

Terms of Reference

National or International consultant: National Consultant

Title of consultancy: Procurement for the services of an Individual Consultant (Electrical Engineering or related discipline) for the MERP project

Project Title: 'Municipal Empowerment and Resilience Project' (MERP)

Period of assignment/services: 22 days spread over the period between December 2021 and March 2022 (extension may be applied if deemed necessary).

Is this a LTA (yes/no): No

I. Background

The impact of the Syrian Crisis on Lebanon has reached an unprecedented scale in the history of complex, displacement-driven emergencies and has placed tremendous pressure on Lebanon's services and resources, particularly at the decentralized level.

The above situation is further exacerbated by the current economic, political and health crisis. Lebanon is facing one of the gravest economic downturns since the end of the civil war in the early nineties.

The 'Municipal Empowerment and Resilience Project' (MERP) is a joint initiative by the United Nations Development Programme (UNDP) and the United Nations Human Settlement Programme (UN-Habitat). The Project is implemented in partnership with the Ministry of Interior and Municipalities (MoIM) and is funded by the European Union (EU) through EU Regional Trust Fund in Response to the Syrian Crisis, the 'Madad Fund'.

The Project aims to strengthen the long-term resilience of subnational authorities in Lebanon as well as host communities, refugees and displaced persons affected by the Syrian Crisis. To achieve this, the Project engages in a three-pronged approach: MERP aims to 1. strengthen processes, procedures and practices to enable Union of Municipalities (UoMs) and municipalities to deliver effective and efficient services in a transparent and accountable manner; 2. empower UoMs and municipalities to facilitate local economic development (LED) and to deliver basic services that address the needs of both host and refugee populations, and; 3. support communities to engage in municipal processes and procedures to ensure that UoMs and municipalities are responsive to their needs.

The Project's geographic areas of intervention are the Urban Community Al Fayhaa, the federation of Municipalities of the Northern and Coastal Matn, and the UoM of Tyre with a total of around 92 potential partner municipalities (see table 1, below).

Table 1 MERP Geographical Focus Area

District	# of Municipalities in the district	Targeted UoM	# of municipalities in the UoM
Tripoli	3 (Qalamoun, Mina and Tripoli)	Urban Community Al Fayhaa	4
Matn	54	Federation of Municipalities of the Northern and Coastal Matn	33
Tyre	62	Union of Tyre Municipalities	55

In response to the current situation, the Project will support basic service/LED interventions that aim to address the immediate needs of host, displaced and refugee communities. Focus of the projects will be on basic services and LED interventions under the mandate of municipalities and Unions of Municipalities in line with municipal legislation (article 49, 50 and 51 of Legislative Decree 118/1977). MERP will prioritize basic services and LED

projects that demonstrate integrated economic, social and environment (sustainable development) benefits. This includes projects that respond to the COVID-19 pandemic and/or aim to mitigate the economic impact of the health crisis.

II. Scope of work

As part of its basic service/LED interventions, MERP identified three municipal basic service/LED interventions that focus on solar PV systems.

Deir Qanoun El Naher municipality currently generates its own electricity for its residents through eight generators. However, the municipality is facing multiple problems due to the current crisis in the country. The operational and maintenance cost of the generators is very high, limited supply of fuel, increasing demand for electricity due to lengthy black-out periods, high electricity bills for residents and increased public safety concerns in the streets due to the lack of public lighting. Deir Qanoun El Naher has proposed a large-scale on-grid PV system to meet the towns' electricity needs. The proposed system will produce 400 kWp. The generated energy will be distributed as an alternative source of electricity through the local network. This will reduce the dependency on the diesel generators, decreasing their share at initial stage from 1,800 to 1,400 kW. Four-hundred streetlights will be replaced with LED lamps in order to provide lights during the night

In **Nabay**, the municipality considers addressing the power/energy issues as top priority. Nabay Solar Project tackles directly the basic need of the community. The project consists of supply and installation of solar photovoltaic power plant in Nabay with a solar capacity of 76 kWp and an energy storage nominal capacity of 714 kWh of which 50% are intended to be used in every cycle during nighttime. The solar off-grid system is with modular on-demand feeding options ranging from streetlights to on grid and thus contributing to several socio-economic and environmental needs of the community.

The municipality of **Srifa** is proposing to install a solar panel system on the roof of the building containing the public health center, the municipality of Srifa and the public Library in the town. This will decrease the cost of fuel and generators; and will also allow for prolonged hours of service.

The three sites for solar PV are identified in the table below.

#	Municipality Name	Region	PV System Type	Battery system/storage capacity	Approximate preliminary capacity
1	Deir Qanoun El Naher	South Lebanon	On Grid PV Solar System- Diesel System	No Battery System	400 kWp (to be validated)
2	Nabay	Mount Lebanon	PV Solar system with storage	Battery System of capacity 714 kWh (to be validated)	76 KWp (to be validated)
2	Srifa	South Lebanon	To be assessed	To be assessed	To be assessed

III. Key Tasks and Responsibilities

Under the overall guidance UNDP/MERP team and in close collaboration with the CEDRO Project Manager, the National Consultant will assume the lead responsibility of preparing the outputs mentioned herewith.

Prepare the full technical part of the tender document for these three sites, including the full bill of quantifies (BOQ), technical specifications with respective single line diagrams (SLD), and also assist the UNDP in evaluation of the tender submissions.

The tasks that are requested from the consultant are:

- **Task 1.** Review project proposals and collect needed data and information on the three sites, including thorough site visits to each municipality in order to form a preliminary outlook on the feasibility, required design, capacity and operations and maintenance estimates, including in terms of battery and LED light assessment, as applicable.
- **Task 2.** Assess technical feasibility and return of investment (e.g. Benefit-cost ratio, Internal Rate of Return) of the three proposals and provide operations and maintenance estimates for each project.
- **Task 3.** Draft the full detailed design of each selected site, including all the required Bill of Quantities and specifications, evaluation criteria and procurement requirements (including Single Line Diagrams, and conduct market search for availability of products, average prices, applicable warranties, and develop a list of potential suppliers.
- **Task 4.** Assist the UNDP team in the evaluation of all the offers submitted in accordance with the criteria and evaluation form set in Task 2.

IV. Expected Outputs and Deliverables

The deliverables are to be submitted in stages of draft and final.

Each deliverable is to be submitted in the form of a soft copy to the MERP Project Manager who will review with support from CEDRO Project Manager. The time needed by the MERP Project Management for the review of each submitted deliverable is 5 working days. The Required deliverables under the terms of reference are:

Deliverables/ Outputs	Estimated Duration to Complete	Target Due Dates	Review and Approvals Required
Deir Qanoun El Naher			
Task 1: review proposals, data collection and site assessment visits.	2 person-days	Two weeks after contract signature	MERP Project Manager
Task 2: Feasibility assessments	2 person-days	End month 1 after contract signature	Project Manager
Task 3: Full tender document (BOQ, specifications, evaluation criteria and requirements) and list of products, average prices, warranties, and suppliers, including for batteries and LED lights, as required.	2 person-days	End month 2 after contract signature	Project Manager
Task 4: Bids evaluation report	1 person-days	End month 4 after contract signature	Project Manager
Nabay			
Task 1: review proposals, data collection and site visits.	2 person-days	Two weeks after contract signature	MERP Project Manager
Task 2: Feasibility assessments	2 persons days	End month 1 after contract signature	Project Manager
Task 3: Full tender document (BOQ, specifications, evaluation criteria and requirements) and list of products, average prices, warranties, and suppliers, including for batteries and LED lights, as required.	2 person-days	End month 2 after contract signature	Project Manager
Task 4: Bids evaluation report	1 person-days	End month 5 after contract signature	Project Manager
Srifa			
Task 1: review proposals, data collection and site visits.	2 person-days	Two weeks after contract signature	MERP Project Manager

Task 2: Feasibility assessments	3 persons days	End month 1 after contract signature	Project Manager
Task 3: Full tender document (BOQ, specifications, evaluation criteria and requirements) and list of products, average prices, warranties, and suppliers, including for batteries and LED lights, as required.	2 person-days	End month 2 after contract signature	Project Manager
Task 4: Bids evaluation report	1 person-days	End month 4 after contract signature	Project Manager
Total days	22 days person days		

All deliverables (once finalized) should be handed out in three hard copies as well as one soft copy (word format and excel format for tables) and a PDF format for web publishing. If relevant, copies of high resolution maps and graphics should also be handed out to the project management team.

During the fulfillment of the assignment, the Consultant will ensure regular communication with the project team, and will ensure a timely delivery of the expected outputs and will regularly inform the project team of the progress as well as any obstacles that might occur.

V. Institutional arrangements

The Consultant shall report to UNDP on the tasks mentioned in section III; coordination meetings with UNDP/MERP Team shall be called for as needed.

VI. Duration of work

The assignment will be 22 working days spread out over a 4-month period from contract signature (estimated in December 2021) to March 2022.

VII. Duty station

Home-based with site visits when deemed necessary.

VIII. Requirements for experience and qualifications

I. Academic Qualifications:

- Bachelor's degree in Electrical Engineering or related discipline.
- Master's degree in Renewable Energy or related field is a plus.

II. Experience:

- Overall relevant experience in PV sector of not less than 10 years
- Previous experience in at least 5 similar projects in PV design and installation.
- Experience in LED Lights assessment (sizing, specs, budget estimation) and PV projects with Lithium batteries.
- List of projects detailing the consultant's scope of work along with completion date must be submitted for full evaluation grading.
- Experience in software related to solar PV design (e.g. PVsyst, Homer...)
- Experience in preparation of tender document and elaboration of technical specifications
- Experience in working with UNDP or other local or international non-governmental organizations on solar PV design and/or implementation.

III. Competencies:

- Good analytical and report-writing skills

- Commitment to team and cross-disciplinary work
- Emphasis on delivery of results and reacts well to constructive criticism
- Proficiency in English

IX. Presentation of Proposal and Offers

For purposes of generating Offers whose contents are uniformly presented and to facilitate their comparative analysis, it is best to recommend the preferred contents and presentation of the Offer to be submitted, as well as the format/sequencing of their presentation. The following documents may be requested:

- **Personal CV or P11**, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references;
- **Brief description** of why the individual considers him/herself as the most suitable for the assignment, and a methodology to complete the assignment.
- **Financial Proposal** that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs.

X. Scope of Price Proposal and Schedule of Payments

The contract will cover the amount payable for fees and foreseeable expenses, including all travel within Lebanon during missions. Proposal of costs must be expressed in Lump Sum Amount and must be "all-inclusive"¹;

The payment will be issued according to the following schedule:

Task	Deliverables	Target Due Dates	Payment Terms
1	Task 1: 3 review proposals, data collection and three site visits.	Two weeks after contract signature	First Payment: 37.5% of the contract value
	Task 2: Feasibility assessments	1 month after contract signature	
2	Task 3: Full tender document (BOQ, specifications, evaluation criteria and requirements) and list of products, average prices, warranties, and suppliers.	2 months after contract signature	Second Payment: 50% of the contract value
3	Task 4: Bids evaluation report	4 months after contract signature	Third Payment: 12.5% of the contract value

Payments will be issued upon satisfactory completion of the required deliverables and submission of the certificate of payment and corresponding documentation. Payment file shall include a summary of the tasks completed as well as report by the consultant and submitted to the MERP Project Manager.

XI. Criteria for selection of the best offers

The award of the Contract should be made to the individual Consultant whose offer has received the highest score out of the following criteria:

Technical Criteria weight: 70%

Financial Criteria weight: 30%

¹ The term "all inclusive" implies that all costs (professional fees, travel costs, living allowances, communications, consumables, etc.) that could possibly be incurred by the Contractor are already factored into the final amounts submitted in the proposal.

Only candidates obtaining a minimum technical score of 70 points would be considered for the financial evaluation.

Criteria	Weight	Max. Point
Technical Competence	70%	100
• Criteria A: Academic qualifications Bachelor's Degree: 10 Master's Degree and above: 20		20
• Criteria B: Years of relevant experience in the field Less than 7 years: 0 7 years: 21 8 to 10 years: 26 More than 10 years: 30		30
• Criteria C: Technical Experience Experience in at least 5 similar projects in PV design and installation: 15 Experience in LED Lights assessment (sizing, specs, budget estimation) and PV projects with Lithium batteries: 15 Experience in software related to solar PV design (e.g. PVsyst, Homer...): 10 Experience preparation of tender document and elaboration of technical specifications: 5 Experience with UN or international donor project(s) on solar PV design and/or implementation: 5		50
Financial (Lower Offer/Offer*100)	30%	100
Total Score	Technical Score * 0.7 + Financial Score * 0.3	