |
| <p>The equipment shall support 802.1d (STP), 802.1w (RSTP), 802.1s (MSTP) standard.</p> | <p>The requirement is for MPLS Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal?</p> | <p>Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification.</p> |

| | | |
|---|--|---|
| The equipment shall support static MAC address and dynamic MAC address. | The requirement is for MPLS Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support MAC address limit, LLDP and transparent bridge. | The equivalent of transparent bridge requirement is bridge domain. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support minimum 128 VLANs, 2048 MACs | The requirement is for MPLS Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support route backup and circular DCC. | The equivalent of DCC requirement is dialer access-link. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support ISDN PRI/BRI interface. | Our propose device can support this feature by using additional module. Since the requirement is MPLS router with 40Mbps, the ISDN PRI/BRI capacity is not enough to cater the required bandwidth. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support NAT, NAT ALG, Netstream. | Netflow is the equivalent of Netstream. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support IPv4 VRRP, VRRP6 | VRRP for ipv6 is not supported but the equivalent of this feature is HSRP for ipv6. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support local CCC, SVC VLL, Martini VLL, and inter-domain Martini VLL | VPLS is the equivalent feature of this requirement. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |

| | The equipment shall support IPsec tunnels >= 4000. | For more than 1000 IPsec tunnels, an HSEC license must be purchased. Do you need more than 1000 IP Sec Tunnels? If yes, do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
|--------|---|---|---|
| | | | |
| ITEM | REQUIREMENT DESCRIPTION (BOC Small-Medium Port MPLS Router) | VENDOR CLARIFICATIONS | BOC RESPONSE |
| 4.1.4. | BOC Small/Medium Port MPLS Router (for ports with 20Mbps required bandwidth) | | |
| | Support non-blocking switching structure | This is a switch functionality and not a function of an MPLS Router. Can we disregard this requirement? | This requirement is deleted the router capacity is now minimum of 40 mbps . <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | The WAN IMIX Performance shall be >= 400Mbps. | The bandwidth requirement is 20Mbps. With our propose device we can cater the 400Mbps WAN IMIX Performance requirement by using additional boost license. Do we need to include it in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification |
| | The equipment shall support >= 2 x 1GE combo WAN interface and 8 X 1GE RJ45 LAN interfaces | The proposed device has two (2) x 1GE combo ports. To cater the additional LAN port, which is 8 x 1GE RJ45 LAN interfaces, we need additional NIM module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | WAN Interface: Support FE, GE, ADSL2+, VDSL, G.SHDSL, EPON/GPON, SA/AS, CE1/CT1, E1/T1, and support product catalogue | Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | Support 3G/LTE interface card and FDD LTE not less than uplink | Our propose device can support this feature by using additional module. Do we need | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and</i> |

| | | |
|--|---|--|
| 40Mbps & Downlink 100Mbps. | to include this in the proposal? | <i>Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| The equipment shall support >= 2000 IPSec tunnels | For more than 1000 IPSec tunnels, an HSEC license must be purchased. Do you need more than 1000 IP Sec Tunnels? If yes, do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| Support AC function without additional hardware. Atleast support to manage 12APs | The requirement is for Small-Medium MPLS Router. This feature is supported but this will require additional module and license. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| Support WEP, WAP, WAPI | The requirement is for Small-Medium MPLS Router. This feature is supported but this will require additional module and license. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| Support packet filtering firewall, ASPF, Attack defense, Active/Standby firewall | The requirement is for Small-Medium MPLS Router. This feature is supported but this will require additional module and license. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| Provide CB/UL/GS/FCC-VERI Certificate | Is this a 3G/LTE certification requirement of the proposed box? Can the NTC type approved for the 4G LTE NIM suffice? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| Provide CE certificate | This ToR is for the small/medium MPLS Router requirement. Is this for wireless certification requirement of the proposed box? Do we need to provide this certificate? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| Provide WIFI Alliance Certification. | The requirement is for Small-Medium MPLS Router. This feature is supported but this will require additional module and license. Do we need to include this in the proposal if you will require WIFI Alliance Certification? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |

| ITEM | REQUIREMENT DESCRIPTION (5X BOC Large Port L3 Switch) | VENDOR CLARIFICATIONS | BOC RESPONSE |
|--------|---|---|--|
| 4.1.5 | 5x BOC Large Port Layer 3 Switch | | |
| | The equipment shall support Port aggregation and Multi-Chassis LAG (MC-LAG) | The equivalent of MC-LAG is VPC. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support web management | The equivalent web management requirement is DCNM. The DCNM will require separate license and server. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support automatic configuration. | The equivalent of the automatic configuration requirement is DCNM. The DCNM will require separate license and server. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| ITEM | REQUIREMENT DESCRIPTION (Direct Internet Service Router) | VENDOR CLARIFICATIONS | BOC RESPONSE |
| 4.1.6. | Direct Internet Service Router Specifications | | |
| | The equipment shall support non-blocking switching structure with switching capacity of the system >= 80Gbps. | This is a switch functionality and not a function of a Router. Can we disregard this requirement? | This requirement is deleted the router capacity is now minimum of 400 mbps . <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | The equipment shall support minimum 8 service slots with rack unit <= 2U. | The number of service slot is more than the required bandwidth throughput which is 400Mbps and this require higher capacity router. Can we propose a router with two (2) service slot but with the same capacity as the required 400Mbps? | The equipment shall support minimum of 2 service slots with rack unit <= 2U <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |

| | | |
|--|---|---|
| The equipment shall support ADSL A/M, ADSL B/J, EPON, G.SHDSL, GPON, ISDN, CE1/CT1, E1/T1, POS/CPOS, VDSL, E1-IMA as the WAN Interfaces. | Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The forwarding performance of NAT + ACL + QOS shall be >= 1800 Mbps. | The bandwidth requirement is 400Mbps. With our propose device we can cater the 1800Mbps forwarding performance by using additional boost license. Do we need to include it in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support 802.1d (STP), 802.1w (RSTP), 802.1s (MSTP) standard. | The requirement is for DIA Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support static MAC address and dynamic MAC address. | The requirement is for DIA Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support MAC address limit, LLDP and transparent bridge. | The equivalent of transparent bridge requirement is bridge domain. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support minimum 128 VLANs, 2048 MACs | The requirement is for DIA Router. This is a switch function not a router function. Our propose device can support this feature by using additional module. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| The equipment shall support route backup and circular DCC. | The equivalent of DCC requirement is dialer access-link. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |

| | | | |
|-------------|---|---|--|
| | The equipment shall support ISDN PRI/BRI interface. | Our propose device can support this feature by using additional module. Since the requirement is MPLS router with 400Mbps, the ISDN PRI/BRI capacity is not enough to cater the required bandwidth. Do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support NAT, NAT ALG, Netstream. | Netflow is the equivalent of Netstream. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support IPv4 VRRP, VRRP6 | VRRP for ipv6 is not supported but the equivalent of this feature is HSRP for ipv6. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support local CCC, SVC VLL, Martini VLL, and inter-domain Martini VLL | VPLS is the equivalent feature of this requirement. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| | The equipment shall support IPsec tunnels >= 4000. | For more than 1000 IPsec tunnels, an HSEC license must be purchased. Do you need more than 1000 IP Sec Tunnels? If yes, do we need to include this in the proposal? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| ITEM | REQUIREMENT DESCRIPTION (Access Point Equipment) | VENDOR CLARIFICATIONS | BOC RESPONSE |
| 4.2.1. | Access Point Equipment x 48 Units | | |
| | Built-in antenna and operating temperature of -10C to +50C | The standard Operating temperature for most devices are in the range of 0° to 40°C. Is this enough? | Yes. |
| | Support WLAN channel management and channel rate adjustment | This is configurable on WLC. This is a function of WLC not the function of Access Point. This feature is supported by using controller-less OS. Changing the OS of the AP to controller-less will make the WLC requirement useless. | This requirement is deleted <i>The Technical Bid Form (Annex V) and Terms of Reference (Annex V-A) of BOC was revised as included in this Amended Bidding Documents.</i> |

| | | |
|--|---|--|
| Support Service Set Identifier (SSID) hiding. | This is configurable on WLC. This is a function of WLC not the function of Access Point. This feature is supported by using controller-less OS. Changing the OS of the AP to controller-less will make the WLC requirement useless. | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| Support priority mapping for upstream packets and flow-based mapping for downstream packets, queue mapping and scheduling, user-based bandwidth limiting. | This is configurable on WLC. This is a function of WLC not the function of Access Point. This feature is supported by using controller-less OS. Changing the OS of the AP to controller-less will make the WLC requirement useless. | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| Support adaptive bandwidth management (the system dynamically adjusts bandwidth based on the number of users and radio environment to improve user experience) | This is configurable on WLC. This is a function of WLC not the function of Access Point. This feature is supported by using controller-less OS. Changing the OS of the AP to controller-less will make the WLC requirement useless. | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| Support WEP authentication/encryption using a 64-bit, 128-bit, or 152-bit encryption key. | WEP is not secure authentication/encryption feature. The supported authentication/encryption is WPA which is secure and the standard. | Noted |
| Support DHCP snooping, Dynamic ARP Inspection (DAI), and IP Source Guard (IPSG) | This is a switch security function. This can be configured on the proposed PoE Switches and not on the Access Points. Is this enough? | Yes, the bidder should provide documentation to prove its compliance to the technical requirements/specification. |
| Support intelligent diagnosis, RF ping, and remote packet obtaining on air interfaces | This is configurable on WLC. This is a function of WLC not the function of Access Point. Is this enough? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| Support built-in virus signature database that supports in-service upgrade. | This is a end point security and not an Access Point features. Do we need to provide end point security in our proposal? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | | |

| ITEM | REQUIREMENT DESCRIPTION (Wireless LAN Controller) | VENDOR CLARIFICATIONS | BOC RESPONSE |
|-------|--|--|---|
| 4.2.2 | Wireless LAN Controller X 2 units | | |
| | Support 6 x GE RJ45 electrical port + 2XGE combo port, supporting 8-port PoE power supply (802.3af) | Proposed WLC has the following ports: 2 x 1/10 Gigabit Ethernet interfaces 1 x service port 1 x redundancy port 1 x console port Based from the ToR, there is a separate PoE Switches that will cater to all Access Points. PoE port is not needed in WLC. Is the number of port in WLC enough? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | The AP provides a USB port for deployment as well as transferring configuration files and upgrade files. | Using USB is not secure in transferring files and it will cause security issue. SFTP is the secure way in transferring configuration files. SFTP is supported by our proposed WLC. Is this enough? | This requirement is revised. USB port or SFTP can be used for deployment as well as configuration files and upgrade files. <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | | | |
| ITEM | REQUIREMENT DESCRIPTION (PoE Switch) | VENDOR CLARIFICATIONS | BOC RESPONSE |
| 4.2.3 | PoE Switch x 20 units | | |
| | The equipment shall support system logs and multi-level alarms and dying gasps | Dying Gasps is a Metro Ethernet Switch function not a PoE Switch functionality. Can we disregard this requirement because this is not needed on PoE Switch? | This requirement is deleted <i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i> |
| | | | |

| ITEM | REQUIREMENT DESCRIPTION (NMS) | VENDOR CLARIFICATIONS | BOC RESPONSE |
|------|--|--|--|
| | <p>Network Monitoring Platform - should at least be able to handle 1000 sensors (expandable to 2000) to monitor BOC's routers, switches, servers, hardware, software, operating systems, applications, virtualized environments, websites, email servers, databases, VOIP and QOS, IPSLA, logs, events, performance, Netflow/IPFIX, sFlow and jFlow, packet sniffing, SNMP, WMI, temperature, humidity and lots more, using approx. 200 predefined sensor types.</p> | <p>How many elements do we need to monitor ? (elements is any interface (such as a switchport, physical interface, virtual interface, sub-interface or VLAN), Volume (e.g. logical disks) or Node (e.g. routers, switches, servers, access points, modems)</p> <p>2. How many phones do we need to monitor ?</p> <p>3. For the monitoring on the servers, do we need to monitor as well the applications running on the server itself ?</p> <p>4. How many web transactions do we cater ?</p> <p>5. Propose NMS has netflow feature and packet sniffing is not supported. Do we need to include packet sniffing tool or is netflow enough?</p> | <p>1. For network (routers and switches) monitoring please provide license for 250 elements</p> <p>2. For the VOIP monitoring, the number of IP Phones to monitor is 300</p> <p>3. For the Server monitoring, please provide license for 20 servers</p> <p>4. For Web monitoring, please provide license for 5 transactions.</p> <p>5. Netflow feature is enough. The bidder should provide documentation to prove its compliance to the technical</p> |

Innovate Communications

| QUERY | BOC RESPONSE |
|---|--|
| <p>1. Final bandwidth since different bandwidths are indicated in page 70 from the list of sites indicated in page 91 Annex.</p> <p>a. MPLS Head Office backhaul b. MPLS Large Port c. MPLS Medium Port d. MPLS Small Port e. Direct Internet Head Office</p> <p>Final bandwidth and address of all sites. Which specifications do we follow? Annex V or Annex V-A?</p> | <p>The specifications on Terms of Reference (Annex V-A) will prevail.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>2. In page 91 Annex, from the list of MPLS backhaul, there is BOC-MK2 400Mbps but no specific managed network equipment is indicated in the TOR. Is this included?</p> <p>a. If yes, need also the specific requirement, final bandwidth and managed network equipment. b. If client has existing co-location in MK2.</p> | <p>Please see 4.1.1 for the Managed Network Equipment of MK2</p> <p>BOC has an existing co-location at MK2 thru DICT.</p> |
| <p>3. Please confirm if subcontracting is allowed for</p> | <p>Sub-Contracting is Not allowed.</p> |

| | |
|--|---|
| <p>the following:</p> <p>a. Last mile facility - on item 3.3.5 page 79 - Third Party Transport Service - it says that subcontracting last mile is allowed as part of Service Provider's solution.</p> <p>b. Network element equipment (Layer 3 switches, wireless AP)</p> <p>c. Network engineering and consultancy services</p> | <p>It's the bidders sole responsibility to managed all components of the back-up network whether handled by a third party transport service provider or network engineering consultancy services.</p> |
| <p>4. Five (5) x BOC Large Port Layer 3 Switch is needed but on the list is only 2 BOC Large Ports.</p> <p>1. Manila ICT</p> <p>2. NAIA</p> <p>Are there additional Large Port sites that were not listed?</p> | <p>Yes it is only two (2) BOC Large ports because the rest will be for future expansion.</p> <p>There are no additional Large Port sites.</p> |
| <p>5. Do you have preferred brands for managed network equipment? Are you open for China-brand, i.e. Huawei?</p> | <p>BOC has no preference to any brand. What we are requiring is the equipment to be compliant or on our technical requirements.</p> |
| <p>6. Latency: 150ms ave from BOC to International Port in the US</p> <p>a. Can this be adjusted to 200ms ave?</p> | <p>This is a minimum requirement.</p> |
| <p>7. The SP or its partner shall operate a NOC that has a team of certified MEF-CECP and CCIE.</p> <p>a. Are MEF-CECP and CCIE can be from network technical group not necessarily from NOC?</p> | <p>The MEF-CEP and CCIE professional should be an organic employee of the Service Provider/Bidder.</p> |
| <p>8. May we request for the existing network diagram of Bureau of Customs?</p> | <p>See the network diagram on Terms of Reference (Annex V-A)</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>9. Handover interfaces going to BOC equipment - at Head Office, MK2, Large Ports, Medium Ports, Small Ports</p> | <p>Depend on Bidders Network Design</p> |

| | |
|---|---|
| <p>10. BOC to provide topology of L3 switch and what interface types that connect to other devices?</p> | <p>Bidder will design its own network topology</p> |
| <p>11. Since no specified switches in Medium/Small Ports, will BOC to provide?</p> | <p>44 units Layer 3 Switch for Medium/Small Ports switches will added in the Amended Terms of Reference.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>12. Standard testing for Ethernet is RFC 2544 compliant on MTU frame of 1500bytes to Jumbo Frames, Bit Error Rate (BER) Test is applicable for legacy network. Can the BER test be replaced with RFC 2544 testing?</p> | <p>The BER Test is applicable.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>13. Does the Network Management System can only manage and monitor the WAN part (no need for LAN part). The primary and backup network service provider will have their monitoring separately.</p> | <p>The Network Management System should be capable of monitoring up to the Switch provided.</p> |

| | |
|--|---|
| 14. How the PEZA Satellite sites (48) are connected to the headquarters, whether the traffic data needs to be encrypted, such as IPSEC VPN or not? If yes, do BOC have VPN Concentrator at Head Office? | The Forty -Eight (48) sites will be connected thru VPN. |
| 15. The consumable Network Engineering consultancy services equivalent to 250 man-hours per year, will it be only at Head Office or including the remote sites? | <p>The network consultancy requirement of 250 man hours per year is deleted.</p> <p>The consultancy services will cover Head Office and ALL sites.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| 16. Service Provider will render a consumable Network Engineering consultancy equivalent to 250 man-hours per year. Consultancy services are those services which are part of the regular network operations services defined in this TOR. Is the 250 man-hour a fixed-value? This may not be enough for the Plan, Design and Implementation. Can we provide costing for the excess man-hour if the 250 man-hour has been consumed before the end of the year? | <p>The network consultancy requirement of 250 man hours per year is deleted.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| 17. Who is the procuring entity is it PITC or BOC? | PITC |
| 18. Innove does not warrant to where the equipment is coming from. | Noted |
| 19. May we follow-up the amended bidding documents? When will this be available in PhilGEPS for download? | The Amended Bidding Documents will be available for download from the PhilGEPS and PITC websites upon issuance of the Supplemental Bid Bulletin No. 1 |
| 20. To ensure serviceability of all sites listed in the bidding document, we shall be conducting feasibility assessment and this may take a little time. May we humbly request for an extension to the submission and opening of bids? | NO Extension as BOC has already conducted a previous bidding at BOC for the same requirement, Innove was one of the bidders who participated in that bidding. |
| 21. What's the Quantity of each items? | <p>Quantity of Equipment and Network and Bandwidth Coverage have been provided.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| 22. Which WAN Interface types are used in the actual network? | This will depend on the bidder's network design |
| 23. Could you provide the topology for L3 switch? What 's the interface types that connect to other devices? | Bidder is responsible for creating a network topology for approval of BOC as interface types will also be dependent on the bidder's network design. |
| 24. Is the Network Management System required only to monitor the primary network and backup network's connectivity status? | The network management system will only monitor the backup network. |

IONE Resources, Inc.

| QUERY | BOC RESPONSE |
|---|--|
| <p>1. Certificates of Performance Evaluation issued by at least three (3) clients with similar projects per Annex VI with a rating of at least “SATISFACTORY”.</p> <ol style="list-style-type: none"> 1. Issued by bidder’s Single Largest Completed Contract (SLCC) Client per submitted Annex I-A. 2. Issued by Department of Information and Communications Technology (DICT). 3. Issued by a Client with similar projects. <p>iOne’s concern:</p> <p>If DICT’s performance evaluation will form part of the eligibility, how are we able to secure such performance evaluation certificate if we haven’t done any project with DICT yet?</p> <p>May we just then request to omit the issuance of DICT’s performance evaluation certificate and replace it with another client instead. Better yet to make the performance evaluation into two (2) certificates only, one (1) from the declared SLCC and the other is from another client with similar project.</p> | <p>Granted.</p> <p>Certificates of Performance Evaluation issued by at least three (3) clients with similar projects per Annex VI with a rating of at least “SATISFACTORY”.</p> <ol style="list-style-type: none"> a) Issued by bidder’s Single Largest Completed Contract (SLCC) Client per submitted Annex I-A. b) Issued by Two (2) Clients with similar projects. <p><i>The Terms of Reference (Annex V-A) of BOC was revised as included in this Amended Bidding Documents.</i></p> <p><i>(Please use the Annex VI of the Amended Bidding Documents).</i></p> |
| <p>2. May we request to provide a detailed diagram wherein the following equipment are being emphasized to their specific location:</p> <ol style="list-style-type: none"> a. Router b. Switch c. Access Points d. Wireless LAN Controller and e. PoE Switch | <p>Network diagram cannot be provided the attached Network Diagram in the Terms of Reference is just for reference</p> <p>Bidder should design its own backup network for diagram for BOC.</p> |
| <p>3. We would like to confirm as well the quantities required as there was no quantity stated in TOR:</p> <ol style="list-style-type: none"> a) MPLS Large Port Router (for ports with 40Mbps required bandwidth) b) MPLS Small/Medium Port Router (for ports 20Mbps required bandwidth) <ul style="list-style-type: none"> - We would like to clarify also as there was no 20 Mbps required bandwidth stated in TOR | <p>Quantities are specified in the Terms of Reference</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |
| <p>4. As indicated in TOR, page 91, there are 48 sites for Broadband Internet, however, there are only 38 sites enumerated on the same page. May we ask, what are the 2 remaining sites?</p> | <p>48 Broadband Internet is for PEZA BOC offices which are located inside private manufacturing buildings/warehouses, to simplify the bid and due to the complexity of coordinating contractor access to the sites, wireless Broadband solution is required.</p> <p><i>The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.</i></p> |

5. Lastly, may we request for the coordinates of the sites provided for the connectivity for easier reference.

In Terms of Reference - Coverage and Bandwidth include the address of the port of installation. Approximate coordinates can be determined by using mapping application like google maps

The Technical Bid Form (Annex V), Terms of Reference (Annex V-A) and Coverage and Bandwidth (Annex V-A1) of BOC was revised as included in this Amended Bidding Documents.

Please use the **Amended Bidding Documents** together with all other required documents for the Bid Opening on **27 September 2019, 10:00 AM**. Please use the **Amended Checklist of requirements for Bidder** as reference.

This **Supplemental/Bid Bulletin 1** shall form part of the Bidding Documents. Any provisions in the Bidding Documents inconsistent herewith is hereby amended, modified and superseded accordingly.

For guidance and information of all concerned.

Issued this **19th of September 2019** in Makati City.

Reviewed and Approved by:

(SGD)CHRISTABELLE P. EBRIEGA
Chairperson, Bids and Awards Committee I

(SGD)ATTY. MARIA GUDELIA C. GUESE
Vice Chair

(SGD)MYRA CHITELLA T. ALVAREZ
Member

(SGD)DAVID A. INOCENCIO
Member

(SGD)JOEL S. RODRIGUEZ
Member

Concurred by:

(SGD)MGEN JOB S YUCOCO (RET)
Provisional Member- BOC