TERMS OF REFERENCE FOR UPGRADING OF LEASED LINE SERVICES FOR PAGASA CENTRAL OFFICE, NL, SL, VIS, MIN REGIONAL SERVICES DIVISION OFFICES AND UPGRADING OF INTERNET SERVICES FOR NL, SL, VIS, MIN REGIONAL SERVICES DIVISION OFFICES

A. BACKGROUND

Increasing number of applications that are being used all throughout PAGASA network requires larger bandwidth in order for a user to optimize utilization of such applications. PAGASA network expands across the different regional offices. Furthermore, web-based applications are also being used to enhance services and research needs. This proposal will address such needs.

B. APPROVED BUDGET FOR THE CONTRACT (ABC)

The Approved Budget for the Contract is Seven Million and Four Hundred Fifty-Eight Thousand Pesos (P7,458,000.00) inclusive of VAT and all applicable government taxes.

C. QUALIFICATIONS OF THE BIDDER

(Please refer to Section II. Instructions to Bidders, the Bid Data Sheet and Checklist of Eligibility and Technical Requirements of the Bidding Documents)

D. DELIVERY PERIOD AND PLACE OF DELIVERY

The winning bidder shall upgrade leased line services for PAGASA Central Office, NL, SL, Vis, Min Regional Services Division Offices and upgrade internet services of NL, SL, Vis, Min Regional Services Division Offices within 90 c.d. from receipt of the Purchase Order (PO) at the PAGASA Central Office located at PAGASA Science Garden Complex, BIR Road, Diliman Quezon City.

E. BID PROPOSAL CONTENTS

The prospective bidder is expected to comply and respond in accordance with the specific instructions to bidders and submit all the documentary requirements under the Checklist of Eligibility, Technical and Financial Requirements. The submission of documentary requirements must be properly arranged in order and with label.

The prospective bidder shall respond paragraph by paragraph and shall clearly indicate compliance to all the required specifications (*Please see Section VII. Compliance Matrix*) and shall specify the number of days or schedules within which to complete the delivery of all the goods required (*Please see Section VI. Schedule of Requirements*).

The prospective bidder shall be required also to include in this proposal, original descriptive literatures and unamend brochures of all equipment/materials to be supplied. Plans, drawings and diagrams/configurations must likewise be provided.

These details will allow the **PAGASA-Bids and Awards Committee** to fully evaluate and determine compliance from the prospective bidders.

The following are additional bidder qualifications which will be part of the technical bid documents that will be submitted by interested bidders:

1. The Service Provider must have a track record of existing subscriptions of the similar offered services in the Philippines.
2. The Service Provider must have nationwide infrastructure and own cable landing station.
3. The Service Provider must have nationwide infrastructure and own cable landing station.
4. The Service Provider must render all the required and necessary services in accordance with accepted standards, conventions and practices; and in compliance with applicable laws, rules and regulations governing the installation, operation and maintenance of MPLS network service.
5. The Service Provider must provide a certification that it's network platform is compliant to the latest MEF Carrier Ethernet (2.0)
6. The Service Provider must have at least 5 Cisco Certified Internetworking Expert, 10 MEF Carrier Ethernet Certified Professional 2.0, a Certified Professional Software Defined Network & Network Functions Virtualization (SDN-NFV) and 2 certified Project Management Professional (PMP) technical support personnel
7. The Service Provider must provide a certification that it uses MPLS and Internet that is supported by a domestic nationwide network which is owned by the Service Provider and operates its own landing stations (at least 3 cable landing stations) to ensure fast, resilient and reliable service.
8. The Service Provider's MPLS and Internet services must support Software Defined Wide Area Network technology. The Service Provider must provide a high level diagram that they have at least 10 loops on their domestic fiber optic network for resiliency and redundancy.

F. TECHNICAL SPECIFICATIONS

The winning bidder shall upgrade leased line services for PAGASA Central Office, NL, SL, Vis, Min Regional Services Division Offices and upgrade internet services for NL, SL, Vis, Min Regional Services Division Offices. The leased line and internet services to be provided should have the following minimum specifications:

i. LEASED LINE (IPVPN) SERVICES

1. The Service Provider shall provide a connectivity solution that is IP-based for the mentioned PAGASA clients
2. The Type of Access – Fixed Bandwidth CIR **40 Mbps** for Central Office and **10 Mbps** for PRSD Offices
3. The connectivity solution must be capable of handling both voice and data transmission, with adjustable quality of service capabilities for type of traffic prioritization.

4. The sites must have the ability to communicate with any and all other sites directly for both voice and data. The Service Provider shall be

responsible for ensuring the proper routing for all communications to the proper sites.

5. The Service Provider shall provide managed network administration services including but not limited to the following:
   - Status monitoring, additional VLAN activation if necessary
   - Editing of routes
   - IP address allocation
   - Traffic report generation
   - Basic troubleshooting
   - Stopping/starting/restarting of network equipment
   - Password resetting if needed.

6. The proposed connectivity to the Disaster Recovery site must connect to the existing IPVPN network of "client" and will serve as secondary backhaul of the IPVPN.
7. The proposed connectivity must be compatible, inter-operable with the existing network infrastructure of PAGASA with minimal configuration needed during the implementation.
8. The Service Provider shall provide as part of their proposal a diagram which will show how the location sites will be connected. The diagram shall clearly reflect specific type of connectivity technology.
9. The Service Provider shall follow the required line speeds for PAGASA.
10. The Service Provider must have a single point of contact for all the components including the IPVPN network links.
11. The Service Provider must conduct testing of the proposed active components, it must be compatible and inter-operable with the existing IPVPN infrastructure of PAGASA.
12. The Service Provider shall complete the installation and BER, IPERF tests, etc., within *60*-calendar days from the date that the Notice to Proceed is received.
13. The Service Provider must be responsible for the connectivity and the needed equipment and other active components needed for the said IPVPN network connection
14. The Service Provider shall operate, maintain and manage the connectivity for the given PAGASA sites during the period of the contract.
15. In any event that single or multiple offices have technical issue on the connectivity, this shall not affect the rest of the offices and the remaining sites shall remain connected.
16. The Service Provider must be responsible for all restoration.
17. Must have a Network Operation Center (NOC) capable of providing 24 hours' x 7 days a week network management and support.

ii. <u>INTERNET SERVICES</u>

1. Service Provider must provide a dedicated, high-speed, diverse, reliable and managed connectivity to the Internet and guaranteed

Internet bandwidth from the following sites to the Service Provider's backbones (i.e. US, Japan, Singapore and Hong Kong) via wired connection.

2. The Type of Access – Fixed Bandwidth CIR – **50 Mbps**
3. Service Provider must certify that the cable facility being used in the connectivity between the Service Provider circuit is exclusively owned and operated by the Service Provider.
4. Service provider directly connects to Asia Pacific and US Peering partners
5. Service Provider must provide a certification that they have more than 2Tbps of payload capacity from international IP transit peering, bilateral peering, content peering and Internet Exchanges (IX).
6. Service Provider must provide a certification that they are peered with multiple Tier 1 and Tier 2 Global ISPs' network.
7. Service Provider must be IPV6 ready and compliant.
8. Service Provider must provide a high-level diagram that they are using at least 10 submarine cable systems for international and Internet traffic diversity.
9. Service must provide web access to usage, network performance statistics and web-based traffic utilization (MRTG) Subscription must include modem or any device that will convert the last mile facility (fiber or copper) to Ethernet or Fast Ethernet. Must include all necessary cables to interconnect and operate all equipment.

iii. CUSTOMER PREMISE EQUIPMENT

Cisco ISR 4221 router or better

iv. ADDITIONAL REQUIREMENTS

The winning bidder must submit, provide or comply on the following:

1. A kick-off meeting must be scheduled to discuss specific details of the Project
2. Work Schedule for the implementation of the project.
3. List of personnel that will be working for the installation for pass clearance
4. Prior to Acceptance, Testing and Commissioning, Data/Report shall be submitted to the End – User.

G. SCOPE OF WORK

The scope of work covers the upgrade of leased line services for PAGASA Central Office, NL, SL, Vis, Min Regional Services Division Offices and upgrade of internet services for NL, SL, Vis, Min Regional Services Division Offices. The works and services to be performed under this contract shall essentially consist of but not limited to the following:

1. Site survey and inspection.
2. Delivery of equipment and materials on site.
3. Installation and Configuration of CPEs.
4. Network system Testing (BER and actual data transmission)
5. Submission of pertinent documents as required by the project
6. Final testing and commissioning of the whole system.

H. WARRANTIES

1. The bidder warrants that it shall strictly conform to all the Terms and Conditions of this Terms of Reference.
2. Service must be available 24 x 7 days continuously.
3. All services shall be an ongoing perpetual service at the fixed monthly rate, until such time as PAGASA decides to terminate the service. Termination of the service shall require PAGASA to give a minimum of 30 days' advance notice. The minimum period for the service shall be 1 year.
4. The winning bidder shall neither assign, transfer, pledge nor subcontract any part or interest therein.