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.**
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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

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SCOPE OF WORK

REPLACEMENT UPS3 AND PURCHASE 32 BATTERIES FOR PetroSA PAROW OFFICE

1. INTRODUCTION

The UPS and batteries are critical components for the supply of electricity to the PetroSA building(s) and equipment and should be replaced as soon as possible to provide the surety of server/service availability in the event a blackout is experienced again.

The objective of this tender is to **replace** the **UPS3** and its old batteries with a **new 40 KW** (400/230V, 415/240V or 380/220V) Three-Phase Uninterruptible Power Supply System and **32 new batteries**.

2. BACKGROUND

PetroSA utilizes Uninterrupted Power Supplies (UPS) to ensure adequate power to its Data Centres in the event of power outages. With the current load-shedding being a reality, the probability and possibility of this risk are high and will remain the case for as long as the country is subjected to it. The objective of this tender is to:

- **Replace** the **UPS3** and its old batteries in Parow with a **new 40 KW** (400/230V, 415/240V or 380/220V) Three-Phase Uninterruptible Power Supply System and
- The **purchase** of **32 new batteries**.

Here is a summary description of the **UPS** and **Batteries**.

UPS

The **UPS** shall be designed to operate as a true on-line, double conversion Voltage and Frequency Independent (VFI) system in the following modes:

A. **Normal** - The critical AC load is continuously supplied by the UPS inverter. The input converter derives power from the utility AC source and supplies DC power to the inverter. The battery charger shall maintain a float-charge on the batteries.
B. **Battery** - Upon failure of utility AC power the critical AC load is supplied by the inverter, which obtains power from the battery. There shall be no interruption in power to the critical load upon failure or restoration of the utility AC source.
C. **Recharge** - Upon restoration of utility AC power, after a utility AC power outage, the input converter shall automatically restart and resume supplying power to the inverter. Also, the battery charger shall recharge the batteries.
D. **Automatic Restart** - Upon restoration of utility AC power, after a utility AC power outage and complete battery discharge, the UPS shall automatically restart and resume supplying power to the critical load on inverter.
E. **Bypass** - The bypass shall provide an alternate path for power to the critical load that shall be capable of operating in the following manner:

    a. **Automatic** - In the event of an internal failure or should the inverter overload capacity be exceeded; the UPS shall perform an automatic transfer of the critical AC load from the inverter to the bypass source.
    b. **Eco-Mode** – The UPS module(s) shall be able to operate in Eco-Mode when the power quality parameters of the by-pass source are within the permissible tolerances. The UPS system shall automatically transfer the load to normal mode if the by-pass source goes out of permissible tolerances. Transfer in both directions shall take place very rapidly (< 2.5 ms) and shall not affect the supplied load.
    c. **Manual** - Should the UPS module(s) need to be taken out of service for limited maintenance or repair, manual activation of the bypass shall cause an immediate transfer of the critical AC load from the inverter to the bypass source.
    d. **By External Bypass** - The UPS should be able to transfer the load to static Bypass by handling a digital signal coming from an external auxiliary contact connected to the installations (external to the UPS).

Batteries

A. The battery system shall be sized to support a connected load of 40 kW for a minimum of 18 minutes at 40 kw load at an ambient temperature of 25°.
B. Battery configuration will be **32 x DELKOR 1150 K** batteries housed into external battery cabinets on site. The battery system shall of the battery type and quantity as indicated.
C. The UPS shall contain provisions to fit additional battery modules internally. The UPS shall also interface with an external battery cabinet to extend reserve time capabilities if required at a later stage.

D. The UPS battery charging circuit shall comprise of a separate battery charger and not depend on a charge voltage being derived from the UPS input rectifier. Consequently, the battery charging voltage shall have zero AC (ripple) content.
E. For single UPS systems, the battery system shall consist of a minimum of 4 strings of multiple cells.
F. For all the above battery system arrangements, the batteries shall be configured so that in the event of a battery malfunction the affected string is automatically isolated from the system thereby ensuring battery autonomy is retained.
G. A fully discharged battery system shall be capable of being recharged to 80% of the UPS output capacity within a maximum period of 10 times the normal total discharge time period.
H. The UPS DC bus voltage shall be variable whereby the number of battery blocks can be adjusted between 20 to 50 (12 Vdc blocks) or 40 to 100 (6 Vdc blocks) depending on the power range and to enable the battery system to be optimised for size and cost.

3. Elimination Criteria

- If any of the in-scope capabilities are not met the Tenderer will be eliminated.
- Written proof that Tenderer are a Service Partner and Value-Added Reseller of the UPS Batteries and/or UPS unit.
- Written quotation of an all-inclusive comprehensive narrative quote/fees for the above hardware, installation, commissioning services, including service warranties and guarantees, if applicable; and
- Written proof of 2 (two) references of similar work done.

4. Site Visit at Parow Head Office

A site inspection visit is arranged for **Tuesday, 10 October 2023 @ 15h00** for all interested parties. Tenderers to provide the names and ID numbers of attendees in order to arrange the necessary permits. All interested parties must submit their names and ID numbers by latest 15h00 on ***Monday, 09 October 2023***. See Tender Notice.

5. Enquiries

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

Closing date: 18 October 2023 @ 11h00.