Note: All tenders and quotations are done via our eProcurement system.

The information given below is an extract of the scope of work. To access/open the full set of tender documentation, you must be registered on CSD.

If you have a MAAA CSD registration number and receiving email notifications from PetroSA Procurement you are already registered, please login as indicated below:

Username: MAAA... User Code: MAAA... Password: newuser

Contact the call center on **012 663 8815** or email: **support@intenda.net** if you are having problems with your login.

If you do not have a MAAA CSD registration number, please click on "Not Registered Yet" and register. Click on the link below to download a "how to" guide to assist you.

http://www.procurement.petrosa.com/Downloads/Documents/SupplierSelfRegistration.pdf

CTT0000025578

Scope of Work

FA Platform Link

**Tenderers can tender for only one or both options (Scope 1 and/or Scope 2 – which must be clearly marked on all correspondence in its Tender Documents and the Proposal/Solution)

1. SCOPE OF WORK

PetroSA has a need for an access link to provide connectivity to its Offshore Platform (FA Platform) that is located 98 km off the coast of Mossel Bay, South Africa, coordinates as indicated below to the receiving beacon (High Site) that's 100km away from the site. The services will be for a minimum period of 36 months and should be designed in such a way that is scalable for any future upgrades. The minimum requirements are listed below.

2. CURRENT SOLUTION

PetroSA has identified the need for a point-to-point connection between the FA Platform, situated approximately 98km offshore, and the GTL Refinery in Mossel Bay is 107km from the receiving station. This connection should incorporate management and monitoring capabilities to detect and address issues before they impact service levels.

The requirements for this solution include, but are not limited to, the following:

1. Hardware and Software

The selected Service Provider must provide, install, manage, and maintain all the necessary hardware and software components of the solution. This includes handling patches, upgrades, configuration backups, and other related tasks.

2. Equipment Reliability

The Service Provider must demonstrate that any equipment proposed for the offshore site has been successfully deployed at other installations. PetroSA may request to visit these installations to verify their effectiveness.

3. Bandwidth Capacity

The Service Provider is required to provide detailed information about the maximum available bandwidth between the sites. This should encompass the bandwidth capabilities of radio/microwave equipment.

4. Quality of Service (QoS) and Class of Service (CoS)

The solution must support QoS/CoS capabilities. The successful Service Provider, in collaboration with PetroSA, will configure and fine-tune these features to meet PetroSA's requirements.

5. Cost Reductions

The Service Provider must ensure that any reductions in bandwidth costs resulting from ICASA rulings, pricing cuts, or other factors are directly passed on to PetroSA.

6. Reporting and Meetings

The Service Provider must generate automated weekly and monthly reports and participate in monthly contract and operational management meetings. These meetings will likely occur at the PetroSA offices in Parow.

7. Proactive Monitoring and Management

The Service Provider is responsible for proactively monitoring and managing all services related to the solution.

8. Online Reporting

The Service Provider must offer client-accessible online reporting with detailed information (source, destination, port) for all links. This reporting should be available 24/7/365.

9. Access to Customer Equipment

The Service Provider must provide PetroSA with read-only login access to all Customer Equipment, including SNMP read-only access.

10. Notifications

The proposed solution should include automated SMS and email notifications to designated individuals in the event of any failures within the provided solution.

11. Transition Project Plan

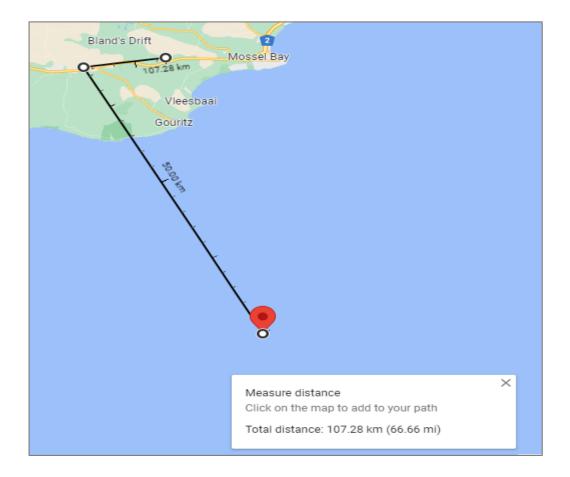
The Service Provider must present a project plan outlining the transition process for implementing the proposed solution.

12. Implementation Agreement

Implementation of the solution will commence once PetroSA and the Service Provider have agreed upon the project plan or any necessary variations.

13. Services Location

Coordinates: -34.899207354152644, 22.096814004179663



14.SCOPE

The scope is to establish and maintain a connectivity solution between PetroSA's offshore installation and the land-based facility, ensuring reliable and monitored connectivity with QoS capabilities, equipment management, and reporting features.

The connectivity solutions provided may be based on:

SCOPE 1

Satellite Link

SCOPE 2

Microwave Link

For each Scope, Tenderers will be required to:

- Conduct a thorough assessment of the offshore installation and land-based facility to determine connectivity requirements, including bandwidth, distance, and environmental considerations. This will be done via Microsoft Teams for the Offshore Installation; all the information will be shared. If you wish to visit the Offshore Platform, it will be for your account.
- Design and implement a connectivity solution that ensures reliable communication between the offshore platform and the land-based facility.
- Procure and install the necessary hardware and software components, including radios, antennas, cables, and network devices.
- Configure and fine-tune the solution to enable Quality of Service (QoS) capabilities and meet PetroSA's specific requirements.
- Implement proactive monitoring and management systems to detect and address issues promptly, minimising service disruptions.
- Provide PetroSA with read-only access to all equipment, including SNMP readonly access, for enhanced visibility and troubleshooting.
- Develop and implement a comprehensive reporting system, providing granular information on link performance and usage.
- Ensure that any cost reductions in bandwidth, as per ICASA rulings or pricing changes, are directly passed on to PetroSA.
- Collaborate with PetroSA in monthly contract and operational management meetings to discuss performance, address concerns, and make necessary adjustments.
- Create a project plan for the seamless transition to the proposed solution and obtain PetroSA's agreement before proceeding with implementation.

• Requirements/Specifications:

- Minimum 32 Mbps bi-directional bandwidth
- Bandwidth Split (Estimated minimum bandwidth allocations):
 - Industrial/Operational IT (Control System):
 - Current: 2 Mbps
 - Desired Minimum: 4 Mbps

- Latency: To be determined based on data type
- Multiplexer usage
- General Data:
 - Current: 4 Mbps
 - Desired Minimum: 20 Mbps
 - Latency: (Please provide a range of latency you estimate will be relevant)
 - IP Connectivity
 - Internet breakout will be via the PetroSA network.
- Voice (SIP):
 - Current: 2 Mbps
 - Desired Minimum: 8 Mbps
 - Number of extensions: PBX (20 ext) 20 Extensions (Minimum)
 - MOS Score: 3.2 minimum
 - Latency: (Please provide a range of latency you estimate will be relevant)
- Jitter and Packet loss measurements should be frequent, with Jitter value under 50ms, packet loss close to 0%, and latency under 100 milliseconds.

PetroSA utilizes a wide range of applications, including:

- Email (MS Exchange) servers reside in Cape Town, Mossel Bay and Exchange Online.
- ERP (SAP) centralized in Cape Town.
- Internet Traffic breakouts currently in both Cape Town and Mossel Bay.
- Intranet Centralised in Cape Town.
- Voice IP Telephony & Microsoft Teams Voice and Video calling.
- Video Conferencing using Microsoft Teams to internal (PetroSA) and external (non-PetroSA) sites.
- Real-time process monitoring application (PI ProcessBook)

Connectivity Features:

- The Service Provider shall provide options available from the minimum to maximum connectivity available in its solution.
- The link should provide access to 45 users, including 20 desktop users.
- PetroSA will utilise the following service feature requirements via the proposed solution:
 - Internet Access
 - Voice
 - Teams
 - VPN Access
 - Email (MS Exchange)
 - ERP (SAP)
 - Hardware and Installation
 - PI ProcessBook
 - General Internet based services (e.g., WhatsApp)

15. ENQUIRIES

Any enquiry regarding this tender should be addressed to **Caroline Widmer** in the Tender Office at telephone no. **(021) 929-3006**, or e-mail address <u>caroline.widmer@petrosa.co.za</u> or <u>Martinhennie.fortuin@petrosa.co.za</u>

A **clarification session** will be scheduled to give the opportunity for questions and answers regarding this tender.