

## TERMS OF REFERENCE FOR INDIVIDUAL CONTRACTORS AND CONSULTANTS

<b>Title of Assignment</b>	<b>National Consultancy: Electrical Engineer</b>	
<b>Requesting Section</b>	WASH	
<b>Location</b>	Place of assignment: Lilongwe with travel to the field in the target districts	
	<input type="checkbox"/> Home Based <input checked="" type="checkbox"/> Office Based: Though the contractor is office based, s/he will be required to travel to the field for monitoring and supervision of activities.	
<b>Contract Duration</b>	4.5 Months	
<b>Number of working days</b>	87 working days	
<b>Planned Start and End Date</b>	<b>From:</b> 1 <sup>st</sup> October 2022	<b>To:</b> 15 <sup>th</sup> February 2023

### BACKGROUND

Reliable electricity is critical to enable basic primary healthcare, store, and deliver vaccines and other medication, make available clean water and sanitation facilities, create a comfortable learning environment, and offer essential services to meet the needs of children and their families during the day and at night. UNICEF Malawi is accelerating outcomes for children from renewable energy systems, especially as growing climate change impacts threaten current and future energy services. As such UNICEF Malawi is providing sustainable energy solutions using solar energy for the health facilities in rural areas of Malawi. The health facilities selected under this project are in hard to reach areas, as defined by the Ministry of Health and Population (MoHP), to have the maximum impact on the immunization programme in the country. It highlights approaches to promote long-term sustainability of these systems and the benefits of working across sectors to address multiple child rights in the most vulnerable areas in Malawi.

For the successful solarization of health facilities project in Malawi, there is a need for quality assurance at various levels. This includes quality assurance of equipment e.g. through the establishment and enforcement of product standards. However, high-quality products will only provide the desired services if renewable energy systems are designed, installed and maintained by highly qualified individuals. Cognizant of this need, UNICEF Malawi, decided to support the development of health facilities for renewable energy services by establishing a certification which requires the services of a qualified electrical Engineer with skills bias towards solar electricity and renewable energy to help supervising and monitoring.

### JUSTIFICATION

To date, various partners including GAVI, KfW, CDC, USAID, and the Global Fund are supporting the country with clean energy in the health sector to improve delivery of health services, including immunization. Solar and photovoltaic technologies are recognised as options for energy generation in Malawi, and they are being expanded and more widely promoted. This is improving the security of the power supply, while contributing significantly to the reduction of greenhouse gas emissions. For this reason, GAVI, through HSIS-III grant (2018-2021), has allocated USD 936,073 for procurement and installation of the solar system in health facilities and staff houses, and support quality assurance for installation of the solar systems. Therefore, WASH section needs the services of an Electrical Engineer to support supervision of solarization of health facilities project in Malawi.

### PURPOSE OF THE ASSIGNMENT

The main purpose of the consultancy assignment is to supervise and guide the solarization of health facilities in Malawi. Under the supervision and technical guidance from the WASH Specialist, the Individual Contractor will

be responsible for supervising the installation of the solar systems in the target health facilities across Malawi. This includes quality assurance of equipment e.g. through the establishment and enforcement of national and international product standards in accordance with UNICEF's Core Commitment for Children (CCCs) and Malawi government standards.

#### SCOPE OF WORK/OBJECTIVES

The Electrical Engineer Individual Contractor will be based in Lilongwe office with frequent monitoring visits to installation sites. Duties will include, but are not limited to the following:

1. Conduct site assessments to identify the needs for installation of the solar PV system
2. Supervise installation of the Solar PV system and its distribution network across the facilities including quality assurance
3. Preventive and corrective maintenance and technical inspection and commissioning of solar PV systems for both schools and health centers
4. Community engagement for the sustainability of the initiative
5. Liaise with MERA<sup>1</sup> and facilitate certification of solar installation as needed

#### REPORTING REQUIREMENTS

To whom will the Individual Contractor report (supervisory and any other reporting/ communication lines):

- UNICEF WASH Specialist

What type of reporting will be expected from the Individual Contractor and in what format/style will the submissions of reports/outputs be done:

- Monitoring reports on the progress and final report

How will Individual Contractor consult and deliver work and when will reporting be done:

- The individual contractor shall deliver the works through field monitoring visits, weekly updates, monthly reports and final contract completion report.

#### EXPECTED DELIVERABLES

In alignment with the scope of work as described above, the Individual Contractor will be expected to perform the following activities and deliverables as per the schedule and estimated dates below:

Task/Milestone	Deliverable/Outcome (e.g. Inception, progress, final reports, training material, workshop, etc.)	Estimated # of days	Planned Completion date	% of total fee payable
Supervision of installation of the PV system and quality assurance and to supervise the installation of electricity distribution network for schools	Progress report	21.75 Days	2 <sup>nd</sup> November 2022	25%

Supervision of installation of the PV system and quality assurance and to supervise the installation of electricity distribution network network for Health centers	Progress Report	21.75 Days	2 <sup>nd</sup> December 2022	25%
Preventive and corrective maintenance and technical inspection and commissioning of solar PV systems for both schools and health centers	Progress Report	21.75 days	5 <sup>th</sup> January 2023	25%
Community engagement for the sustainability of the initiative and preventive and corrective maintenance and post installation monitoring.	Progress Report and Final report	21.75 Days	6 <sup>th</sup> February 2023	25%

However, as the actual starting date may impact the dates estimated in the TOR, a detailed workplan with exact timeframes and actual delivery dates will be jointly agreed upon between the Individual Contractor and the supervisor upon contract signing.

#### PERFORMANCE INDICATORS FOR EVALUATION OF RESULTS

The performance of work will be evaluated based on the following indicators:

- Completion of tasks specified in TOR
- Compliance with the established deadlines for submission of deliverables
- Quality of work
- Demonstration of high standards in cooperation and communication with UNICEF and counterparts

#### PAYMENT SCHEDULE

All payments, without exception, will be made upon certification from the supervisor of the contract, upon satisfactory and quality completion of deliverables and receipt of the respective and approved invoice.

UNICEF will provide transport for approved official travels and living costs will be paid in accordance with UNICEF rates for actual and approved days on field travel.

#### DESIRED COMPETENCIES, TECHNICAL BACKGROUND AND EXPERIENCE

##### Academic qualification:

- ✓ Minimum of university degree in Electrical Engineering with a good experience in solar electricity and installations, those with a Bachelor's Degree in Engineering, Electrical Engineering, Science, or another related field will have an added advantage.
- ✓ Proof of being a MERA certified installer.

#### **Work experience required:**

- ✓ Minimum of 5 years of commercial PV system installation and design, permitting, construction, commissioning and operation and maintenance of solar systems
- ✓ Experience in providing technical support to energy-related projects with accountability for project performance and design
- ✓ Experience in value engineering of photovoltaic or other constructions projects

#### **Technical skills and knowledge required in the following technical areas:**

- ✓ Strong knowledge of photovoltaic system installation and design including optimizing system components for energy production
- ✓ Good working knowledge of standard solar utility process for interconnection approval and design requirements
- ✓ Strong knowledge of solar electrical and structural design components and manufacturers

#### **Competencies required:**

- ✓ Good analytical, conceptual and writing skills
- ✓ Strong facilitation and coordination skills, including participatory group discussion
- ✓ Strong communication, advocacy and negotiation skills

#### **Languages:**

- ✓ Fluency in English (verbal and written) is required, including in the local language.

### **ADMINISTRATIVE ISSUES**

UNICEF will regularly communicate with the Individual Contractor and provide feedback and guidance and necessary support so to achieve objectives of the work, as well as remain aware of any upcoming issues related to the performance and quality of work.

As per policy on individual contractors, the individual will be expected to complete a list of mandatory training, including policies on Prohibiting and Combatting Fraud and Corruption; Prohibition of discrimination, harassment, sexual harassment and abuse of authority and other relevant policies for their information and acknowledgment upon acceptance of the offer.

Prior to the issuance of the official contract, the individual contractor is requested to complete the applicable mandatory trainings as well as self-certify that he/she has received the required primary series' of the WHO- 'emergency use listed' (EUL) approved COVID-19 vaccines and can demonstrate proof of a valid vaccination certificate.

The Individual Contractor will be expected to work in the office with frequent travel to the field.

An office space will be provided within the WASH section and the Individual Contractor will have to use her/his personal laptop. There will be travels to the field to supervise and guide the contractors on need basis and the Individual Contractor is expected to submit his/her monthly travel plan for approval.

### **CONDITIONS**

- The consultancy will be on a short-term arrangement basis over a period of 4.5 months with 87 working days to complete the assignment.
- The candidate selected will be governed by and subject to UNICEF's General Terms and Conditions for individual contracts.
- No contract may commence unless the contract is signed by both UNICEF and the Individual Contractor.

- The Individual Contractor will be based in Lilongwe with field travels.
- The Individual Contractor will be paid an all-inclusive fee (stationery, communication and other miscellaneous expenses) as per the stipulated deliverable and payment schedule.
- Under the consultancy agreements, a month is defined as 21.75 working days, and fees are prorated accordingly for actual days worked.
- The Individual Contractor is not entitled to payment for overtime, weekends or public holidays.
- The Individual Contractor will receive Paid Time Off (PTO) credit at the rate of one- and one-half days (1.5 days) for each full month of service, to be credited on the last calendar day of the month.
- Living costs for approved field travel will be covered in accordance with UNICEF's rules and tariffs.
- Transport will be provided by UNICEF to the Individual Contractor during in-country field travel, if planned and approved.
- No travel should take place without an email travel authorization from section prior to the commencement of the journey from the duty station.
- Standard UNICEF procedures will apply for invoicing and all other financial management requirements set out in the contract.
- Standard penalty clauses will also apply for late and poor-quality deliverables. The supervisor of the contract will provide the Individual Contractor with the criteria for the evaluation of the quality of each deliverable.
- Additional details of UNICEF rules, regulations and conditions will be attached to the contract.
- The Individual Contractor will not have supervisory responsibilities or authority on UNICEF budget.
- Individuals engaged under a consultancy or individual contract will not be considered "staff members" under the Staff Regulations and Rules of the United Nations and UNICEF's policies and procedures, and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Individual Contractors. Individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.
- The assignment is an on-site/off-site support.

## HOW TO APPLY

Interested Individual Contractor should provide the following:

1. Curriculum Vitae
2. Proof of MERA certified installers
3. Brief technical proposal (no longer than five pages) demonstrating the Individual Contractor's understanding of the assignment and approach/methodology to the assignment
4. Financial proposal including a breakdown of their all-inclusive fees (including professional fees, stationery, communication, and other miscellaneous costs). Complete the attached form.



Financial  
Proposal.xlsx

5. References details