Terms of Reference (ToR)

LBJ1AF – AECID

# Solarization of a Water Borehole in Insariye-South Lebanon

**PD Reference: PD-TY0-00156**

Project Title: Vulnerable communities in the South of Lebanon are kept from slipping further into poverty and their basic needs are met in a sustained and dignified way.

Project Result: Communal assets, services, and systems in Aadloun are supported to be sustained, accessible, and used through rehabilitations of key community-level infrastructure and improving environmental.

Background

Action Against Hunger is a global humanitarian organization committed to ending world hunger. Recognized as a leader in the fight against malnutrition, Action Against Hunger saves the lives of malnourished children while providing communities with access to safe water and sustainable solutions to hunger.

With 30 years of expertise in emergencies of conflict, natural disaster, and chronic food insecurity, Action Against Hunger runs life-saving programs in over 40 countries. Action Against Hunger's 5,000+ professionals work to carry out innovative, life-saving programs in nutrition, food security & livelihoods, and water, sanitation & hygiene. ACF's humanitarian programs directly assist some five million people each year, along with countless others through capacity-building programs in collaboration with government ministries.

In Lebanon, Action Against Hunger has been active since 2006, operating mainly in the South, Beqaa, and Beirut.

Objective

As most of the local wells are slowly reducing their operating hours due to increased fuel costs and the lack of financial capacity to cover its demand, Action Against Hunger proposes to solarize a water borehole in South Lebanon. In doing so, Action Against Hunger would be building on its successful experience under an AECID humanitarian action in South Lebanon that was completed in 2022. Considering the absence of electricity and fuel, such an intervention would guarantee adequate water supply to the residents throughout the day, providing independency from the current instable and expensive fossil fuel market.

Acknowledging the right to access public water services should be guaranteed to all residents. Following the development of a detailed technical assessment and selection criteria, a solarization intervention, that yields the highest social and economic return, has been prioritized in close coordination with the South Lebanon Water Establishment.

Within this framework, Action Against Hunger seeks to hire a consultant to design and supervise the solarization of a pumping well in South Lebanon. The submersible pump is of power 180 HP with a safe yield of 90m3/h located at a dept of 300 m. The well is feeding Adloun and Insariye villages within South Lebanon. The available land suitable for solarization spans approximately 1500 square meters (190 meters by 8 meters) and is situated on public road owned by the Ministry of Public Works. Additionally, the consultant will undertake a training program aimed at enhancing the capacity of ACF staff (up to 10 persons) in solar system design using Helioscope software. This comprehensive training will cover all aspects of solar system design, including installation techniques and electrical connections, with the goal of strengthening their expertise in this area.

The consultant will be responsible for:

* Preparing a full design for solarization of the well including priced BoQ, shop drawings for the installation of the panels, structures, civil works, and all electrical connections needed, in addition to an automation system connected to SCADA system at South Lebanon Water Establishment that will be installed for the water system.
* Preparation of risk analysis for the new system involves identifying potential risks associated with the project, assessing their likelihood and potential impact, prioritizing risks based on their significance, developing appropriate risk mitigation strategies, conducting a cost-benefit analysis to evaluate the effectiveness of these strategies,
* Preparation of a ToR for contracting the works.
* Monitoring the works during the implementation process for at least two days per week as requested by Action Against Hunger's engineer.
* Providing any technical clarifications needed during the implementation process.
* Attending the site visit and pre-bid meeting with the contractors.
* Submission of data sheets checklist along with recommendations for contractor’s evaluation.
* Submission of selection criteria and evaluation template to Action Against Hunger for contractor’s evaluation.
* Participate in the technical evaluation of contractor in case requested by ACF.
* Signing off on progress checks with Action Against Hunger, the consultant and the contractor will be done upon request by ACF's engineer.
* Handing over the intervention once completed.
* Submission of monthly report during the implementation period.
* Submission of a final report upon completion of the intervention.
* During the design phase, the consultant will carefully consider the availability of the land and propose alternative solutions as necessary. Should any changes to the land be required, the consultant will accommodate these adjustments without necessitating variations on their part.
* Running a simulation and producing a report for the efficiency of the designed PV system, as well as a simulation for the footings and mounting structure against the wind load, snow load, and dead load.
* Liaise with the standards of South Lebanon Water Establishment for the design of the solarization system.
* Conducting an advanced 2–3-day training session tailored for about 10 participants from Action Against Hunger. The focus will be on elevating their managerial and technical skills in designing solar PV systems specifically for water pumping systems, utilizing *Helioscope software*. The training will encompass installation techniques and maintenance practices. *Action Against Hunger will facilitate the venue, refreshments, and logistical arrangements for the training*.

Expected Products:

1. **Design**

BoQ, shop drawings, risk analysis, ToR for contractor, work plan, method of statement, materials data sheet checklist, selection criteria and evaluation template for the contracting service.

1. **Supervision**

Monitoring the works during the implementation process for two days per week and upon the request of Action Against Hunger’s engineer.

1. **Training on PV Solar Systems**

Training materials, pre and post-tests.

Location:

Insariye, Saida District, South Lebanon. The location is subject to change in case of any obstacle impeding the execution of solarization in the said village.

Duration:

* Starting Date: Upon signature of the contract (expected May 2024)
* End date: Upon completion of the design, supervision, final report and training (January 2025)

Estimated workplan for the service:

Below are the projected timeframes based on Action Against Hunger judgment of the proposed consultancy activities and the duration of the project. Vendors are encouraged to share their detailed timeframe as part of their technical offers. The submitted timeframe will not be considered unless approved officially by Action Against Hunger team.

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| Activity | Task | Month 1 | Month 2 | Month 3 | Month 4 | Month 5 | Month 6 | Month 7 | Month 8 | Month 9 |
| 1 | Design of solar system (Including BoQ, shop drawings, method statement, risk analysis, and contractor ToR) |  |  |  |  |  |  |  |  |  |
| 2 | Supervision of works (Upon request) |  |  |  |  |  |  |  |  |  |
| 3 | Preparation and delivery of an advanced training program on solar pumping systems |  |  |  |  |  |  |  |  |  |
| 4 | Handing over and final report |  |  |  |  |  |  |  |  |  |

Selection Criteria

The selection of the firm will have in consideration the following points:

* Technical Offer (Qualification and General experience, project Related Experience): 50%
* Financial offer 50%

Selection Process

A contractor Selection Committee (CSC) will evaluate technical and financial proposals according to the requirements and criteria defined above. Evaluators will first independently assess whether the technical proposals comply with submission requirements and will then evaluate each proposal. The CSC will be composed of a minimum of 3 staff from Action Against Hunger.

Roles and Responsibilities of the Consultant

The consultant is obliged to:

* Report any incident or delay to Action Against Hunger engineer during the activity process.
* Commit to provide all the requested products/supplies as mentioned above, and not to change any specifications without the written consent of Action Against Hunger.
* Inform ACF about any legal documents or approval processes related to the project.
* Be flexible for any change in the location of the well without any request for variations to the contract.
* Abide to the workplan requested by Action Against Hunger.
* Abide to the supervision rules set by Action against Hunger.
* Submit a final report upon the completion of the intervention.
* The reply and approvals on the submitted documents by the contractor must not take more than 5 calendar days.
* Abide by all rules and regulations of Action Against Hunger, particularly the ones related to safety and security.
* Deliver a training program that is advanced and highly beneficial for the attendees, specifically focusing on the design of water pumping solar systems.

Roles and Responsibilities of Action Against Hunger

Action Against Hunger is obliged to:

* Provide on time all the necessary documentation, information, and contacts for the accomplishment of the service.
* Provide the Consultant with the exact location of the project.
* Liaise with SLWE and the Mayor. The Contractor is not expected to initiate or participate in municipalities' meetings without the presence and authorization of Action Against Hunger.
* Review and validate the work plan proposed by the Consultant.
* Provide any further technical specifications for the adequate performance of the work.
* Ensure proper monitoring by assigning a Site Civil Engineer from Action Against Hunger who will be present in the site and to support the consultant during the consultancy process.
* Organize weekly management meetings with the consultant to verify the work progress during the implementation.
* To pay the Consultant according to the Terms of Payments agreed in the Contract.
* Final approval of the completion of the consultancy process.

Clarification Meeting

A clarification meeting will be held on **07 MAY 2024 15:00** Beirut time, so bidder needs to confirm their presence by max on **03 May 2024 16:00 Beirut time to receive the meeting link.**

All questions will be answered via email to all bidders in **05 May 2024 12:00** Beirut time.

Essential Criteria of the Consultant

Interested companies must request the bid documents by email to:

[procurement-ty@lb.acfspain.org](mailto:procurement-ty@lb.acfspain.org).

The consultant shall submit:

1. General experience of the company.
2. Experience of the applicant and the team (letters, certificates and CVs) in designing solar pumping systems and capacity to cover all related activities (design, supervision and training including organization name and reference).
3. Experience in automation, Programmable Logic Controller (PLC) philosophy, and remote monitoring; particularly the SCADA system.
4. Logical work plan with available resources to finalize the works.
5. ID of the general Manager/Owner
6. Bank Details signed from the bank
7. ToR should be signed and stamped
8. RFQ should be signed and stamped

Make sure once sharing your offer to take the below into your account:

* Offer should show the net price aside from the VAT amount (if applicable)
* Validity of the offer (minimum 60 days)
* Payment modality: Cheque/Bank Transfer
* Project design costs
* Project implementation supervision costs
* Design costs for training materials
* Staff training costs (excluding venue and materials)
* Reporting costs

Deadline

Deadline to receive offers is **12 May 2024 16:00** Beirut time, offer received after will not be considered.