



TERMS OF REFERENCE

for the

SUBSCRIPTION OF IPVPN SERVICES AT ECHAGUE AND PANABO X-BAND RADAR

A. BACKGROUND

The transition from VSAT to IPVPN at the Echague and Panabo radar sites represents a strategic move towards modernizing the telecommunications infrastructure. By adopting IPVPN technology, these sites will benefit from reduced costs and enhanced scalability, ultimately strengthening the nation's weather monitoring and early warning capabilities.

B. APPROVED BUDGET FOR THE CONTRACT (ABC)

The Approved Budget for the Contract is **One Million Six Hundred Seventy-Six Thousand Six Hundred Forty Pesos** (Php1,676,640.00) 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 provide IPVPN services from Echague Isabela X-band Radar Station and Panabo Davao del Norte X-band Radar Station, respectively to PAGASA Weather and Flood Forecasting Center (WFFC) in Quezon City within **forty-five (45) calendar days** from receipt of Notice to Proceed (NTP).

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 unamended 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:

- The Service Provider must have a track record of existing subscriptions of the similar offered services in the Philippines.
- The Service Provider must have nationwide infrastructure and own cable landing station.
- 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 related to IPVPN Network services
- Must provide a certification that it uses IPVPN network services that are supported by a domestic nationwide network owned by the Service Provider to ensure fast, resilient, and reliable service.
- Runs over a substantial domestic and international IP capacity ensuring businesses of congestion-free connectivity to the Internet. The Service Provider must operate its domestic network and IP capacity in the Philippines with more than 30Tbps and 2Tbps operating capacities, respectively.
- Must provide a certification that its network platform is compliant to the latest MEF Carrier Ethernet 3.0.
- Must be backed by solid MPLS, Carrier Ethernet expertise and experience. Must have Certified Internetworking Expert, Certified Network Associate, SD-WAN Certified Professional, Certified Professional Software Defined Network & Network Functions Virtualization (SDN-NFV), and certified Project Management Professional (PMP) technical support personnel.
- Must provide a high-level diagram that Service Provider network has at least 10 loops on their domestic fiber optic network for resiliency and redundancy.
- A private networking solution that provides reliable and highly secure WAN connectivity to link geographically dispersed sites using cost-effective IP-based connectivity.
- The service supports traffic prioritization to better serve data, VoIP, videoconferencing, and cloud service. Suitable for supporting a wide base of Enterprises that need mission-critical applications and high throughput database transaction.
- IP VPN is a fully meshed solution for private any-to-any connectivity. The service is Layer 3 VPN based on Multi-Protocol Label Switching (MPLS) technology which enables

packets of information to be transmitted securely across a network that is highly scalable and manageable.

- The Provider Edge (PE) nodes of the Service Provider's IP backbone must be robust and are connected in mesh for network resiliency and better service uptime.
- Each Enterprise client has a separate instance in the IP Backbone using Multiprotocol Label Switching (MPLS) VPN. This set-up provides capability of using an overlapping private IP address space.
- The Service Provider must provide a certification that it owns an IPVPN Network supported by a nationwide domestic fiber optic backbone network.
- The IPVPN Network must be able to deliver Class of Service (CoS) feature, to segregate VoIP traffic and business critical traffic from the rest, thus enforcing better control over sensitive traffic and mission-critical data application.
- The Service Provider must provide a certification that its network platform is compliant to the latest MEF Carrier Ethernet 3.0.
- The IPVPN Network must support IPv6 dual stack
- The IPVPN remote link must be capable of supporting the required bandwidth, from the Service Provider's transport or fiber optic cable system to remote site location where the modem and router will be installed.
- The IPVPN Network must be able to serve a wide bandwidth spectrum available across the country to meet current and expansion needs.
- Must be fiber optic-based systems that can deliver a multitude of digital information such as voice, video, data, more efficiently than traditional copper or coaxial cable.
- Subscription must include modem, router, or any device that will convert the last mile fiber facility to Ethernet or Fast Ethernet.
- Service Provider must certify that the cable facility being used in the connectivity for last mile facility is exclusively owned and operated by the Service Provider.

F. TECHNICAL SPECIFICATIONS

The winning bidder shall provide IPVPN services to Echague and Panabo X-band Radar Stations and WFFC Building in Isabela, Davao del Norte and Quezon City respectively. The leased service to be provided should have the following minimum specifications:

i. LEASED LINE (IPVPN) SERVICE

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 **10 Mbps**.
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 must be compatible, inter-operable with the existing network infrastructure of PAGASA with minimal configuration needed during the implementation.
7. 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.
8. The Service Provider shall follow the required line speeds for PAGASA.
9. The Service Provider must have a single point of contact for all the components including the IPVPN network links.
10. 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.
11. The Service Provider shall complete the installation and BER, IPERF tests, etc., within 45-calendar days from the date that the Notice to Proceed is received.

12. The Service Provider must be responsible for the connectivity and the needed equipment and other active components needed for the said IPVPN network connection
13. The Service Provider shall operate, maintain and manage the connectivity for the given PAGASA sites during the period of the contract.
14. 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.
15. The Service Provider must be responsible for all restoration.
16. Must have a Network Operation Center (NOC) capable of providing 24 hours x 7 days a week network management and support.
17. The Service Provider must already have an established nodes and backbone near the site area.
18. The Service Provider must already be providing quality IPVPN service in the area.
19. Service node must already be readily available in the Echague and Panabo X-band Radar area as of the moment.

ii. **CUSTOMER PREMISE EQUIPMENT**

- The provided routers must be a high-capacity CPE and capable of performing processes up to the required throughput bandwidth and upgradable.

H. SERVICE LEVEL AND REBATES

A. SERVICE PERFORMANCE

Service	Service Level Agreement
Availability	99.6%

1. The end-to-end Service Availability level indicated in above shall be determined in the following manner:

1.1 End-to-end Service Availability is calculated per circuit on a calendar month basis as follows:

(A-B)	X	100%
A		

Where: A = Total Hours for the Calendar Month

B = Total Unavailable Hours for the same Calendar Month

Unavailable Hours shall be the sum of all hours in which the Data Service is not available for usage. This is calculated from the time when PAGASA reports a fault condition and releases the circuit to the Provider for failure analysis and testing action, to the time Provide returns or attempts to return the circuit to the PAGASA in proper working condition.

The granting of Service Credits is contingent upon PAGASA having opened a trouble ticket with Provider Enterprise Service Management. The start of the problem occurrence will be considered to begin when the trouble ticket is opened with Provider Enterprise Service Management for the purpose of Service Credits.

1.2 For purposes of calculating Unavailable Hours, the following faults/outages shall be excluded:

- a. Outages due to PAGASA fault, equipment failure (e.g. failure of PAGASA's UPS) and applications.
- b. Scheduled maintenance
- c. Inability of Provider's staff to gain access to the PAGASA's premises for the purpose of fault rectification
- d. Incidents of Force Majeure and Fortuitous Events
- e. Travel time and accessibility of site
- f. Power failure in the Customer's

1.3 Failure to Meet Service Level.

Provider shall, upon request of the PAGASA and after validation of Provider, credit PAGASA the amount corresponding to the period of interruption, provided that the period of interruption shall not be less than 175.2 minutes per month. The computation is as follows:

$$\text{Rebate for the Month} = \text{MRC} \times \text{Total downtime for the month (in hours)} / 730 \text{ Hrs.}$$

These rebates are subject to the following conditions:

- (1) All applicable rebates will be computed based on Provider's existing Enterprise Service Management records.
- (2) PAGASA will report to the Provider's Corporate Helpdesk any outages experienced by the network.
- (3) Customer should submit a written /formal advice to the Provider to document its claim for any rebates for outages, subject to Provider's verification. Provider shall grant rebates based on the results of its verification.
- (4) PAGASA will submit a written request for rebate within two weeks from receiving Reason for Outage (RFO). Any rebate requests beyond this prescribed period shall be forfeited.
- (5) The following outages are not subject to rebates:**
 - (a) Outages due to PAGASA fault, equipment failure (e.g., failure of PAGASA's UPS) and applications,
 - (b) Scheduled maintenance,
 - (c) Inability of Provider staff to gain access to the PAGASA's premises for the purpose of fault rectification,
 - (d) Incidents of Force Majeure and Fortuitous Events,
 - (e) Travel time and accessibility of site, or
 - (f) Power failure at the PAGASA's site.

I. 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.

