

TERMS OF REFERENCE (TOR):

Technical Support Services to LCEC in the Implementation of the GIZ-Funded SUFA Project

1. Country Background and Energy Sector

1.1 The electricity supply in Lebanon is much lower than the demand. The gap between the peak demand and the peak generation is continuously increasing. In order to close this gap, back-up diesel generators have been operating in communities, however, due to the shortages in fuel supply and the increase in fuel costs, securing diesel to run these back-up generators is becoming challenging, not to forget about the resulting high levels of noise and air pollution.

1.2 In addition, with a shortage in electricity supply that exceeds 20 hours per day, running diesel generators for long durations has resulted in recurrent technical failures. All the mentioned challenges are affecting the reliability of electricity supply and disrupting the socio-economic sectors and in particular, schooling activities. For instance, long electricity outages are leaving the students without access to basic learning necessities, such as classroom lighting and internet.

1.3 Furthermore, the school's management is becoming financially incapable of covering the diesel and electricity bills, which is affecting the budget allocation for the operation and renovation of facilities.

1.4 In view of these extremely challenging situations, the urgent need to integrate renewable energy and energy efficiency solutions in the energy systems has emerged as a main possible solution. Renewable energy and energy efficiency solutions would increase energy security, energy reliability, and energy affordability, and ensure access to adequate electricity and by that access to water, internet services and most important access to education.

1.5 Using renewable energy and energy efficiency solutions is not new in Lebanon. In fact, in September 2015, Lebanon's Intended Nationally Determined Contribution (INDC) was presented to the UNFCCC. It includes an unconditional target of "15% of the power and heat demand in 2030 generated by renewable energy sources" which would be increased to 20% if international support is obtained.

1.6 In October 2018, the Prime Minister announced a target of 30% renewable electricity by 2030.

1.7 In March 2019, the Updated Policy Paper for the Electricity Sector prepared by MEW was approved by the CoM, the policy paper stressed on the important role renewable energy will be playing in the energy mix of the country and commits to the completion of renewable energy projects of all types.

1.8 In June 2020, the International Renewable Energy Agency (IRENA) published the IRENA Renewable Energy Outlook for Lebanon carried out in collaboration with the MEW and the LCEC and including a roadmap to reach the national 30% renewable electricity target. The document includes a target capacity of 500 MW of decentralized solar PV plants by 2030.

1.9 In March 2021, Lebanon submitted its Updated Nationally Determined Contribution (Updated NDC) to the UNFCCC with raised ambitions for greenhouse gas emission reduction, by setting a target of 20% emission reduction in 2030 (amounting to 7,790 Gg. CO₂eq). Within the Updated NDC, Lebanon commits to unconditionally generate 18% of its electricity demand from renewable energy sources in 2030. A commitment that could be increased to 30% if international support is granted.

1.10 Lebanese authorities are committed to substantially increase renewable energy (RE) investment. This commitment includes increasing the share of RE in total electricity consumption to 12% by 2020, as set in the National Renewable Energy Action Plan (NREAP 2016–2020).

1.11 Scaling-up RE is an important means for Lebanon to: (i) increase generating capacity of the electricity sector; (ii) meet its climate change mitigation commitments by decreasing the reliance on fossil-fuel based generation; and (iii) increase the resilience of its power sector by addressing the issue of under-capacity, as well as by diversifying the country's energy sources.

1.12 Due to the high demand for solar energy, ongoing installations are not necessarily following the best installation practices. This highlights a greater need for capacity building and knowledge sharing to properly assess and implement energy conservation measures that would respond to current and future needs.

1.13 Among its responsibilities, a main aspect of LCEC's momentum is in updating the local context in line with global trends and the latest innovations, aligning national efforts, and reaching out to the largest share of the public for awareness raising and professionals for capacity building.

2. GIZ-Funded SUFA Project

2.1 The overall objective of the SUFA project is to reduce the environmental footprint and to keep the schools operational, in line with SUFA project's general goal to improve the school conditions for Lebanese children and Syrian refugee children in the host communities.

2.2 The specific objectives of the project are the following:

- SO1.** To ensure sustainable access to electricity for school students, teachers, and administrators in the targeted areas
- SO2.** To strengthen the capacities of schools and MEHE's resources in the energy field

- SO3.** To contribute to environmental protection, climate change adaptation and mitigation through improved energy management of public schools' buildings and execution of green school measures.
- SO4.** To reduce the energy consumption in public schools and increase energy security and affordability through the implementation of cost-effective renewable energy and energy efficiency solutions, tailored to specific sites conditions
- SO6.** To increase awareness and sustainable energy habits through the engagement of students and staff in the operation and use of REEE systems
- SO7.** To reduce the environmental footprint and operating cost of public schools through the implementation of eco-friendly and environmental measures under Green Schools component.

2.3 As part of the contract signed between GIZ and LCEC, the LCEC will act closely with the GIZ SUFA team to implement different solutions related to renewable energy and energy efficiency in public schools.

2.4 This would bridge the national Renewable Energy (RE) action plan and road map to the specific project objectives. With the implementation of the REEE and GS measures at public schools, this project would contribute to the solar photovoltaic distributed generation by the public sector by adding around 430 kWp which represents around 9% of the 5 MW target, in addition to the reduction of around 550 tCO₂eq of GHG emissions.

2.5 Within this signed agreement between GIZ and LCEC, the LCEC wishes to a Consultant to provide technical support to the LCEC in the implementation of the different technical tasks.

3. Bid overview

3.1 Objectives

The key objectives of this assignment are to:

3.1.1 Support the LCEC in expanding its capabilities to manage and implement the renewable energy, energy efficiency, and green environmental solutions as per the signed agreement;

3.1.2 Support the LCEC with specialized manpower able to contribute to the implementation of the activities envisaged as part of the project.

3.2 Timeline

The following dates are set forth for informational and planning purposes; however, LCEC reserves the right to change the dates.

Issue TOR	7 February, 2023
Questions Due	10 February, 2023
Response to Questions Issued	13 February, 2023
Closing Date for Receipt of Offers	15 February, 2023
Announcement of Winning Offer	17 February, 2023

3.3 Clarification Process

3.3.1 From the issue date of this TOR until announcement of the winning bidder, bidders may contact LCEC ONLY by email to: energy@lcec.org.lb in case of questions, comments, or suggestions. Oral questions will not be permitted.

3.3.2 If the questions, requests for clarifications, or suggestions pertain to a specific section of the TOR, the page and section number(s) must be referenced.

3.3.3 Written responses to questions, requests for clarifications, or suggestions will be sent on or before the date listed in the Timeline.

3.3.4 LCEC will share a list of questions and answers with all bidders.

3.3.5 LCEC assumes no responsibility for verbal representations made by its officers or employees unless such representations are confirmed in writing and incorporated into the TOR.

3.4 Submission of Bid Proposals and Validity Period

3.4.1 The deadline for the submission of proposals is as mentioned in the Timeline is on **15 February 2023 at 3:00 pm.**

3.4.2 All proposals received after the mentioned date and time will be rejected.

3.4.3 Submittals must be sent in softcopies to energy@lcec.org.lb.

3.4.4 LCEC may, at its discretion, extend the deadline for the submission of proposals, in which case all rights and obligations of LCEC and the applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.

3.4.5 The period of validity of proposal is 30 days and it starts on the submission deadline date.

3.4.6 In exceptional circumstances, LCEC may request the winning bidder to extend the validity of the proposal and quotation beyond what has been initially indicated in this TOR.

4. Scope of Work

Reflecting the objectives of the Assignment, the Consultant will need to undertake a number of tasks:

4.1 Task 1: fully understand the scope of works to be done by the LCEC as detailed in Annex 1, and be able to propose qualified experts for the implementation of the REEE component.

4.2 Task 2: dedicate in an efficient and reliable manner the experts and/ or consultants needed to achieve the project implementation as per the schedule.

4.3 The consultant shall support the LCEC in implementing the REEE component of the SUFA project as per Annex1, noting that the consultant shall have a role in each section of the Methodology detailed in Annex 1 starting from the last point of the M5 section, using the data collected by the LCEC, as follows:

5. Deliverables and timeline

The key **deliverables** as per the Tasks set out under the Scope of Work will be:

5.1 On-going dedicated efforts from the selected energy experts (involving detailed recommendations) to the LCEC during the implementation of the project activities;

5.2 Preparation of the design and feasibility of the REEE solutions, a bill of quantities (BoQ) for the items and components needed to deliver the work, the expected impact (savings in energy consumption and costs) as per Annex 1 section M5.

5.3 Installation of the REEE solutions in the 4 pilot schools, including the T&C and O&M training as per Annex 1 section M6.

5.4 Preparation of the list of needed items for the remaining 21 schools to be procured for the project, as per Annex 1 section M7.

5.5 Participating in the review and evaluation of the bids before awarding the contracts for the contractors to implement the REEE solutions in the 21 schools, as per Annex 1 section M9.

5.6 Supervising the works of the winning bidders in the 21 schools, under the guidance of the LCEC, as per Annex 1 section M9.

5.7 Supervising, following-up and ensuring that the 4 winning bidders (responsible for the remaining 21 schools) will complete the one-year maintenance visits and works as per Annex 1 section M11.

5.8 A final report outlining the activities and outputs achieved during project implementation.

5.9 The provisional timeline for the key **milestones** in this Assignment is as follows:

5.9.1 A kick-off meeting involving the Consultant and the LCEC to take place within 1 week from contract signing;

5.9.2 On-going advice (involving detailed recommendations) to LCEC during project implementation;

5.9.3 Final report reflecting received feedback from LCEC, to be submitted within 2 weeks following execution of works.

6. Consultants Profile

6.1 The Consultant selected for this assignment will be a firm with previous related project experience.

6.2 The Consultant shall fill and submit Form 1- Applicant Information Form and Form 2- Applicant Financial Form and all necessary documents to prove the team's expertise (including CVs) and an organizational chart explaining the method of work. All forms and submitted documents shall be signed by a Legal Representative and stamped.

6.3 The Consultant's expert team is expected to include (at least) the following key experts (the '**Key Experts**')

6.3.1 Key Expert 1: **Project Manager** with:

- At least 10 years of experience in project management, preferably in projects related to the renewable energy and energy efficiency sectors, needed to manage the work flow of the REEE component in close coordination with the LCEC, by following up the project activities, program of work, budget control, tendering and bidding process, consultant's team supervision, and focal point reporting to the LCEC;
- Proven experience in leading a team of engineers and technicians, and the ability to demonstrate adequate project management, time and budget management, tendering and bidding, cost control, and communication skills;
- Fluency in English for coordination and report writing purposes;

6.3.2 Key Expert 2: **Project Coordinator/Senior Energy Engineer** with:

- At least 5 years of experience in working on technical assessments, designs, and execution of renewable energy and energy efficiency projects, needed to prepare the full designs of the REEE measures, list of needed items to be procured, coordination with schools and contractors, supervision of the implementation works in the 21 schools ;
- Proven experience in tender documents preparation for renewable energy and energy efficiency projects.

- Proven experience in coordinating with multiple sub-contractors for progress monitoring in specific timelines.
- Strong communication and reporting skills.
- Reporting to the team's project manager.

6.3.3 Key Expert 3: **Energy Engineer** with:

- At least 3 years of experience in working on technical assessments, designs, and execution of renewable energy and energy efficiency projects, including site supervision and maintenance visits.
- Strong communication and reporting skills.
- Reporting to the Project Coordinator/ Senior Energy Engineer.

6.3.4 Key Expert 4: **Civil Engineer** with:

- At least 5 years (preferably 10 years) of experience in designing, developing, and maintaining small-scale through large-scale construction projects in a safe, timely and sustainable manner, needed to prepare the civil structure designs of the steel structures for the PV systems, as well as the needed civil design calculations and notes;
- Proven experience in steel structure design and visualization software such as but not limited to AutoCAD.
- Strong communication and supervision skills.
- Reporting to the team's project manager.

6.3.5 **Technicians** with:

- At least 10 years of experience in electrical installations, and a relevant experience in solar PV projects, needed for the installation and T&C of the REEE solutions in the 4 pilot schools under LCEC's guidance, and to assist in technical assessments, and supervision of the implementation works in the remaining 21 schools to ensure the good quality and safety of the selected solutions, and to be reporting to the team's project coordinator/Senior energy engineer.

6.3.5 All the key experts are expected to have strong communication skills, be fluent in English and, preferably, have experience in past projects within the REEE & EE fields.

7. Organization

7.1 The consultant will have an initial meeting/call with LCEC at the start of the assignment to clarify the precise scope of each task. The assignment will be managed and overseen by the LCEC's assigned team member.

7.2 The LCEC will be responsible for coordinating the work of, and providing ongoing guidance to, the consultant, as well as reviewing interim deliverables and overseeing the process of collecting feedback/comments for the consultant's deliverables.

8. General Terms and Conditions

8.1 Legal Status

8.1.1 The Consultant shall be considered as having the legal status of an independent Consultant vis- à-vis LCEC. The Consultant's personnel shall not be considered in any respect as being the employees or agents of LCEC.

8.2 Sources of Instructions

8.2.1 The Consultant shall neither seek nor accept instructions from any authority external to LCEC in connection with the performance of the services. The Consultant shall refrain from any action which may adversely affect LCEC and shall fulfill its commitments with the fullest regard to the interests of LCEC.

8.2.2 The Consultant may not communicate at any time to any other person, government or authority external to LCEC, any information known to it by reason of its association with LCEC which has not been made public except with the authorization of LCEC; nor shall the Consultant at any time use such information to private advantage. These obligations do not lapse upon termination of the contract.

8.3 Observance of the Law

8.3.1 The Consultant shall comply with all Lebanese laws, decrees, ordinances, rules, and regulations (including future amendments) bearing upon the performance of its obligations under the terms of the contract.

8.4 Settlement of Disputes

8.4.1 The Consultant and the LCEC shall use their best efforts to settle amicably any dispute, controversy or claim arising out of, or relating to the contract or the breach, termination or invalidity thereof. In case amicable efforts fail, the settlement of disputes will take place in the courts of Beirut according to Lebanese laws and regulations.

8.5 Consultant's Responsibility for Employees

8.5.1 The Consultant shall be responsible for the professional and technical competence of its employees and will select reliable individuals who will perform effectively in the implementation of this ToR, respect the local customs, and conform to a high standard of moral and ethical conduct.

8.6 Title to Equipment

8.6.1 Title to any equipment and supplies that may be furnished by LCEC shall rest with LCEC and any such equipment shall be returned to LCEC at the conclusion of the project or when no longer needed by the Consultant. Such equipment, when returned to LCEC, shall be in the

same condition as when delivered to the Consultant, subject to normal wear and tear. The Consultant shall be liable to compensate LCEC for equipment determined to be damaged or degraded beyond normal wear and tear.

8.7 Confidential Nature of Documents and Information

8.7.1 All maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents and all other data compiled by or received by the Consultant shall be the property of LCEC, shall be treated as confidential and shall be delivered only to LCEC authorized officials on completion of work.

8.8 Indemnification

8.8.1 The Consultant shall indemnify, hold and save harmless, and defend, at its own expense, LCEC, its officials, agents, servants and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Consultant, or the Consultant's employees, officers, agents or sub-contractors, in the performance of this project. This provision shall extend, inter alia, to claims and liability in the nature of workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Consultant, its employees, officers, agents, or servants.

8.9 Encumbrances/Liens

8.9.1 The Consultant shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file or to remain on file in any public office or on file with LCEC against any monies due or to become due for any work done or materials furnished, or by reason of any other claim or demand against the Consultant.

8.10 Use of Name, Emblem or Official Seal

8.10.1 The Consultant shall not advertise or otherwise make public the fact that it is a Consultant with LCEC, nor shall the Consultant, in any manner whatsoever use the name, emblem or official seal of LCEC, or any abbreviation of the name of LCEC in connection with its business or otherwise.

8.11 Copyright, Patents and Other Proprietary Rights

8.11.1 LCEC shall be entitled to all intellectual property and other proprietary rights including but not limited to patents, copyrights, and trademarks, with regard to products, or documents and other materials which bear a direct relation to or are produced or prepared or collected in consequence of or in the course of the execution of this project as well as after execution. At the LCEC request, the Consultant shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring them to LCEC in compliance with the requirements of the applicable law.

8.12 Force Majeure; Other Changes in Conditions

8.12.1 Force majeure, as used herein, means acts of God, war (whether declared or not), invasion, revolution, insurrection, or other acts of a similar nature or force which are beyond the control of the parties.

8.12.2 In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the Consultant shall give notice and full particulars in writing to LCEC, of such occurrence or change if the Consultant is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities. The Consultant shall also notify LCEC of any other changes in conditions or the occurrence of any event which interferes or threatens to interfere with its performance. The notice shall include steps proposed by the Consultant to be taken including any reasonable alternative means for performance that is not prevented by force majeure. On receipt of the notice required herein, LCEC shall take such action as, in its sole discretion, it considers to be appropriate or necessary in the circumstances, including the granting to the Consultant of a reasonable extension of time in which to perform its obligation.

8.12.3 If the Consultant is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities, LCEC shall have the right to suspend or terminate the contract following a period of notice of seven (7) days.

8.13 Child Labour

8.13.1 The Consultant represents and warrants that neither it, nor any of its suppliers is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including Article 32 thereof, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical mental, spiritual, moral or social development. Any breach of this representation and warranty shall entitle the LCEC to terminate the contract immediately upon notice to the Consultant, at no cost to the LCEC.

8.14 Corrupt and Fraudulent Practices

8.14.1 Anticorruption Policy requires bidders to observe the highest standard of ethics during the execution of the project. In pursuance of this policy the organization defines, for the purposes of this provision, the terms set forth below as follows:

8.14.2 "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

8.14.3 "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

8.14.4 “coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

8.14.5 “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

8.14.6 LCEC will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive practices, or any illegal practice in competing for the contract.

8.14.7 LCEC will sanction a party or its successor, including declaring ineligible, either indefinitely or for a stated period of time, to participate in contracts if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive practices, or any illegal practice in competing for, or in executing, the contract.

8.15 Conflict of Interest

8.15.1 LCEC considers a conflict of interest to be a situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations, and that such conflict of interest may contribute to or constitute a prohibited practice under LCEC’s Anticorruption Policy. In pursuance of LCEC’s Anticorruption Policy’s requirement, bidders must observe the highest standard of ethics.

8.15.2 LCEC will take appropriate actions to manage such conflicts of interest which may include rejecting a proposal for award if it determines that a conflict of interest has flawed the integrity of any procurement process. At the time of bidding, bidders may be considered to be in a conflict of interest with one or more parties if they, including but not limited to:

- have controlling shareholders in common; or
- receive or have received any direct or indirect subsidy from any of them; or
- have the same legal representative for purposes of their proposal; or
- have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or to influence the bid of another bidder in the subsequent bidding process or influence the decisions of LCEC regarding this bid process; or
- participated as a Bidder in the preparation of the design or technical specifications of the works that are the subject of this ToR. Where a firm, or a firm from the same economic or financial group, in addition to consulting, also has the capability to manufacture or supply goods or to construct works, that firm, or a firm from the

same economic or financial group, may not normally be a supplier of goods or works, if it provided consulting services for the contract corresponding to this ToR, unless it can be demonstrated that there is no significant degree of common ownership, influence or control.

9. Evaluation Criteria

9.1 Evaluation of proposals will be conducted through a two-phase evaluation process as follows: - Phase 1 – Technical Evaluation.

9.2 Mandatory Technical Evaluation Criteria (Pass/Fail): All proposals will be screened based on the mandatory evaluation criteria (pass/fail) as per Table 1.

9.3 To be considered eligible or technically compliant in the mandatory evaluation a proposal must obtain “Pass” in ALL mandatory criteria. If a proposal obtains “Fail” in ANY of the mandatory criteria, it will be considered technically non-compliant in the mandatory evaluation and will not be considered for financial evaluation.

9.4 Phase 2 - Commercial Evaluation

9.4.1 Mandatory Commercial Evaluation Criteria (Pass/Fail) Financial proposals of all technically compliant proposals/bids that passed through Phase 1, will be screened as per below mandatory criteria in Table 2. Bidders are required to specify and elaborate in their financial proposals/bids if there is any reservation to comply to any of the mandatory criterion. A proposal/bid that scores “Fail” in any of the mandatory criteria may be rejected as commercially non-compliant and may not be considered further.

9.4.2 The contract will be awarded to the lowest priced financial proposal.

Applicant Information Form

[Name of Applicant]

[All individual firms applying for the project are requested to complete the information in this form]

Applicant's name:	<i>[insert full name]</i>
Applicant's actual or intended country of registration:	<i>[indicate country of Constitution]</i>
Applicant's actual or intended year of incorporation:	<i>[indicate year of Constitution]</i>
Applicant's legal address [in country of registration]:	<i>[insert street/ number/ town or city/ country]</i>
Applicant's authorized representative information	
Name:	<i>[insert full name]</i>
Address:	<i>[insert street/ number/ town or city/ country]</i>
Telephone/Fax numbers:	<i>[insert telephone/fax numbers, including country and city codes]</i>
E-mail address:	<i>[indicate e-mail address]</i>

Attached are copies of original documents of articles of incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above.

Applicant Financial Form

[All individual firms applying for the project are requested to complete the information in this form]

<i>Number</i>	<i>Task/Deliverable</i>	<i>Price (\$)</i>
1	Preparation of the design and feasibility of the REEE solutions, a bill of quantities (BoQ) for the items and components needed to deliver the work, the expected impact (savings in energy consumption and costs) as per Annex 1 section M5.	
2	Installation of the REEE solutions in the 4 pilot schools, including the T&C and O&M training as per Annex 1 section M6.	
3	Preparation of the list of needed items for the remaining 21 schools to be procured for the project, as per Annex 1 section M7	
4	Participating in the review and evaluation of the bids before awarding the contracts for the contractors to implement the REEE solutions in the 21 schools, as per Annex 1 section M9.	
5	Supervising the works of the winning bidders in the 21 schools, under the guidance of the LCEC, as per Annex 1 section M9.	
6	Supervising, following-up and ensuring that the 4 winning bidders (responsible for the remaining 21 schools) will complete the one-year maintenance visits and works as per Annex 1 section M11.	
7	A final report outlining the activities and outputs achieved during project implementation.	
Total		

Table 1: Mandatory Technical Evaluation Criteria

No.	Background & Capacity	Examples of documentary evidence	Type of Evaluation: Pass/Fail
1	The bidder firm has been in business relevant to the Terms of Reference for at least five (5) years	Detailed company profile with key areas of expertise justifying the relevance to the Terms of Reference	Pass/Fail
2	The Bidder is required to provide a statement that they will not subcontract any of the budget allocated to any of the work.	The bidder must provide a letter of confirmation clearly stating the non-allocation of work to any subcontractor	Pass/Fail
3	Bidder must provide curriculum vitae/professional qualifications (max 2 pages) of each key personnel to be assigned to the project. Also include a 1-page organogram indicating roles, location, focal points as well as working languages of the staff assigned to the project.	Curriculum vitae/professional qualifications (max 2 pages) of each key personnel 1-page organogram	Pass/Fail
4	Bidder must submit an Approach and Methodology as the part of technical proposal, to undertake the work	Approach and Methodology	Pass/Fail

Table 2: Mandatory Commercial Evaluation Criteria

No.	Description of Evaluation	Evaluation Criteria	Type of Evaluation
1	The bidder has to submit Financial Proposal covering all cost elements	Financial proposal should be in company letterhead	Pass/ Fail
2	Confirmation that the prices and fees will remain firm and fixed for the entire duration and any extensions thereof.	Bidder to provide this information on their letterhead	Pass/ Fail
3	Confirmation that the proposals will remain valid for 30 days as required by the RFP.	Bidder to provide this information on their letterhead	Pass/ Fail

Annex 1:

Implementation concept for the Renewable Energy and Energy Efficiency (REEE) component

Component brief description and results

The project implementation by LCEC will include activities related to solar systems and other REEE equipment (sites inspection, design, procurement, storage, delivery and installation of equipment, supervision, reporting, testing, and commissioning, trainings, and operation and maintenance) at 25 public schools in Lebanon.

Methodology

LCEC will proceed and conduct site visits to the 25 schools in two teams working in parallel, with the priority given to the 4 pilot schools: Zouk Mosbeh, Amatour, Almoallaka, and Hassan Kassir.

The site visits will be followed by reports identifying the additional procurement needs, where requests for offers to supply solar and lighting components will be launched.

In parallel, a bid to install waterproofing for identified sites will be launched, requesting a warranty for at least 5 years. It is important to note here that the implementation of waterproofing works is critical and shall be conducted at the beginning of the project, in order to ensure the completion of works before winter and avoid any major delays.

For the 4 pilot schools, LCEC team will review the existing design documents and proceed with the implementation accordingly. Meanwhile, LCEC will develop the design and tender documents for the remaining 21 schools based on the SUFA prototype and best practices catalogue, covering the following REEE solutions:

- hybrid solar PV solution
- solar pumping solution
- Energy-efficient lighting
- Installation of Indoor air monitoring devices
- Installation of wireless weather stations

The scope of work for the implementation and post-implementation phases will be divided as follows:

- LCEC team will directly handle the implementation of REEE systems in the 4 pilot schools. The remaining 21 schools will be implemented under downstream contracts with energy SMEs, in different governorates under the direct supervision of LCEC.

The priority in implementation will be given to the 4 pilot schools. LCEC team is expected to complete the installation of the 4 systems before the end of 2022. The next step will be to launch a bid for the installation of the REEE systems in the last 21 schools, in order to select 4 SMEs across 5 governorates.

More details on the methodology of work are provided below:

M1. Team selection and roles assignment

M2. Warehouse rental, transfer of procured items from GIZ warehouse, and material transport to schools

- LCEC will rent a warehouse, suitable for storing the procured solar components, batteries, LED lighting, weather stations, and indoor air quality sensors by SUFA.
- The warehouse must accommodate the additional items to be procured.
- LCEC will handle the transfer of items from the GIZ warehouse to the new warehouse following the required handing over process.
- LCEC will be responsible for transporting the REEE equipment to the 4 pilot schools whose REEE components' implementation is handled directly by the LCEC team.
- LCEC will hand over the REEE equipment to the 4 SMEs (winning bidders) responsible for implementing the REEE components in the remaining 21 schools.

M3. Review of project documentation

- The LCEC team will review the project documentation, including but not limited to the grant contract, list of schools, 4 pilot schools design, drawings, list of procured items and datasheets, and SUFA prototypes and best practices catalogue.

M4. Coordination with schools and project kick-off

- LCEC will coordinate with the schools' management to set dates for site visits to the 25 schools, with a priority to start with the 4 pilot schools: Zouk Mosbeh, Amatour, Al Moallaka, and Hassan Kassir. LCEC will introduce its role to the school staff and collect the information and data required for the project.

M5. Site visits to 25 schools and delivery of site visit findings

- Priority given to the 4 pilots schools in site visits and reporting of findings
- The visits to schools will be conducted by two LCEC teams working in parallel. The teams will visit the 25 schools based on the geographical distribution and priority.
- During the visits, the teams will collect data related to the implementation of solar PV and solar pumping systems, including but not limited to the space availability and suitability for installation, the waterproofing needs, the energy needs, the routing of cables, the technical room for inverters and batteries, the earthing, the connection point, and the existing power sources. In addition, the teams will inspect the existing lighting system in terms of types of fixtures and lamps installed, lighting level, and quantities. Finally, the teams will also check the sites requirements and suitable locations for the installation of indoor air quality sensors and weather stations.
- Following the site visits, LCEC team will deliver the site visit report findings for each of the 25 schools. Each report will identify the design, sizing requirements, and feasibility of the REEE solutions, a bill of quantities (BoQ) for the items and components needed to deliver the work, the expected impact (savings in energy consumption and costs), and the identified challenges and limitations.

M6. Implementation of REEE works related to the 4 pilot schools by LCEC

- Procurement of additional components related to the first 4 schools (mounting structures, protection devices, etc.)
- Installation of solar components, lighting, weather stations and indoor air quality sensors based on the reviewed designs
- Testing and commissioning, and O&M training of school maintenance team in each school
- One-year post-implementation maintenance

M7. Procurement of the additionally needed REEE material (mainly solar and lighting items)

- The weather stations will be distributed among the 4 climatic zones in Lebanon. As such, each school will be matched to the corresponding climatic zone as per the Thermal Standard for Buildings in Lebanon (TSBL 2005). Theoretically, 3 weather stations will be installed per climatic zone – no addition in quantities is planned.
- The indoor air quality sensors will be optimally distributed as per the area and site requirements in each school – no addition in quantities is planned.
- Regarding the lighting, the priority will be to distribute the procured items based on the identified types and quantities of lighting fixtures and lamps in each school. As such, deficit or excess in the procured types/quantities might result.
- For the solar systems, the procured components include panels, single-phase/three-phase on-grid inverters, single-phase off-grid inverters, VFD inverters, batteries, DC and AC SPDs, PV cables, and MC4 connectors. The plan is to match the components with the size of solar PV panels. In other words, the total capacity of procured solar PV panels is around 430 kWp. As such, the total capacity of inverters installed should be in this range. In addition, it is preferable to implement solar PV systems with the capability to inject the excess of energy into EDL grid. As such, the priority would be to couple the existing on-grid inverters with the existing off-grid inverters and procure any additional inverters based on the site’s needs. The AC coupled systems would require procuring controllers. The quantity of batteries seems to be enough and will be distributed in a way to guarantee at least one branch of 48V (at least 24 batteries per school).
- For the solar PV systems, the following components would need to be procured based on specific requirements and standards: concrete blocks (ballasts), mounting structures, inverters, controllers, breakers/fuses/RCDs, earthing, electrical panels, cable trays, AC cables, battery cables, fire extinguishers, signage, and labeling, and finally the lightning protection (subject to budget availability).
- Regarding the solar pumping solutions, the purpose is to implement systems based on the available quantity of the procured VFD inverters- no additional procurement is intended. The distribution of the solar pumping systems will be decided as per the needs of the schools and the site suitability, with priority given to the 4 pilot schools. Based on the school visits’ findings, the additional components and accessories needed to be procured will be specified.
- Once the team matches the needs with the previously procured items, a final list of missing components will be prepared. The LCEC team will then prepare the technical specifications of each component and will launch a tender to be shared with a selected number of companies. The criteria of selection will be based on the compliance of

components with the technical requirements, the availability of components, and the lowest price.

- Delivery of the procured items to LCEC warehouse

M8. Implementation of waterproofing works in the 21 schools

- Identification of waterproofing needs following the site visit findings and preparation of the tender documents based on GIZ technical specifications for waterproofing
- Bid launching and selection of winning bidder(s) to implement the works in the 4 regions in parallel - one or multiple bidders might be selected depending on the outcomes of the visits.
- Installation of waterproofing in 21 schools.

M9. Under LCEC’s supervision, implementation of REEE systems in 21 schools by local SMEs

- Launching the bid for installation of REEE systems in 4 regions (Beirut and Mount Lebanon – North Lebanon – Beqaa – South Lebanon) and award of contracts to 4 installers
- Installation of solar components, lighting, weather stations and indoor air quality sensors in 21 schools (starting with lighting and indoor air quality sensors until the waterproofing works are finalized)
- Testing and commissioning, and O&M training of school maintenance team in each school
- One-year post-implementation maintenance for each school

M10. Approval and handing over to schools and MEHE

M11. One-year post-implementation maintenance

This step is necessary to monitor the efficiency and performance of the implemented solar systems and ensure the capability of the school maintenance team to handle the operation and basic preventive maintenance works (checking if the system is working properly and cleaning PV panels).

- LCEC team will be directly responsible for the conduct of the one-year maintenance works in the 4 pilot schools
- LCEC will supervise, follow-up and ensure that the 4 SMEs responsible for the remaining 21 schools (Lot2-WP1&2 and Lot3-WP3&4) will complete the one-year maintenance visits and works.

The scope of the one-year maintenance covers the following:

- Conducting schools’ visits
- Submission of a site report including the completed (preventive) maintenance checklist, executed works, and pictures.

M12. Training on the operation and maintenance of solar systems in each region

M13. Closing Event - training with MEHE and stakeholders on solar systems

M14. Regular reporting and documentation to GIZ