

Terms of Reference (TORs)

For

Solar Powered Borehole location and design system for TA Masumbankhunda, Lilongwe district

1. Background

Habitat for Humanity Malawi (HFHM), affiliated to Habitat for Humanity International is a non-profit Christian organization aiming at improving housing conditions in Malawi. HFHM was established in Malawi in 1986 and has assisted over 75,000 families through different housing solutions. In addition to housing, HFHM has undertaken Water, Sanitation and Hygiene (WASH) projects in peri-urban and rural areas of Lilongwe and Thyolo districts.

With funding from The Federal Ministry for Economic Co-operation and Development (BMZ) and in partnership with Habitat for Humanity Deutschland, HFHM is embarking on a project to provide safe water to 8 communities of TA Masumbankhunda in Lilongwe district through Solar reticulated system.

2. Purpose for the works

2.1. To support with the survey, design and possible location of the system

Feasibility studies involving topographical surveys and expert investigations were conducted on 16 communities that were recommended for the construction of reticulated water supply systems and construction of solar-powered (high yielding boreholes). The 16 communities comprised four geographically dispersed locations namely: Kapote (4), Mpani (5), Chinseu (3) and Masumbathumbwi (4). It is therefore from this background that HFHM is seeking a consultant to confirm these 4 geographical locations and get a suitable location for a solar powered borehole. Then the consultant will be required to design one system that can supply water to 8 surrounding communities.

2.2. To develop a detailed BOQ for the works

The consultant will be expected to develop a detailed BOQ which can be used by the contractor who will be assigned to do the works. Specifics for the BOQ will be shared as per recommendations from the feasibility study. See annex 1 below

2.3. Hydrogeological Supervision Of Drilling Works for Solar Powered Deep Well

Below are some of the specific tasks that will be expected during drilling works and installation of the solar powered water reticulation system:

- Supervision of construction works for the solar water pumping system including the provision of monthly progress report and final report with visual documentation.
- Lead in all site meetings
- Ensure presence at all times during drilling works. The driller shall not proceed with works in the absence of the supervising entity.
- Ensure that all required parameters are being recorded appropriately and safely kept.
- Check quality of materials and workmanship during installation of the solar powered water reticulation system.
- Ensure a durable, effective, and functional water distribution system in all 8 communities.
- Coordinate the collection of water and geology samples and their testing as required.
- Report to Habitat for Humanity Malawi and the District Water Office on the progress of works
- Ensure the completion of the construction of the solar water pumping system within the timeframe of the project.
- Ensure and supervise the compilation of the Operation and Maintenance (O&M) manual and training of Water Users Association by the Contractor, as part of the handover process.
- Ensure observance of health and safety measures during all stages of construction works.
- Preparing monthly progress reports to be submitted at the beginning of each subsequent month, in addition to a completion report at the end of the project.
- Approving materials supplied by the Contractor, based on the specifications.
- Conduct pumping tests during drilling works.
- Report writing for the works conducted (The data to be collected should be as per NWRA Regulations and data required in the Water Rights/Permits.)
- Inspection of works and checking materials used and their quantities.
- Collection of hydrogeological data generated.
- On-site modifications of the borehole design and facilitating discussions with villagers who are the beneficiaries.

3. Objective of the works

The objective is to conduct a survey, design the system and develop a BID and BOQ for the system

3.1. The specific objectives are:

- To confirm a suitable location for a solar powered borehole
- Conduct hydrogeological survey
- To design and develop a BOQ for the system

4. Deliverables/Expected Outputs

- Conduct hydrogeological survey
- Submit a detailed drawing and design for the solar powered system.
- Submit a detailed BOQ and bid for the whole system.

5. Duration and Timing

Hydrogeological supervision will be aligned to the drilling works. Design, survey and development of BID and BOQ should be completed in 30 calendar days.

6. Eligibility/Qualification of Consultants

The consultant shall have the following qualifications and experience in;

- Conducting geophysical assessment.
- Experience in solar powered reticulated system of high complexity
- Well conversant in software designs like Autocad
- Background in hydrogeology
- Experience in 3 similar exercise (with proof of evidence) for the past 3 years

7. Submission

Interested consultants or companies should submit their technical, timeline and financial offer by Tuesday 13th February 2024. Bids are supposed to be submitted physically at HFHM offices in Lilongwe