Terms of Reference (TOR) for the Provision of Power Backup Solar 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

[**22nd March 2026**]