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**Request for Quotation**

**for**

**Supply, Delivery, Installation, Testing and Commissioning of Fiber
Optic Cabling for the
Asi@Connect Project (17-088)**

**Issue 1**

**July 2019**

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# INTRODUCTION

Asi@Connect is the name of a project which is successor of Trans-Eurasia Information Network (TEIN) 4th phase. The TEIN Initiative was firstly launched at the Asia-Europe Meeting (ASEM) 3 Summit in Seoul in October 2000. The initiative was to use Information and Communication Technology (ICT) to improve research and education collaborations between Asia and Europe and intra-Asia. The Asi@Connect project started in September 2016 and will run for 5 years. It is funded by the European Commission (EC), Korean government and other project partners. It is managed by the TEIN\*Cooperation Center (TEIN\*CC), which is a Korean based, not for profit organization and supported by the Korean Government – the Ministry of Science and ICT (MSIT) in the Republic of Korea for its operating cost.

TEIN\*CC is seeking offers for the provision, delivery, installation and support of optical cable and its accessories to connect underserved areas in the Calabarzon Region of the Philippines as part of the Asi@Connect project. We are inviting quotations for the proposed hardware equipment.

Maximum Budget allocated for this procurement is **98,700 Euros**.

This Request for Quotation (RFQ) is required by **31 August 2019**.

# BACKGROUND INFORMATION

# Asi@Connect and TEIN background

The first TEIN interconnection between Europe and Asia was launched in October 2000 and its operational service between Paris and Seoul started in November 2001.

The TEIN2 network operated from January 2006 to December 2008 and connected the national research and education networks of 11 Asia Pacific countries to each other and also with the pan-European R&E network, GEANT.

The TEIN3 phase has continued to develop the pan-Asian research and education network, and in particular, it has extended the network to South Asia. 16 Asia Pacific countries were connected during the period, with over 50M users.

The TEIN2 and TEIN3 projects had been managed by the Delivery of Advanced Network Technology to Europe (DANTE, currently GEANT), a UK based company; with funding from the European Commission (EC) and the Asian partners. The EC has agreed to continue to fund TEIN4 as a further phase during the period 2012 – 2016; and this was managed by TEIN\*CC.

Moving into its fourth phase and its successor Asi@Connect now, the Asi@Connect network currently has network Point of Presence (POP) in Beijing, Hong Kong, Mumbai and Singapore. The backbone of the project is composed of International Private Leased Circuits (IPLC) and its speed among POPs is all 10Gbps. Access links between the Asian NREN partners and Asi@Connect POPs are in the range of 10 Mbps to 10Gbps. In addition, several additional links are provided by other Asi@Connect partners and are managed co-operatively. These circuits make a significant contribution to the backbone and provide access for partners in some instances.

The Asi@Connect network is managed by a Network Operations Centre based in Hong Kong and run by Tsinghua University in China.

The Asi@Connect network is well used, with traffic levels growing steadily and innovative applications in fields including telemedicine, environmental monitoring and culture heritage being actively promoted.

# TEIN\*Co-operation Center

The Asi@Connect project is contracted between the EC and TEIN\*CC. Besides receiving funding support from the EC and the Korean Government, TEIN\*CC also has the support of the existing Asi@Connect partners. TEIN\*CC has full responsibility for the operation of the Asi@Connect, and this will include contracting through this RFQ. All contracts will be between the successful tenderer and TEIN\*CC.

# Cable Operators Neutral Network Exchange for Community Transformation (CONNECT)

The CONNECT project is a collaborative endeavor set out by the Electrical and Electronics Engineering Institution in the University of the Philippines Diliman (UP-EEEI), Advanced Science and Technology Institute (ASTI), Central Luzon State University (CLSU) and the Telmarc Corporation to improve the state of domestic Internet access and narrow the gap of digital divide in the Philippines. The project aims to achieve these goals by fostering cooperation and interconnectivity among Cable TV operators through the establishment of a neutral, software-defined Internet exchange, and providing technologies that would enable the delivery of competitive and new services to existing and prospective network users, especially those inhabiting missionary areas of the country generally out of reach by incumbent Internet service providers. This ongoing effort is supported by the Asi@Connect project and will be implemented until December 2020.

# SOLUTIONS TO BE QUOTED

# TECHNICAL SPECIFICATIONS

The following guidelines and design rules MUST be followed and answered whilst designing the proposed network and its operation. The technical specifications will become an annex to the resulting contract.

**Yes/No Questions**

|  |  |  |
| --- | --- | --- |
| **#** | **Definition** | **Response by tenderer** |
| **YES** | **NO** |
| 1 | The Contractor shall carry out the detailed site survey and engineering for Fiber Optic Cable routes to corroborate the installation and construction designs. As such, detailed installation/construction design drawings must be submitted to UP-EEEI for approval within ten (10) calendar days after receipt of Contract and prior to installation. UP-EEEI will check and review the design drawings accompanied by justification/verification reports, and will give their decision whether the design drawings are acceptable or not, within one (1) week time from the date the drawings were received. The construction design/drawings to be submitted by the Contractor must be in a computer-aided design (CAD) format, and includes geospatial data indicating the route plan with the splicing point, termination point, and ODF specified. It should provide a key map showing the proposed optical fiber cable route between the designated nodes with latest route conditions, optical fiber cable arrangement and termination on patch panels, and schematic diagram for fiber optic cores splicing assignment.  |  |  |
| 2 | As part of each telecommunications work order/project, detailed schematic drawings shall be prepared for each fiber optic span/cable route, showing the following information:* fiber cable manufacturer;
* cable size (number of fiber cores);
* cable type;
* cable make-up;
* type of fiber;
* transmission characteristics (dB loss/km at given wavelength);
* dispersion specification in ps/(nm . km);
* Trunk number/cable number;
* Span length;
* Major intersections and key streets;
* Fiber cable splice points with station location;
* Splice-to-splice cable lengths;
* Change in cable route; and
* budget loss link calculation
 |  |  |
| 3 | In case the proposed installation/construction design is deficient or incomplete, and/or had elicited repeated disapproval from UP-EEEI, then the Contractor shall be fully responsible for any delay in progress, cost of re-design etc. and UP-EEEI will keep the right to order the replacement of the Contractor’s engineer / management-in-charge of installation/construction design at the Contractor’s own expense. |  |  |
| 5 | The Contractor must submit an as-built plan upon the completion of the project. It shall include the following drawings:* General map covering all of the Project area;
* Key Map for Cable Route (each cable section);
* Detailed fiber core assignments (each cable section/splicing point);
* Junction Cable Location Map (each cable section);
* Optical Fiber Cable Arrangement and Termination on the fiber distribution frame;
* Schematic diagram for Fiber Optics Cores Assignment;
* Structured Cabling Plan/Cable route plan from insertion/splicing point to inside LRT2 Santolan Station or Advanced Science and Technology Institute (ASTI) and Telmarc equipment/ICT room.
* Results of OTDR, end-to-end acceptance and continuity tests
 |  |  |
| 6 | The Contractor shall designate a qualified on-site engineer for proper supervision and coordination of the project. He must undergo an interview with UP-EEEI for verification. |  |  |
| 7 | The Contractor shall adhere to the prevailing industry practices for installing/constructing fiber optic cables for aerial applications, such as the recommended length for service/maintenance loops, drop closures placement, and cable slack length at each splicing, and termination points.  |  |  |
| 8 | The Contractor shall borne the responsibility of performing pole dressing, guyings and other appurtenances for aerial installation as well as the splicing and termination of fiber optic cable. All splices should be fusion method.  |  |  |
| 9 | The Contractor shall be responsible for the installation of patch panel/cabinet including patch cord/pigtails, ODF, optical fiber trays, dB loss/amplification and other equipment and accessories inside LRT2 / ASTI / Telmarc’s network room, if deemed necessary. All connections are to be directly terminated using ODFs/patch panels. Terminations shall be made using the method recommended by the connector manufacturer.  |  |  |
| 10 | The Contractor shall, in order to keep the design accurate and practical, and at his own expense, unless otherwise noted, perform the following:* Obtain prior approval/permits from municipalities and/or other relevant authorities/agencies, and third parties for the execution of the work. Fees/charges associated with obtaining such documents, if deemed necessary, shall be at the expense of the Contractor.
* Abide and comply with the terms and conditions specified in the permits obtained from said municipalities and/or other relevant authorities/agencies.
* Coordinate with UP-EEEI and Telmarc for the disbursement of funds required to cover the license fees under the Joint Use and Pole Agreement (JPA) with the incumbent pole owners and/or with the relevant authorities/agencies.
 |  |  |
| 11 | The Contractor shall be solely responsible for the necessary logistics and safety of human resources at the Project Area. |  |  |
| 12 | The Contractor must warrant that the goods supplied under the Contract are new, unused, of the most recent or current models, and that they incorporate all recent improvements in design, materials, except when the technical specifications required by UP-EEEI provides otherwise. The Contractor further warrants that all goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship. The warranty shall cover full replacement of defective items, free of charge, including labor, spare parts and materials for three (2) years after completing the installation of the fiber optic cable.  |  |  |
| 13 | The Contractor, upon award of the Contract, shall submit an integrated project implementation plan indicating the following: * Detailed work plan, including milestones and critical tasks, in implementing the project
* Number of work teams at any given time;
* Specific dates for work and quality inspection by the UP-EEEI and Telmarc team at the Project Area;
 |  |  |
| 14 | The Contractor is responsible for the performance of all civil and cable network pre-test requirement but not limited to:* Fiber Optic Cable (FOC) attenuation and all its related testing, power meter test, and grounding test and all other tests that may need to be performed in order to complete the FOC test requirements.
* Continuity testing shall be conducted to determine that the fiber routing and/or polarization is correct and documentation is proper. Continuity testing of optical fibers shall be performed using a visual fiber tracer, visual fault locator, or OLTS.
* On-reel acceptance tests shall be performed on the cable to confirm the manufacturer’s tests prior to installation. This will also be used to validate the fiber loss/km; at wavelength 1310 nm loss shall be 0.4 dB/km or less; at 1550 nm shall be 0.3 dB/km or less.
* End-to-end acceptance tests (typically conducted after completion of installation and splicing and before installing terminal equipment).
* End-to-end attenuation is the amount of optical power loss between cable system connector tips. This will include the fiber and splice /connector loss in the cable system after it has been installed.
* Splice acceptance tests (individual splice insertion losses): splice loss shall not be above 0.1 dB for fusion splices; and

connectors shall have insertion losses of 0.5 dB or less.* All test equipment that will be utilized for this project shall have updated calibration certificates to ensure accuracy of results. The Contractor is required to submit Calibration Certificates prior to testing.
* During the design stage, a link loss calculation shall be prepared and included with the project proposal and design packages. The link loss budget shall include:
	+ Total fiber attenuation (loss), not more than 6 dB.
	+ Splice loss (including pigtail splices, if pigtails are used).
	+ Connector loss.
	+ The calculated dB loss cannot exceed the operating range of the terminal equipment that will be installed. Measured end-to-end loss should measure less than the calculated loss. Fibers that measure a higher loss than the link loss budget will not be accepted.
* UP-EEEI will issue provisional and final acceptance certificate to the Contractor certifying that the scope of work has been performed and accomplished in accordance with the approved plans and specification schedules, variation orders if any, and other related contract document.The Contractor, likewise, agrees to correct any defect accruing after the final acceptance of the site facility under the project within the guarantee period. Effective duration of which shall be one (1) year commencing from the date of final acceptance by UP-EEEI.
 |  |  |
| 15 | The Contractor shall provide service restoration and repair works, within service level agreements (SLA), on damaged cables and related fiber optic cable ancillaries that cause/s or may cause service interruption when called for up to eight (8) incidents after the commissioning of the fiber optic cable system. These works may involve testing, inspection, fault isolation, withdrawal of materials, splicing, re-splicing, cable replacement, fixing of line, and other works necessary to restore service.  |  |  |

**Confirmatory Questions**

|  |  |  |
| --- | --- | --- |
| **#** | **Definition** | **Response by tenderer** |
| **Confirmed** | **Not-Confirmed** |
| 1 | Quotes received in response to this invitation may be awarded wholly, in part or not at all. |  |  |
| 2 | All expenses relating to the submission of offers and any subsequent negotiations are the responsibility of the quote supplier. |  |  |
| 3 | Contractors shall quote for the cost of the installation under the condition that maintenance and operation of the network will be handled by the Contractor's local partner who will be involved during installation process. The local partner must provide support for at least three years, from the date of successful installation. |  |  |
| 5 | Quotes must be based on fiber optic cable and its relevant accessories which is currently in use in production networks or committed to be “generally available” by June 2019. |  |  |
| 6 | Where it is proposed to subcontract any of the above service items to a third party, this shall be indicated as part of the response. |  |  |
| 7 | The selected tenderer will be required to make firm commitments to such delivery dates as are proposed. |  |  |
| 8 | All offers that are quoted must remain valid for a period of nine months following the submission deadline for submission. |  |  |

**Explanatory Questions**

|  |  |  |
| --- | --- | --- |
| **#** | **Definition** | **Response by tenderer** |
| 1 | Curriculum Vitae of the key experts proposed. CVs shall be for such criteria as qualifications, professional experience, geographical experience, language skills, etc. The key experts are: * Professional Electronics Engineer (PECE);
* Project Manager;
* Project Engineer; and
* Outside Plant Supervisor
 |  |
| 2 | The Contractor shall also provide training for the operation and maintenance of the optical cable network to the concerned community of the Project Area.  |  |
| 3 | Submit relevant information on the tenderer’s average annual staffing levels, the size and professional experience of their management and turnovers (for the last two (2) years). |  |
| 4 | The proposal shall include specific clauses relating to quality including performance guarantees and guaranteed delivery dates. |  |

# TIMELINE, DELIVERY AND INSTALLATION

TEIN\*CC plans to deliver the new proposed hardware and to be ready for operation by November 2018. Prospective suppliers are required to quote a delivery lead time from receipt of order.

# Indicative Timeline

Procurement Plan below provides an overview of the key stages and dates in this tender. TEIN\*CC reserves the right to change these dates as necessary, although it will seek to minimise any changes.

|  |  |
| --- | --- |
| **Activity** | **Dates** |
| RFQ issue | 1 August 2019 |
| Deadline for completed submissions | 31 August 2019 |
| Evaluate Submitted proposals | 15 September 2019 |
| Award contract and standstill period (10days) | 30 September 2019 |
| Contract production and finalization | 31 October 2019 |
| Installation and Delivery of equipment | 4Q 2019 |

# Delivery and installation of new hardware

Prospective suppliers are required to quote for the supply, delivery, installation, splicing, testing and commissioning service of the optical fiber cable and necessary hardware equipment quoted for the Asi@Connect network.

The quoted prices shall include:

* Delivery to the site of installation on an agreed date set by TEIN\*CC or by mutual understanding. All relevant taxes must be paid by the Contractor.
* Network installation according to a plan and date set by TEIN\*CC. The installation shall include:
	+ Provision of staff and local partner who is competent, skilled and experienced in the subject areas and other matters which relate to the services they are to provide.
	+ The Contractor is highly encouraged to survey the Project Area after signing the contract and may propose a better solution to TEIN\*CC for efficient and reliable network, wherever applicable.
	+ Installation of the network specified by TEIN\*CC.
* Turn-on, commissioning, and testing of the fiber optic cable network.

# COMMERCIAL ISSUES

TEIN\*CC would plan to agree contract terms with the successful supplier along the following lines.

# Contractual

5.1.1 The Nationality and Origin Rule: Participation in tender procedures administered by TEIN\*CC is open on equal terms to all natural and legal persons of the EU Member States and the States and territories of Asia Pacific region who are participating in the Asi@Connect program (refer to Annex 2). And it is also opened to legal persons from no-EU OECD/DAC member countries namely Canada, Switzerland and the United States. Tenderers are requested to provide the name(s) and country/countries of their legal entity/entities that could be used for contracting the Equipment with TEIN\*CC (a Korean based not for profit organization). Tenderers must state, in the quotation, the country of which they are nationals by presenting the usual proof of nationality under their national legislation.

####

|  |  |  |
| --- | --- | --- |
|  | **Name of legal entity** | **Country** |
| Preferred |  |  |
| Others |  |  |

Application of the Origin rule follows the same as that of the Nationality Rule aforementioned. Tenderers must state the origin of supplies and Contractor must present proof of origin to TEIN\*CC no later than when the first invoice is presented. The certificate of origin must be made out by the competent authorities of the country of origin of the supplies and must comply with the rules laid down by the relevant Community legislation (i.e. Articles 23 and 24 of Council Regulation (EEC) No 2913/92 of 12 October 1992).

# Pricing

5.2.1 Quotes must be itemised to list the price of all separate elements. Pricing proposals shall each include:

* + - 1. The cost of implementing the proposed network including:
	+ Cost to TEIN\*CC for each individual hardware component of proposed network expressed in terms of the basic cost elements, this may include but not limited to:
		- Fiber Optic Cable (SMF., ITU –T Recommendation G.652d, NECA/FOA 301 Compliant), closure, and cabinet
		- Optical Distribution Frame (ODF) including patch cord/pigtails, optical fiber trays, other equipment, if necessary and accessories.
		- Pole line hardware and accessories
		- Engineering, Right of Way, Permits
		- List of equipment
		- Contingency
	+ Software (including details of licensing breakdown), if any
	+ Cost of shipping, duties and taxes, delivery, storage, installation, splicing, testing, commissioning, and production of test results and other documentation
	+ Annual cost of the Support and Maintenance service, including any levels of service that are available

5.2.2 Potential suppliers are required to submit their quote for the proposed hardware and ancillary services as described as below:

**Fiber Optic Cable**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No.** | **LOCATION** | **TYPE** | **SPECIFICATIONS** | **QTY** |
| 1 | SM Masinag Cherry and Cogeo Junction as Per Annex 1 | Design, Supply, Delivery, Installation, Splicing,Testing and Commissioning | Quote for 24-core optical fiber cable (Length in meters) | 5,400 |
| * Standard : ITU-T G.652D
* Cable Type : Figure-8 / Self-supporting fiber optic cable
* Installation Environment : Outside plant, aerial application
* Cable Sheath: Black HDPE, a compound of PE and carbon black
* The moisture barrier shall consist of a longitudinally applied laminate of polymer coated aluminum foil.
* A rip cord having a minimum breaking load of 150N shall be laid beneath the outer sheath to facilitate access to the fiber.
* Cable sheath marking shall be as follows:
	+ Property of CONNECT Project funded by Asi@Connect;
	+ Manufacturer’s Name and Fiber Count;
	+ Date of Manufacture;
	+ Length Marker;
	+ and Fiber type: SM
* The completed cable shall have sequentially numbered length markers at regular intervals of one meter (1.0m).
* The cable sheath shall have at least 2.0mm thick green-striped marking continuously on the sheath.
* One or more strength members shall be incorporated into a cable structure designed to carry the tensile load associated with installation.
* The fiber reinforced plastic (FRP), serving mainly as the central strength member must be laminated with an MDPE-Jacket to prevent disintegration/breakage of plastic materials used.
* The color coding of loose tubes and the individual fibers within each loose tube shall be as follows:

* Cable protection shall include, as a minimum, a covering placed between the cable reel flanges and over the exposed layer of the cable. The covering shall be weather resistant and shall limit solar heating of the cable such that the cable surface temperature does not exceed 10°C above ambient temperatures under maximum solar radiation.
* The cable ends shall be accessible for testing, and securely fastened to the reel to prevent the cable from becoming loose in transit or during cable installation.
* End caps shall be securely installed to both cable ends to prevent escape of filling compound and entry of moisture during shipping, handling, and storage.
* The manufacturer shall state the sizes of cable drums used for the purpose of packing the offered single mode optical fiber cables.
* The minimum diameter of spool of the cable drums shall be at least 20 times the cable diameter.
* The spindle hole of each cable drum shall be greater than 100mm.
* Cable length per reel /drum must be continuous
* The manufacturer shall state the outer diameter of the various sizes of the single mode fiber optic cables offered.
 |
| 2 | Cogeo Junction and Lores Hub as Per Annex 1 | Design, Supply, Delivery, Installation, Splicing,Testing and Commissioning | Quote for 48-core optical fiber cable (Length in meters) | 10,100 |
| * Standard : ITU-T G.652D
* Cable Type : Figure-8 / Self-supporting fiber optic cable
* Installation Environment : Outside plant, aerial application
* Cable Sheath: Black HDPE, a compound of PE and carbon black
* The moisture barrier shall consist of a longitudinally applied laminate of polymer coated aluminum foil.
* A rip cord having a minimum breaking load of 150N shall be laid beneath the outer sheath to facilitate access to the fiber.
* Cable sheath marking shall be as follows:
	+ Property of CONNECT Project funded by Asi@Connect;
	+ Manufacturer’s Name and Fiber Count;
	+ Date of Manufacture;
	+ Length Marker;
	+ and Fiber type: SM
* The completed cable shall have sequentially numbered length markers at regular intervals of one meter (1.0m).
* The cable sheath shall have at least 2.0mm thick green-striped marking continuously on the sheath.
* One or more strength members shall be incorporated into a cable structure designed to carry the tensile load associated with installation.
* The fiber reinforced plastic (FRP), serving mainly as the central strength member must be laminated with an MDPE-Jacket to prevent disintegration/breakage of plastic materials used.
* The color coding of the loose tubes and the individual fibers within each loose tube shall be as follows:

* Cable protection shall include, as a minimum, a covering placed between the cable reel flanges and over the exposed layer of the cable. The covering shall be weather resistant and shall limit solar heating of the cable such that the cable surface temperature does not exceed 10°C above ambient temperatures under maximum solar radiation.
* The cable ends shall be accessible for testing, and securely fastened to the reel to prevent the cable from becoming loose in transit or during cable installation.
* End caps shall be securely installed to both cable ends to prevent escape of filling compound and entry of moisture during shipping, handling, and storage.
* The manufacturer shall state the sizes of cable drums used for the purpose of packing the offered single mode optical fiber cables.
* The minimum diameter of spool of the cable drums shall be at least 20 times the cable diameter.
* The spindle hole of each cable drum shall be greater than 100mm.
* Cable length per reel /drum must be continuous
* The manufacturer shall state the outer diameter of the various sizes of the single mode fiber optic cables offered.
 |
| 3 | Lores Hub and Telmarc Headend as Per Annex 1 | Delivery, Installation, Splicing,Testing and Commissioning | Quote for 48-core optical fiber cable (Length in meters) | 5400 |
| * Standard : ITU-T G.652D
* Cable Type : Figure-8 / Self-supporting fiber optic cable
* Installation Environment : Outside plant, aerial application
* Cable Sheath: Black HDPE, a compound of PE and carbon black
* The moisture barrier shall consist of a longitudinally applied laminate of polymer coated aluminum foil.
* A rip cord having a minimum breaking load of 150N shall be laid beneath the outer sheath to facilitate access to the fiber.
* Cable sheath marking shall be as follows:
	+ Property of CONNECT Project funded by Asi@Connect;
	+ Manufacturer’s Name and Fiber Count;
	+ Date of Manufacture;
	+ Length Marker;
	+ and Fiber type: SM
* The completed cable shall have sequentially numbered length markers at regular intervals of one meter (1.0m).
* The cable sheath shall have at least 2.0mm thick green-striped marking continuously on the sheath.
* One or more strength members shall be incorporated into a cable structure designed to carry the tensile load associated with installation.
* The fiber reinforced plastic (FRP), serving mainly as the central strength member must be laminated with an MDPE-Jacket to prevent disintegration/breakage of plastic materials used.
* The color coding of the loose tubes and the individual fibers within each loose tube shall be as follows:

* Cable protection shall include, as a minimum, a covering placed between the cable reel flanges and over the exposed layer of the cable. The covering shall be weather resistant and shall limit solar heating of the cable such that the cable surface temperature does not exceed 10°C above ambient temperatures under maximum solar radiation.
* The cable ends shall be accessible for testing, and securely fastened to the reel to prevent the cable from becoming loose in transit or during cable installation.
* End caps shall be securely installed to both cable ends to prevent escape of filling compound and entry of moisture during shipping, handling, and storage.
* The manufacturer shall state the sizes of cable drums used for the purpose of packing the offered single mode optical fiber cables.
* The minimum diameter of spool of the cable drums shall be at least 20 times the cable diameter.
* The spindle hole of each cable drum shall be greater than 100mm.
* Cable length per reel /drum must be continuous
* The manufacturer shall state the outer diameter of the various sizes of the single mode fiber optic cables offered.
 |
| 4 | Cogeo Junction and Cabading Hospital as Per Annex 1 | Design, Supply, Delivery, Installation, Splicing,Testing and Commissioning | Quote for 24-core optical fiber cable (Length in meters) | 10,700 |
| * Standard : ITU-T G.652D
* Cable Type : Figure-8 / Self-supporting fiber optic cable
* Installation Environment : Outside plant, aerial application
* Cable Sheath: Black HDPE, a compound of PE and carbon black
* The moisture barrier shall consist of a longitudinally applied laminate of polymer coated aluminum foil.
* A rip cord having a minimum breaking load of 150N shall be laid beneath the outer sheath to facilitate access to the fiber.
* Cable sheath marking shall be as follows:
	+ Property of CONNECT Project funded by Asi@Connect;
	+ Manufacturer’s Name and Fiber Count;
	+ Date of Manufacture;
	+ Length Marker;
	+ and Fiber type: SM
* The completed cable shall have sequentially numbered length markers at regular intervals of one meter (1.0m).
* The cable sheath shall have at least 2.0mm thick green-striped marking continuously on the sheath.
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* Cable protection shall include, as a minimum, a covering placed between the cable reel flanges and over the exposed layer of the cable. The covering shall be weather resistant and shall limit solar heating of the cable such that the cable surface temperature does not exceed 10°C above ambient temperatures under maximum solar radiation.
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* The minimum diameter of spool of the cable drums shall be at least 20 times the cable diameter.
* The spindle hole of each cable drum shall be greater than 100mm.
* Cable length per reel /drum must be continuous.
* The manufacturer shall state the outer diameter of the various sizes of the single mode fiber optic cables offered.
 |
| 5 | Cabading Hospital and Calawis as Per Annex 1 | Design, Supply, Delivery, Installation, Splicing,Testing and Commissioning | Quote for 24-core optical fiber cable (Length in meters) | 15,900 |
| * Standard : ITU-T G.652D
* Cable Type : Figure-8 / Self-supporting fiber optic cable
* Installation Environment : Outside plant, aerial application
* Cable Sheath: Black HDPE, a compound of PE and carbon black
* The moisture barrier shall consist of a longitudinally applied laminate of polymer coated aluminum foil.
* A rip cord having a minimum breaking load of 150N shall be laid beneath the outer sheath to facilitate access to the fiber.
* Cable sheath marking shall be as follows:
	+ Property of CONNECT Project funded by Asi@Connect;
	+ Manufacturer’s Name and Fiber Count;
	+ Date of Manufacture;
	+ Length Marker;
	+ and Fiber type: SM
* The completed cable shall have sequentially numbered length markers at regular intervals of one meter (1.0m).
* The cable sheath shall have at least 2.0 mm thick green-striped marking continuously on the sheath.
* One or more strength members shall be incorporated into a cable structure designed to carry the tensile load associated with installation.
* The fiber reinforced plastic (FRP), serving mainly as the central strength member must be laminated with an MDPE-Jacket to prevent disintegration/breakage of plastic materials used.
* The color coding of the loose tubes and the individual fibers within each loose tube shall be as follows:

* Cable protection shall include, as a minimum, a covering placed between the cable reel flanges and over the exposed layer of the cable. The covering shall be weather resistant and shall limit solar heating of the cable such that the cable surface temperature does not exceed 10°C above ambient temperatures under maximum solar radiation.
* The cable ends shall be accessible for testing, and securely fastened to the reel to prevent the cable from becoming loose in transit or during cable installation.
* End caps shall be securely installed to both cable ends to prevent escape of filling compound and entry of moisture during shipping, handling, and storage.
* The manufacturer shall state the sizes of cable drums used for the purpose of packing the offered single mode optical fiber cables.
* The minimum diameter of spool of the cable drums shall be at least 20 times the cable diameter.
* The spindle hole of each cable drum shall be greater than 100mm.
* Cable length per reel /drum must be continuous
* The manufacturer shall state the outer diameter of the various sizes of the single mode fiber optic cables offered.
 |

**Pole Line Hardware**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **LOCATION** | **TYPE** | **SPECIFICATIONS** | **QTY** |
| **1** | SM Masinag Cherry and Cogeo Junction as Per Annex 1 | Supply, Delivery and Installation | Quote for Pole Clamps, Bolts, Suspension Clamps, Cable Ties, Fiber Optic Closure  | 1 lot |
| * Quantity and type of pole line hardware (such as pole clamps, bolts, suspension clamps and fiber optic closure) shall be determined by the number and type of existing utility poles present along the route, and required to connect the two specified locations.
 |
| **2** | Cogeo Junction and Lores Hub as Per Annex 1 | Supply, Delivery and Installation | Quote for Pole Clamps, Bolts, Suspension Clamps, Cable Ties, Fiber Optic Closure | 1 lot  |
| * Quantity and type of pole line hardware (such as pole clamps, bolts, suspension clamps and fiber optic closure) shall be determined by the number and type of existing utility poles present along the route, and required to connect the two specified locations.
 |
| **3** | Lores Hub and Telmarc Headend as Per Annex 1 | Supply, Delivery and Installation | Quote for Pole Clamps, Bolts, Suspension Clamps, Cable Ties, Fiber Optic Closure, and Optical Distribution Frame (ODF)  | 1 lot |
| * Quantity and type of pole line hardware (such as pole clamps, bolts, suspension clamps and fiber optic closure) shall be determined by the number and type of existing utility poles present along the route, and required to connect the two specified locations.
* Two (2) units of Optical Distribution Frame with the following specifications:
	+ 19” rack mounted
	+ 48-cores with SC/PC SM simplex adapter loaded
 |
| **4** | Cogeo Junction and Cabading Hospital as Per Annex 1 | Supply, Delivery and Installation | Quote for Pole Clamps, Bolts, Suspension Clamps, Cable Ties, Fiber Optic Closure | 1 lot  |
| * Quantity and type of pole line hardware (such as pole clamps, bolts, suspension clamps and fiber optic closure) shall be determined by the number and type of existing utility poles present along the route and required to connect the two specified
 |
| **5** | Cabading Hospital and Calawis as Per Annex 1 | Supply, Delivery and Installation | Quote for Pole Clamps, Bolts, Suspension Clamps, Cable Ties, Fiber Optic Closure, and Optical Distribution Frame (ODF)  | 1 lot |
| * Quantity and type of pole line hardware (such as pole clamps, bolts, suspension clamps and fiber optic closure) shall be determined by the number and type of existing utility poles present along the route and required to connect the two specified locations.
* The Optical Distribution Frame must follow these specifications:
	+ 19” rack mounted
	+ 24-cores with SC/PC SM simplex adapter loaded
 |

5.2.3 Quotes should say whether VAT or other taxes are included in the cost.

5.2.4 Quotes must be in **EURO (€)** currency.

# The SELECTION AND EVALUATION CRITERIA

The evaluation will be composed of three sequential steps, namely administrative compliance, technical compliance and financial evaluation. If a tender cannot meet the administrative and technical compliance explained in 6.1 and 6.2, no further evaluation will be progressed. ***The award criterion applied to administratively and technically compliant tenders is price. Therefore, the successful tenderer is the one submitting the least expensive tender.***

# Examination of the administrative conformity of tenders

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Is tenderer (consortium) nationality[[1]](#footnote-1) eligible?(Y/N) | Is documentation complete?(Y/N) | Is language as required? (Y/N) | Is tenderer's declaration of eligibility signed (by all consortium members if a consortium) in the Annex 3? (Yes/No/ Not Applicable) | Overall decision?(Accept / Reject) |
|  |  |  |  |  |
|  |  |  |  |  |

A tender is deemed to comply if it satisfies all the above conditions. If a tender does not comply with them, it will be rejected immediately and may not subsequently be made to comply by correcting it or withdrawing the departure or restriction.

# Examination of Technical compliance of tenders

After analyzing the tenders deemed to comply in administrative terms, the technical admissibility of each tender will be ruled on, classifying it as technically compliant or non-compliant, based on the responses of 3.1 Technical specifications above.

# Financial evaluation

The offer with the lowest price shall be awarded the contract.

If the chosen tender exceeds the maximum budget available for the contract, the tender procedure will be cancelled, and the TEIN\*CC may negotiate with one or more tenderers of its choice, from among those that took part in the tender procedure, if they comply with the selection criteria, provided that the original procurement documents are not substantially altered and the principle of equal treatment is observed.

# RESPONDING TO THIS RFQ

# Documents required for responding to this RFQ

1.
2.
3.
4.
5.
6.
7. 1.

7.1.1 Tenderers are required to email soft copy of the RFQ responses, at least including below, but not limited to them, to: **tech@teincc.org**

* Introduction of the proposer (i.e. company) including size of staffing, turnovers.
* Declaration of eligibility of tenderers in the Annex 3 (one page).
* Specific responses on 3, 4 & 5 above.

7.1.2 The closing date for responding to this RFQ is **31 August 2019**.

# Enquiries

For enquiries, please email to: tech@teincc.org

# ANNEX 1

Proposed Network Diagram



Proposed Fiber Closure/Nodes for the Project Area

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Location** | **Coordinates** | **Address** | **Landmark** |
| A | SM Masinag Cherry |  14.624200°, 121.133041° | along Marilaque Hi-way, Antipolo | In front of SM Cherry |
| B | Cogeo Node | 14.620339°, 121.169506° | Olalia Road, Sumulong Hiway, Antipolo | In front of Jollibee Cogeo |
| C | Lores Hub | 14°34'16.55"N, 121°10'31.23"E  | Yuan St. Lores Subd. Antipolo City, Rizal |  |
| D | Telmarc Headend | 14°34'22.40"N, 121°09'04.23"E | Maharlika Main, Maharlika Hills Subdivision, Taytay, Rizal |  |
| E | Cabading Hospital | 14.633998°, 121.229049° | Marcos Hiway, Antipolo | In front of Cabading Hospital |
| F | Calawis  | 14.673105°, 121.242086° | Calawis Brgy Road, Calawis, Antipolo City | Adjacent Calawis Elementary School |

**Proposed Estimates and Details of the Network Route**

|  |  |  |
| --- | --- | --- |
| **Path** | **Proposed Distance** | **Remarks** |
| SM Masinag Cherry |  | Start of the network point |
| SM Masinag Cherry to Cogeo Node | 5,400 m |  |
| Cogeo Node to Lores Hub  | 10,100 m |  |
| Lores Hub to Telmarc Headend | 5,400 m |  |
| Cogeo Node to Cabading Hospital | 10,700 m |  |
| Cabading Hospital to Calawis | 15,900 m |  |
| **TOTAL** | **47,500 m** |  |

# ANNEX 2

1. Participation in this tender is normally open on equal terms to the following nationals or legal persons:

a) List of countries as below:

* a) a Member State of the European Union;
* b) a Member State of the European Economic Area;
* c) an official candidate country or potential candidate that is a beneficiary of the Instrument for Pre-Accession Assistance, depending on the basic act;

b) Legal persons from Asi@Connect partners countries as follows.

|  |  |  |  |
| --- | --- | --- | --- |
| **Number** | **Country** | **Number** | **Country** |
| 1 | Afghanistan | 13 | Mongolia |
| 2 | Australia | 14 | Myanmar |
| 3 | Bangladesh | 15 | Nepal |
| 4 | Bhutan | 16 | New Zealand |
| 5 | Cambodia | 17 | Pakistan |
| 6 | China | 18 | Philippines |
| 7 | Hong Kong | 19 | Singapore |
| 8 | India | 20 | South Korea |
| 9 | Indonesia | 21 | Sri Lanka |
| 10 | Japan | 22 | Thailand |
| 11 | Laos | 23 | Vietnam |
| 12 | Malaysia | 24 | Chinese Taipei |

c) Legal persons from several non-EU OECD/DAC member countries namely Canada, Switzerland and the United States.

2. Please check TEIN\*CC if the eligibility of your entity is still not clear addressed to tech@teincc.org. //the end//

# ANNEX 3 DECLARATION OF ELIGIBILITY OF TENDERERS

Natural or legal persons are not entitled to participate in this tender procedure or be awarded a contract if they are in any of the situations mentioned in Sections 2.3.3.1 or 2.3.3.2 of the Practical Guide (<http://ec.europa.eu/europeaid/prag/?header_description=DEVCO+Prag+to+financial+and+contractual+procedures+applicable+to+external+actions+financed+from+the+general+budget+of+the+EU+and+from+the+11th+EDF&header_keywords=ePrag%2C+europa>).

**Candidates or tenderers must certify with the responsible person’s signature that they are not in one of the situations listed above.**

1. If the tender has been submitted by a consortium, the nationalities of **all** the consortium members must be eligible [↑](#footnote-ref-1)