
National or International consultant: National Consultant

Description of the assignment (Title of consultancy): Long term agreement-Renewable Energy Consultant

Project Title: UNDP Country Office

Period of assignment/services: 24 months

Is this a LTA (yes/no): Yes

Terms of Reference

1. Background / Project Description

Renewable energy holds strong potential in Lebanon as a cost-effective alternative for Lebanese citizens and institutions to increase their self-reliance in the face of a deteriorated power sector. Solar photovoltaic systems in specific are in high demand in every sector in Lebanon given the inability of the central power system to deliver adequate and reliable power supply.

The United Nations Development Programme (UNDP) in Lebanon is supporting the energy sector through the implementation of various projects in renewable energy and energy efficiency. The aim of the UNDP is to assist Lebanon in transforming its power system, relying more on distributed renewable energy generation, and assisting various critical institutions in the current crisis.

The UNDP CEDRO 5 project is co-funded by the European Union and aims at assisting the Government of Lebanon to reach its Nationally Determined Contribution (NDC) targets for Renewable Energy and Energy Efficiency (RE/EE). It also aims at assisting Lebanon in fostering growth for Small and Medium Enterprises (SMEs) and creating jobs from the momentum of existing value chains in RE/EE and creating new momentum in new RE/EE value chains. Technology transfer is done through the pilot projects – in both industrial and commercial sectors – demonstrating and disseminating different technologies / solutions in Lebanese context to support their commercial uptake, thereby creation of new jobs. All of which will be framed under the umbrella of one activity focused on fostering an innovation and entrepreneurship environment dedicated to find creative solutions to the energy sector, create new markets/value chains and attract strong buy-in from the existing energy SMEs.

2. Scope of work, responsibilities and description of the proposed analytical work

The UNDP is seeking a long-term agreement (LTA) with a Renewable energy Consultant (referred to as "Consultant" in the ToR) to provide the technical support to several programs and projects within the UNDP country office in Lebanon. The consultant will be tasked with the complete design, specification identification,

procurement support, and monitoring of implementation for solar photovoltaic systems to support the daily functioning for defined facilities as selected by UNDP CEDRO Project Manager.

3. Expected Outputs and deliverables

The Consultant will prepare the full technical part of the tender documents for required sites for selected projects, including the full bill of quantities (BOQ), technical specifications with respective single line diagrams (SLD), and also assist the UNDP in the evaluation of the tender submissions in addition to supervision of installation of the equipment, and providing guidance in operation and maintenance.

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 CEDRO Project Manager. The time needed by the Project Management for the review of each submitted deliverable is 5 working days. The Required Tasks under the terms of reference are:

Task 1: Technical and financial proposal of PV solar energy systems [App. 4 working days per site]

- Conduct site visit to selected facilities aiming at examining feasibility of installation of solar energy system.
- Collect needed data and information on the required sites to form a preliminary outlook on the required design and capacity.
- Develop tailored technical proposals/scope of work for the selected facilities considering the energy supply and demand, physical and technical conditions as preliminary financial estimation for the required budget.

- **Task 2:** Preparation for tender documents for PV solar energy systems [App. 6 working days per site] Preparation of Tender documents including full technical design and sizing for solar photovoltaic systems, energy efficiency measures and solutions based on beneficiary site needs and conditions.
- Prepare shop drawings and single line diagrams (SLD), work schedules and material specifications; and ensure conformity with the design specifications.
- Preparation of required Bill of Quantities and specifications, evaluation criteria and procurement requirements and detailed cost-estimates
- Assist the UNDP team in the evaluation of all the offers submitted in accordance with the criteria and evaluation form

Task 3: Supervision of implementation of PV solar energy systems [App. 15 working days per site]

- Review and approve the contractor's submittals including the detailed design, implementation plan, work schedule, the quantities of materials to be incorporated into works and construction drawings to be submitted by the Contractor.
- Supervise works, including ensuring the provision of complete listings of installed equipment per site; the preparation of site logs, acceptance reports; change orders; documentation of site

condition; etc.

- Ensure that the Contractor is conducting installation works in accordance with the approved designs, technical specifications, and technical requirements and in accordance with the contract terms and conditions.
- Approve the payment request initiated by the contractor and issue interim and final payment certificates.

Task 4: Testing, Commissioning and Handover of PV solar energy systems [App. 4 working days per site]

- Assist in the performance testing of installations and coordinate hand-over arrangements.
- Prepare commissioning and progress reports as needed.
- Review of O&M manual submitted by the contractor.

The above tasks are expected to be implemented concurrently between different assignments or cases of identified needs.

4. Institutional arrangements

The Consultant will report directly to the UNDP CEDRO project manager. He/She will work in coordination with programme in charge of this project.

5. Duration of work

The contract will be valid on an LTA basis for 24 months with a maximum of 200 working days.

6. Duty station

The assignment requires deskwork, meetings, site visits as well as coordination between the different related entities. The consultant is expected to perform his/her duties at the UNDP offices in Beirut if requested and/or at home office. The Consultant will perform the needed using his/her own property and technology and will hold direct responsibility for the quality of delivered outputs.

7. Requirements for experience and qualifications

7.1 Academic Qualifications

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

7.2 Years of experience:

- At least 7 years' expertise in renewable energy especially solar PV or related field.

7.3 Technical experience

- In-depth knowledge of the renewable energy sector in Lebanon
- Experience conducting surveys or similar assessments of renewable energy in Lebanon
- 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.

7.4 Competencies

- Advanced writing and editing skills in both English and Arabic; French is an asset
- Computer literacy for Microsoft Office Package or equivalent.
- Good analytical and report-writing skills
- Commitment to team and cross-disciplinary work
- Emphasis on delivery of results and reacts well to constructive criticism

8. Scope of Price Proposal and Schedule of Payments

Payment will be made against each requested and completed task and upon submission of certificate of payment based on working-days and submissions (tasks/deliverable, and payment request) shall be approved by the Project Manager.