TERMS OF REFERENCE

Section:	Health Programme	Date:	19th August 2022
Title:	**Site assessments for determining energy needs and infrastructural condition of 272 Primary Health Clinics in Lebanon to create plans for solar PV electrification**	Duty station:	Beirut
Reporting to:	Health Specialist	Contract type:	Institutional Contract
Duration:	2 months	Start date:	1st September 2022

Section	Content
Background	In contribution to the UNICEF Strategic Plan 2022-2025, UNICEF Lebanon Country Office is committed to scaling up sustainable energy integration in priority programme areas (e.g., Health, Education, and related WASH interventions) with the goal of promoting positive social benefits for children and young people. Positive correlations between electricity access and health outcomes have been demonstrated during routine maternal, new-born and child health services and emergencies. The interruption in availability of electricity is a bottleneck in using life-saving equipment especially for new-borns and children which has resulted in many preventable deaths. Similarly, during the COVID-19 pandemic, electricity in health facilities is critical to treat patients and operate vital, lifesaving medical devices to manage cases. Health facilities with un-interrupted, stable, and suitable electricity supply are expected to have a higher performance in delivering health services. Besides enabling a proper cold chain and improving diagnostic and curative services, the availability of reliable electricity leads to a better administration of the health facilities and supports the access to better communication channels and data management. Access to reliable electricity in health facilities is therefore an important enabler of quality health, education and related WASH services and is necessary to meet the Sustainable Development Goals (SDGs) in energy, health, education, and WASH. Some of the solutions to increase energy access in health facilities include connecting to decentralized solutions such as mini-grids or stand-alone solar Photovoltaics (PV) systems. Decentralized solar energy solutions are promising options that can also simultaneously transform the sectors to a low carbon and climate resilient development pathway. This is a powerful benefit to children and young people in the face of a changing climate and degrading environment. With the objective to provide reliable electricity to the Primary health Clinics (PHCs) through solar PV systems, UNICEF Lebanon is carrying out a site assessment of 272* PHCs in Lebanon to determine the energy needs and infrastructure condition of the PHCs in order to prepare for next phase of solar installations. *: number of PHCs might be + or – 10 facilities on time of data collection.
Purpose and Objectives	The purpose of this consultancy is to carry out site assessments of 272 Primary Health Clinics (PHCs) in Lebanon, to determine the energy needs of the facilities and infrastructural information which will provide information to plan for solar PV installation project at the PHCs in the country. The general objectives of this consultancy are to:

	1. Collect energy needs data from 272 PHCs based on the template prepared by UNICEF and Ministry of Health 2. Collect infrastructural condition and site layout details to inform on solar PV installation plan 3. Create BOQs with costs for electrical wiring requirements of each of the facility Expected Results: 1. Detailed report containing energy needs and infrastructural information for each of the 272 PHCs 2. Detailed BOQ with costs for electrical wiring needs per each facility
Scope of work	UNICEF Lebanon seeks to engage a qualified contractor to conduct site assessments in at 272 PHCs in the country. **The list of sites is attached as Annex 1** with this TOR. **UNICEF aims to complete all 272 PHCs within 6 weeks for which contractor is allowed to use multiple teams (minimum 5) simultaneously to cover PHC assessment within allotted timeframe.** The site assessments will be carried out based on the **template, attached as Annex 2**, created by UNICEF Lebanon in discussions with Ministry of Health. This template already includes all the parameters deemed necessary to be collected from the sites that will allow UNICEF and future solar PV system suppliers to size the solar PV system and calculate the material required per site. The detailed services required under this assignment are: **1. TASK 1: Collect Health facility level data using the template attached as Annex 2:** The company will use the prepared Site Assessment Template created by UNICEF and Ministry of Health to collect information from the health facilities. The key points for data collection are • **All collected data will be submitted for each facility to UNICEF in Excel format.** • **All required photos will be submitted in jpeg or similar format organized in folder named after the facility name** The following type of information will be collected: **Site/Infrastructure Assessment:** • Facility profile: verify the existence of the health facilities and schools at the provided location, basic information, GPS coordinates of the facility, etc. • Record the names and contact details of key facility personnel and local government officials with a stake in the healthy functioning of the facilities • Building layout (dimensioned plan), structural condition, physical infrastructure integrity and suitability for the installation of solar PV system to power the facility and community receptivity, electrical power distribution system, etc. • Determine the network connectivity situation and level of mobile phone service (voice/text only, GPRS, 3G, 4G, none) at each facility (to determine if remote monitoring technology can be deployed at the site) • Describe the operation activity of the facility, including the operating hours, etc. • Describe the current level of functionality of the facility (fully functional, partially functional, etc.) and highlight key constraints to functionality (medicine, vaccinations, water supply, electricity supply, etc.) • Record the number of rooms, list the potential / earmarked electrical equipment per room and the expected daily usage pattern of electricity • Record the average number of patients/days, no. of beds, services provided, etc. for health facilities and number of students and the fraction of these students that live in a boarding arrangement at the school – these can help estimate the size of the system and the needs in terms of equipment use, mobile phone/device charging • Grid power availability (facilities and community), quality (reliability), connectivity arrangements, plans for grid supply in the community • Other additional assessment, as necessary.

	Detailed load assessment of the facilities (or kW requirement) to meet the existing and future demand for improved service delivery, including but not limited to the following: • The current electricity needs of the facility • Identify the types of services and associated electrical appliances that are deemed highest priority • Stock-take of existing energy consumption at facilities (including electricity via diesel generators, batteries, or other means, and the use of any liquid or solid fuels). This stock-taking should: • List electrical appliances present at the site, their Wattage, and hours of usage in daytime and night-time • Describe the current source of lighting and electricity and how it is perceived in terms of reliability and service quality. Provide photographs of existing lighting sources (e.g., candle, kerosene lamp, battery-powered torch, etc.) and/or any existing electricity source (e.g., diesel generator or solar system). Record the age of the existing diesel generator (if any), cost of installing the energy system and the average energy expenditure (per month) on the different energy sources, and O&M costs. • The amount of downtime due to lack of fuel budget or generator being out of order • If one or more solar PV systems already exist, record information regarding their specifications (1) A picture of the solar panel specifications 2) Total number of panels, number of panels in series, and number of series in parallel. 3) Inclination and azimuth of solar panel array 4) calculated PV array peak output voltage, current, and power (wattage) (if available). 5) charge controller size and type. 6) battery size, type, age, and typical depth of discharge 7) battery inverter/variable frequency drive/3-phase inverter size and type (if used)) and typical usage profile • Record data on refrigeration used (model(s), size, and nameplate data). If the refrigerator is powered by a separate solar electric system, record solar panel peak Wattage (Wp) • For other equipment already powered by solar, length, terms, and conditions of the operation and maintenance contract, age of the system, battery life, etc. • Identify loads not suited to being powered from a solar PV system All the above points are already included in the questions in Template attached as Annex 2. 2. **TASK 2: Create site floor layouts for each facility** highlighting all the rooms of the facility with dimensions in meter, with their purpose. The site layout should identify the location for installation of solar PV panels and suitable location for installation of controller, inverter, and batteries. The criteria for selection of the suitable places will be part of the template (Annex 2) instructions. 3. **TASK 3: Prepare Bill of Quantity with costing** (based on materials available in the local market) to install electrical wiring, lights and power sockets at each of the facility. The BOQs should contain all the components that will allow the electricity produced for solar PV system to be distributed to the entire (all the rooms) of the facility. It should include the components such as the distribution board, MCBs, lighting fixtures, power sockets, ground wire, wiring etc. **Note that this task is only focused on the electrical distribution in the PHCs and does not cover the solar equipment BOQ**. 4. **TASK 4: Create report** (word and pdf) for each site as per the template (Annex 2) format
Stakeholders	• UNICEF and Health Sector Partners • Ministry of Health • UNICEF Health HQ
Reference List	NA
Deliverables and Schedules	**Deliverables** |

	# of working days	Sept 2022	Oct 2022	Nov 2022
Deliverable 1: • Conduct preliminary site assessments at 10 PHCs in Lebanon. • Submit the collected data in excel format with site floor layouts and photos arranged in folders per site • Submit the BOQs and site report for 10 PHCs as per the template.	5	x		
Deliverable 2: • Conduct site assessments at 80 PHCs in Lebanon. • Submit the collected data in excel format with site floor layouts and photos arranged in folders per site • Submit the BOQs and site report for 80 PHCs as per the template.	10	x	x	
Deliverable 3: • Conduct site assessments at 80 PHCs in Lebanon. • Submit the collected data in excel format with site floor layouts and photos arranged in folders per site • Submit the BOQs and site report for 80 PHCs as per the template.	10		x	
Deliverable 4: • Conduct site assessments at 80 PHCs in Lebanon. • Submit the collected data in excel format with site floor layouts and photos arranged in folders per site • Submit the BOQs and site report for 80 PHCs as per the template.	10		x	x
Deliverable 5: • Conduct site assessments at 22 PHCs in Lebanon. • Submit the collected data in excel format with site floor layouts and photos arranged in folders per site • Submit the BOQs and site report for all 272 PHCs as per the template.	5			x
Total working days:	40 days			

***** Materials under this assignment are the property of UNICEF.**

*****UNICEF needs to approve deliverables prior to moving to a next phase).**

Timing	Duration of assignment: 40 days (within a period of 2 months).

	Start date: 1st September 2022
Reporting Requirements	The Contractor will report directly to UNICEF Lebanon's Health Team in coordination with colleagues from the Ministry of Health and UNICEF Health HQ. The contractor will coordinate with Ministry of Public Health PHC and Dispensaries departments, with main support from EPI manager at MOPH, and UNICEF Health team and other stakeholders as advised by UNICEF Immunization specialist. A technical and financial proposal should be resubmitted by the contractor. The technical and financial proposals should be submitted in separate envelopes. No financial information should be included in the technical proposal. Below is a list of items that should be submitted in the separate technical and financial proposals. Technical Proposal should include the following: • Company Profile Document & registration documents • List of previous similar project undertaken • Minimum 3 reference from previous clients (UN agency or other international organisations if available) • Solar PV installations work carried out in previous 3 years • Workplan for implementation of the contract • Methodology • Team Composition • CV's of all proposed team members Financial Proposal should include all costs associated with implementation of the TOR, including: Bidders are expected to submit a lump sum financial proposal to complete the entire contract based on the terms of reference. UNICEF does not provide transport, accommodation, insurance or other logistical support for the Suppliers' staff and all costs should be included in the lump sum financial proposal. These lines of communication and liaison will remain open for regular contact throughout the assignment, and staff will remain available to assist and participate in the assignment as necessary or appropriate. Ultimately however, the institution is expected to have the self-sufficiency to work independently in Lebanon.
Profile Requirements	The company should consist of a team of full-time individuals who will be coordinating directly with the Health Team at the UNICEF LCO. The applicants should have a combination of technical skills of both solar PV installations data collection and electrical wiring. Fluency in Arabic and English amongst the team overall is a must. **To finish the assessments of all 272 PHCs within the allotted timeframe, the company should propose multiple teams (not less than 5) with qualified team members not less than 2 in each team.** The composition of the team would need to combine the following expected profiles and skills: **The Project manager** will be responsible to ensure timely and effective implementation of the contract. The proposed person should have experience of at least 7 years of work experience in conducting similar assignments. **Solar Technician or Engineer**: will be responsible to survey the PHCs and collect all the relevant energy and ideal installation location information according to the template **Electrical Technician or Engineer**: will be responsible to survey the PHCs and determine the needed material for electrical wiring and prepare BOQs for each PHC

<table>
<tr><td></td><td>All other proposed personnel should have qualifications and experience applicable to the position that they are being proposed for. The proposed personnel should also have to capacity to collect and organize data effectively

Experience for all technicians & engineer:

• Experience in solar and electrical works
• Minimum 5 years' experience in delivery of similar services
• Degrees from Quality institutions

Languages:

Mastering Arabic and English reading, writing and speaking.</td></tr>
<tr><td>Evaluation Process and Method</td><td>Technical Evaluation Criteria:
• Service Providers are encouraged to ensure they meet the below requested evaluation and qualification criteria;
• Technical evaluation is composed of 80 points;
• Minimum successful score for the technical evaluation is 56 points.
<table>
<tr><td>Evaluation criteria</td><td></td><td></td><td></td></tr>
<tr><td>Criteria</td><td>Marks</td><td>Benchmarks</td><td>Comments</td></tr>
<tr><td>Overall concord between the Request for Proposals and the submission, with clear methodology and approach based on understanding of UNICEF requirements.</td><td>10</td><td>Briefly outline the proposed methodology for the assignment including a specific timeline vis a vis the assignment deliverables</td><td></td></tr>
<tr><td>Expertise of the company (or subcontracted companies) on solar and electrical works</td><td>20</td><td>• Provision of projects with solar and electrical works in last 3 years. Max: 10 points
• Portfolio of Sub contracted company/company. 10 points for company portfolio.</td><td></td></tr>
<tr><td>Expertise of the team in solar, electrical and data collection works</td><td>20</td><td>Resume of team leader and other team members.</td><td></td></tr>
<tr><td>Previous experience working closely with UN agencies or similar large-scale organizations.</td><td>10</td><td>Provide reference letters or project reports/ evaluations of previous partnership with agencies on similar projects</td><td></td></tr>
<tr><td>Work Plan to cover site assessments of all 272 PHC within timeframe</td><td>20</td><td>Provide detailed workplan with proposed number of teams and team composition. Max points 20 for plan to complete all work within 6 weeks</td><td></td></tr>
<tr><td>Total</td><td>80</td><td></td><td></td></tr>
</table>
Financial Evaluation Criteria:
• Only bidders obtaining the minimum pass mark in the technical evaluation (56 points) will be considered for the financial evaluation;
Financial evaluation is composed of 20 points. The lowest financial offer will obtain 20 points.</td></tr>
<tr><td>Administrative Issues & Logistical Activity</td><td><u>Administrative issues:</u>
• The overall review process will be led by the UNICEF LCO.</td></tr>
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	• The team will be working directly with UNICEF LCO and report to this organization for technical guidance and approval of draft and final products. • The institution should have a team leader who will closely coordinate with the Health Team at UNICEF LCO. • Assignment to be a combination of office/desk work and field work; with frequent consultations, meetings and site visits throughout Beirut and the rest of Lebanon. • The Contractor is expected to be able to work independently to ensure the smooth running of the assignment. • The Contractor will need to organize its logistics for meetings, workshops and FGDs, as well as transport means needed for the field visits and local level consultations. • The Contractor is required to provide his/her own computer and communications equipment (laptops, telephones, etc.). • The Contractor is not entitled to payment of overtime. All remuneration must be within the contract agreement. • No contract may commence unless the contract is signed by both UNICEF and the Contractor. <u>Logistical Activity:</u> Any travels shall be included in the costed proposal, data collection related or others. The unit cost for each travel shall be stated in the financial proposal. All the meetings, consultations and interviews will be organized by the Contractor together with UNICEF Lebanon and its partners who will support in organizing and coordinating relevant meetings with partners and other key stakeholders (trainees, etc.,).
Budget*	This Project falls under UNICEF's Health and Nutrition Programme and is funded by ACT-A HAC Contract is budgeted based on a contractor team comprising of at least 8 individuals, with professional levels with more than 5 years of experience. Payment will be made at a rate of: Deliverable 1: 15% Deliverable 2: 20% Deliverable 3 &4: 35% Deliverable 5: 30% Budget (maximum):