

Request for Clarifications - Q&A

Request for Proposals (RFP) for the Implementation of Renewable Energy & Energy Efficiency (REEE) Measures in Twenty One (21) Public Schools in Lebanon

Sustainable Facility Management at Public Schools in Lebanon (SUFA) project. Funded by the German Federal Ministry for Economic Cooperation Development (BMZ) under the education portfolio of GIZ Lebanon.

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Prepared by the Lebanese Center for Energy Conservation (LCEC)

Beirut, Lebanon

Notes to Bidders

1. This document provides the answers to the questions that were asked by interested bidders, following the launching of the RFP to “Implementation of Renewable Energy & Energy Efficiency (REEE) Measures in Twenty One (21) Public Schools in Lebanon” under SUFA project.
2. The questions are divided in five categories; general questions applicable for the whole project, and specific questions for each of the four lots of schools.
3. This document shall be considered an integral part of the RFP.

General Questions:

- Q1. *Should we use all quantities of PV cables mentioned in the BoQ in the corresponding school only? What if the cables routing is different and additional cables were needed?*
- A1. *The PV cables procured by the project will be distributed per lot, meaning that the winning bidder of each lot will receive a total of PV cables corresponding to the sum of the quantities mentioned in the BoQs of the same lot. It is very important to note that in case additional quantities of PV cables were needed, they shall be procured by the winning bidder without having any impact on the bidder's proposed price. In other words, the price of PV cables installation should take into consideration any additional quantities procured later on by the winning bidders.*
- Q2. *Are the accessories needed for the batteries connections also supplied along with the batteries themselves?*
- A2. *Yes, the interconnectors between the cells of each pack of batteries will be delivered to the winning bidders. Same for the accessories of the batteries' racks.*
- Q3. *In case the water pumps are not compatible with the solar drive inverter selected in the project, does installing the solar drive inverter get removed from our scope?*
- A3. *As indicated in the notes of the SLDs where solar drive inverters shall be installed, it is under the scope of the winning bidder to do all necessary measures for the installation and good operation of the solar drive inverters, including but not limited to replacing the existing water pump with a new one if needed. This should be reflected in the bidders' proposals and the price to be included in the item of solar drive installation of the corresponding BoQs.*
- Q4. *Can you please confirm that the bid bond for the amount of \$7,000 shall be submitted with the proposal regardless the number of lots we apply to? In other words, if we submit for one lot or two, the bid bond is \$7,000 and not \$14,000 if we are apply for 2.*
- A4. *The bid bond value is 7,000 USD regardless of the number of lots included in the bidder's proposal.*
- Q5. *Is there any acceptable way for the bid bond to be payable in for the LCEC other than the cash payment method?*
- A5. *The bid bond shall be made payable in cash only to the LCEC along with the submitted proposals.*

- Q6. *In schools where we need to install the inverter and batteries under the stairs, are we responsible for installing a separator?*
- A6. *In case of installing the inverter and batteries under the stairs in any of the schools, and in case there is no physical separation between the corridor and these energy items, the winning bidder shall be responsible of installing a security steel cage/fence to ensure this physical separation for safety purposes. This should be reflected in the bidders' proposals and the price to be included in the item of batteries installation of the corresponding BoQs.*
- Q7. *In which item of the BoQ should we include the price of installing the DC and AC cable trays and their corresponding accessories?*
- A7. *The cable tray price should be included in the item of PV cables installation in each BoQ, regardless if it used for DC or AC cables installation.*
- Q8. *Is it mandatory to use cable trays for the PV cables installation? Can we use different methods such as PVC conduits for example?*
- A8. *All PV cables installations should be made through cable trays, as per the specs mentioned in Annex 4 of the RFP. PVC conduits can only be used inside the electrical shaft of the school, otherwise, the installation of a cable tray is mandatory. In other words, any installation of cables, outdoor or indoor, excluding the electrical shaft, should be through cable trays.*
- Q9. *For the site that have VFDs, It is mentioned on the drawing that the contractor is responsible for operation of the pump and will bear the replacement in case it is not operational where the VFD is sized and procured by the LCEC. The contractor has no responsibility in the design and selection of the VFD and should not bear the replacement in case of malfunction. Please confirm.*
- A9. *As explained in the answer A3, the winning bidder shall replace the water pump, if needed, in order to install a compatible pump with the solar drive inverter according to the datasheet of the solar drive inverter found in Annex 6 of the RFP.*
- Q10. *We need the dimensions of the battery rack for the 2V batteries in order to measure the needed DC cables.*
- A10. *The batteries racks are formed of two rows, each row fits for 12 batteries installed next to each other, and each battery's dimensions are 21.5 x 27.7 x 85.5cm (LxWxH) as per the datasheet of the batteries in Annex 6 of the RFP.*

Q11. *For Load segregation, some sites do not have a dedicated breaker for the non-critical load (load that should not be on solar system) and there is incapability to access these equipment, can you share your proposed plan in order to access the feasibility and prepare a price.*

A11. *The load segregation shall be made either on the level of the MDB, or on the level of the SDBs of the school. In case the distribution network between the MDB and the SDBs is not accessible (in case of the non-existence of an electrical shaft and the electrical tubes are not accessible), then the load segregation would be considered not feasible.*

Q12. *What are the payment conditions? Is there a downpayment or the full payment is at the end of the project (one month delivery time is very short to make intermediate payment based on deliverables)*

A12. *The payment terms will be detailed in the contracts with the winning bidders, but usually in such projects three payments are scheduled, including a down payment upon contract signature.*

Q13. *How will be made the payment. In cash or by bank transfer from Fresh account to fresh account?*

A13. *The payments will be made through bank transfers from fresh account to a fresh account.*

Q14. *Which documents should be submitted separately from the proposal?*

A14. *Each bidder shall submit his proposal including the technical and financial proposals as detailed in the RFP, and shall submit in a separate way the bid bond payment, form 4 of the RFP (filled, signed, and stamped), and a copy of the cover page of the proposal.*

Q15. *Concerning the bid bond of 7,000\$; is there another way to give this bid bond or only in cash (banknotes)? If only in cash shall we put the 7000\$ inside the financial envelope without receiving a receipt from LCEC? Or shall we pay the 7000\$ separately when delivering the proposal against an official receipt?*

A15. *The bid bond shall be paid separately when submitting the bidder's proposal. Every bidder will receive a document from the LCEC confirming the payment of the bid bond. The conditions of returning the bid bond are available in form 4 of the RFP.*

Q16. *The steel structure for PV panels shall be procured and installed by the contractor or only installed? Are the material supplied by LCEC?*

A16. *The steel structure of the PV panels shall be procured and installed by the winning bidder according to the design in Annex 2 of the RFP.*

Q17. *Shall we sign and stamp the Technical drawings and BoQs for all the 4 Lots or we only include the 2 Lots that we are submitting for?*

A17. Each bidder shall sign and stamp the documents related to the lots he/she is applying to only.

Q18. *In section D: Instructions to Bidders, point 53: "The bidder shall prepare one (1) copy of the proposal." and "In the event of any discrepancy between the original and the copy, the original shall prevail." Kindly clarify if we should submit only the Original proposal, or One "Original" and One "Copy".*

A18. The proposal should include the original documents only, no need for a copy.

Lot 1 Questions:

Q19. Can you please confirm the location of the inverter and batteries room in Bar Elias school?

A19. The inverter and batteries room shall be the prefab room located in the playground of the school.

Q20. In Nabi Shit school, should we use a cable tray for the PV cables installation from the roof to the inverter room? Is it ok to use an EMT conduit instead?

A20. The PV cables shall be installed from the roof to the inverter room through a cable tray, as per the specs mentioned in Annex 4 of the RFP.

Q21. In Nabi shit school, are we allowed to use the shaft of the adjacent building (belonging to another school) since it reaches the electrical room where the inverter will be installed?

A21. No, all works shall be done within the property of the school itself.

Q22. In Nabi shit school, will the generator on site be connected to new solar system?

A22. Please check the SLD in Annex 2.

Q23. In Nabi shit school, there is a pump missing on site, is that mean we will install only one VFD?

A23. No, the number of solar drive inverters indicated in the SLD in Annex 2 should be installed in the site. Please refer to answer A3.

Q24. In Nabi shit school, Do we need to supply and install Wifi repeaters to reach Air quality sensors locations?

A24. Please check the notes of the drawing NS956-E-Layout & IAQ Sensors & Lighting & WS in Annex 2 of the RFP.

Q25. In Nabi Shit school, Where is the location of grounding?

A25. During the site visit with bidders, three suitable spots for the installation of the earthing system within the property of the school were identified. Each bidder shall select the convenient location, which shall be reflected in the proposal and item number 38 of the corresponding BoQ.

Q26. In Nabi Shit school, Can we offer aluminum support structure giving higher warrantee period?

A26. The design and specs of the mounting structure are available in Annex 2 and Annex 4 respectively of the RFP.

Q27. In Nabi Shit school, Who will supply the required DC cables 70mm² for charging the batteries?

A27. As per the corresponding BoQ, this item is under the procurement and installation category that should be done by the winning bidder.

Q28. In Qaa school, the water tanks not appearing on the layout of the PV panels are blocking some rows of PV panels. Can we move the PV panels to install them on the same roof?

A28. The PV panels can be moved towards the small glass dome to avoid any overlapping with the existing water tanks. Also, the existing vertical pipe shall be shortened as much as possible to reduce its shading effect on the PV panels.

Q29. In the SLD of Qaa school, the inverter shall be interacting with EDL only, to allow for the school to benefit from the net metering in the future. But since the ATS is located far from the inverter room, and the routing of AC cables between the ATS room (janitor room) and the inverter room is underground, how can we identify, at the inverter level, that EDL is online to allow power export?

A29. The solution is installing an AC cable from the EDL side of the ATS in the janitor room to the inverter room, and use this cable as an AC input for the inverter. The power export, when feasible, shall be done then through this direct connection between the inverter and the EDL meter. This should be reflected in the bidders' proposals and the price to be included in item number 37 of the corresponding BoQ.

Q30. In Qaa school, We saw two possible locations for the inverters and battery bank, which location is LCEC decision?

A30. The location of the inverter and batteries room is the electrical room located in the basement of the school.

Q31. In Qaa school, Can we install a new MTS at the electrical room in the school to avoid routing a new AC cable from main gate where is EDL switch?

A31. Please refer to answer A29.

Q32. In Qaa school, Can we install additional router with data cable to enhance internet in the school?

*A32. Please refer to answer **Error! Reference source not found.** and check the notes of the corresponding drawing.*

Lot 2 Questions:

Q33. In Yahchouch school, there are two schools in the same building but in different floors, does the project include them both or shall we install the REEE measures in the specified school only? More specifically since the electrical room is common, should the PV system supply both schools or one school only?

A33. The school targeted in this project by all REEE measures is Yahshouh Mixed Intermediate Public School (يخشوش المتوسطة الرسمية المختلطة) only. More specifically, the solar system shall supply the loads of the mentioned school only.

Q34. Can you please confirm the location of the inverter room?

A34. The inverter and batteries shall be installed in the existing MDB room.

Q35. The size of the earthing cable in the BoQ of Yahchouch, Ghaboun, and Bteghreen school is 16mm², whereas it is 10mm² in the corresponding SLDs, which one is correct?

A35. The size of the earthing cable is as per the SLD. It shall be priced in the items number 17, 18, and 18 respectively in the corresponding BoQs.

Q36. Can you please confirm the location of the batteries room in Bteghreen school?

A36. The inverter and batteries shall be installed in the teacher's room facing the stairs on the ground floor, using the first room on the left where water pipes are installed. For safety reasons and since we do not have any other location, the contractor shall install a shed to avoid any risk of water leakage on any equipment related to this project. This should be reflected in the bidders' proposals and the price to be included in item number 4 of the corresponding BoQ.

Q37. Is the playground in Bteghreen school accessible for material transportation?

A37. No, the playground of the school cannot be accessible by any car or truck.

Q38. Is the elevator of Ghaboun school included in the loads supplied by the PV system

A38. No, the elevator should be excluded from the solar system's output.

Q39. In Ghaboun school, the AC cables routing from MDB room to the SDBs of each floor is very challenging since it is not done through a shaft. How can we do the load segregation required in the SLD in this case?

A39. For load segregation, the winning bidder needs to access the existing electrical tubes and install AC cables from the MDB room to the SDBs, in case these tubes are full and cannot be used, then the load segregation would be considered not feasible.

Q40. In Ghaboun school, the electrical shaft selected for reaching the inverter room includes thermal pipes, should we still use this shaft?

A40. No, the winning bidder shall install an outdoor cable tray, starting from the roof level and ending at the outdoor level of the school's electrical room, where the inverter will be installed.

Q41. In Beirut for Girls school, can we use the existing cable tray in the basement level to reach the inverter room with the PV cables?

A41. Yes.

Q42. In Rene Mouawad & Hassan Saab schools, Do we need to divide the number of the air quality sensors onto four floors?

A42. Please check the notes of the drawing 56-57-E-Layout & IAQ Sensors & Lighting in Annex 2 of the RFP.

Q43. In Rene Mouawad & Hassan Saab schools, Can we change the panels distribution on the roof to reduce DC cables lengths?

A43. No.

Q44. In Rene Mouawad & Hassan Saab schools, Where is the location of grounding?

A44. In the garden within the school's property as checked during the site visit.

Q45. In For Girls Second school, Can we use existing cable tray in the shaft or in the building to run DC cables or AC cables as a new cable tray seems will not be fitted in the shaft and new cable tray in the building will crowd the ceilings?

A45. Please refer to answer A8.

Q46. Do we have to bring a new pump replacing old pump in the school?

A46. Please check answer A3.

Q47. In Baaklin school, the LED in the school already new, do we still need to replace them?

A47. The bidders shall fill the cells of item number 29 of the BoQ with the price of installation of the quantity mentioned in the BoQ. The winning bidder will receive the total quantity of lighting fixtures of the lot, the quantity allocated for Baaklin school will then be shifted to another school in the same lot, meaning it will be installed by the same winning bidder.

Lot 3 Questions:

Q48. In Kfaraaka school and since there is no electrical shaft in the building, how are we going to install the AC cables from the inverter room to the main ATS of the school? And should we use cable trays or conduits?

A48. The AC cables from the inverter to the ATS should be installed outdoor in the corridor that is on the same level of the ATS room, and one floor beneath the inverter room. The installation shall be made through a cable tray, as per the specs mentioned in Annex 4 of the RFP.

Q49. Where should we install the earthing system in Kfaraaka school

A49. The earthing system should be installed at the entrance of the school, to the right to the main gate where few trees are located.

Q50. In Zgharta school there are 3 water pumps of 0.5 HP each, according to the SLD we have to install 1 solar drive inverter for a pump of 1 HP. Should we replace one of the existing pumps before installing the solar drive inverter?

A50. As per the datasheet of the solar drive inverter, the minimum size of the water pump is 0.75 HP. As such, and as mentioned in the general questions, it is under the winning bidder's scope to replace one of the pumps with a 1 HP pump and install the solar drive inverter accordingly. This should be reflected in the bidders' proposals and the price to be included in item number 3 of the corresponding BoQ.

Q51. The chosen room for the installation of the inverter and the batteries in Zgharta school is in a bad state in terms of waterproofing and moisture. Are we supposed to fix the room before installing the energy items? Also, the room needs ventilation, kindly advise.

A51. The winning bidder shall do the necessary work to make the inverter room, including the walls, sealing, and floor in a good state. The winning bidder is also responsible for lowering the door for ventilation. This should be reflected in the bidder's proposal, and the price to be included in item number 4 in the corresponding BoQ.

Q52. In Tripoli school, can we use the existing cable tray in the basement level to reach the inverter room with the PV cables?

A52. Yes.

Q53. Can you please confirm the location of the inverter and batteries room in Miniarah school?

A53. The inverter room shall be located directly under the PV panels location. From a top view of the layout in Annex 2 of the RFP, the room is located to the left of the PV panels.

Q54. In Tripoli school, can we use the existing earthing system?

A54. No, a new earthing system dedicated for the new PV system should be installed.

Lot 4 Questions:

Q55. *In Zebdine school, the inverter room needs ventilation, is it under our scope to secure the ventilation for the room?*

A55. The winning bidder shall be responsible of lowering the inverter room's door, along with installing a fan inside the room. This shall be reflected in the bidder's proposal and the price to be included in item number 3 of the corresponding BoQ.

Q56. *In Deir Qanoun school, can you confirm the location of the inverter and batteries?*

A56. The location of the inverter and batteries room is the storage room located one floor beneath the tiled roof.

Q57. *In Deir Qanoun school, can we use the existing earthing system installed in the facility?*

A57. No, a new earthing system dedicated to the new PV system should be installed.

Q58. *In Deir Qanoun school, can we use the earthing system of the existing PV system?*

A58. No, a new earthing system dedicated to the new PV system shall be installed.

Q59. *In Kafra school, some of the bricks on the roof where we are supposed to install the PV panels on are broken, is it under our scope to fix them?*

A59. As per the RFP section C (Scope of the Proposal), bullet point number 40, the winning bidder shall be responsible of any necessary additional civil works if needed. In the case of Kafra school, the method statement and the civil design should be followed as per the Annex 2 of the RFP, and all necessary works needed for the safe installation and fixation of the PV panels, including but not limited to repairing the broken bricks, is under the scope of work of the winning bidder. This should be reflected in the bidders' proposals and the price to be included in item number 1 of the corresponding BoQ.

Q60. *In Kafra school, should we price a new lightning protection system? What are the requirements of the LPS?*

A60. The pricing of the LPS system is mandatory in all BoQs. Since it is an optional item, it shall be priced regardless if it is going to be installed or not. The specs of the LPS are in Annex 4 of the RFP.

Q61. *In Matariet el choumar school, is it under our responsibility to fix the waterproofing of the roof?*

A61. In the case of Matariet El Choumar school, a roof area of 10m² only should be treated with the appropriate waterproofing measure. This should be reflected in the bidder's proposals and the price to be included in item number 1 of the corresponding BoQ.

Q62. *In Matariet el choumar school, is it part of our scope to procure a 1.5 HP pump and install it for the water storage tanks in the parking?*

A62. Please refer to answer A3.