Terms of Reference (ToR) for Consultancy Services
For Design of Two number of Solar Operated Production Well and Mid-Scale Chlorinated Water Network

1.0 Background

Village Education Resource Center (VERC) has been implementing a WASH project titled “Improved WASH Services to the Myanmar Refugees Population in Ukhiya Upazila, Cox's Bazar District” in the selected camp 8E & 8W areas. The one of the major objectives of the project is to ensure safe water supply among the targeted Myanmar Refugees Population through the installation of new water distribution system. To ensure the safe running water supply facilities, a need has arisen to conduct a study with the intent to find out appropriate design of water distribution facilities in selected camps locations. From this realizing, this Terms of Reference (ToR) has been developed for the external consultant(s)/firms in whom the expectations and outcomes of the study have clearly been outlined.

To ensure sufficient quantities of safe water throughout year for the Rohingyas there is a need to find an optimal technical solutions of safe water supply resulted into a mitigation plan to construct chlorinated centralized water supply networks in the camp fed by deep production boreholes (min. 700ft) in reaching the unconfined or confined aquifer. Behind this backdrop, Village Education Resource Center (VERC) is seeking the services of a qualified agency to design/drawings/ layout and Piped Water Supply Systems with T-95 reservoir (PWSS) and their chlorination treatment systems including Operation and Maintenance and Water Safety Plan modalities.

2.0 Objective

The broad objective of this assignment is to develop two design of production well and Mid-Scale Chlorinated Water Network according with the WASH sector standard (MASTER PLAN) and provide a detail description of design of component the selected Rohingya camps in Ukhiya, Cox's Bazar.

2.1 Specific Objectives

The specific objectives of this assignment are as follows:

- To prepare design and working drawing of Mid-Scale Chlorinated Water Network of the selected camp areas.

- To conduct topography survey with GIS mapping of relevant features for design water distribution system including physical features map, digital elevation model, pipe trenching, laying, pressure testing, access for cleaning/repair (incl. air/scourvalves), pumping, water quality monitoring; and fire-fighting capacity, household/communal water points, household collection and storage capacity following the sector standards.

- To design solar power supply system with alternative power options for any emergency

- To the complete design and detail engineering drawing for the production well, Borelog and water distribution network including indication of ground levels, diameter of pipes, longitudinal sections, general components and critical components with all the design calculations etc.
2.2 Scope of work

- To review the current capacity of production well through obtaining existing data/borelog available and pumping test, suggest any changes considers appropriate and based on the secondary data analysis of hydraulic of existing system designs. To determine their compliance with the agreed parameters.

- To review the design criteria as per sector standard including per person water consumption, tap stand standard, depleting ground water, etc.

- To select the borehole location sites based on hydrogeological and water quality secondary data, site selection criteria, agreed by UNICEF as well as in consultation with CIC and community.

- To identify the water treatment requirement based on water quality analysis in case of Mid-Scale chlorinated water supply network (MCWSN), identify the target communities and conduct a gender sensitive community consultation, for the tap stand access, design and location with the support of VERC.

- To identify the location of all infrastructure, assets, pipeline and access routes and outline design of scheme and its layout plan;

- To develop context specific design, drawing and detail cost estimates under the guidance VERC and UNICEF.

- To provide environmental management plant for proposed physical works.

- To provide cost analysis for capital cost, operation and maintenance and life cycle costs;

- To prepare the BoQ and technical specifications in line with Government’s procurement procedures and guidelines;

- To develop a Water Safety Plan for each of the water supply schemes and ensure involvement of user groups through participatory capacity building approaches through motivation, training and awareness creation to keep the supply safe and protected.

2.3 Deliverables

The Consultant/Consultant firm is expected to deliver a comprehensive and high quality analytical report to the abovementioned scope of work which included below:

- Completion of details assessment, hydrogeological survey, Topography survey, data analysis, community consultation.

- Submission of all design and drawing/network layout drafting shall be carried out by computer aided design and drafting systems.

3.0 Timeframe

The total duration of the assignment will be 10 (ten) weeks after signing of the contract. The commencement of the services is expected to be started by May 2019.

4.0 Qualifications

The Consultant/consulting firm should have at least the following qualification of key personnel:

- Master's degree/Ph.D. in Civil Engineering/Water Supply Engineering or equivalent fields having at least 10 years’ experience in the related field;

- Experience in design rural drinking water supply preparation of tender document with detail technical specification and BoQs;

- Strong technical background in water supply infrastructure, production well, environmental safeguards, etc.;
• Report writing skill in English will be desired.

5.0 Guideline for Proposal Submission

The proposal (duly signed) should be comprised with the following sections and given page limit. Proposal should be submitted to Village Education Resource Center (VERC), B-30, Ekhlas uddin khan road, Anandapur, Savar, Dhaka-1340 duly signed by mentioning "Consultancy Services for Design of Solar power operated Production Well and Mid-Scale Chlorinated Water Network" in the subject line by 2 May 2019 within 5:00 PM.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Maximum Page Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Proposal</td>
<td></td>
</tr>
<tr>
<td>Cover Page</td>
<td>1 Page</td>
</tr>
<tr>
<td>Content of the Report</td>
<td>2 page</td>
</tr>
<tr>
<td>Table of Content</td>
<td>1 Page</td>
</tr>
<tr>
<td>Understanding of the Assignment</td>
<td>3 Page</td>
</tr>
<tr>
<td>(Without copying from the ToR content)</td>
<td></td>
</tr>
<tr>
<td>Proposed Methodology and experience in leading similar evaluation work</td>
<td>3 Pages</td>
</tr>
<tr>
<td>Work Schedule</td>
<td>1 Page</td>
</tr>
<tr>
<td>Any other relevant information (if required)</td>
<td>3 Pages</td>
</tr>
</tbody>
</table>

**Financial Proposal**

Budget detailing out

- Consultancy days and fees
- Travel and accommodation
- Any other expenditure (please mention nature of expenditure)
- VAT and Tax will be deducted as per govt. rule.
- Consultant should submit his/her CV along with a copy of valid TIN/BIN certificate.
- Total amount in BDT

6.0 Evaluation Process

In response to the invitation, the consultant / consulting firm will have to submit a technical proposal as per the ‘Terms of Reference’ and a financial proposal. The selection committee will evaluate both the technical and financial proposal of the consultants / firms based on proposed tasks. The Consultant must submit the following documents along with Technical & Financial Proposal

- 2-page profile highlighting consulting firm / consultant’s related assignment completed with client names, contract persons and mobile numbers;
- Updated company profile, trade license, TIN certificate and any other relevant document(s), (if necessary);
7.0 Payment Modality

The consultant will report to the Village Education Resource Center (VERC) for each of the deliverables, and will work closely. VERC will make payments to the consulting firm/organization after deducting applicable TAX and VAT in compliance with the rules of Government of Bangladesh. Payment will be made to the agreed account based on the receipt of invoice after the successful completion of each of the following phases of the assignment:

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Payment schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upon Signing of the Contract</td>
<td>25% of the total budget</td>
</tr>
<tr>
<td>Upon submission of draft design, drawing and approved by VERC</td>
<td>25% of the total budget</td>
</tr>
<tr>
<td>Upon submission of the final design and drawing including all documents</td>
<td>50 % of the total budget</td>
</tr>
<tr>
<td>developed within the assignment period and approved by VERC</td>
<td></td>
</tr>
</tbody>
</table>