



REQUEST FOR QUOTATION (RFQ)

RFQ Reference: RFQ-083-PHL-2021

Date: 20 September 2021

SECTION 1: REQUEST FOR QUOTATION (RFQ)

UNDP kindly requests your quotation for the provision of goods, works and/or services as detailed in Annex 1 of this RFQ.

This Request for Quotation comprises the following documents:

Section 1: This request letter

Section 2: RFQ Instructions and Data

Annex 1: Schedule of Requirements / Terms of Reference

Annex A of ToR : Bill of Materials

Annex B of ToR: Location Map

Annex C of ToR Structures for Rooftop

Annex D of ToR: Solar Radiation data

Annex E of ToR Summary of Electric Bill

Annex F of ToR Pictures of Building

Annex G of ToR CV Template

Annex H of ToR Detailed detailed of the mounting structure specifications.

Annex 2: Quotation Submission Form

Annex 3: Technical and Financial Offer

Annex 4: Format for Warranty Security

When preparing your quotation, please be guided by the RFQ Instructions and Data. Please note that quotations must be submitted using Annex 2: Quotation Submission Form and Annex 3 Technical and Financial Offer, by the method and by the date and time indicated in Section 2. It is your responsibility to ensure that your quotation is submitted on or before the deadline. Quotations received after the submission deadline, for whatever reason, will not be considered for evaluation.

Thank you and we look forward to receiving your quotations.

Issued by:

Signature: _____

Name: Samantha Gunasekera

Title: Operations Manager

Date: September 20, 2021

SECTION 2: RFQ INSTRUCTIONS AND DATA

Introduction	Bidders shall adhere to all the requirements of this RFQ, including any amendments made in writing by UNDP. This RFQ is conducted in accordance with the UNDP Programme and Operations Policies and Procedures (POPP) on Contracts and Procurement Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by UNDP. UNDP is under no obligation to award a contract to any Bidder as a result of this RFQ. UNDP reserves the right to cancel the procurement process at any stage without any liability of any kind for UNDP, upon notice to the bidders or publication of cancellation notice on UNDP website.
Deadline for the Submission of Quotation	October 18, 2021, 4pm (Manila Time) If any doubt exists as to the time zone in which the quotation should be submitted, refer to http://www.timeanddate.com/worldclock/. For eTendering submission - as indicated in eTendering system. Note that system time zone is in EST/EDT (New York) time zone.
Method of Submission	Quotations must be submitted as follows: ☒ E-tendering only Bid submission address: https://etendering.partneragencies.org Insert BU Code : PHL 10 Event ID number : 0000010321 Detailed instructions on how to submit, modify or cancel a bid in the eTendering system are provided in the eTendering system Bidder User Guide and Instructional videos available on this link: http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notices/resources/
Cost of preparation of quotation	UNDP shall not be responsible for any costs associated with a Supplier's preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.
Supplier Code of Conduct, Fraud, Corruption,	All prospective suppliers must read the United Nations Supplier Code of Conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN. The Code of Conduct, which includes principles on labour, human rights, environment and ethical conduct may be found at: https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct Moreover, UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of UNDP vendors and requires all bidders/vendors to observe the highest standard of ethics during the procurement process and contract implementation. UNDP's Anti-Fraud Policy can be found at http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_andinvestigation.html#anti
Gifts and Hospitality	Bidders/vendors shall not offer gifts or hospitality of any kind to UNDP staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches, dinners or similar. In pursuance of this policy, UNDP: (a) Shall reject a bid if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question; (b) Shall declare a vendor ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a UNDP contract.

Conflict of Interest	UNDP requires every prospective Supplier to avoid and prevent conflicts of interest, by disclosing to UNDP if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, specifications, cost estimates, and other information used in this RFQ. Bidders shall strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified. Bidders must disclose in their Bid their knowledge of the following: a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel who are family members of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving goods and/or services under this RFQ. The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this RFQ, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Bid.
General Conditions of Contract	Any Purchase Order or contract that will be issued as a result of this RFQ shall be subject to the General Conditions of Contract Select the applicable GTC: ☒ General Terms and Conditions / Special Conditions for Contract. Applicable Terms and Conditions and other provisions are available at UNDP/How-we-buy
Special Conditions of Contract	☒ Possible Cancellation of PO/Contract if the delivery/completion is delayed by 60 days
Eligibility	• A vendor who will be engaged by UNDP may not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to UNDP whether they are subject to any sanction or temporary suspension imposed by these organizations. Failure to do so may result in termination of any contract or PO subsequently issued to the vendor by UNDP. • It is the Bidder's responsibility to ensure that its employees, joint venture members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by UNDP. • Bidders must have the legal capacity to enter a binding contract with UNDP and to deliver in the country, or through an authorized representative. • Minimum of 3 years of experience in project integration or Engineering, Procurement and Construction (EPC) of residential and commercial solar PV systems (2 kW to 100 kW systems) • Minimum average annual turnover of PHP 5,000,000.00 for the last 2 years.
Currency of Quotation	Quotations shall be quoted in PHP for local firms or USD for international firms
Joint Venture, Consortium or Association	If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture, Consortium or Association. Refer to Clauses 19 – 24 under Solicitation policy for details on the applicable provisions on Joint Ventures, Consortium or Association.
Only one Bid	The Bidder (including the Lead Entity on behalf of the individual members of any Joint Venture, Consortium or Association) shall submit only one Bid, either in its own name or, if a joint venture, Consortium or Association, as the lead entity of such Joint Venture, Consortium or Association. Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:

	a) they have at least one controlling partner, director or shareholder in common; or b) any one of them receive or have received any direct or indirect subsidy from the other/s; or b) they have the same legal representative for purposes of this RFQ; or c) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Bid of, another Bidder regarding this RFQ process; d) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or e) some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this RFQ process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.
Duties and taxes	Article II, Section 7, of the Convention on the Privileges and Immunities provides, inter alia, that the United Nations, including UNDP as a subsidiary organ of the General Assembly of the United Nations, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs restrictions, duties, and charges of a similar nature in respect of articles imported or exported for its official use. All quotations shall be submitted net of any direct taxes and any other taxes and duties, unless otherwise specified below: All prices must: ☒ be exclusive of VAT and other direct taxes
Language of quotation	English Including documentation such as catalogues, instructions and operating manuals.
Documents to be submitted	Bidders shall include the following documents in their quotation: ☒ Annex 2: Quotation Submission Form duly completed and signed ☒ Annex 3: Technical and Financial Offer duly completed and signed and in accordance with the Schedule of Requirements in Annex 1 ☒ Company Profile. ☒ Registration certificate (DTI/SEC Certificate and Business permit for local firm) and equivalent/similar documents for international firm. ☒ List and value of projects performed for the last 5 years plus client's contact details who may be contacted for further information on those contracts ☒ Audited Financial Statements in the last two (2) years ☒ Proposed implementation plan for the period of the contract ☒ CV of key personnel as defined in project team composition. ☒ Technical plans and specifications with Single line diagram based on the bill of materials (BOM). ☒ Brochures with technical specifications for primary components particularly solar panels, battery, inverter, battery charge controller, circuit breakers, surge suppressors shall be submitted. Non-submission of brochures for these items will be an automatic ground for a disqualification. The rest of the components, e.g.wires, mountings will require technical specifications only to ensure its consistency with the BOM. UNDP reserves the right to ask for additional information as it deem proper. Aside from the technical specifications, submission of pictures for items without brochures is highly recommended to facilitate review of the bid proposal. ☒ Drawing with specifications and measurements for the mounting structure for the 40kW Solar PV Grid Tied Net Metering. For the steel mounting structure and railings, the detailed drawing and technical specifications and measurements on the proposed height and earthworks to be undertaken, the materials for the reinforcing steels and steel framings shall be submitted. The solar panel mounting structure will be located in the car parking area. The panels to be installed will provide a shade to serve as partial roofing for cars.
Quotation validity period	Quotations shall remain valid for 90 days from the deadline for the Submission of Quotation.

Price variation	No price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted at any time during the validity of the quotation after the quotation has been received.
Partial Quotes	☒ Not permitted
Alternative Quotes	☒ Not permitted
Payment Terms	☒ Other Refer to Terms of References
Conditions for Release of Payment	☒ Passing Inspection ☒ Passing all Testing ☒ Written Acceptance of Goods, Services and Works, based on full compliance with RFQ requirements
Prebid Conference	A pre-bid Conference will be held on 01 October, 10:00am (local time). Kindly confirm attendance by providing the following information: - Name of firm/company - Name of representative and designation - Email address
Site Inspection	Date : 28 September to October 5, 2001 Focal Person: Aileen Cabusas Mobile # : 09499952468
Contact Person for correspondence, notifications and clarifications	E-mail address: procurement.ph@undp.org Attention: Quotations shall NOT be submitted to this address but to the address for quotation submission above. Otherwise, offer shall be disqualified. Any delay in UNDP's response shall be not used as a reason for extending the deadline for submission, unless UNDP determines that such an extension is necessary and communicates a new deadline to the Proposers.
Clarifications	Requests for clarification from bidders will not be accepted any later than 4 days before the submission deadline.
Evaluation method	☒ The Contract or Purchase Order will be awarded to the lowest priced substantially compliant offer
Evaluation criteria	☒ Full compliance with all requirements as specified in Annex 1 ☒ Full acceptance of the General Conditions of Contract ☒ Comprehensiveness of after-sales services (Product and Service Warranty)
Right not to accept any quotation	UNDP is not bound to accept any quotation, nor award a contract or Purchase Order
Right to vary requirement at time of award	At the time of award of Contract or Purchase Order, UNDP reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.
Type of Contract to be awarded	☒ Purchase Order ☒ Contract Face Sheet (Goods and-or Services)
Expected date for contract award.	30 November 2021
Publication of Contract Award	UNDP will publish the contract awards valued at USD 100,000 and more on the websites of the CO and the corporate UNDP Web site.

Policies and procedures	This RFQ is conducted in accordance with UNDP Programme and Operations Policies and Procedures
UNGM registration	Any Contract resulting from this RFQ exercise will be subject to the supplier being registered at the appropriate level on the United Nations Global Marketplace (UNGM) website at www.ungm.org . The Bidder may still submit a quotation even if not registered with the UNGM, however, if the Bidder is selected for Contract award, the Bidder must register on the UNGM prior to contract signature.

ANNEX 1: SCHEDULE OF REQUIREMENTS

Terms of Reference (TOR) for Supply, Installation and Commissioning of a 40kWp solar PV-Grid tie system and 3 x 5kWp solar hybrid grid tie PV System

A. Background

The Development for Renewable Energy Applications Mainstreaming and Market Sustainability (DREAMS) Project is a five-year project being implemented by the Department of Energy (DOE) through its Renewable Energy Management Bureau (REMB) in partnership with the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP).

The DREAMS Project seeks to reduce GHG emissions through the promotion and facilitation of the commercialization of renewable energy (RE) markets through the removal of barriers to increase investments in RE-based power generation projects. Among others, this objective will be achieved by supporting local RE developers that leads to an enhanced uptake of RE projects and successful replication using proven and emerging RE technologies.

The DREAMS project has a Support Fund for RE (SF4RE) to leverage investments for RE projects that will lead towards an increase in RE based installed capacity. SF4RE provides support in the form of goods and technical assistance to LGUs and smaller RE proponents for them to be able to implement local RE projects in off-grid areas or far-flung communities with economic potentials.

The support for the “Iloilo Provincial Hospital Rooftop Solar PV Project” under SF4RE was approved by the DREAMS Project Steering Committee on 1 June 2021.

B. Stakeholders of the Project

The DREAMS project is being implemented by the Renewable Energy Management Bureau (REMB) of the Department of Energy. A Project Management Unit (PMU), headed by the REMB Director as DREAMS National Project Director, is based at the REMB. The PMU supervises and coordinates with local partners and technical experts in the implementation of the project activities. A Local Recipient has been identified as the beneficiary of under this TOR.

C. Objective

This TOR is designed to provide safe, reliable, cost-effective solar energy solutions to install 55 kW solar PV powered system on the three (3) identified areas of Iloilo Provincial Hospital, Pototan, Iloilo (40kW grid-tied-net-metering, 10kW hybrid-grid-solar-battery and 5kW hybrid-grid-solar-battery).

The project aims to provide dependable uninterrupted power supply to the IPH Covid-19 Molecular Laboratory; Intensive Care Unit, ICU; Vaccine Cold Chain; & other critical facilities.

D. Scope of Work and Methodology of the Required Services

Based on Annex B (Bill of Quantities), the contractor must, supply equipment, install, test and commission, provide training for the operation and maintenance of the 55 kWp Solar PV powered system. After completion, the Firm must provide maintenance support and provide warranty on the equipment and workmanship.

The materials will be delivered in a storage area near or within the compound of the provincial hospital in Municipality of Pototan, Iloilo. The Contractor shall ensure that the materials delivered on site must be secured and stored according to the Manufacturer's recommended storage practice. Care must be taken by the Contractor in coordination with the end-user that the materials stored are properly secured

The 40kW grid-tied-net-metering solar PV system will be installed in a mounting structure that will also serve as a covered-like car parking area of the hospital. The construction, including the excavation needed for the mounting structure is included in this TOR. See Annex A (Bill of Materials) and **Annex H** for the detailed drawing of the mounting structure including measurements and specifications. The cost of net-metering application and other requirements for the net-metering will be shouldered by the counterpart of the Provincial Government of Iloilo and the Electric Cooperative. The Contractor will coordinate with the electric cooperative and LGU through the Project Team in securing permits compliant with the provisions of the RE Law including the net-metering system as may be necessary.

The 10kW and 5kW hybrid-grid-solar battery systems will be installed in the existing roofs of the Molecular Laboratory Building and Operating Room Building respectively.

The Contractor will conduct 5 days hands-on training in the project site to a maximum of 15 representatives of the IPH on operation and maintenance of the solar PV systems as part of commissioning, and operations and maintenance support. The Contractor must provide printed training handouts to training participants and should provide hard copies and e-copy of the operating and maintenance manual of the system installed including the as-built system plans and specifications.

See Annex A (BOM) for the required minimum warranties for the major parts of the systems. Within the warranty period, the defective parts or works should be repaired or be replaced if beyond repair. The cost of the inspections, testing, repairs, and replacements including the logistics will be at the expense of the Contractor. Contractor must inspect the reported defect/s within 15 working days from the date the Contractor received a formal communication (by letter or email). The repair must be completed within 30 working days and if replacement is required it must be completed within 40 working days from the receipt of formal communication.

The Contractor will provide at least four (4) months of operation and maintenance support. The operation support is in the form of technical assistance on operating the solar PV systems wherein the operator/s is needing clarification or additional guidance on operating the system and may be done on-site or through telephone/cellphone, teleconferencing, email other communication platforms. The maintenance support is in the form of supervising the operator/s in conducting their maintenance activities as stated in the operation and maintenance manual provided.

The Contractor will provide at least one (1) year of after sales services such as supply of parts, repairs, and replacements under the expense of the end user including the cost of inspection and logistics if not covered by the warranty. The Contractor must supply/deliver the parts within 20 working days from the receipt of order and payment. In case of

repairs and replacements the Contractor must do the repair or replacement within 30 working days from the receipt of order and payment of the parts/materials, the balance will be paid once the repair or replacement is completed. Should there be Force Majeure or fortuitous events such as pandemic, e.g. Covid-19, and travel restriction is imposed by the Government, the Contractor shall notify in writing, the Project Management Unit of such an event. The PMU shall act upon the request for delay and extension of the delivery of the parts shall start on counting of the number of days from the PMU's approval of the extension.

The contractor needs to also provide warranty on workmanship and equipment (Solar Module and PV Inverter). The proposed equipment must be fully compliant with the specification under Bill of Materials.



E. Expected Outputs and Deliverables

Deliverables/ Outputs	Estimated days to Complete	Target Due Dates	Approvals Required (review output and confirm acceptance)	Review and Approvals Required (review output and confirm acceptance)
Approval of the final work plan based on the inception planning with the LGU/IPH and the PMU including the detailed system design and submission of Performance Security which is 10% of the total contract value	5	NLT 10 calendar days upon receipt of Notice to Proceed (NTP)	National Project Director	DREAMS Project Manager and Programme Analyst CAPT
Delivery and acceptance of all materials as stated in the BOQ	25	NLT 45 days upon receipt of NTP		
Completed 50% of the activities approved work plan	30	As per agreed upon work plan		
System Commissioned & working for 15 straight days and Submission of all as-build plans (Solar PV system and electrical wiring), warranty certificates and other pertinent documents.	40			
Report on Activities Conducted, support provided during the maintenance period and Certificate of Work	120	NLT 10days after the end of the 4 months		

Deliverables/ Outputs	Estimated days to Complete	Target Due Dates	Approvals Required (<i>review output and confirm acceptance</i>)	Review and Approvals Required (<i>review output and confirm acceptance</i>)
Completion from the UNDP and IPH		maintenance period		

First, considering the COVID-19 pandemic and declaration of State of Public Health Emergency in the Philippines, all work of the Firm shall be done within the guidelines and protocols set by the Philippine Government and local Government Units that will or may be involved.

Second, for the delivery of materials, the following must be considered.

- i. The Bidder should check different routes and modes of transportation for the delivery of the materials. The location of the project is at Brgy Rumbang, Pototan, Iloilo.
- ii. The Bidder is responsible to get the necessary insurance and travel documents in the light of the health protocols, both for the goods to be shipped and the personnel that will travel.
- iii. There will be material testing prior to acceptance or preferably before leaving the warehouse of the supplier. At the minimum, the materials needing testing prior to acceptance are the solar panels, batteries, and inverters. Standard test and inspection will be based on the BOM. The materials should be well functioning within 1 - 2 minutes upon start testing.
- iv. During delivery, packing of all the items must be well secured, wrapped, labelled properly and documents in place, especially for the solar panels, DC breaker, and inverters.

F. Governance and Accountability

- The work of the Firm will be supervised by the DREAMS Project Manager in close collaboration with the local partners or Recipient Organization
- A Project Management Group (PMG) will be formed upon the awarding of the Contract. The PMG will be headed by the DREAMS Project Manager.
- The Contractor must assign a Senior Representative to be part of the PMG. An alternate may be included but the Senior Member shall be present during at least during the 1st and last or closing meeting. The Provincial Government of Iloilo (PGI) and Iloilo Electric Cooperative (ILECO) II representatives will be members of the PMG.
- Accommodations for the contractor's staff and laborers will be arranged by and shouldered by the firm. The contractor should report to the DREAMS project and the partner LGU based on the service level agreement in Section K.

G. Location of Work

Iloilo Provincial Hospital (IPH), Pototan Iloilo

H. Duration of the Work

- The contract period will be from 30 November 2021 to 30 June 2022.
- The Recipient shall be given a minimum of 15 calendar days upon receipt to fully test the materials prior to their final acceptance.

I. Facilities to be provided by the Project

- The PGI will provide a secure warehouse or enclosed area for the storage of the equipment to be used for the installation.
- The PGI will also, subject to availability of space, provide a working area to the Firm during its staff's consultations with concerned units of the PGI.
- The contractor is not expected to have a base office in the area.

J. Qualifications of the Successful Contractor

The firm should have minimum qualification:

- Minimum of 3 years of experience in project integration or Engineering, Procurement and Construction EPC) of residential and commercial solar PV systems (2 kW to 100 kW systems)
- Minimum annual turnover (average for 2 years) is Php5M

The firm should assign minimum 3 key personnel with the following qualifications:

1. Team Project Manager

Education:

- Minimum Graduate degree in Engineering or Social Sciences

Experience:

- Minimum a Senior Level Executive or Officer with permanent item/regular employee (Division/Unit Head; Manager or equivalent position) of the firm for a minimum of 4 years

Language

- Proficiency in English and Filipino

2. Electrician

Education:

- Minimum AB/BS degree in Electrical or Electronics engineering with license

Experience:

- Minimum 2 years of experience in designing and doing electrical works in buildings, residential homes, and other infrastructure.
- Minimum 1 year of actual experience in designing and/or installing electrical systems of solar PV systems

Language:

- Proficiency in English and Filipino

3. Head Installer / Foreman

Education:

- Minimum High School graduate

Experience:

- Minimum 1 year of supervising Solar PV systems installations

Language

- Proficiency in English and Filipino

K. Scope of Price Proposal and Schedule of Payments

This is a lump-sum approach. The lump sum amount must be “all inclusive” of expenses, e.g. supplies, reproduction, meals, lodging, professional fees and other local travel fares that will be involved in performance of the TOR. The contract price is fixed regardless of changes in cost components. Payments will be based on the completion and/or submission of the documents mentioned below:

Deliverables	Payment (%)
Approved final work plan based on the inception planning with the PLGU/IPH and the PMU including the detailed system plans and specifications	5%
Delivery and acceptance of all materials as stated in the BOM	30%
System Commissioned & working for 15 straight days. Submission of all as-build plans (Solar PV system and electrical wiring), warranty certificates and other pertinent documents; Submission of <u>Warranty security in the form of Bank Guarantee</u> equivalent to 10% of the total contract value.	45%
Report on activities conducted, support provided during the maintenance period and certificate of work completion from the UNDP and IPH	20%
Total	100%

Please carefully review the UNDP Financial Guidelines as described in the bid documents.

K. Key Performance Indicators and Service Level

The PMG will be guided by these performance indicators

Key Services Required	Frequency	Minimum Standard/Requirement
Regular Project Meeting of Local Project Team (Based in Iloilo)	Every after 15 working days	Minutes of meeting signed by PGI Focal person
Status report based on Inception plan or work breakdown structure	Every end of the month	Based on agreed upon format during the inception planning

		Copy furnished PGI/IPH and ILECO II focal persons
Project Management Report	Every Quarter	Approved by the focal person of PGI confirmed by ILECO II for this project Signed Minutes of Meeting (if any) that happened during the period being covered by the report
Completion Report	End of the Project	Clearance from the PGI/IPH and ILECO II that the Firm has no further commitment or pending issues Checklist of all soft copies of documents and reports submitted to DREAMS PMU, PGI/IPH and ILECO II duly validated by both agencies.

Non submission of these documents (either in hard or soft copies) will lead to deferment of payments due to the Firm. For purposes of documentation, soft copies of the reports are acceptable but duly signed hard copies of the reports must be submitted as part of the final requirement for final payment.

Criteria for Evaluation

Offers will be evaluated on a Pass or Fail basis based on Two key Criteria:

1. Minimum Qualifications per item I.
2. Technical Proposal based on the proposed and detailed specification of the materials to be offered vis a vis the BOQ as shown in Annex A and scope of work provided in section D.

Bidders are highly encouraged to inspect the site prior to submission of bid proposals. The proposed materials/equipment to be supplied must include technical specifications as contained in the BOM. Please note that the UNDP does not support or encourage any specific brand. The technical brochures for primary components particularly solar panels, battery, inverter, battery charge controller, circuit breakers, surge suppressors are required to determine compliance with the specifications in the BoM.

Offers that Passed all the requirements in Criteria 1 and Criteria 2 will be considered for Criteria 3 (Financial Evaluation). The lowest financial bid from “technically compliant and responsive” bidder will be considered for award.

Annexes of the TOR

- A. Bill of Materials
- B. Location Map
- C. Structures for Rooftop
- D. Solar Radiation data
- E. Summary of Electric Bill
- F. Pictures of Building
- G. CV Template
- H. Detailed detailed of the mounting structure

ANNEX A: BILL OF MATERIALS

40kWp Grid-tie / net-metering Solar Rooftop Project	Qty	Unit
a) Solar panels, 520Wp monocrystalline, Tier 1	78.00	pcs
b) Inverters 10 kW Grid Tie Inverter, 400V / 220V, 60Hz, 3-phase	4.00	units
c) Steel Mounting structures with rails	1.00	lot
d) Clamps (conduit/mid/end) L-foot, MC4 connector, 40A MCCB, Surge Suppressors (SPD AC and DC) Box, Metal (20ways) Mini Circuit Breaker, 16A DC Silicon Sealant, Black	1.00	lot
e) Solar Wire, 6 mm2, twin 119 meters	300.00	m
f) AC Wire 8 mm2, 58 meters	60.00	m
Hybrid: grid - solar - battery storage	Qty	Unit
15 kW peak		
a) Solar panels 520 Wp, Tier 1	30.00	pcs
b) Inverters 5 kW, hybrid	3.00	units
c) Battery Charge Controller for LiFePO4 battery bank, mPPT, 48VDC default voltage	3.00	units
c) Railings Aluminium, 4.2 m length and accessories) Clamps (conduit/mid/end) L-foot, MC4 connector, 40A MCCB, Surge Suppressors (SPD AC and DC) Box, Metal (20ways) Mini Circuit Breaker, 16A DC Silicon Sealant, Black	1.00	lot
d) Wirings, 6 mm2 & 8 mm2	1.00	lot
e) Batteries LiFePO4	3.00	set
f) Battery Box and enclosure	3.00	sets

Specification Sheet for Grid-Tie

Solar Module, 520Wp, Tier 1, monocrystalline	Unit of Measure
Maximum Power (Pmax)	520Wp
Maximum Power Voltage (Vmp)	41.60V
Maximum Power Current (Imp)	12.50A
Open-circuit Voltage (Voc)	49.14V
Short-circuit Current (Isc)	13.23A
Module Efficiency STC (%)	20.50%
Operating Temperature(?)	-40?~+85?
Maximum system voltage	1500VDC (IEC)
Maximum series fuse rating	25A
Power tolerance	0~+3%
Temperature coefficients of Pmax	-0.35%/ deg. Celsius
Temperature coefficients of Voc	-0.28%/ deg. Celsius
Temperature coefficients of Isc	0.048%/deg. Celsius
Nominal operating cell temperature (NOCT)	45±2/deg.Celsius
Grid Tie Inverter	
DC Input	
Max DC power for single MPPT	6750W
Number of MPP trackers	2
Number for DC inputs	2 for each MPPT
Max. input voltage	1000V
Start-up voltage	350V
Rated input voltage	600V
MPPT operating voltage range	250V-960V
Full power MPPT voltage range	350V-850V
Max. input current per MPPT	15A/15A
AC Output	

Rated power	10000W
Max. AC power	10000VA
Max. Output current	15A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac
Grid voltage range	310Vac-480Vac (According to local standard)
Nominal frequency	60Hz
Grid Frequency range	54Hz-66Hz (According to local standard)
THDi	<3%
Power factor	>0.99 (adjustable+/-0.8)
Performance	
Max efficiency	98.2%
Self-consumption at night	<1W
MPPT efficiency	>99.9%
Protection	
DC reverse polarity protection	Yes
DC switch	Yes
Protection class/overvoltage category	I/III
Safety protection	Anti-islanding, RCMU, Ground fault monitoring
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30), IEC60255

Specification Sheet for Hybrid

Solar Module, 520Wp, Tier 1, monocrystalline	Unit of Measure
Maximum Power (Pmax)	520Wp
Maximum Power Voltage (Vmp)	41.60V
Maximum Power Current (Imp)	12.50A

Open-circuit Voltage (Voc)	49.14V
Short-circuit Current (Isc)	13.23A
Module Efficiency STC (%)	20.50%
Operating Temperature(?)	-40?~+85?
Maximum system voltage	1500VDC (IEC)
Maximum series fuse rating	25A
Power tolerance	0~+3%
Temperature coefficients of Pmax	-0.35%/ deg. Celsius
Temperature coefficients of Voc	-0.28%/ deg. Celsius
Temperature coefficients of Isc	0.048%/deg. Celsius
Nominal operating cell temperature (NOCT)	45±2/deg.Celsius

Hybrid Inverter Specification	Unit of Measure
Maximum PV Input Power	6500W
Rated Output Power	5500W
Maximum Charging Power	2880 W
GRID-TIE OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A
GRID OUTPUT (AC)	
Nominal Output Voltage	202/208/220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC*
Max. Output Current	23.9A*
Power Factor	> 0.99
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96%

European Efficiency@ Vnominal	95%
OFF-GRID OPERATION	
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	170 -280 VAC
Maximum AC Input Current	40 A
PV INPUT (DC)	
Maximum DC Voltage	500 VDC
MPP Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	202/208/220/230/240 VAC
Output Waveform	Pure sinewave
Efficiency (DC to AC)	93%
HYBRID OPERATION	
PV INPUT (DC)	
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC
MPP Voltage Range	120 VDC ~ 450 VDC
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A
GRID INPUT	
Nominal Output Voltage	202/208/220/230/240 VAC
Output Voltage Range	184 - 264.5 VAC*
Max. Output Current	23.9A*
AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC
Acceptable Input Voltage Range	170 -280 VAC
Maximum AC Input Current	40A
BATTERY MODE OUTPUT (AC)	

Nominal Output Voltage	202/208/220/230/240 VAC
Efficiency (DC to AC)	93%
BATTERY & CHARGER	
Nominal DC Voltage	48 VDC
Maximum Solar Charge Current	60 A
GENERAL	
PHYSICAL	
Dimension, D x W x H (mm)	110 x 450 x 445
Net Weight (kgs)	16
INTERFACE	
External Safety Box (Optional)	RS-232/USB
Communication ports	Optional SNMP, Modbus and AS-400 cards
ENVIRONMENT	
Humidity	0 ~ 90% RH (Non-condensing)
Operating Temperature	0 to 40°C
Altitude	0 ~ 1000 m**

Charge Controller	Value
System voltage	12V/24V/36V/48V Auto
No-load loss	0.7 W to 1.2W
Battery voltage	9V to 70V
Max. solar input voltage	150V (25°C), 145V (-25°C)
Max. power point voltage range	Battery voltage +2V to 120V
Rated charging current	60A
Rated load current	20A
Max. capacitive load capacity	10000uF
Max. photovoltaic system input power	800W/12V; 1600W/24V; 2400W/36V; 3200W/48V
Conversion efficiency	≤ 98%

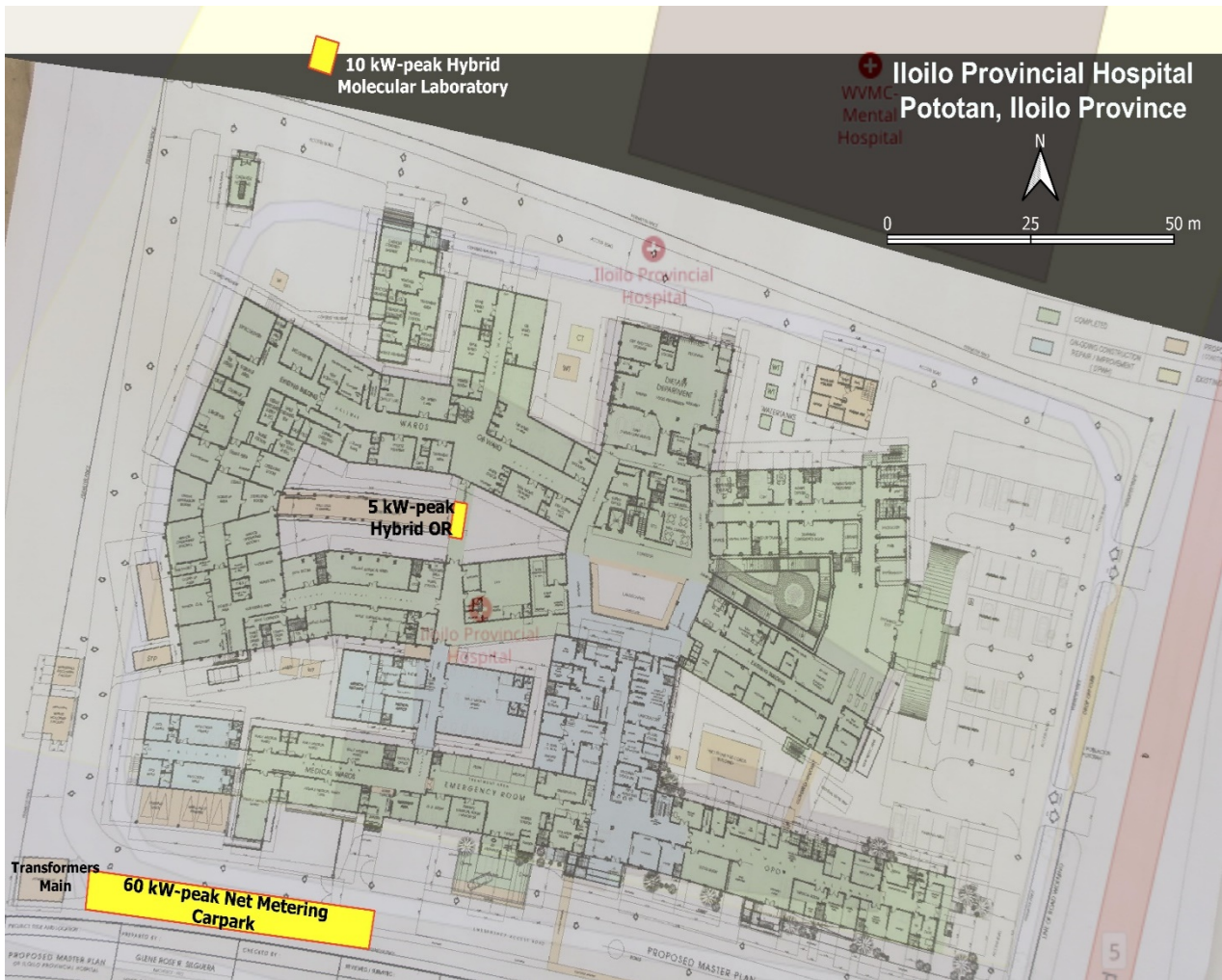
MPPT tracking efficiency	> 99%
Temperature compensation factor	-3mv/°C/2V (default)
Operating temperature	-35°C to +45°C
Waterproof level	IP32
Weight	3.6kg
Communication method	RS232 RS485
Altitude	≤ 3000m
Product dimensions	285*205*93mm
LiFePO4 Battery Bank	
Total Energy [kWh]	13 kWh
Usable Energy [kWh]	124kWh
Capacity [Ah]	250Ah
Nominal Voltage [V]	51.8V
Voltage Range [V]	42.0~58.8VDC
Enclosure Protection Rating IP55	IP55
Cell Certification	UL1642
Product Certificate	UL1973/TUV (IEC62619)/CE/FCC/RCM
Manufacturer's Warranty Certificates	
Solar Module: at least 10 years and 25 years expected life Solar Module Mounting structure: 3 years warranty against corrosion PV Inverters: 5 years warranty Batteries : At least 2 years	

ANNEX B. Location Map of the Iloilo Provincial Hospital in the Municipality of Pototan, Province of Iloilo

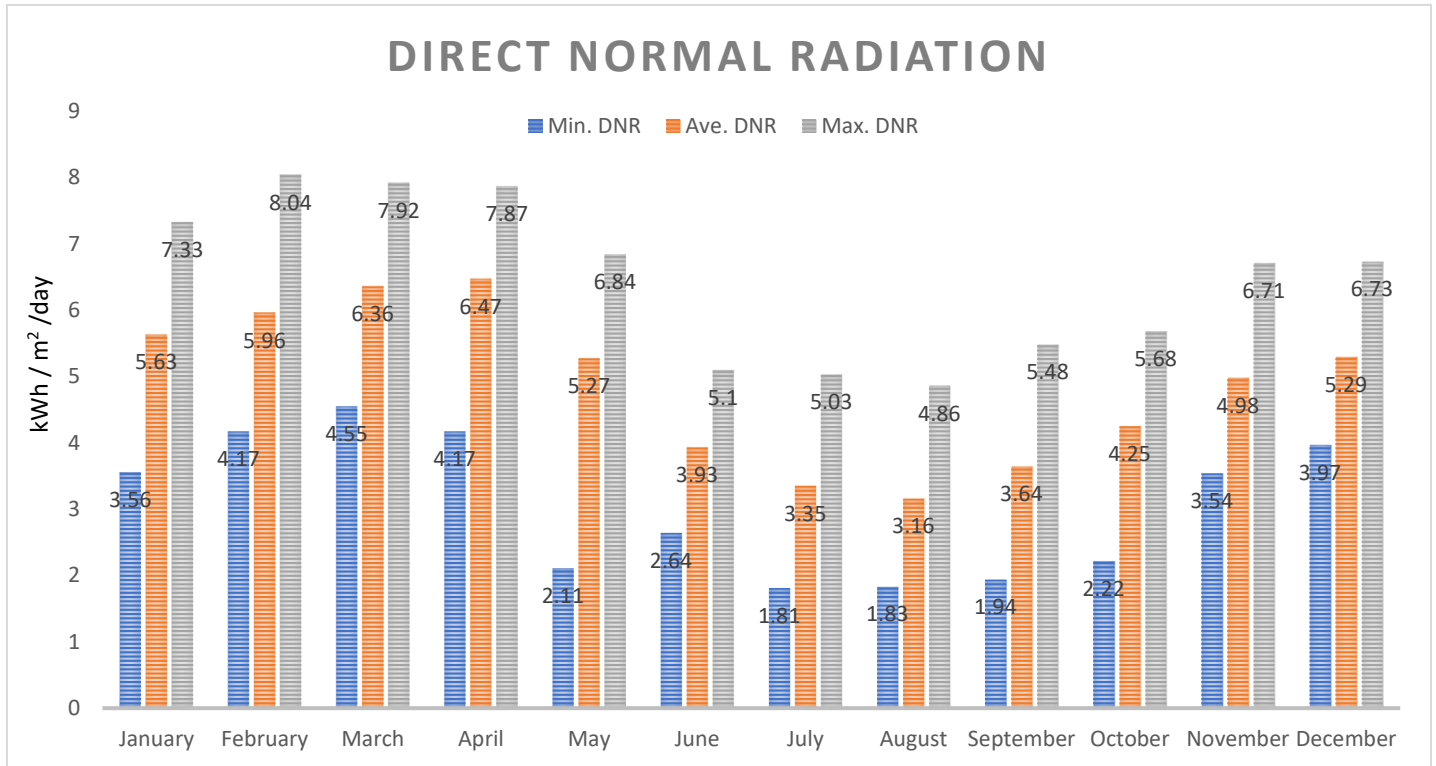


ANNEX C. IPH Structures for Rooftop Solar PV Installation.

The total roof area is approximately 6,900 m² but the roof areas inclined towards the South total around 1,200 m² and using poly-crystalline modules with conversion efficiency of 16.19% the potential conversion capacity will be around 190 kW.



ANNEX D. Solar Radiation Data and Estimated Monthly and Annual Savings with Rooftop PV



Direct Normal Radiation (DNR) at Latitude: 10°55.615' Longitude: 122°37.819'

22 Year Solar Climatological Averages (July 1983 to June 2005)

Source: NASA Prediction of Worldwide Energy Resources (POWER).

<https://power.larc.nasa.gov>

Below are the estimates of monthly and annual savings with the installation of 95 kW peak rooftop solar PV systems using the 22-Year DNR Averages.

Month	Solar Radiation (kWh/m ² /day)	Installed PV Capacity (kW)	Daily Output (kWh)	Days per Month	Monthly Output (kWh)	ILECO II Rates (PhP)	Monthly Savings (PhP)
January	5.63	95	534.85	31.00	16,580.4	10.29	134,693.53
February	5.96	95	566.20	28.00	15,853.6	10.29	128,789.64
March	6.36	95	604.20	31.00	18,730.2	10.29	152,158.23
April	6.47	95	614.65	30.00	18,439.5	10.29	149,796.68
May	5.27	95	500.65	31.00	15,520.2	10.29	126,080.80
June	3.93	95	373.35	30.00	11,200.5	10.29	90,989.33
July	3.35	95	318.25	31.00	9,865.8	10.29	80,146.24
August	3.16	95	300.20	31.00	9,306.2	10.29	75,600.63

September	3.64	95	345.80	30.00	10,374.0	10.29	84,275.10
October	4.25	95	403.75	31.00	12,516.3	10.29	101,678.06
November	4.98	95	473.10	30.00	14,193.0	10.29	115,299.45
December	5.29	95	502.55	31.00	15,579.1	10.29	126,559.28
Annual	4.85	95	460.71	365.00	168,158.6	10.29	1,366,066.96

ANNEX E. Electric Bills

Summary of ILECO II Billings			
January 2019 - December 2019			
Months	kWh used	Total Bill	PhP/kWh
January	38,976	386,428.64	9.9145
February	34,377	328,175.78	9.5464
March	34,041	330,556.88	9.7106
April	45,633	430,952.76	9.4439
May	49,329	518,962.01	10.5204
June	51,702	522,175.92	10.0997
July	44,856	478,284.57	10.6627
August	4,940	407,662.17	82.5227
September	50,694	427,653.97	8.4360
October	46,578	387,287.09	8.3148
November	47,271	422,275.87	8.9331
December	41,559	401,963.62	9.6721
2019 Monthly Ave.	40,830	420,198.27	10.2915

ANNEX F. Pictures of the Building

IPH Administration Building



IPH Molecular Laboratory under construction



Waste Decomposer Facility will need some clearing of vegetation



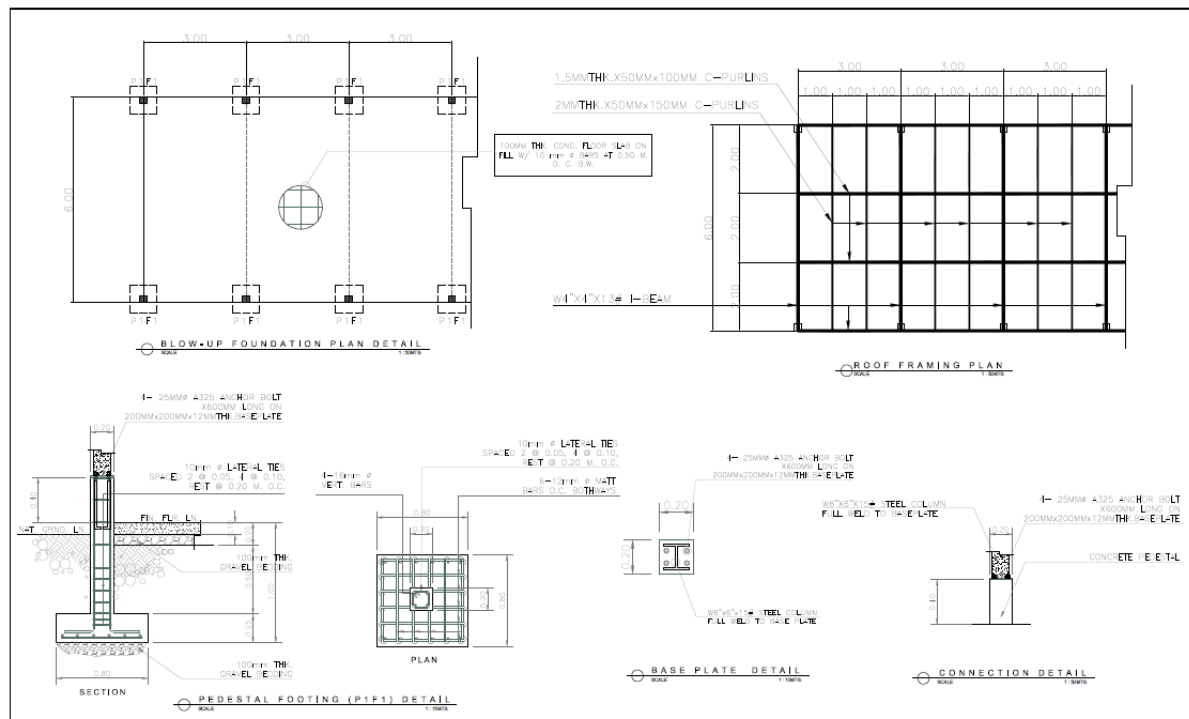
Format for CV of Proposed Key Personnel

Name of Personnel	[Insert]
Position for this assignment	[Insert]
Nationality	[Insert]
Language proficiency	[Insert]
Education/ Qualifications	<i>[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]</i> [Insert]
Professional certifications	<i>[Provide details of professional certifications relevant to the scope of goods and/or services]</i> ▪ Name of institution: [Insert] ▪ Date of certification: [Insert]
Employment Record/ Experience	<i>[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position held and location of employment. For experience in last five years, detail the type of activities performed, degree of responsibilities, location of assignments and any other information or professional experience considered pertinent for this assignment.]</i> [Insert]
References	<i>[Provide names, addresses, phone and email contact information for two (2) references]</i> Reference 1: [Insert] Reference 2: [Insert]

I, the undersigned, certify that to the best of my knowledge and belief, the data provided above correctly describes my qualifications, my experiences, and other relevant information about myself.

 Signature of Personnel Date (Day/Month/Year)

HLCM-PN/UNDP RFQ – October 2020



Delivery Requirements

Delivery Requirements	
Delivery date and time	Bidder shall deliver the goods within 90 days after Contract signature.
Delivery Terms (INCOTERMS 2020)	Refer to the Terms of References
Customs clearance (must be linked to INCOTERM)	☐ Not applicable Shall be done by: ☒ UNDP ☐ Supplier/bidder ☐ Freight Forwarder
Exact Address(es) of Delivery Location(s)	Iloilo Provincial Hospital – Pototan, Iloilo
Distribution of shipping documents (if using freight forwarder)	Supplier/bidder
Packing Requirements	Supplier/bidder
Training on Operations and Maintenance	required
Warranty Period	Refer to Terms of References (ToR)
After-sales service and local service support requirements	Refer to Terms of References (ToR)_
Preferred Mode of Transport	Land and Sea

ANNEX 2: QUOTATION SUBMISSION FORM

Bidders are requested to complete this form, including the Company Profile and Bidder's Declaration, sign it and return it as part of their quotation along with Annex 3: Technical and Financial Offer. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.

Name of Bidder:	Click or tap here to enter text.	
RFQ reference:	Click or tap here to enter text.	Date: Click or tap to enter a date.

Company Profile

Item Description	Detail
Legal name of bidder or Lead entity for JVs	Click or tap here to enter text.
Legal Address, City, Country	Click or tap here to enter text.
Website	Click or tap here to enter text.
Year of Registration	Click or tap here to enter text.
Legal structure	Choose an item.
Are you a UNGM registered vendor?	☐ Yes ☐ No If yes, insert UNGM Vendor Number
Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate):	☒ Yes ☐ No
Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? (If yes, provide a Copy of the valid Certificate):	☒ Yes ☐ No
Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy)	☒ Yes ☐ No
Does your organization demonstrate significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies or membership of trade	☒ Yes ☐ No

institutions promoting such issues (If yes, provide a Copy)				
Is your company a member of the UN Global Compact	☒ Yes ☐ No			
Bank Information	Bank Name: Click or tap here to enter text. Bank Address: Click or tap here to enter text. IBAN: Click or tap here to enter text. SWIFT/BIC: Click or tap here to enter text. Account Currency: Click or tap here to enter text. Bank Account Number: Click or tap here to enter text.			
Previous relevant experience: 3 contracts				
Name of previous contracts	Client & Reference Contact Details including e-mail	Contract Value	Period of activity	Types of activities undertaken

Bidder's Declaration

Yes	No	
☐	☐	Requirements and Terms and Conditions: I/We have read and fully understand the RFQ, including the RFQ Information and Data, Schedule of Requirements, the General Conditions of Contract, and any Special Conditions of Contract. I/we confirm that the Bidder agrees to be bound by them.
☐	☐	I/We confirm that the Bidder has the necessary capacity, capability, and necessary licenses to fully meet or exceed the Requirements and will be available to deliver throughout the relevant Contract period.
☐	☐	Ethics: In submitting this Quote I/we warrant that the bidder: has not entered into any improper, illegal, collusive or anti-competitive arrangements with any Competitor; has not directly or indirectly approached any representative of the Buyer (other than the Point of Contact) to lobby or solicit information in relation to the RFQ ;has not attempted to influence, or provide any form of personal inducement, reward or benefit to any representative of the Buyer.
☐	☐	I/We confirm to undertake not to engage in proscribed practices, , or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and we have read the United Nations Supplier Code of Conduct : https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct and acknowledge that it provides the minimum standards expected of suppliers to the UN.
☐	☐	Conflict of interest: I/We warrant that the bidder has no actual, potential, or perceived Conflict of Interest in submitting this Quote or entering a Contract to deliver the Requirements. Where a Conflict of Interest arises during the RFQ process the bidder will report it immediately to the Procuring Organisation's Point of Contact.

Yes	No	
☐	☐	Prohibitions, Sanctions: I/We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium members or subcontractors or suppliers for any part of the contract is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists and have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization.
☐	☐	Bankruptcy: I/We have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future.
☐	☐	Offer Validity Period: I/We confirm that this Quote, including the price, remains open for acceptance for the Offer Validity.
☐	☐	I/We understand and recognize that you are not bound to accept any Quotation you receive, and we certify that the goods offered in our Quotation are new and unused.
☐	☐	By signing this declaration, the signatory below represents, warrants and agrees that he/she has been authorised by the Organization/s to make this declaration on its/their behalf.

Signature: _____

Name: Click or tap here to enter text.

Title: Click or tap here to enter text.

Date: Click or tap to enter a date.

ANNEX 3: TECHNICAL AND FINANCIAL OFFER – Supply, Delivery and Installation of Solar PV at the Iloilo Provincial Hospital

Bidders are requested to complete this form, sign it and return it as part of their bid along with Annex 2: Quotation Submission Form. The Bidder shall fill in this form in accordance with the instructions indicated. No alterations to its format shall be permitted and no substitutions shall be accepted.

Name of Bidder:	Click or tap here to enter text.	
RFQ reference:	Click or tap here to enter text.	Date: Click or tap to enter a date.

Specification Sheet for Grid-Tie

Solar Module, 520Wp, Tier 1, monocrystalline	Unit of Measure	Compliance Sheet (pls indicate will comply or indicate any deviations)
Maximum Power (Pmax)	520Wp	
Maximum Power Voltage (Vmp)	41.60V	
Maximum Power Current (Imp)	12.50A	
Open-circuit Voltage (Voc)	49.14V	
Short-circuit Current (Isc)	13.23A	
Module Efficiency STC (%)	20.50%	
Operating Temperature(?)	-40?~+85?	
Maximum system voltage	1500VDC (IEC)	
Maximum series fuse rating	25A	
Power tolerance	0~+3%	
Temperature coefficients of Pmax	-0.35%/ deg. Celsius	
Temperature coefficients of Voc	-0.28%/ deg. Celsius	
Temperature coefficients of Isc	0.048%/deg. Celsius	
Nominal operating cell temperature (NOCT)	45±2/deg.Celsius	

Grid Tie Inverter	Unit of Measure	Compliance Sheet (pls indicate will comply or indicate any deviations)
DC Input		
Max DC power for single MPPT	6750W	
Number of MPP trackers	2	
Number for DC inputs	2 for each MPPT	
Max. input voltage	1000V	
Start-up voltage	350V	
Rated input voltage	600V	
MPPT operating voltage range	250V-960V	
Full power MPPT voltage range	350V-850V	
Max. input current per MPPT	15A/15A	
AC Output		
Rated power	10000W	
Max. AC power	10000VA	
Max. Output current	15A	
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac	
Grid voltage range	310Vac-480Vac (According to local standard)	
Nominal frequency	60Hz	
Grid Frequency range	54Hz-66Hz (According to local standard)	
THDi	<3%	
Power factor	>0.99 (adjustable+/- 0.8)	

Performance		
Max efficiency	98.2%	
Self-consumption at night	<1W	
MPPT efficiency	>99.9%	
Protection		
DC reverse polarity protection	Yes	
DC switch	Yes	
Protection class/overvoltage category	I/III	
Safety protection	Anti-islanding, RCMU, Ground fault monitoring	
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30), IEC60255	

Specification Sheet for Hybrid

Solar Module, 520Wp, Tier 1, monocrystalline	Unit of Measure	Compliance Sheet (pls indicate will comply or indicate any deviations)
Maximum Power (Pmax)	520Wp	
Maximum Power Voltage (Vmp)	41.60V	
Maximum Power Current (Imp)	12.50A	
Open-circuit Voltage (Voc)	49.14V	
Short-circuit Current (Isc)	13.23A	
Module Efficiency STC (%)	20.50%	
Operating Temperature(?)	-40?~+85?	
Maximum system voltage	1500VDC (IEC)	
Maximum series fuse rating	25A	
Power tolerance	0~+3%	
Temperature coefficients of Pmax	-0.35%/ deg. Celsius	

Temperature coefficients of Voc	-0.28%/ deg. Celsius	
Temperature coefficients of Isc	0.048%/deg. Celsius	
Nominal operating cell temperature (NOCT)	45±2/deg.Celsius	
Hybrid Inverter Specification	Unit of Measure	Compliance Sheet (pls indicate will comply or indicate any deviations)
Maximum PV Input Power	6500W	
Rated Output Power	5500W	
Maximum Charging Power	2880 W	
GRID-TIE OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC	
MPP Voltage Range	120 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A	
GRID OUTPUT (AC)		
Nominal Output Voltage	202/208/220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC*	
Max. Output Current	23.9A*	
Power Factor	> 0.99	
EFFICIENCY		
Maximum Conversion Efficiency (DC/AC)	96%	
European Efficiency@ Vnominal	95%	
OFF-GRID OPERATION		
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	170 -280 VAC	

Maximum AC Input Current	40 A	
PV INPUT (DC)		
Maximum DC Voltage	500 VDC	
MPP Voltage Range	120 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A	
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	202/208/220/230/240 VAC	
Output Waveform	Pure sinewave	
Efficiency (DC to AC)	93%	
HYBRID OPERATION		
PV INPUT (DC)		
Nominal DC Voltage / Maximum DC Voltage	360 VDC / 500 VDC	
Start-up Voltage / Initial Feeding Voltage	116 VDC / 150 VDC	
MPP Voltage Range	120 VDC ~ 450 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 2 x 13 A	
GRID INPUT		
Nominal Output Voltage	202/208/220/230/240 VAC	
Output Voltage Range	184 - 264.5 VAC*	
Max. Output Current	23.9A*	
AC INPUT		
AC Start-up Voltage / Auto Restart Voltage	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	170 -280 VAC	
Maximum AC Input Current	40A	
BATTERY MODE OUTPUT (AC)		
Nominal Output Voltage	202/208/220/230/240 VAC	
Efficiency (DC to AC)	93%	

BATTERY & CHARGER		
Nominal DC Voltage	48 VDC	
Maximum Solar Charge Current	60 A	
GENERAL		
PHYSICAL		
Dimension, D x W x H (mm)	110 x 450 x 445	
Net Weight (kgs)	16	
INTERFACE		
External Safety Box (Optional)	RS-232/USB	
Communication ports	Optional SNMP, Modbus and AS-400 cards	
ENVIRONMENT		
Humidity	0 ~ 90% RH (Non-condensing)	
Operating Temperature	0 to 40°C	
Altitude	0 ~ 1000 m**	
Charge Controller	value	Compliance Sheet (pls indicate will comply or indicate)
System voltage	12V/24V/36V/48V Auto	
No-load loss	0.7 W to 1.2W	
Battery voltage	9V to 70V	
Max. solar input voltage	150V (25°C), 145V (-25°C)	
Max. power point voltage range	Battery voltage +2V to 120V	
Rated charging current	60A	
Rated load current	20A	
Max. capacitive load capacity	10000uF	
Max. photovoltaic system input power	800W/12V; 1600W/24V; 2400W/36V; 3200W/48V	

Conversion efficiency	≤ 98%	
MPPT tracking efficiency	> 99%	
Temperature compensation factor	-3mv/°C/2V (default)	
Operating temperature	-35°C to +45°C	
Waterproof level	IP32	
Weight	3.6kg	
Communication method	RS232 RS485	
Altitude	≤ 3000m	
Product dimensions	285*205*93mm	
LiFePO4 Battery Bank	Value	Compliance Sheet (pls indicate will comply or indicate)
Total Energy [kWh]	13 kWh	
Usable Energy [kWh]	124kWh	
Capacity [Ah]	250Ah	
Nominal Voltage [V]	51.8V	
Voltage Range [V]	42.0~58.8VDC	
Enclosure Protection Rating IP55	IP55	
Cell Certification	UL1642	
Product Certificate	UL1973/TUV (IEC62619)/CE/FCC/RCM	

Currency of the Quotation: Click or tap here to enter text.						
INCOTERMS: Click or tap here to enter text.						
Item #	Item Description	Qty	Unit of Measure	Specify brands, model	Unit Price (No VAT)	Total Price (No VAT)
1	40kWp Grid-tie / net-metering Solar Rooftop Project					
	a) Solar panels, 520Wp monocrystalline, Tier 1	78	pcs			
	b) Inverters 10 kW Grid Tie Inverter, 400V / 220V, 60Hz, 3-phase	4	units			

	c) Steel Mounting structures with rails	1	lot			
	d) Clamps (conduit/mid/end)	1	lot			
	L-foot,					
	MC4 connector,					
	40A MCCB, Surge Suppressors (SPD AC and DC)					
	Box, Metal (20ways)					
	Mini Circuit Breaker, 16A DC					
	Silicon Sealant, Black					
	e) Solar Wire, 6 mm2, twin 119 meters	300	m			
	f) AC Wire 8 mm2, 58 meters	60	m			
2	Hybrid: grid - solar - battery storage 15 kW peak					
	a) Solar panels 520 Wp, Tier 1	30	pcs			
	b) Inverters 5 kW, hybrid	3	units			
	c) Battery Charge Controller for LiFePO4 battery bank, mPPT, 48VDC default voltage	3	units			
	c) Railings Aluminium, 4.2 m length and accessories)	1	lot			
	Clamps (conduit/mid/end)					
	L-foot,					
	MC4 connector,					
	40A MCCB, Surge Suppressors (SPD AC and DC)					
	Box, Metal (20ways)					
	Mini Circuit Breaker, 16A DC					
	Silicon Sealant, Black					
	d) Wirings, 6 mm2 & 8 mm2	1	lot			
	e) Batteries LiFePO4	3	set			
	f) Battery Box and enclosure	3	sets			
Total Price						
Transportation Price						
Insurance Price						
Installation Price						
Training Price						
Other Charges (specify)						
Total Final and All-inclusive Price						

Compliance with Requirements

	You Responses		
	Yes, we will comply	No, we cannot comply	If you cannot comply, pls. indicate counter - offer
Minimum Technical Specifications	☐	☐	Click or tap here to enter text.
Delivery Term (INCOTERMS)	☐	☐	Click or tap here to enter text.
Delivery Lead Time	☐	☐	Click or tap here to enter text.
Warranty and After-Sales Requirements	☐	☐	Click or tap here to enter text.
Validity of Quotation	☐	☐	Click or tap here to enter text.
Payment terms	☐	☐	Click or tap here to enter text.
Other requirements <i>[pls. specify]</i>	☐	☐	Click or tap here to enter text.
CV of Key Personnel	☐	☐	Click or tap here to enter text.
Brochures	☐	☐	Click or tap here to enter text.

Other Information:

Estimated weight/volume/dimension of the Consignment:	Click or tap here to enter text.
Country/ies of Origin: <i>(if export licence required this must be submitted if awarded the contract)</i>	Click or tap here to enter text.

I, the undersigned, certify that I am duly authorized to sign this quotation and bind the company below in event that the quotation is accepted.	
Exact name and address of company Company Name: Click or tap here to enter text. Address: Click or tap here to enter text. Click or tap here to enter text. Phone No.: Click or tap here to enter text. Email Address: Click or tap here to enter text.	Authorized Signature: Date: Click or tap here to enter text. Name: Click or tap here to enter text. Functional Title of Authorised Signatory: Click or tap here to enter text. Email Address: Click or tap here to enter text.

ANNEX 4

WARRANTY SECURITY

INSERT LETTERHEAD OF THE BANK

[date]

To: Beneficiary

United Nations Development Programme (UNDP)

[insert address]

Contractor

[insert information on contractor]

Reference: Guarantee No. **[insert number]**

Dear Sirs,

WHEREAS, the United Nations Development Programme (the “Beneficiary”) and **[Name of Contractor]** (the “Contractor”) have entered into Contract No. **[contract number]** for **[insert description of contract]**, which entered into force on **[date]** (the “Contract”);

WHEREAS, the Contract requires that the Contractor furnishes a bank guarantee for a sum specified in the Contract as warranty for the Contractor’s satisfactory compliance with its obligations under the Contract;

WHEREAS, we **[Name of the Bank]** (the “Guarantor”), have agreed to give the Contractor such Guarantee;

NOW THEREFORE, we, the Guarantor, hereby undertake to pay to the Beneficiary, upon the Beneficiary’s first written demand and without cavil or arguments any sum or sums not exceeding in the aggregate **[currency][amount in words and figures]** or such lesser sum of money as the Beneficiary may by such written demand require to be paid, accompanied by the Beneficiary’s written statement that the Contractor is in breach of its obligations under the Contract, without the need to specify, prove or show grounds or reasons for such demand. Such statement shall be conclusive evidence of the Beneficiary’s entitlement to payment in the amount demanded, up to the amount of this Guarantee.

The maximum guaranteed amount under this Guarantee is **[currency] [amount in words and figures]**.

We, the Guarantor, further agree that no change or addition to or other modification of the terms of the Contract or of the works, goods and services acquired thereunder, which may be made between the Beneficiary and the Contractor, shall in any way release us, the Guarantor, from any liability under this Guarantee, and we hereby waive the notice of any such change, addition or modification.

This Guarantee shall be valid for 12 months after the date of issuance by the Beneficiary of a certificate of satisfactory performance and full completion by the Contractor of its obligations under the Contract.

Subject to the paragraph below, this Guarantee is governed by the Uniform Rules for Demand Guarantees, ICC Publication No. 758. The supporting statement under Article 15(a) thereof is excluded.

Nothing herein or related hereto shall be deemed a waiver express or implied of the privileges and immunities of the United Nations, including its subsidiary organs nor shall it be interpreted or applied in a manner inconsistent with such privileges and immunities.

SIGNATURE AND SEAL OF THE GUARANTOR BANK

Date:

Name of Bank:

Address: