



UNHCR

United Nations High Commissioner for Refugees
Haut Commissariat des Nations Unies pour les réfugiés

DATE: 16/07/2023

REQUEST FOR PROPOSAL: HCR/IRQ/DHK/2023/RFP-037
Installation Of Solar System for Wastewater Treatment Plant in Kabarto Camp, Duhok Governorate, Iraq
FOR UNHCR COUNTRY-OFFICE ERBIL OPERATIONS.

CLOSING DATE AND TIME: - 23:59 HRS IRAQ Local Time on 06/08/2023

INTRODUCTION TO UNHCR

The Office of the United Nations High Commissioner for Refugees was established on December 14, 1950, by the United Nations General Assembly. The agency is mandated to lead and co-ordinate international action to protect refugees and resolve refugee problems worldwide. Its primary purpose is to safeguard the rights and well-being of refugees. It also has a mandate to help stateless people.

In more than five decades, the agency has helped tens of millions of people restart their lives. Today, a staff of some 6,600 people in more than 110 countries continues to help about 60 million persons. To help and protect some of the world's most vulnerable people in so many places and types of environment, UNHCR must purchase goods and services worldwide. For further information on UNHCR, its mandate and operations please see <http://www.unhcr.org>.

1. REQUIREMENTS

The Office of the United Nations High Commissioner for Refugees (UNHCR), Iraq Operations, invites qualified construction firms to make a firm offer for construction of Installation of Solar System for Wastewater Treatment Plant in Kabarto Camp, Duhok Governorate, Iraq, for UNHCR Iraq Operation.

IMPORTANT: Bill of Quantities (BOQs) are detailed in Annex A of this document.

2. BIDDING INFORMATION

2.1 RFP DOCUMENTS

The following annexes form integral part of this Request for Proposal.

- Annex A: Bill of Quantities & Scope of Work (SOW)
- Annex B: Design and the structure (Drawings)
- Annex C: Detailed Technical Evaluation Criteria
- Annex D: Technical Proposal Form
- Annex E: Vendor Registration Form
- Annex F: General conditions of Contracts for the provision of Good and Services (July 2018)
- Annex G: UNHCR General Conditions of Contracts for Civil works (October 2000)
- Annex H: Supplier's Code of conduct
- Annex I: e-Tender Box Supplier user manual
- Annex J: How to Join Microsoft Teams without account
- Annex K: Financial Offer Form
- Annex L: Tentative calendar of activities
- Annex M: Bid Data Sheet
- Annex N: Submission Checklist

IMPORTANT: It is strongly recommended that this Request for Proposal and its annexes be read thoroughly.

2.2 ACKNOWLEDGEMENT

We would appreciate your informing us of the receipt of this RFP by return e-mail to IRQDUTND@unhcr.org, CC: SAADIS@unhcr.org as to:

- Your confirmation of receipt of this RFP
- Whether or not you will be submitting a bid

IMPORTANT: Failure to send the above requested information may result in disqualification of your offer from further evaluation.

2.3 REQUESTS FOR CLARIFICATION

Bidders are required to submit any request for clarification or any question in respect of this RFP by e-mail to IRQDUTND@unhcr.org, CC: SAADIS@unhcr.org. The deadline for receipt of questions is 23:59 HRS IRAQ Local Time on 25/07/2023. Bidders are requested to keep all questions concise. UNHCR may, at its discretion, copy any reply to a question to all other invited firms.

All the emails sent requesting clarification **MUST** have the following subject otherwise UNHCR reserves the right NOT TO REPLY.

EMAIL SUBJECT: HCR/IRQ/DHK/2023/RFP 037 - Query

UNHCR will compile all questions and reply to the questions received as soon as possible by means of publication on the UNGM, UNHCR websites and by email to all bidders participating in the tender competition.

IMPORTANT: Please note that Bid Submissions are NOT to be sent to the e-mail address above. Bid Submissions sent directly to the e-mail addresses above will result in disqualification of the offer.

2.3.1 SITE VISIT:

All the participating construction companies/contractors are **required to attend a Mandatory site** to inspect the construction site before submitting their offer. The contractors are required to send an email for booking an appointment for the visit to the email address: IRQDUTND@unhcr.org, CC: SAADIS@unhcr.org before 24/07/2023. The date of the site visit is 24/07/2023 (the date and the time of the site visit is fixed no changes can be made to this date and time upon the request of a potential bidder).

Site Visit Date/Time: 24/07/2023 at 11:00 am.

Venue: Camp Management, Kabarto Camp, Duhok, Iraq

GPS Coordinates: 36'49'59.85; N 42'53'54.01 E

Please Note: UNHCR does not provide means of transport to the site.

2.3.1 PRE-BID CONFERENCE:

UNHCR will organize a supplier pre-bid conference on MS Teams, on 25/07/2023 at 11:00 HRS. A maximum of ONE representative per company is allowed. Name and contact details of the company's representatives must be provided, at least two working days in advance, by e-mail to IRQDUTND@unhcr.org, CC: SAADIS@unhcr.org before 25/07/2023. Changes in staff need to be shared in advance; otherwise, they will not be able to participate.

Participation to the pre-tender conference shall be at the bidders' own expenses. There will be no reimbursement from UNHCR.

Participation to the pre-tender conference is **STRONGLY RECOMMENDED** given the complexity of the requirements. However, after the supplier conference, a Questions & Answers document will be prepared and posted on UNGM and/or distributed by email to all invited bidders.

IMPORTANT: Please note that Bid Submissions are not to be sent to the e-mail address above.

2.4 YOUR OFFER

IMPORTANT: Cancellation of Solicitation: UNHCR reserves the right to cancel a Solicitation at any stage of the procurement process prior to final notice of award of a contract.

Your offer shall be prepared in English.

Please submit your offer using the Annexes provided. Offers not conforming to the requested formats may be not taken into consideration.

IMPORTANT: Inclusion of copies of your offer with any correspondence sent directly to the attention of the responsible buyer or any other UNHCR staff other than the manner of submission as specified in the tender document will result in disqualification of the offer. Please send your bid directly to the address provided in the "Submission of Bid" section 2.6) of this RFP.

Your offer shall comprise the following sets of documents:

- Technical offer
- Financial offer

2.4.1 Content of the TECHNICAL OFFER

IMPORTANT:

No pricing information should be included in the Technical offer. Failure to comply may risk disqualification. The technical offer should contain all information required.

The Bill of Quantities for **Installation of Solar System for Wastewater Treatment Plant in Kabarto Camp, Duhok Governorate, Iraq, for UNHCR Iraq Operation** can be found in **Annex A: Bill of Quantities & Scope of Work (SOW)**

Your technical offer should be concisely presented and structured in the following order to include, but not necessarily limited to the following information:

Description of the company and the company's qualifications

A description of your company with the following documents: company profile, registration certificate and last audit reports:

- Year founded;
- If multi location company, specify headquarters location;
- Number of similar and successfully completed projects;
- Number of similar projects currently underway;
- Total number of clients; previous and current;

- a. **Valid Registration Documents** / Certificate / Incorporation with the Government of Iraq (Federal Government or Kurdistan Region) as a construction or general contracting company, Company Age Not less than 3 years from the date of registration / incorporation.
- b. Your technical offer should contain your acknowledgement of the following applicable conditions either by signing the below documents or acceptance of the following in writing on its letterhead as part of your technical:
 - (i) **Annex F: General conditions of Contracts for the provision of Good and Services (July 2018)**
 - (ii) **Annex G: UNHCR General Conditions of Contracts for Civil works (October 2000)**

However, please note that submitting an offer is deemed as full acceptance of UNHCR's Conditions above for Provision of required Services and UNHCR General Conditions of Contracts for Civil works (October 2000).

- c. **Bid Security:** Your technical offer should contain the sum of **USD 5000** in the form of a Bank Guarantee or Certified Bankers Cheque issued from a local bank. The bid security must be valid for at least 180 Days after the closing date of the tender. Please include a scanned copy of bid security in your technical documents submitted through eTenderBox and keep the original. UNHCR may ask to submit original copy at later stage of the evaluation.

The bid security for the unsuccessful bidders will be released with the regret letter(s). The Bid Security for the successful bidder(s) will be released upon the submission of the Performance Bond and upon the signing of the Awarded Contract.

Your bid security may be forfeited: If you withdraw your offer during the period of the Bid Validity specified by you in your offer: or, In the case of a successful Bidder, if you fail to sign the Contract/Purchase Order - in which case, you would have refused the offer.

d. **Award and Performance Bond (bank guarantee):**

The Firm that submits the successful Proposal will be notified by “Letter of Award” prior to the expiration of the validity period. The letter, referred to as the “Letter of Award” will state the sum of the fees to be paid to the Firm for the services rendered and will indicate the terms under which the Contract must be finalized. The Contract must be signed within 14 days of the issuance of the Letter of Acceptance. The successful bidder will be required to furnish UNHCR with a **10% BANK GUARANTEE** of the contract value from a reputable bank in the next 7 days, valid for the entire period of the contract and the period for defects and liabilities period.

- e. List of Equipment owned by the firm to be mobilized for the execution of works described in **Annex A: Bill of Quantities & Scope of Work (SOW)**
- f. Frame-time for completion of the project including the main project milestones; Work Schedules; Gantt charts. Submission of a detailed and realistic work plan with duration up to **180 Days**
- g. Past experience and performance records with other UN Agencies, NGOs or any other major clients and other credentials.
- h. Similar Past Experience (Copies of 5 Purchase Orders (POs), contract agreements, or work orders for **Construction and landscaping projects** with proof of project completion in the **past ten (10) years**
- i. Project assumption's and constraints based on your understanding of the project;
- j. The methodology/approach to be used in addressing the issues outlined in the BoQ;
- k. Submit the latest 2 consecutive years' financial audited reports for the years **(2020-2021)**; Audited Financial reports must include the Balance Sheet and must be certified by the Iraqi Association of Accountants, clearly demonstrating a minimum cumulative turnover of **USD 100,000.00**.
- l. **Vendor Registration Form:** If your company is **not** already registered with UNHCR, you should complete, sign, and submit with your technical proposal the **Vendor Registration Form (Annex E)** however in case if your company is registered, please clearly state your supplier/vendor ID. In case if you are not sure about the status of your company, please send you're a duly filled Vendor Registration Form.
- m. Any information that will facilitate our evaluation of your company's substantive reliability, financial and managerial capacity to provide the requested requirements by UNHCR as specified in **Annex A: Bill of Quantities & Scope of Work (SOW)**

Understanding of the requirements of the services requested in the solicitation documents such as: proposed approach, solutions, methodology and outputs.

Any comments or suggestions on the project, as well as your detailed description of the manner in which your company would respond to the BOQs:

- A description of your organization's capacity to provide the required services.
- A description of your organization's experience in undertaking / implementing the project.
- Compliance to the requirements stated on the in the BOQ and/or technical proposal form.

Proposed personnel to carry out the assignment

- The organization structure or organizational chart. List of key personnel and their qualifications with Curriculum Vitae of core staff.

Where deemed necessary a supplier visit may be required to complement the narrative of the technical evaluation.

IMPORTANT:

Companies not submitting the required documents with their proposal may be contacted by UNHCR and given one more opportunity (within 48 hours) to submit them (Only for the Administrative requirements **criterion no. 1 & 2 & 3 (Site Visit Certificate, Bid security, and Business Registration Documents)**). Should these companies still not submit the missing documents, they will then be disqualified.

2.4.2 Content of the FINANCIAL OFFER

Your separate Financial Offer must contain an overall offer in United States Dollars (USD). The financial offer must cover all the services to be provided (price “all inclusive”). If no financial offer is received, the bid shall be automatically disqualified.

The Financial Offer is to be submitted as per the **Annex A: Bill of Quantities & Scope of Work (SOW) BIDS THAT HAVE A DIFFERENT PRICE STRUCTURE MAY NOT BE ACCEPTED.**

UNHCR is exempt from all direct taxes and customs duties. With this regard, **price has to be given without VAT.**

You are requested to hold your offer valid for a minimum of **180 days** from the deadline for submission. UNHCR will make its best effort to select a company within this period. UNHCR’s standard payment terms are within 30 days after satisfactory implementation and receipt of documents in order.

The cost of preparing a bid and of negotiating a contract, including any related travel, is not reimbursable nor can it be included as a direct cost of the assignment. Any activity undertaken or expenses incurred in preparation of a contract before an actual contract is signed shall be borne by the Bidder. An advance notice or information of award is not to be considered as a contract.

UNHCR will not provide any advance payments or payments by letter of credit. The standard payment terms are by bank transfer net thirty (30) days after acceptance of contractor’s invoice and delivery and acceptance of services by UNHCR in shape of a partial or substantial works completion certificate issued by the designated Project Manager / Engineer.

IMPORTANT: UNHCR can only facilitate payments through the local banks and not banks outside of Iraq and therefore the current market condition must be factored in before submitting your quote.

IMPORTANT: Bidders are required to submit the financial offer both in PDF and Excel Sheet (Soft Copy) in the Template provided in Annex K: Financial Offer Form

2.5 BID EVALUATION:

Each proposal from a Bidder will be considered separately and independently. Bidders shall submit a complete proposal for each solicitation in which they wish to participate. References to previous or on-going proposals will be not considered. Award of a previous contract with UNHCR will not be considered in itself as a preference or guarantee for the award of future solicitations on the same subject.

2.5.1 Supplier Registration:

The qualified company (s) will be added to the Vendor Database after investigation of suitability based on the submitted Vendor Registration Form and supporting documents. The investigation involves consideration of several factors such as:

Financial standing;
Core business;
Track record;
Contract capacity;

2.5.2 Technical and Financial evaluation:

For the award of this project, UNHCR has established evaluation criteria which governs the selection of offers received. Evaluation is made on a technical and financial basis. The percentage assigned to each component is determined in advance as follows:

- **Technical Offer will be weighed at 60 points (or 60%)**
- **Financial Offer will be weighed at 40 points (or 40%)**

Technical Offer

The Technical offer will be evaluated using inter alia the following criteria and percentage distribution: **60% from the total score**, with a minimum passing score of **36 points in overall, and minimum 20 points for technical specification of works**.

Annex C: Detailed Technical Evaluation Criteria

Evaluation Factors
Mandatory
Valid Registration Documents / Certificate / Incorporation in Iraq with Federal Government or Kurdistan Region of Iraq) Company Age Not less than 3 years from the date of registration/incorporation.
Did the vendor send an engineer to visit the site on the said date and time and sign their company's name on the attendance sheet?? (The Engineer should bring an authorization letter from the company and show their engineering union ID card)
Mandatory bid security of USD 5000 by "Good for Payment Cheque/Certified Cheque" made out in the name of UNHCR covering the offer's validity (180 days) It should be a certified cheque (not personal).
The cheque should indicate the RFP number and must be issued under the company name. The selected company would be required to submit the original cheque.
Scoring Criteria
General Company Qualification & experience (0-14 Point)
Relevant Experiences (0-8) marks
Technical Specification of Works (0-30) marks (Min Passing point is 20 Points)
Work Plan & Method of Implementation (0-8)
Total Marks (60)

The Technical offer score will be calculated according to the percentage distribution for the technical and financial offers. The cut-off points for submissions to be considered technically compliant will be 60% of the total technical weightage **i.e. 36 out of the 60**.

Financial Offer:

The Financial offer will use the following percentage distribution: **40%** from the total score. The financial component will be analyzed only for those suppliers that pass the technical evaluation.

The maximum number of points will be allotted to the lowest price offer that is opened and compared among those invited firms. All other price offers will receive points in inverse proportion to the lowest price, e.g., $[\text{total Price Component}] \times [\text{US\$ lowest}] \div [\text{US\$ other}] = \text{points}$ for other supplier's Price Component.

Clarifications of Proposals:

To assist in the examination, evaluation, and comparison of proposals UNHCR may at its discretion ask the Bidder for clarification about the content of the proposal. The request for clarification and the response shall be in writing and no change in price or substance of the proposal shall be sought, offered, or accepted.

UNHCR reserves the right to award without clarifications and/or discussions. If there are arithmetic mistakes in the budget of the technically acceptable applicants, UNHCR will rectify these mistakes on the following basis:

- If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected; and
- If there is a discrepancy between the amounts in figures and in words, advantage will be given to the amounts in words.

If the correction(s) leads to a different total cost, this new total cost will be evaluated against other technically acceptable Proposals and considered as being part of the Best Value evaluation and selection. UNHCR reserves the right to reject the Proposal if the technically acceptable applicant does not accept the correction of mistakes in the budget by UNHCR.

2.6 SUBMISSION OF BID:

The offers must bear your official letter head, clearly identifying your company. The Technical and Financial offers shall be clearly separated.

Please submit your proposal through an online eTenderBox Tool, which can be accessed at <http://etenderbox.unhcr.org>.

To submit a proposal against UNHCR tender, the bidder needs to register in eTenderbox system. Please refer to the eTenderbox user manual for bidders at **Annex I: e-Tender Box Supplier user manual**. You are requested to get familiar with this tool and create a login by registering your company in the system for access to the current and upcoming UNHCR tenders.

Once the login is created, the bidder will be given access to the UNHCR available tenders. Bidders can access the specific tender by clicking on the “tender reference number”, the system will then navigate to the detailed tender review page, where the separate technical and financial submissions can be done.

It is the bidder’s responsibility to upload only technical documentation under the “Technical” category and Financial documentation under the “Financial” category. Failure to do so will result in disqualification.

Note: The official submission of the selected files for upload is done by clicking the ‘Save & Submit’ button, therefore, this button has to be clicked before the deadline expires. If done so, the selected files will be submitted and uploaded successfully even if the deadline expires during the file upload. It is the Supplier’s responsibility to ensure that all files of the final offer are submitted before the tender expiration deadline. In order to ensure the safe submission of the full and final offer, it is recommended to have all files uploaded well before the tender deadline.

Allowed extensions for files to upload are .doc, .docx, .xls, .xlsx, .rtf, .png, .jpg, .jpeg, .pdf, .txt, .zip, .ppt, .pptx, .bmp, .rar, .gif, .tif and .tiff, however **it is preferable to upload PDF files. Executable files** (.exe, .bat, .cmd etc.) should not be uploaded. All files should be clearly labeled. **The maximum size limit per file is 10MB.**

IMPORTANT: The technical offer and financial offer are to be sent in separate documents. Failure to do so may result in disqualification.

IMPORTANT: DEADLINE TO SUBMIT YOUR BID: 06/08/2023 BY 23:59 HOURS LOCAL TIME: Any bid uploaded after this date and time will be rejected. UNHCR may, at its discretion, extend the deadline for the submission of bids by notifying through etenderbox.unhcr.org and WWW.UNGM.ORG.

IMPORTANT: Any bid received after this date or sent to another UNHCR address may be rejected. UNHCR may, at its discretion, extend the deadline for the submission of bids, by notifying all prospective bidders simultaneously.

UNHCR will not be responsible for locating or securing any information that is not identified in the bid. Accordingly, to ensure that sufficient information is available, the bidder shall furnish, as part of the bid, any descriptive material such as extracts, descriptions, and other necessary information it deems necessary for a comprehensive understanding of its proposal by UNHCR.

IMPORTANT: The Financial offer will only be opened for evaluation if the supplier’s technical part of the offer has passed the test and has been accepted by UNHCR as meeting the technical specifications.

2.7 BID ACCEPTANCE:

UNHCR reserves the right to accept the whole or part of your bid or allow split or partial awards on this project. It is however important to note that the construction project cannot be split unless the various components are defined by LOT. All other projects are to be awarded on an all or nothing basis.

Important: Any missing cost for a line in Bill of Quantities & Financial Offer will be considered invalid.

UNHCR may at its discretion increase or decrease the proposed content when awarding the contract and would not expect a significant variation of the rate submitted. Any such increase or decrease in the contract duration would be negotiated with the successful bidder as part of the finalization of the Purchase Orders for Services.

Please note that UNHCR is not bound to select any of the firms submitting bids and does not bind itself in any way to select the firm offering the lowest price. Furthermore, the contract will be awarded to the bid considered most responsive to the needs, as well as conforming to UNHCR's general principles, including economy and efficiency and best value for money.

Some of the reasons of disqualification:

Some of the reasons which may lead to such disqualification of your offer are as following: Proposal if:

1. The Applicant's qualification or data are proven to be false; The selected Applicant refuses to enter into a contract.
2. The Applicant commits a proven unfair or dishonest act in order to acquire rights for agreement award.
3. The proposal is received through any other means of communication except as specified in this solicitation document under Article 2.6 SUBMISSION OF BID
4. The offer is received after the deadline for submission of bids stated in the tender documents; and/or Sent via the correct route after having been sent incorrectly.
5. Any changes made to the BOQ by the bidder may result in disqualification of the offer.

2.8 CURRENCY AND PAYMENT TERMS FOR PURCHASE ORDERS

Any Purchase Order (PO) issued as a result of this RFP will be made in the currency of the winning offer(s). Payment will be made in accordance to the General Conditions for the Provision of Goods and Services and in the currency in which the PO is issued. Payments shall only be initiated after confirmation of successful completion by UNHCR business owner.

Any Purchase Order (PO) issued as a result of this RFP will be made in USD. Payment will be as follows:

- a) **1st Payment (30%)** of contract value after completing **40% of work**.
- b) **2nd Payment (40%)** of contract value after completing **80% of work**.
- c) **3rd Payment (20%)** of contract value after completing **100% of work**.
- d) Payment Retention: 10% of the total project amount will be withheld from the Final Payment as Retention Amount for a period of Defect Liability Period of **Six Months** after completion of the project.

2.9 UNHCR GENERAL CONDITIONS OF CONTRACTS FOR CIVIL WORKS (OCTOBER 2000)

Please note that the **UNHCR General Conditions of Contracts for Civil works (October 2000) (Annex G)** will be strictly adhered to for the purpose of any future contract. The Bidder must confirm the acceptance of these terms and conditions in writing.

2.10 UNHCR GENERAL CONDITIONS OF CONTRACTS FOR THE PROVISION OF GOODS AND SERVICES

Please note that the **Annex F: General conditions of Contracts for the provision of Good and Services (July 2018)** will be strictly adhered to for the purpose of any future contract. The Bidder must confirm the acceptance of these terms and conditions in writing.

2.11 Liquidated Damages

- 2.11.1 In accordance with the provisions made in the Article 45 of (The UNHCR General Conditions of Contract for Civil Works (October 2000 version) and in Article 17 of the UNHCR Standard Contract for Construction Services. The Contractor acknowledges the requirement of UNHCR to be completed **in accordance with the time frames stipulated contract resulting from this solicitation process with the successful bidder**. The successful bidders will therefore be required to acknowledge, that time is of the essence in relation to performance of its obligations.
- 2.11.2 Should the Contractor be in delay, without prejudice to UNHCR's other rights and remedies, UNHCR may, at its sole option, demand liquidated damages for such delay, in an amount equal to **0.1%** for each DAY for the portion of incomplete portion of the works of delay beyond the date upon which the Services were due to be completed. The Parties agree and acknowledge that calculation of damages from a breach would be difficult to estimate accurately and that the foregoing

The assessment will not exceed 10 percent of the Contract value is a reasonable approximation thereof and is intended as the fair allocation and liquidation of damages and not as a penalty against the Contractor.

- 2.11.3 UNHCR shall have the right to deduct any liquidated damages to which it is entitled under the terms of its standard contract for construction services from any monies due from UNHCR to a potential Contractor (resulting from this solicitation process), or to recover the same as a debt due from the Potential Contractor.
- 2.11.4 Liquidated damages shall be payable by virtue of the sole fact of the delay without the need for any previous notice or any legal or arbitral proceedings, or proof of damage, which shall in all cases be considered as ascertained.

Signature

Chrysanthus Yaw Anthonio

Supply Officer

UNHCR Country Office Erbil

Annex A: Bill of Quantities & Scope of Work (SOW)

General Note/Guidance

1. All the work items should be done according to IGTS that complies with ACI-Code 1995 applied according to the instructions of the supervising Engineer.
2. All materials must be NEW from best type, approved by supervising Engineer.
3. All construction materials should be tested according to Construction Works Specification by NCCL (1981 edition).
4. The contractor shall provide samples for all materials to be used in the project prior to using them to get approval from supervising Engineer.
5. It is the duty of the contractor to check the designs for accuracy and adequacy, otherwise UNHCR will take no risk of the contractor's failure to accomplish the work.
6. The contractor shall provide all required manpower, transportation, equipment, tools, machinery... etc. unless otherwise stated below.
7. In case of any difference between BOQ, designs and/or drawings; the instruction of supervising Engineer will prevail/govern. And In case any components (for any necessary Civil, Mechanical and Electrical Works) required further design and calculation, the contractor needs to provide adequate human resources to prepare the detail design works (full package for rehabilitation and for solarization (installing PV solar system) the existing WWTP) with approval from Engineers Union or any certified relevant party.
8. After all works are finished the site must be cleaned from all debris and waste materials must be removed to a dumping site designated by the municipality and disposed in an environmentally friendly manner.
9. Normal site office for the Engineer: Constructing or providing normal working space for Site Engineers, furniture, and office equipment, including consumable materials, stationary. Office in temporary set up will be accepted.
10. The contractor is responsible for fixing any damages or defects which happen during the implementation.
11. The Supervising Engineer can ask for a Certificate of Origin & Quality to ensure the quality of the materials will be used in the projects. The Supervising Engineer can ask Lab test to certify quality of materials. After completing all the below works in the BoQ (Rehabilitation and Solarization <installing PV solar system> of the existing WWTP), the water outflow from the WWTP should be tested at the authorized laboratory and the outflow water quality (treated/ recycle water) should be in compliance with the attached Iraqi standard for irrigation purposes. The contractor should cover all the required Lab test expenses.
12. The contractor shall install steel sign board 1.2 x 1.8 with calligrapher wages to achieve visibility of the project.
13. Supply Labors, required materials, equipment, tools, machines, and skilled labors for installing a Photovoltaic Main/Back-up Solar Power Generator, consisting of Solar Panels, Solar Racks, Smart Invertors, Regulators, Connection Cables, Plugs & Sockets...etc as Main/ Stand-by Power Sources that supply power during the day and according to the below item descriptions/specifications. All the provided below materials should be good and approved quality by supervising Engineer (Certificate of Origin and Quality should be provided).

No	Item Description	Unit	Quantity
	Installing a New PV Solar System		
A	General Descriptions/Guidelines:- Provide the required materials, equipment, tools, machines, and skilled labors for Providing and installing a Photovoltaic Solar System, Hybrid ON-Off-Grid Complete Set of Total Production Capacity = 180 Kwp, Inverter Rated Nominal /Min.Power 132 Kwe, Voltage Range 380Vac, Overload 200% during 60sec, Protection Class IP20/IP54, Built-in MPPT, Built-in Fuse Box, Monitoring with GPRS module and Automatic transfer switch) consisting from Solar Panels, Solar PV panel Support Structure, Smart Solar Inverter for the whole components of the WWTP, DC Connection Cables, MC-4 DC connectors and AC cable...etc. As Main Power Sources that supply the required power during the daytime for all electrical components of the existing WWTP and according to the below item descriptions/specifications. All the provided below materials should be of Country Origin of approved quality by Supervisor Engineer (Certificate of Origin and Quality should be provided). The System should day time work from solar energy and at night work from the city network/Generator The contractor should prepare a detailed Design Works by an authorized Consultant Expertise Bureau/Engineer with all details for the required PV Solar Unit (Full Package, includes all Electrical with earthing & anti lighting/all protection system, Mechanical and Civil Works) and for all other related works according to the above mentioned requested descriptions, existing site requirements and under supervision & approvals of the UNHCR Engineer.		

A1	PV Solar Panels :- Provide, install, test and commission the required numbers (Set) of New PV Solar Panels which should have the following specifications (Minimum): - Heterojunction HJT, N-Type, Half-Cut-Cell, 12 or 9 Busbar (MBB), Bifacial (preferable), Mono Crystalline, must be from one of the world well-known brands/from one of the leading top ten PV solar panel manufacturers, good frame thickness, the module conversion efficiency of Min. 21%, No/low LID and PID. Product Warranty of 12 years and Power Warranty of 25 years with lowest and minimum degradation. PV module production capacity (Minimum = 500 Wp, Total production minimum 180 Kwp), internationally certified by TUV Rhineland to ISO, BS and UV standards with required certificates, Max. Wind/Snow Load 2400 / 5400 Pa, Junction Box 67 / 68 IP, Front / Back Glass 2.0 mm Anti-reflet coating semi-tempered glass, low iron, Frame Anodized aluminum alloy, Junction Box IP68, 3 diodes - MC4 Compatible, Output Cables* 4.0 mm², 350 mm - 1200 mm(cable should be suitable for leapfrog connection, including foundation, structures and accessories, all other/related required works. Note:- The number of Solar Panels depends on each panel's outputs but the total production capacity (Peak) of the new solar unit/system should not be less than 180,000 Watts and the Contractor is responsible for the proper design of the number of panels and strings to meet the existing WWTP control system requirements.	LS (complete set)	1.0
A2	Combiner box: Supply and install PV panel combiner connection box (10 string min), with earthing , surge suppressor System. The earthing system should be tested and should be less than 5 Ohms	Unit	3.0
A3	WWTP Controller System: - (Smart Inverter, AC motor drive VFD); Supply and install well known Hybrid Pumping/WWTP Controller System of brands (FUJI, SCHENIDER, YASKAWA, Lorentz) or equivalent quality which should be approved by UNHCR Supervisor Engineer, Including Smart Inverter, MPPT, Frequency Drive, min 800VDC load Reactor/ Filter with all other necessary accessories. Pump/WWTP Controller must be internationally certified by Tuv ,ISO , and supplier should also provide test report of confirming that the VFD is according to the IEC62109 of safety power conversion using in photovoltaic power system, Suitable/Input DC voltage range 300~800V, Max input DC voltage 1000V, MPPT Voltage (Vmp) 250~750V or as per current site requirements, Recommended MPPT Voltage (Vmp) 550, MPPT efficiency 99%, Input AC voltage, Output frequency 0~50Hz, IP level IP20,Fault protection function : Up to 30 general fault protections including overcurrent, overvoltage, undervoltage, overheating, default phase, overload, shortcut, etc., and also include water level sensor failure protection, full water, dry running, weak sunshine warning special protection functions for solar pump system. Could record the detailed running status during failure & has fault automatic reset function. Inverter must include EMC filter. Inverter Kw output 132 Kw/each (Minimum), 1st one DUTY & 2nd one STAND BY, Rated output current from the inverters should cover the existing rehabilitated WWTP total demand (old & new components), (Min 3 Years Warranty from installation date), the pump controller should include HMI and wireless remote-control feature. The work also includes modifying/converting (if any) of the existing control panels of any electromechanical components of the WWTP.	Unit	2.0
A4	Load reactor :- Supply and install Load reactor installing after VFD	Unit	1.0
A5	Cables and Accessories: Supply and install -DC MCCB before VFD - MC4 connectors for whole project - All required types & sizes of Ac and Dc Electrical Cables with all connections between Solar Panels, Combiner box, Inverter, comes and goes from Main source and Generator and Terminal Electrical Boxes, , Ac changeover, Circuit breakers .	Set	1.0

A6	Racking for panels: Supply and install a Galvanized Steel or Aluminum Structure/Tower (Canopy Structure is Preferable), Module Support Structure of sufficient size and shape. (Heavy Duty & High resistance Structure - full package/set) of required high (according to the site requirements, technical drawings, and instructions of Supervisor Engineer) for mounting the solar panels and designed to BS5950. The structure must be made from Aluminum or from square hollow galvanized steel sections with vandal proofing. The structure for the support of the PV module should be anchored to the concrete base.(3,02mt/kg). including complete fittings with wind load:60m/s, snow load:1.4kn/m2 Structure, flexible installation angle with certifications, tests, and 10 years warranty. All components must be pre-cut	Set	1.0
A7	Cable trench: Supply and install suitable Cable trench using PVC pipes and manholes ,the price includes all needed accessories and works	L.S	1.0
A8	Earth system: supply, install and connect an earth for the whole system , contain (3 piece of 25mm dia /150cm length of pure Copper rods) connected by (1x50mm2) Cu wires, all connections should be bandaged by Copper welding or using Cu clamps, then to be connected through the same CU wire to the ground distribution bus bar of MDB, each rod should be buried in the excavated hole of (0.5x2x3)m, then back filled sequence by (coal, salt, bentonite clay) with providing plastic manhole for each rod .	Set	1.0
A9	Antilightning : Supply, install and connect anti lightning system of type (Early streamer emitter (ESE) ,using suitable 6m GS pole ,including (3 * (16mm-25mm) dia /150cm length of pure Copper rods) connecting by (1x50mm2) Electrolytic Copper Conductor, ,Exothermic welding way should be use. Back filling sequence by (coal, salt),Lightning system is active Type the radius of protection shall cover all the Plant and work must done according to the supervisor engineer's instruction	Set	1.0
A10	HMI System: - Supply and install HMI system for operators room, the price include providing HMI with specifications of (Manufacturer : DELTA or equivalent ,10.1"(1024*600) 65,536 Colors TFT,Cortex-A8 800MHz CPU,256 MB RAM,256 MB,ROM,2 sets of COM ports / 1 extension COM port,USB Host,USB Client,CE / UL certified, Pressing times: >1,000K times). and changing Smart relays(LOGO) with PLC of specification(Manufacturer : DELTA or equivalent ,Power Supply : 100 ~ 240 V ,Output Method : Relay Inputs : 16 Outputs : 16)..the price also include providing necessary Relays and electrical transformer 220v to 24v dc and wires, , providing necessary sensors, actuators, limit switches ,valvs.HMI programming and design .	L.S	1.0
A11	Installing(assembling): Installing (assembling with electrical connection to the existing Public Grid Electrical Network & Diesel Generator), Testing and Commissioning Hybrid PV Solar Panel Units for wastewater treatment . The work includes all Civil, Mechanical & Electrical works, providing (if needed) all remained/necessary electrical accessories, instruments and electrical cables of different size & length and also includes training of the local concerned water board staff (Minimum 5 attendants) on the operation and maintenance of the new installed PV Solar Panel System for 2 days minimum.	L.S	1.0
B	Civil works		

B1	Site Preparation: Demarcation, Clearing and Grubbing up: Providing survey equipment and instrument (Total station is recommended) to demarcate the area for installing Solar Panel . The Contractor shall demolish, break up and remove all buildings, structures, and superficial obstructions on the Site, transporting the Guard and container store cabinets to the new place , repairing the damages caused by works for the existed infrastructures (Electricity poles, wires, sewerage pipe, water pipes, etc...) (according to the requirement of Section R2 of S.O.R.B.). The works include removing of topsoil to minimum 20 cm for all types of soil (clay, rocky, Asphalt, concrete) for all required area ,cutting the required area as per final level indicated in survey drawings and making the necessary side slope for the sides and Back filling the required area with clean soil with CBR not less than 4 by layers each layer 25 cm after compaction (95 % MDD) (required depth as indicated in Drawings) . The price includes cleaning the site from the debris as per instruction of Engineers representative to a location identified by the local municipality or camp manager. Furthermore, for the area contains high moisture percentage, the work includes replacing of the soil by a boulder (oversize aggregates) including construction of the required filter with dimension 50 X50 cm with all the works should be conducted according to instructions of supervisor Engineer.	M ²	3000.0
B2	Casting Concrete for Bases: Provide the material (Sand,Gravel,Cement,Shuttering, ...ect) and machines for Excavation work of Solar Panels Bases each (50X50X30) cm for all bases and casting by ordinary concrete 210 kg/cm², (50X50) cm, 25cm thickness with smoothing final face of bases, using BRC (15X15) cm, 6 mm thickness above a layer of approved sub base 10 cm thickness , and according to the attached drawings and instructions of the Supervisor Engineer.	No.	1300.0
B3	Black Plastic Sheet: Installation of black nylon, weight 265 g/m² and 100% polyester (Fire-retardant polyester fabric) during site preparation and herbicides with all other necessary works according to instructions of Supervisor Engineer.	M ²	2800.0
B4	Gravel Works: The work includes providing materials and all types of machines and manpower for laying a layer of gravel between solar panels and fence (2/3 of the volume to be sized 20mm and 1/3 of the volume to be sized 12mm) with thickness of 10cm and proper compaction by using compactors and watering (moisturizing), all the works should be conducted according to IGTS & instructions of supervisor Engineer.	M ²	2800.0
B5	Fence works: Supply and Install chain link fabric Ø4 mm, 50X50 mm steel wire mesh fencing and columns from square pipe 8*8 cm, 2 mm thick, 2 m C/C, 3.2 m height from ground level, including excavation for the column foundation 70x50x50 cm, concrete casting for foundation 50x50 x50 cm, galvanized three bared wires (thorn) SWG gauge 12.5 with 4 spines each 7.5 cm with all other required works as per current site requirements and the instruction of the supervisor Engineer.	ML	500.0
B6	Gate works: Supply and Install chain link fabric Ø3 mm, 50X50 mm steel wire mesh double swing fence gate with 2200mm height and each swing width 2000mm (in meters) including all concrete works for PV Solar and pump house site protection.	No.	2.0
B7	Solar Panel Protection System:- (External Metal Structure), Supply material and Install/build a structure made of Galvanized iron/Aluminum hollow section square pipe size (40 x 40 x 2.0)mm, 1.5 m C/C (Maximum), fixing on the new constructed concrete floor and the height of the column is 3 m for two-row of panels and 1.5 for one row of panels. The work includes all the required materials and works to make a rigid structure by adding bracing between the columns ..etc., using three lines of vineyard plastic wire as a tension cable, fixed by screws, painting works and then covering the top of the constructed structure by using/installing anti rust steel wire mesh (20 X 20 X 1.5) mm opening at the top of the structure and using three lines of vineyard plastic wire as a tension cable, fixed by screws, with all other necessary works according to instructions of Supervisor Engineer. M² (Top Area)	M ²	1100.0

B8	Self-Cleaning/Flushing system: Solar Panel Automatic Washing/Flushing System, includes providing & installing Booster Pumps min. Min 6 Hp with Pipe networks by using composite PPR (UV & Thermal resistance) PN 16 Bars & Min. OD. 25 mm from one of the existing clean water source to HDPE/GRP roof water tank of Min. 3000 liters storage capacity and then to the solar panels (Jet, Sprinklers, or other suitable type) with all required fittings, gate & non-return valves, electronic automatic control system and plumbing works as shown in the Pic #1 and 2 (for example).	Set	1.0
C	Rehabilitate/Renovate the existing WWTP (Civil Works)		
C1	Site Preparation Clearing and Grubbing up: Providing labors, equipment, tools, and machines for cleaning area of Extension of cleaning base and electronic inlet and outlet water gate. The Contractor shall demolish, break up and remove all existed Reinforced concrete channels required for extension of sedimentation base, structures, and superficial obstructions on the Site, repairing the damages caused by works for the existed infrastructures (Electricity poles, wires, sewerage pipe, water pipes, ...etc.) (According to the requirement of Section R2 of S.O.R.B.). The works include cutting the existing grass, removing the existing gravel, removing of topsoil to minimum 20 cm for all types of soil (clay, rocky, Asphalt, concrete) for all area sounding the solar panel area. The price includes cleaning the site from the debris as per instruction of Engineers representative to a location identified by the local municipality or camp manager. Furthermore, for the area contains high moisture percentage, the work includes replacing of the soil by a boulder (oversize aggregates) including construction of the required filter with dimension 50 X50 cm with all the works should be conducted according to instructions of supervisor Engineer.	M ²	400.0
C2	Excavation works: Provide materials, machines, manpower and equipment for excavating the foundation of fence and walls (0.6x0.6) m all types of soil (clay, rocky, Asphalt, concrete) and compacting and all works should be according to instructions of the supervising Engineer.	M ³	200.0
C3	Backfilling Works: Provide materials, machines, manpower and equipment to backfill using subbase, each layer with 20 cm thickness after good compaction. The works includes watering (moisturizing) and compaction should be according to R6 S.O.R.B and supervisor Engineer instructions, all the works should be executed according to the instructions of the supervising Engineer.	M ³	650.0
C4	Concrete for Foundation of Walls and fence : Provide materials, machines, manpower and equipment to cast Reinforced concrete 30 cm thickness, 60cm width, (210 Kg/cm ²), 6#16 mm and stirrup @20 cm c/c for foundation of fence and other part on a layer of compacted subbase 10 cm including shuttering works were needed, grading, and leveling of the foundation According to specification and instruction of supervisor Engineers.	M ³	38.0
C5	Reinforced Concrete for constructing sedimentation basin: Provision of materials and manpower to cast reinforced concrete using new play wood (Fare face)shuttering and plastic chamfer for the foundation, walls, and roof of sedimentation base according to the instructions of supervisor engineer. The work includes (drawing 04): 1. Cast sulphate resistant reinforced concrete with wood shuttering as following: 1.1: For 300mm thick floor slab using C25 Mpa, and reinforcement 12 mm steel bars @ 200x200 mm C/C one mesh. with thick nylon layer under concrete. 1.2 : For 300mm thick for walls, C25 Mpa, 12 mm steel bars @ 200x200 cm C/C double mesh. 1.3 : Cast top slab and manhole neck of minimum (depending on finished ground level) 100 mm thick by reinforced concrete C25 Mpa, the slab to be 150 mm thick, with reinforcement steel bars 12 mm @ 150X150 mm c/c one mesh. The slab must fit smoothly and tightly onto the RC walls. 1.4 : All reinforcing on the inside of the tank must have 50mm cover min. 2. Painting inside of the unit by using a wastewater proof materials of approved sample. 3. Backfilling with sub-base and clean soil. All the works should be conducted according to IGTS and instructions of supervising Engineer.	M ³	80.0

C6	Building Walls:		
C6.1	Concrete blocks work under DPC: Provide materials and all requirements for building by solid block (15x20x40) cm, required height, 40 cm thickness, using cement sand mortar 1:3, filling spaces between joints. All the works should be conducted according to IGTS and instructions of supervising Engineer.	M ³	65.0
C6.2	Concrete blocks work above DPC: Provide materials and all requirements for building by solid concrete block (15x20x40) cm, required height, 20 cm thickness, using cement sand mortar 1:3, filling spaces between joints. All the works should be conducted according to IGTS and instructions of supervising Engineer.	M ³	65.0
D	Rehabilitation/Maintenance Works - (Mechanical Works for the existing WWTP)		
D1	Automatic Multi-rake bar screen for waste water: Provide materials and all requirements for installing, testing and operating the electrical multi-rake bar screen machine the Materials Guide Rail and Dead Plate SS 304, SS 316, SS 316L, SS304L, Rack Assembly SS 304, SS 316, SS 316L, SS304L, Wire Rope SS304, Screen Opening 5 –50 mm, bar extension 200 mm, Rack Speed 5 –10 M/min, Discharge Height 800 to 2800 mm, to be fix in reinforced concrete channel. The works include supply of 2 waste containers, all electricity connection, control boards, sensors, and other requirement, all the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	1.0
D2	Automatic grit classifier: provision of a full automatic wastewater treatment plant spiral type sand water separator grit classifier, provide materials and all requirements for installing, testing and operating electrical full automatic spiral, the Materials SS304 or SS316, Core Components Pump, Bearing, Motor (SEW/NORD/Customize) ,Productivity 5000L/Hour, Weight (KG) 1300kg, Certification SGS/CE/ISO 9001, to be fix in reinforced concrete base by screws .The works include all electricity connection ,control boards, sensors and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	1.0
D3	Scraper bridge rectangular section: Provide materials and all requirements for installing, testing, and operating electrical/full automatic scraper bridge. Grit bridge scraper consists of following main parts: Drive unit (It is formed by a geared motor which is located at the middle of the moving bridge and two drive wheels set which are located at both ends), bridge and walkways made from galvanized steel), Grease removal, blade, Bottom scraper (made of standard profiles and pipes. Universal joint gives the flexibility to move when scraper blade confronts an obstacle), airlift or submersible type pumps, the Materials SS304 or, to be fixed in reinforced concrete base by galvanized steel u-channel. The works include U-channel made from galvanized steel (200x250x250) mm, 8-meter length, all electricity connection, control boards, sensors, and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	1.0
D4	Automatic Penstock: Provide materials and all requirements for installing, testing, and operating electrical/fully automatic square penstock made from steel, size (400-800) mm, including the frame, gate, guide rail, sealing strip and adjustable seal, the capacity of the pump (3-8) HP, Frame, gate and guide rail Carbon steel / Stainless steel / Duplex steel and all other materials from stainless steel. The works include, all electricity connections, control boards, sensors, and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	3.0
D5	ELECTRIC AUTOMATIC PH SENSOR: Provide materials and all requirements for installing, testing, and operating electrical/fully automatic PH sensor to relate to electric penstock to open it automatically when there is change in wastewater quality specially during mixing with Engine Oil. The works include: all electricity connection, control boards, sensors, and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	3.0

D6	The contractor shall provide experts and human resources to conduct an assessment for the wastewater treatment plant, and the quality of water, up on the outcomes the size and the specifications of the below filter will be selected, in a condition the below minimum requirements must be met, the contractor shall provide design and calculations for filter selection the design and specifications will be subject to approval of the supervising team. The filter shall have the capacity to treating > 1200 m3/day and the outflow/treated water quality should be in compliance with the attached Iraqi standard for irrigation purposes. The filter shall be able to work at least (4 years) without needing any maintenance, contractor shall provide warranty for this specific condition (the supplier will repair or replace any defective parts or provide other forms of compensation within the warranty period: 4 years).	Note	
	Sand Filter: Provide materials (pure crushed sand with different size free from organic materials) and all requirements for installing, testing and operating horizontal sand filter with inside diameter (>2.3 m) and length of each filter(>6m) Made of mild steel thickness of plate (>10 mm) for walls and end dish(>12mm) coat by alimentary epoxy thickness >135 micron for inside and coat outside by oil paint (best quality, thermal paint), nozzle plate thickness in filter 16 mm, number of nozzle shell not be less than (500), it is the duty of the contractor to conduct assessment for the unit, check the quality of the input water, and conduct calculation and the design for the filter to make sure the selected filter (in total must be able to treat > 1200 m3/day and the outflow/treated water quality should be according to the attached Iraqi standard for irrigation purposes. The works include (built in pumps, valves, connection of the backwash system, all connections from inlet and outlet) and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	System	2.0
D7	The contractor shall provide experts and human resources to conduct an assessment for the wastewater treatment plant, and the quality of water, up on the outcomes the size and the specifications of the below filter will be selected, in a condition the below minimum requirements must be met, the contractor shall provide design and calculations for filter selection. The filter shall have the capacity to treat > 1200 m3/day and the outflow/treated water quality should be in compliance with the attached Iraqi standard for irrigation purposes. The filter shall be able to work at least (4 years) without needing any maintenance(including changing the activated carbon), contractor shall provide warranty for this specific condition (the supplier will repair or replace any defective parts or provide other forms of compensation within the warranty period: 4 years).	Note	
	Activated Carbon Filter: Provide materials, manpower, equipment and machines to install an activated carbon filter, the core material should be (pure granular Carbone with different size free from organic materials-best quality) and all requirements for installing, testing and operating vertical Carbone filter type according to specification bellows: Height >2 m Diameter >3 m Dish plate thickness >12 mm Material St37 Carbon Steel The number of nozzles > 220 Valves manually Media activated carbon granules Nozzle plate thickness >14 mm Shell plate thickness >10 mm (In total the unit most be able to treat > 1200 m3/day) The works include, all connections from inlet and outlet, and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	System	2.0

D8	Grease and oil removal unit: Provide materials and all requirements for installing, testing and operating horizontal sand filter type Oil separation tanks operate on the principle of density difference Oil Type Gasoline, Diesel, Lubricant, Grease Flow Capacity 500-700 L/min Dimensions Up to 2490mm x 2410mm x 980mm Dry Weight Up to Approx. 1500kg Material of Construction Stainless Steel Fats, Oil & Grease Concentration 2,000 mg/L (max) Suspended Solids Concentration 1,500 mg/L (max) Oil Droplet Diameter 10 to 100 µm Operating pH 6 to 10 pH Operating Temperature Below 40 deg C Fats, Oils and Grease Reduction Up to 95% Inclusions/Options Outlet Sump Pit, Submersible Pump, Float Switch. The works include, all connections from inlet and outlet , and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	System	1.0
D9	Air Pump (Blowers): Provide materials and all requirements for installing, testing, and operating electrical air pump 3-Phase (- Stainless steel shift -Power size 4.3 kw- A 10- Hz 50 / 2920 min- V 345 – 415. The works include, all electricity connection, control board, removing the existing damage one) and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	2.0
D10	Electric Submergible Pump: Provide materials and all requirements for installing, testing, and operating electrical submergible pump 3-Phase (-according to the below specifications: Power size 3 kw- A 5.8- Hz 50 / 2800 min-1- V 3*400- Hmin 18.2 Hmax 26.1- T max 40 c° / 104 °F, flow 50 m3/hr., (2.5-3.5) HP. The works include, all electricity connection, control board, removing the existing damage one) and other requirement, All the works should be conducted according to IGTS and instructions of supervising Engineer.	Set	2.0
	Installation Vent Pipe Filters: The contractor should ensure the following requirements for the installation of Vent Pipe Filters to the septic tanks: • Provide the necessary materials, equipment, and manpower for the installation of Vent Pipe Filters. • Ensure that the Vent Pipe Filters are designed to stop offensive septic odors. • Supply Vent Pipe Filters that fit 2-inch and 3-inch vent pipes, including a reducer bushing for easy installation and accommodating various pipe sizes. • Verify that each Vent Pipe Filter contains activated carbon that recharges with sunlight. • Ensure that the filter media has a lifespan of approximately 5 years, offering long-lasting odor control, and have a warranty period of more than 5 years. • Provide Vent Pipe Filters that contain at least 0.6 kg of activated carbon material. • Ensure that the Vent Pipe Filters are easy to install, requiring minimal effort. • Confirm the dimensions of the Vent Pipe Filters as 7.50 inches in height and 4.75 inches in outer diameter. • Include a rain cover measuring 6 inches in outer diameter with each Vent Pipe Filter. • Ensure that the Vent Pipe Filters effectively stop septic odor from plumbing vents, holding tank vents, and drain field vents. • Verify that the Vent Pipe Filters can be installed in minutes and have a warranty period of more than 5 years. Furthermore, the contractor should ensure that a sample of the Vent Pipe Filter is approved by the supervising engineer before providing the complete quantity.	Unit	10.0

Scope of Work (SOW)

The established Wastewater Treatment Plant (WWTP) in Kabarto has the design capacity to recycle 1,000 cubic meter of wastewater per day (that is according to the irrigation standards). The unit can recycle wastewater according to irrigation standards (national and international), which can cover (capacity to irrigate up to 100,000 square meters per day). The unit is designed to have a 24/7 electricity source, otherwise disruptions in the electricity will damage the treatment process, leading to restart of the unit. Thus, the unit undergoes necessary maintenance on regular basis. However, absent a functioning system which relies on regular electricity supply the wastewater cannot be treated adequately resulting in nontreatment of water, inability to recycle water for agricultural purposes and other purposes.

The Solarization of the wastewater treatment plant in Kabarto will provide a continues sustainable source of energy which will enable the unit to properly treat wastewater that is according to local and international standards. The project will enable the line ministry to deliver WASH services in a sustainable manner, provide families with WASH services, and thus promote hygiene among residents in the area, and prevent communicable diseases within the population linked to poor hygiene and WASH practices and poor sanitation services. It might also support livelihood in the area since the recycled water can also be used for agricultural activities. Lastly, the project will reduce harm to the environment by treating the wastewater instead of the direct discharge to the environment.

UNHCR is planning to rehabilitate and install PV solar system for the existing Wastewater Treatment Plant (WWTP) in Kabarto by executing the below works:

1. Site preparation works.
2. Provision and installation of the PV solar system.
3. Self-Washing-cleaning system for the PV Solar Panels.
4. Protection system for the panels.
5. Wiring system, invertors, and distribution systems... and all required components.
6. Fencing and security of the site.
7. Looking into fire risk prevention by preventing the growth of grass (installation of a layer of black nylon during site preparation).
8. Rehabilitation of the existing WWTP by replacing/installing some mechanical & electrical parts (Automatic Multi-rake bar screen for wastewater, Automatic grit classifier, Scraper bridge, Automatic Penstock, electric automatic phase sensor, Sand Filter, Activated Carbon Filter, Grease and oil removal unit, Air Pump (Blowers), and Electric Submersible Pump) with all other work requirements as per current site requirements and instructions of the Supervisor Engineer.

No	Item/s to be Supplied	Description/ Specifications of Goods	Related Services	Contract Duration
1	Following the items description in the BOQ and technical drawings	As per BOQ	As per BOQ	Up to 180 calendar days

Site Visit: Mandatory, Kabarto camp.

Annex C: Detailed Technical Evaluation Criteria

Mandatory Pre-qualification			
Main Criteria	Sub-Criteria	Specific Requirements	(Yes/NO)
Mandatory Pre-qualification	Mandatory Site Visit	Did the vendor send an engineer to visit the site on the said date and time and sign their company's name on the attendance sheet?? <u>(The Engineer should bring an authorization letter from the company and show their engineering union ID card)</u>	
	Mandatory Bid Security	Has the bidder submitted a scanned copy of Bid Security of USD 5,000 by "Good for Payment Cheque/Certified Cheque" made out in the name of UNHCR covering the offer's validity (180 days after the closing date of the bid)? It should be a certified cheque (not personal). <u>The cheque should indicate the RFP number and be issued under the company name.</u> The selected company would be required to submit the original cheque.	
	Valid Business Registration Certificate	Is the company registered as <u>an electrical/renewable energy/general contracting company</u> in IRAQ (Federal Government or Kurdistan Region)? <u>For Joint Venture, the companies should submit a legal JV contract endorsed by the government with a statement outlining the duties and responsibilities of each party otherwise, and the joint venture will not be accepted.</u> <u>Any company with an age less than 3 years at the time of the submission will be disqualified.</u>	
The Bidders must meet all the above mandatory pre-qualification criteria for their proposal to be considered for further evaluation.			

Technical Evaluation				
Percentage distribution of 60% of the total score of technical evaluation has been allocated to Technical Proposal. Maximum scores are listed in the table below. Failure to achieve a minimum score of 36 points out of the 60 points will result in technical non-compliance and elimination from further evaluation.				
Main Criteria	Sub-Criteria	Specific Requirements		Score
General Company Qualification & experience	Company profile and Capability.	The company has ISO 9001 certification or equivalent recognized certifications. (1 Point)		1
		Company age from the registration date (min 3 years).	From 3 to 5 years (1 point)	2
			More than 5 years (2 points)	
	Company classification	The company has a valid electrical/renewable energy/general contracting company classification ID issued by the Ministry of Planning (Central Government and/or KRI), classified range between 1-5 classes.	Classification from 1-3 (2 Points)	2
			Classification 4-5 (1 point)	
	Staff qualifications, CVs with min 5 years of experience and Resources	Project Manager (site engineer) with a bachelor's academic degree in civil engineering (minimum of 5 years of experience) with proof of graduation like (Graduation certificate, syndicate ID, Union ID) (3 Points)		3
		Electrical Engineer (bachelor's degree) with a minimum of 5 years experience with proof of graduation (Graduation certificate, syndicate ID, Union ID) (2 Point)		2
		Mechanical Engineer (bachelor's degree) with a minimum of 5 years experience with proof of graduation (Graduation certificate, syndicate ID, Union ID) (1 Point)		1
		Surveyor (diploma in Surveying) with a minimum of 3 years of experience. (1 Point)		1
	Financial Auditing report	The latest 2 consecutive years, financial audit reports for the years (2020-2021). The audit financial reports (including the Balance Sheet) must be certified by the Iraqi Association of Accountants. Minimum cumulative turnover of USD (100,000). <u>If the baseline turnover is not demonstrated, the bidder will receive zero points.</u>		2

		Does the vendor submit the latest 2 consecutive years' financial audit reports? Yes	(2 Points)	
		Does the vendor submit the latest 2 consecutive years' financial audit reports? No	(0 Points)	
Total score 14 points				
Relevant Experiences	Proof of relevant experience	Copies of Purchase Orders (POs), contract agreements, or work orders attached <u>with proof of project completion certificate/ performance letter issued by the client (Showing value, time completed, organization or firm for which completed, contact details of the organizations) awarded and served within the past 10 years with other UN Agencies, NGOs or any other major clients and other credentials.</u> The actual copies of POs, contracts, or work orders should relate to similar projects (this includes Electrical infrastructure and renewable energy infrastructure) - 5 (and above) Projects = 5 Points - 4 Projects = 4 Points - 3 Projects = 3 Points - 2 Projects = 2 Points - 1 Projects = 1 Point - No project = 0 Points		5
	Past experience with clients	List of similar projects showing (project name, client name, project cost, reference contact (phone No. or email)). UNHCR will conduct a reference check per project to be considered. - 3 or more different clients (3 Points) - 2 different clients (2 Points) - 1 client (1 Point) - No list (0 Points)		3
Total score 8 points				
Technical Specifications of Works	Construction & Finishing Materials	Catalogues or Datasheet Confirming that the specification of the below items complies with the BoQ:		
		Fire-retardant polyester fabric (1 point)		1
		Fence and gate: chain link fabric (2 point)		2
		Steel Structure for PVs (2 point)		2
		Solar Panel Protection System (2 point)		2
		Materials used for Self-Cleaning/Flushing system (1 point).		1
	Electrical - Renewable Energy Materials	Electrical - Renewable Energy Materials Catalogues or pictures/ Data sheet confirming that the specification of the below items is comply with the BoQ:		
		PV modules - Class, Efficiency, performance (2 point) Class. Outputs. Specifications. characteristics, efficiency, manufacturer, bypass diodes. current & voltage ratings. Quality		2
		PV modules • Warranties (2 point) The suppliers to provide the Performance degradation information and Product warranty as detailed in the BoQ (article A1).		2
		Support / Racking Structures (2 point) Details of the structure design and the product warranty as specified in the BoQ (article A6).		2
		VFD Inverters (132 KW) (2 point) Specifications according to BoQ. Performance. Manufacturer. Enclosures. Cooling Remote monitoring. Weather station. Foundations. Metering and controls.		2
		Combiner box (1 point) Performance. Size. Standardization. Sealing. Manufacturer. Mounting.		1

		Foundations. Components.		
		Cabling & Busbar system (1 point) Sections. Voltage drops. Specifications. Routing. Manufacturer / certificates. Poles. Stays. Terminations etc.		1
		Operation and Maintenance plan (2 point) Cleaning, communications, response time Maintenance schedule, resources, security installations		2
	Mechanical installations	Mechanical installations Catalogues or pictures/ Data sheet confirming that the specification of the below items is comply with the BoQ:		
		Automatic Multi-rake bar screen for wastewater (1 point)		1
		Automatic grit classifier. (1 point)		1
		Scraper bridge. (1 point)		1
		Automatic Penstock. (1 point)		1
		ELECTRIC AUTOMATIC PH SENSOR (1 point)		1
		Sand Filter. (1 point)		1
		Activated Carbon Filter. (1 point)		1
		Grease and oil removal unit. (1 point)		1
		Air Pump (Blowers). (1 point)		1
		Electric Submersible Pump. (1 point)		1
30 points (Min. Passing point is 20 Points)				
Work Plan & Method of Implementation	Works plan Detailed and realistic work plan with Work Schedule/ Gantt Chart showing the starting and end of each activity	- Implement realistic timelines as indicated in the Scope of work up to (180) days. Including a Gantt Chart indicating a detailed sequence of activities. (3 Points).		3
		- Incomplete Gantt chart, no Gantt Chart or Proposed Gantt chart (more than 65 days) of the indicated duration in (SoW) or Project Schedule not indicating a detailed sequence of activities (0 Point).		
	Method of implementation	Submission of the minimum equipment list, which should comprise 1 Truck, 1 Grader, 1 Excavator, 1 Pickup, 1 Loader, 1 Compactor, and 1 Concrete Mixture Machine, 1 crane	Full list (2 Points).	2
			Partial list (1 point)	
		The logistics plan includes access to the site and material delivery with the needed workforce. (1 Point)		1
		Environmental Impact Assessment Plan. (1 Point)		1
		Risk mitigation plan and insurance to ensure all risks are covered (1 Point).		1
Total score 8 points				
Total Score for Technical Evaluation 60				

Annex D: Technical Proposal Form:

The Bidder must provide sufficient information in the proposal to demonstrate compliance with the requirement set out in each section of this Request for Proposal. This **PROPOSAL FORM** must be completed, signed, and returned to UNHCR. Proposal must be made in accordance with the instructions contained in this Request for Proposal.

TERMS AND CONDITIONS OF CONTRACT

Any contract resulting from this RFP shall be subject to **Annex F: General conditions of Contracts for the provision of Good and Services (July 2018)** AND **Annex G: UNHCR General Conditions of Contracts for Civil works (October 2000)**

D-1 DECLARATION

The undersigned, having read the Instruction to Bidder, and the **Annex F: General conditions of Contracts for the provision of Good and Services (July 2018)** AND **Annex G: UNHCR General Conditions of Contracts for Civil works (October 2000)** as set out in the attached document, hereby offers to supply the services specified in the BOQ at the price or prices quoted in **Annex A: Bill of Quantities & Scope of Work (SOW)**.

The undersigned understands that UNHCR reserves the right to accept the whole or part of your bid or allow split or partial awards on this project. It is however important to note that the construction project cannot be split unless the various components are defined by LOT. All other projects are to be awarded on an “all or nothing basis”.

D-2 AWARD AND BANK GUARANTEE:

The Firm that submitted the successful Proposal will be notified by letter of the award prior to the expiration of the validity period. The letter, referred to as the “Letter of Award” will state the sum of the fees to be paid to the Firm for the services rendered and will indicate the terms under which the Contract must be finalized.

The Contract must be signed within 14 days of the issue of the Letter of Acceptance. The successful bidder will be required to furnish us with 10% Bank Guarantee of the contract sum from a reputable bank in the next 7 days, valid for the entire period of the contract works.

Name of authorized representative: _____

Title: _____

Signature: _____

Date: _____

Supplier Name: _____

Postal Address: _____

Telephone No.: _____

Email Address: _____

D-3

Bidder General Information		
Description	Information (to be filled by the Bidder)	Remarks
Registration Type (Company / Contractor etc.)	E.g. Construction Company with appropriate registration as a construction company	
Registration number		
If multi location company, specify headquarters location		
Grading/Classification if any applicable to the type of registration you company has.	Provide certified copies	
Number of similar and successfully completed projects;	Provide a list and copies of contracts / POs with certificate of completion	
Number of similar projects currently underway;	Provide a list and copies of contracts / POs	
Total number of clients previous and current	Provide a list	
Specialty		
Expiry Date of Certifications and/or Grading		<i>Provide certified copies</i>
Legal Status	e.g. Limited Company / Public limited Company etc	<i>Provide certified copies of Registration</i>
VAT Registration Number	(If applicable)	

D-4 STAFF QUALIFICATION AND EXPERIENCE:

Qualifications and experience of key management and technical personnel proposed for this Project. Signed CVs of all proposed staff must accompany the submission and it should be noted that substitution of staff during Project implementation shall be subject to the approval of UNHCR. A detailed organization chart of the company including the location and staffing of existing offices must also be attached to the offer.

Construction Project Management Staff		
A. Key Professionals		
Name	Position	Task
B. Support Staff		
Name	Position	Task

The CVs of all staff listed above must be provided and a reference to the page number must be made for each staff cv in the technical proposal.

D-5 FINANCIAL INFORMATION:

Annual Turn-over Information (Last two Years)		
Year	Turn-over in USD	Remarks
2020		
2021		

D-6 Financial Statement Analysis

S No.	Description of Financial Info.	Value	Reference Page No. Tec Proposal
Current Ration			
1	Current assets		
2	Current liabilities		
Debt Ratio as a Percentage			
3	Total Debt		
4	Total Assets		

D-7 WORKS IN HAND (Ongoing Projects)

Works in Hand				
Employer name & contact details	Description of Works/Services	Start date	End date	Amount
Total USD				

Make a reference to page number in your technical proposal for the corresponding documents (1. Contract / PO 2. Date of Project Site Handover. All documents must be provided in your technical proposal.

D-8 CONSTRUCTION EXPERIENCE IN LAST FIVE YEARS

Make a reference to page number in your technical proposal for the corresponding documents (1. Contract / PO 2. Date of Project Site Handover 3. Substantial Completion Certificate) All documents must be provided in your technical proposal.

D-9 INFORMATION ON ANY CURRENT LITIGATION IN WHICH THE FIRM(S) IS INVOLVED.

Other Party(ies)	Cause of Dispute	Amount Involved

D-10 PROPOSED WORK PLAN AND SCHEDULE OF ACTIVITIES

The proposed work plan and schedule of activities must be submitted with this Proposal. The work plan and schedule should be prepared in detail to the extent possible and include time allocated.

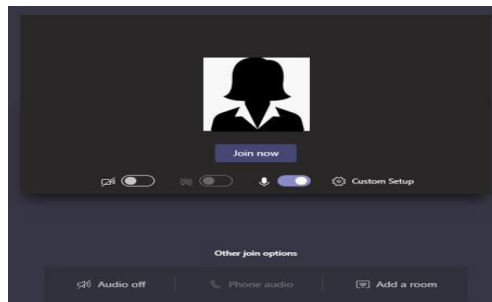
A proposed timeline in a Gantt / Bar chart format must be part of this Proposal. It should start with establishing Minimum Requirements till the Issuance of the Substantial Completion Certificate.

Annex J

Join a meeting without a Teams account



1. Go to the meeting invite and select **Join Microsoft Teams Meeting**.
2. That'll open a webpage, where you'll see two choices: **Download the Windows app** and **Join on the web instead**. If you join on the web, you can use either Microsoft Edge or Google Chrome. Your browser may ask if it's OK for Teams to use your mic and camera. Be sure to allow it so you'll be seen and heard in your meeting.
3. Enter your name and choose your audio and video settings. If the meeting room (or another device that's connected to the meeting) is nearby, choose **Audio off** to avoid disrupting. Select **Phone audio** if you want to listen to the meeting on your mobile phone.
4. When you're ready, hit **Join now**.
5. This will bring you into the **lobby**. We'll notify the meeting organizer that you're there, and someone in the meeting can then admit you.



ANNEX L: TENTATIVE CALENDAR OF ACTIVITIES:

Calendar of Activities			
S/No:	Action Description	Date	
		From	To
1	Tender available to vendors (<i>Tender opening and closing dates</i>)	16/07/2023	06/08/2023
2	Closing date for Queries	25/07/2023	25/07/2023
3	Site Visit (<i>if applicable</i>)	24/07/2023	24/07/2023
4	Pre-bid conference Meeting	25/07/2023	25/07/2023
5	Tender Closing date	06/08/2023	06/08/2023
6	Bid opening Date	07/08/2023	07/08/2023
7	Technical Evaluation	27/08/2023	27/08/2023
8	Financial Evaluation	29/08/2023	29/08/2023
9	Approval of Contract	07/09/2023	07/09/2023

ANNEX M: BID DATA SHEET

THE FOLLOWING SPECIFIC DATA FOR THE SERVICES TO BE PROCURED SHALL COMPLEMENT, SUPPLEMENT OR AMEND THE PROVISION IN THE INSTRUCTIONS TO BIDDERS. WHENEVER THERE IS A CONFLICT, THE PROVISION HEREIN SHALL PREVAIL.

DEADLINE FOR SUBMISSION OF BIDS	06/08/2023 at 23:59 HRS Iraq Local Time	
SUBMISSION OF BIDS:	Please submit your proposal through an online eTenderBox Tool, which can be accessed at http://etenderbox.unhcr.org	Installation Of Solar System for Wastewater Treatment Plant in Kabarto Camp, Duhok Governorate, Iraq FOR UNHCR COUNTRY-OFFICE ERBIL OPERATIONS.
LATE SUBMISSION OF OFFERS:	OFFERS SHOULD BE SUBMITTED IN GOOD TIME TO BE RECEIVED BY CLOSING DATE AND TIME. IMPORTANT NOTE: BIDS RECEIVED AFTER THE DEADLINE FOR SUBMISSION OF BIDS AND BIDS TRANSMITTED IN ANY OTHER MANNER THAN THOSE INDICATED ABOVE WILL NOT BE CONSIDERED.	
BID VALIDITY PERIOD:	180 DAYS	
PRICE VALIDITY PERIOD:	Entire Period of the Project Duration	
DEFECT LIABILITY:	A MINIMUM OF 6 MONTH DEFECT LIABILITY APPLY	
TERMS OF REFERENCE:	ALTERNATIVES TERMS OF REFERENCE SHALL NOT BE CONSIDERED	
DELIVERY SCHEDULE:	SET UP TIME: IN DAYS: 180 DELIVERY TIME: IN DAYS: 180	
RETENTION MONEY:	Please note that a 10% of the total contract value will be kept as retention money for period of Six Months from the completion and handover of the site against defects and liabilities.	
RELEASE OF PERFORMANCE BOND OR BANK GUARANTEE	The performance bond or bank guarantee will be released upon the 100% completion of the works and upon the issuance of Substantial Completion of Works Certification by the UNHCR Project Manager/Engineer.	
LIQUIDATED DAMAGES	The resulting contract from this tendering exercise MAY BE subject to the application of liquidated damages at the sole discretion of UNHCR and if deemed necessary. In accordance with article 2.11 of the tender document.	

SUBCONTRACTING	UNHCR WILL HAVE TO APPROVE ANY SUBCONTRACTOR THAT THE CONTRACTOR INTENDS TO USE FOR THE EXECUTION.
LANGUAGE OF THE BID:	ENGLISH
REQUESTS FOR ADDITIONAL INFORMATION:	BIDDERS ARE REQUIRED TO SUBMIT ALL THEIR QUERIES IN RESPECT OF THIS REQUEST FOR PROPOSAL TO BID BY E-MAIL TO: IRQDUTND@unhcr.org, CC: SAADIS@unhcr.org BEFORE 23:59 HRS Iraq Local Time on 25/07/2023. (CUT-OFF DATE FOR QUERIES). UNCHR MAY, AT ITS DISCRETION, COPY ANY REPLY TO A PARTICULAR QUESTION TO ALL OTHER INVITED / PARTICIPATING BIDDERS.
BID EVALUATION CRITERIA:	BIDS WILL BE EVALUATED BASED ON THE TECHNICAL EVALUATION CRITERIA prescribed in article <u>"2.6.2 Technical and Financial evaluation"</u>

ANNEX N: SUBMISSION CHECKLIST

Submission Checklist		
S. No.	Description	Status
1	I have read and understood the RFP and all its annexes	
2	Annex A: Annex A: Bill of Quantities & Scope of Work (SOW) - Completed and Submitted	
3	Annex D: Technical Proposal Form - Completed and Submitted	
4	Annex E: Vendor Registration Form - Completed and Submitted	
5	Annex F: General conditions of Contracts for the provision of Good and Services (July 2018) - Signed and Stamped	
6	Annex G: UNHCR General Conditions of Contracts for Civil works (October 2000) Signed and Stamped or else	
7	Annex H: Supplier's Code of Conduct - Signed and Stamped	
8	Annex K: Financial Offer Form (Filled Signed and Stamped in PDF)	

Name of authorized representative: _____

Title: _____

Signature: _____

Date: _____

Supplier Name: _____

Postal Address: _____

Telephone No.: _____

Email Address: _____