Terms of Reference: Provision of Power Backup System for Starlink Standard Hardware

1. Introduction

This document outlines the Terms of Reference (TOR) for the provision and installation of a reliable power backup system to support Starlink Standard hardware. The system is required to ensure uninterrupted internet connectivity during periods of mains power outages or fluctuations. This is crucial for **critical communication, business continuity, and remote operations.**

2. Objectives

The primary objectives of this project are:

- To provide a reliable and efficient power backup solution for Starlink Standard hardware.
- To ensure seamless operation of the Starlink system during power outages.
- To minimize downtime and maintain consistent internet connectivity.
- To provide a system that is scalable and adaptable to potential future expansion.
- To ensure the system is installed and commissioned safely and professionally.

3. Scope of Work

The selected vendor shall be responsible for:

- **System Design and Engineering:**
  - Conduct a site assessment to determine power requirements and environmental conditions.
  - Design a suitable power backup system, including battery capacity, inverter specifications, and protection mechanisms.
  - Provide detailed technical specifications and schematics for the proposed system.
  - Ensure the system is compatible with the power requirements of the Starlink Standard hardware (including the Starlink dish and router).
- **Equipment Procurement and Supply:**
  - Supply all necessary equipment, including batteries, inverter, surge protectors, cabling, and mounting hardware.
  - Ensure all equipment is of high quality and meets relevant industry standards.
  - Provide detailed datasheets and warranty information for all supplied equipment.
- **Installation and Commissioning:**
  - Install the power backup system in a safe and professional manner, adhering to all applicable electrical codes and regulations.
  - Connect the Starlink Standard hardware to the backup system.
  - Test the system thoroughly to ensure proper operation and performance.

    - Provide comprehensive training to designated personnel on the operation and maintenance of the system.
- **Documentation and Training:**
    - Provide detailed documentation, including installation manuals, operating procedures, and maintenance schedules.
    - Conduct training sessions for designated personnel on the operation, maintenance, and troubleshooting of the system.
    - Provide a list of recommended spare parts.
- **Warranty and Support:**
    - Provide a comprehensive warranty for all supplied equipment and workmanship.
    - Offer ongoing technical support and maintenance services.
    - Provide estimated response times for support requests.

4. Technical Requirements

The power backup system shall meet the following technical requirements:

- **Battery Capacity:** Sufficient battery capacity to provide backup power for a minimum of **24 hours** at the rated power consumption of the Starlink Standard hardware.
- **Inverter:**
    - Pure sine wave inverter to ensure compatibility with sensitive electronic equipment.
    - Power rating sufficient to handle the peak power consumption of the Starlink system.
    - Automatic transfer switch (ATS) to seamlessly switch between mains power and battery backup.
    - Overload and short-circuit protection.
- **Batteries:**
    - Deep-cycle batteries suitable for backup power applications.
    - Maintenance-free or low-maintenance design.
    - Long lifespan and high cycle life.
- **Protection:**
    - Surge protection to protect the Starlink hardware from voltage spikes.
    - Circuit breakers or fuses for overcurrent protection.
    - Low voltage cut-off to protect the batteries.
- **Environmental Considerations:**
    - System design to withstand the local environmental conditions (temperature, humidity, etc.).
    - Proper ventilation to prevent overheating.
- **Safety:**
    - All installations and materials must comply with local electrical safety regulations.
    - Clearly labelled equipment.

5. Vendor Qualifications

The vendor shall possess the following qualifications:

- Proven experience in the design, installation, and maintenance of power backup systems.
- Qualified and certified electricians and technicians.
- Demonstrated ability to deliver projects on time and within budget.
- Strong technical support and customer service capabilities.
- Provide contactable references.

6. Proposal Requirements

Vendors shall submit a comprehensive proposal that includes:

- Company profile and experience.
- Detailed technical proposal, including system design, specifications, and schematics.
- Bill of materials and cost breakdown.
- Installation and commissioning plan.
- Warranty and support information.
- Project timeline.
- References.

7. Evaluation Criteria

Proposals will be evaluated based on the following criteria:

- Technical compliance and suitability.
- Cost-effectiveness.
- Vendor experience and qualifications.
- Warranty and support services.
- Project timeline.

8. Site Visit

A site visit may be required to assess the site conditions and discuss the project requirements.

9. Contact Information

[**AF WCO/SS Procurement** afwcossprocurement@who.int **for inquiries and proposal submission.**]

10. Deadline for Submission

[**07th March 2025**]