



REQUEST FOR QUOTATION (RFQ) (Goods)

UNDP Saudi Arabia Country Office Procurement Unit, UNDP ITM – Copenhagen	DATE: 20 September 2022
	REFERENCE: RFQ-SAU-22-011 UNDP Saudi Arabia Country Office Grid-tied Solar PV System

Dear Sir / Madam:

We kindly request you to submit your quotation for **Supply, delivery and installation of grid-tied solar PV system for UNDP, Saudi Arabia**, as detailed in Annex 1 of this RFQ including ToR, price schedule, tasks and responsibilities, and compliance form.

Please take note of the following dates

Quotations may be submitted on or before **Wednesday, October 19, 2022** and via *e-mail*,
bids.sa@undp.org

- The bidders **should attend the Mandatory Pre-bid meeting** for a complete understanding of the scope of service before sending the formal proposal to UNDP.

Time: 11:00 hrs Riyadh time (GMT+3)

Date: **October 6, 2022 11:00 AM**

Venue : (Virtual) Zoom Meeting

Join on your computer or mobile app

<https://undp.zoom.us/j/84777799448>

Meeting ID: 847 7779 9448

- The bidders should conduct the **mandatory** site visit for a complete understanding of the scope of work:

Mandatory: Site Visit will be granted on 04 October 2022, bidders should send their contact details before September 29th, 2022 at 11am Riyadh time.

If you need further information, please feel free to contact the following:

Name: Ahmed Alsalman

Email: ahmed.alslaman@undp.org

Cc : abduhrahman.alghamdi@undp.org

Quotations submitted by email must be limited to a maximum of 35MB, virus-free and no more than 6 email transmissions. They must be free from any form of virus or corrupted contents, or the quotations shall be rejected.

It shall remain your responsibility to ensure that your quotation will reach the address above on or before the deadline. Quotations that are received by UNDP after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your quotation by email, kindly ensure that they are signed and in the .pdf format, and free from any virus or corrupted files.

Please take note of the following requirements and conditions pertaining to the supply of the abovementioned good/s: *[check the condition that applies to this RFQ, delete the entire row if condition is not applicable to the goods being procured]*

Introduction	<p>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</p> <p>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.</p> <p>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.</p>
Delivery Terms [INCOTERMS 2010] <i>(Pls. link this to price schedule)</i>	DDP
Customs clearance, if needed, shall be done by:	Supplier/Offeror

Exact Address/es of Delivery Location/s (identify all, if multiple)	United Nations Development Programme Country: Saudi Arabia Address: United Nations Building, Turnabout 9, Diplomatic Quarter, Riyadh 11614 GPS Coordinates: 24.683929, 46.622428
UNDP Preferred Freight Forwarder, if any ¹	N/A
Distribution of shipping documents (<i>if using freight forwarder</i>)	N/A
Latest Expected Delivery Date and Time (<i>if delivery time exceeds this, quote may be rejected by UNDP</i>)	Two months from the issuance of the Purchase Order (PO)
Delivery Schedule	Required
Packing Requirements	As per standard packing method applicable
Mode of Transport	Up to the contractor
Preferred Currency of Quotation	Quotations shall be quoted in Saudi Riyals or United States Dollars Method for Currency Conversion: UN Operational Exchange Rate prevailing on the closing date of submission of Bids.
Value Added Tax on Price Quotation	Must be inclusive of VAT and other applicable indirect taxes
After-sales services required	Please refer to the TOR
Deadline for the Submission of Quotation	Wednesday, October 19, 2022 16:00 hrs Riyadh Time If any doubt exists as to the time zone in which the quotation should be submitted, refer to http://www.timeanddate.com/worldclock/ . Try to submit your bid a day prior to or well before the closing time. Do not wait until the last minute. If you face any issue submitting your proposal at the last minute, UNDP may not be able to assist.

Method of Submission	<p>Quotations must be submitted as follows:</p> <p><input checked="" type="checkbox"/> Dedicated Email Address</p> <p>Bid submission address: bids.sa@undp.org</p> <ul style="list-style-type: none"> • File Format: .pdf, word or excel • File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. • All files must be free of viruses and not corrupted. • Max. File Size per transmission: 35 MB • Mandatory subject of the email: RFQ-SAU-22-011: and/or UNDP Saudi Arabia Country Office grid-tied solar PV system Supply, delivery and installation of grid-tied solar PV system for UNDP, Saudi Arabia <p>Multiple emails must be clearly identified by indicating in the subject line “email no. X of Y”, and the final “email no. Y of Y.”</p> <p>It is recommended that the entire Quotation be consolidated into as few attachments as possible.</p>
<p>All documentations, including catalogs, instructions and operating manuals, shall be in this language</p>	<p>English, and/or Arabic</p>
<p>Documents to be submitted</p>	<p>THE FOLLOWING DOCUMENTS SHALL BE INCLUDED IN THE BID SUBMISSION:</p> <p>1) TECHNICAL OFFER. Bidders are required to provide the following as part of the technical offer, presenting 12 separate attachments:</p> <ol style="list-style-type: none"> Technical description of offer, including comprehensive description and diagrammatical representation of the technical solution offered. Datasheets and certificates of the required standards of the main components. Bill of Materials (BoM). Bidder’s Statement Regarding Deviations/Non-Compliance (as per template provided in Appendix I in the ToR). Topics and content to be covered during training. Plan for bi-annual maintenance by the local partner, lasting for 3 years. Include the comprehensive details for procedures to be carried out during periodic inspection. Details on freight, logistics and installation plan in terms of timelines, delivery time and production time. Proposed work plan and approach criteria in relation to the requirements in the terms of reference (TORs). Risk assessment and Mitigation plan. <p>In case the bidder is not a company registered and based in Saudi Arabia, and a local partner is required as per section 3.1 of the TOR, the following documents shall be included:</p> <ol style="list-style-type: none"> Letter signed by both parties confirming relationship between the supplier and local service provider. Official documentation stating that the Local Partner is a registered business in the country.

	<p>I. A detailed profile of the local service provider including documentary evidence of similar services performed by the company.</p> <p>2) FINANCIAL OFFER.</p> <p>a. Price and Delivery Schedule Form: Fully completed and duly authorized (see Annex 1, Section 4).</p> <p>b. Please note all costs should be specified as indicated in the Price and Delivery Schedule Form. Therefore, the price of an item must not be included into another item.</p> <p>3) Annex 2: Quotation Submission Form duly completed and signed</p> <p>4) Annex 3: Technical and Financial Offer duly completed and signed and in accordance with the Schedule of Requirements in Annex</p> <p>5) Company Profile.</p> <p>6) Company registration: Certificate of Registration of the business, including Articles of Incorporation or equivalent document if Bidder is not a corporation.</p> <p>(Note: The Bidders that are not registered with the relevant Ministry/authorities in Saudi Arabia shall be required to obtain permission from the Government Authorities to undertake solar/construction/ESCO activities in Saudi Arabia; if they are awarded any contracts).</p> <p>Confirmation to obtain essential Approvals and Permitting from relevant Authority to undertake the works. (Submit confirmation is MANDATORY)</p> <p>7) Technical maintenance during warranty by authorized service representative in Saudi Arabia. The bidder shall provide a list of the local service organizations (including addresses, phone numbers and names of contact persons) constituted to handle requests from UNDP or its clients for technical assistance, maintenance, service, repairs and overhaul of the system.</p>
Period of Validity of Quotes starting the Submission Date	<p>90 days</p> <p>In exceptional circumstances, UNDP may request the Vendor to extend the validity of the Quotation beyond what has been initially indicated in this RFQ. The Proposal shall then confirm the extension in writing, without any modification whatsoever on the Quotation.</p>
Partial Quotes	Not permitted
Payment Terms	<p>✓ Total Acquisition: 40% upon complete delivery of goods;</p> <p>✓ 60% upon complete installation and commissioning of the system.</p>

	Maintenance Payment: $\frac{1}{3}$ of the cost at the end of the 1st year, $\frac{1}{3}$ at the end of the 2nd year, $\frac{1}{3}$ at the end of the 3rd year.
Liquidated Damages	<p>Will not be imposed</p> <p>Will be imposed under the following conditions :</p> <p>Percentage of contract price per day of delay : 0.5%</p> <p>Max. no. of days of delay : 30 Calendar days</p> <p>After which UNDP may terminate the contract.</p>
Evaluation Criteria <i>[check as many as applicable]</i>	<ul style="list-style-type: none"> ✓ Technical responsiveness/Full compliance to requirements and lowest price ✓ Compliance with after-sales services ✓ Full acceptance of the PO/Contract General Terms and Conditions ✓
UNDP will award to:	One and only one supplier
Type of Contract to be Signed	<p>➤ Purchase Order</p> <p>Contract Face Sheet (Goods and-or Services) (this template is also utilised for Long-Term Agreement) and if an LTA will be signed, specify the document that will trigger the call-off. E.g., PO, etc.)</p>
Contract General Terms and Conditions	<p>General Terms and Conditions for contracts (goods and/or services)</p> <p>General Terms and Conditions for de minimis contracts (services only, less than \$50,000)</p> <p>Applicable Terms and Conditions are available at http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</p>
Special conditions of Contract	Cancellation of PO/Contract if the delivery/completion is delayed by 50 days from receiving the order
Conditions for Release of Payment – Acquisition	<p>1st installment: 40% of total acquisition</p> <p><input checked="" type="checkbox"/> Written Acceptance of Goods based on inspection and full compliance with RFQ requirements</p> <p>2nd installment: 60% of total acquisition</p> <p>Upon commissioning of the system as per Annex 1, section 3.7.1.7</p> <p><input checked="" type="checkbox"/> Submission of Deliverables</p> <p><input checked="" type="checkbox"/> Passing Inspection</p> <p><input checked="" type="checkbox"/> Complete Installation</p> <p><input checked="" type="checkbox"/> Passing all Testing (including UAT)</p> <p><input checked="" type="checkbox"/> Completion of Training on Operation and Maintenance and online monitoring.</p>
Conditions for Release of Payment - Maintenance	<p>1st installment: $\frac{1}{3}$ of total maintenance</p> <p><input checked="" type="checkbox"/> Deliver of 1st and 2nd visit report and checklist</p>

	<p>2nd installment: ⅓ of total maintenance</p> <p><input checked="" type="checkbox"/> Deliver of 3rd and 4th visit report and checklist</p> <p>3rd installment: ⅓ of total maintenance</p> <p><input checked="" type="checkbox"/> Deliver of 5th and 6th visit report and checklist</p>
Annexes to this RFQ	<ul style="list-style-type: none"> ➤ Specifications of the Goods Required (Annex 1) ➤ Form for Submission of Quotation (Annex 1) ➤ General Terms and Conditions / Special Conditions: http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html ➤ Terms of Reference (Annex 1), Site Photos and Specifications (Annex 1: Section 2.3), Price and Delivery Schedule Form (Annex 1: Section 4), Minimum Project Deliverables (Annex 1: Section 3.6 and 3.7) ➤ 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 <p>Non-acceptance of the terms of the General Terms and Conditions (GTC) shall be grounds for disqualification from this procurement process.</p>
Contact Person for Inquiries (Written inquiries only)	<p>Focal Person in Procurement UNDP: Ahmed Alsalman Address: UNDP, Saudi Arabia E-mail address: ahmed.alsalman@undp.org Copy to:</p> <p><i>Abdulrahman Alghamdi</i> <i>Programme Analyst</i> abdulrahman.alghamdi@undp.org and copy itm.green.energy@undp.org</p> <p>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.</p>
Cost of preparation of quotation	<p>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.</p>

Supplier Code of Conduct, Fraud, Corruption,	<p>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</p> <p>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</p>
Gifts and Hospitality	<p>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.</p>
Eligibility	<p>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.</p> <p>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.</p> <p>Bidders must have the legal capacity to enter a binding contract with UNDP and to deliver in the country, or through an authorized representative.</p>

Joint Venture, Consortium or Association	<p>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 the 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.</p> <p>Refer to Clauses 19 – 24 under Solicitation policy for details on the applicable provisions on Joint Ventures, Consortium or Association.</p>
Only one Bid	<p>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.</p> <p>Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:</p> <ul style="list-style-type: none"> 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.
Fraud, Corruption, Collusion, Unethical practices, and Obstruction	<p>UNDP implements a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical practices, and obstruction. UNDP is committed to preventing, identifying and addressing all acts of fraud and corrupt practices against UNDP as well as third parties involved in UNDP activities. (See http://www.undp.org/about/transparencydocs/UNDP Anti Fraud Policy English FINAL june 2011.pdf and http://www.undp.org/content/undp/en/home/operations/procurement/procurement protest for full description of the policies)</p>

Other Information Related to the RFQ	<p>Bidders willing to apply as the Joint Venture (JV) must indicate in the bid that it is a JV undertaking, and provide a JV agreement. Legally registered JV certificate will be required in case of selection but before contract signing in accordance with section 5 of this RFQ. One of the partners MUST be a Local representative to cater for the services that may be necessary during the defect liability period.</p> <p>Bids have been rejected at the submission stage or found to be technically non-compliant due to errors in presentation and failure to follow bidding instructions.</p> <p>Below are some of the more common examples of why bids are rejected. Bidders are urged to read this before submission and to check that their bids conform to each of these points and the instructions as noted in the bidding documents.</p> <ol style="list-style-type: none"> 1. Mandatory documents were not submitted, such as Bid Submission Form, financial offer, ..etc. 2. The bid is not signed as per the instructions in the RFQ. 3. Documents provided are not in English or Arabic. 4. Documents provided do not directly address each point of the evaluation criteria; 5. Too many missing documents; 6. The bid is more like a brochure for the firm without specifically addressing the specific evaluation criteria of the RFQ and TOR. 7. Bid does not offer goods or services which have been specifically requested by UNDP in the Terms of Reference/ Scope of Works. 8. The bidder declines or proposes a major deviation to UNDP General Conditions of Contract.
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Goods offered shall be reviewed based on completeness and compliance of the quotation with the minimum specifications described above and any other annexes providing details of UNDP requirements.

The quotation that complies with all of the specifications, requirements and offers the lowest price, as well as all other evaluation criteria indicated, shall be selected. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price (obtained by multiplying the unit price and quantity) shall be re-computed by UNDP. The unit price shall prevail and the total price shall be corrected. If the supplier does not accept the final price based on UNDP's re-computation and correction of errors, its quotation will be rejected.

After UNDP has identified the lowest price offer, UNDP reserves the right to award the contract based only on the prices of the goods in the event that the transportation cost (freight and insurance) is found to be higher than UNDP's own estimated cost if sourced from its own freight forwarder and insurance provider.

At any time during the validity of the quotation, no price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by UNDP after it has received the quotation. 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.

Any Purchase Order that will be issued as a result of this RFQ shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a quotation implies that the vendor accepts without question the General Terms and Conditions of UNDP indicated above - <http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html>.

UNDP is not bound to accept any quotation, nor award a contract/Purchase Order, nor 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.

Please be advised that UNDP's vendor protest procedure is intended to afford an opportunity to appeal for persons or firms not awarded a purchase order or contract in a competitive procurement process. **In the event that** you believe you have not been fairly treated, you can find detailed information about vendor protest procedures in the following link: <http://www.undp.org/content/undp/en/home/operations/procurement/protestandsanctions/>

UNDP encourages every prospective Vendor 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.

UNDP implements a zero tolerance on fraud and other proscribed practices, and is committed to identifying and addressing all such acts and practices against UNDP, as well as third parties involved in UNDP activities. UNDP expects its suppliers to adhere to the UN Supplier Code of Conduct found in this link : http://www.un.org/depts/ptd/pdf/conduct_english.pdf

Thank you and we look forward to receiving your quotation.

Thank you and we look forward to receiving your quotations.

Issued by:

Approved by:

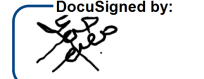
DocuSigned by:

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Name: Ahmed Alsalman

Title: Procurement Associate

Date: **September 20, 2022**

DocuSigned by:

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Name: Mohammed Siddig Mudawi

Title: Resident Representative a.i.

Date: **September 20, 2022**

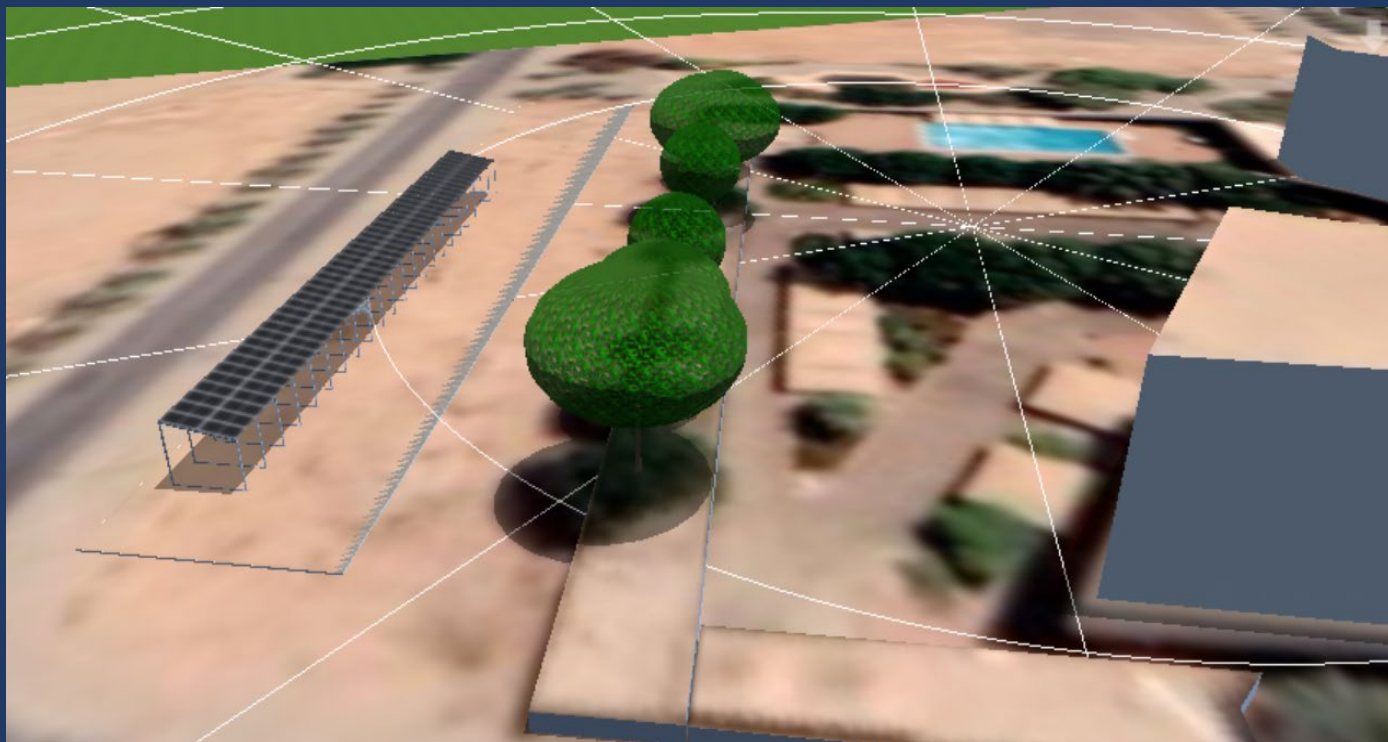
United Nations Development Programme

Information & Technology Management

Smart Infrastructure Services



UNDP Saudi Arabia Country Office



Annex 1 - Terms of Reference:

Smart Solar Grid-tied System for Saudi Arabia Country Office,
contributing to Create Smart UN Facilities Powered by Renewable Energy

Solar PV
Capacity (kWp)



39.6

Renewable
Fraction (%)



17.1

CO₂ Reductions
(tons/year)



44.5

About

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Prepared 13/07/2022
Last Update: 09/09/2022 by

ITM Green Energy Team.

ISO 9001 *Approved for Release by*
Gerald Demeules
Global ICT Advisor



Terms of Reference: Grid-tied solar PV system

UNDP Saudi Arabia Country Office

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Terms of Reference – Grid-tied solar PV system for UNDP Saudi Arabia CO

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Acronyms

COB - Close of Business
HQ - Head Quarters
ICT - Information and Communications Technology
IoT - Internet of Things
O&M - Operation and Maintenance
ITM - Information and Technology Management
PCMM - Power Consumption Measuring and Monitoring
SDGs - Sustainable Development Goals
TOR - Terms of Reference
UAT - User Acceptance Test
UNDG - United Nations Development Group
UNDP – United Nations Development Programme



Terms of Reference: Grid-tied Solar PV System

Saudi Arabia UNDP Country Office

Scope of the Document

The Terms of Reference (TOR) sets the requirements to facilitate smart and clean energy solutions to secure country office (CO) activities in **UNDP Saudi Arabia** by supplying, installing, commissioning (including complete civil works), and after-sales services for the Grid-tied solar PV system at the UNDP Saudi Arabia CO. An overall high-quality system is expected, as the system will be a showcase for other compounds.

Structure of the Document

The ToR include the following components:

1. Introduction
2. Project Description
3. Statement of Work
4. Price and Delivery Schedule Forms
5. Project Management and Communication Plan

All the requirements included in this ToR are numbered and boxed.

1. Introduction

The **UNDP Saudi Arabia CO**, in cooperation with the UNDP Information & Technology Management (ITM) Green Energy Team, has taken initial steps toward implementing a solar installation on their premises. This endeavor will comprise of **39.6kWp solar PV grid-tied system**.

The CO's load has been estimated from electricity bills and data provided by the Saudi Arabia UNDP CO colleagues in the site survey assessment. Based on the projection of the load consumption for the new building, the new solar PV system will be able to cover approximately 17.1% of the electricity consumption.

Switching to renewable energy implies strong environmental incentives. Going solar will save approximately 44.5 tons of CO₂ emissions yearly, effectively reducing Saudi Arabia CO's carbon footprint and environmental burden. This will institute the United Nations Sustainable Development Goals while being an opportunity to promote green energy solutions and inspire local economies to adopt similar solutions.

A solar installation in Saudi Arabia CO will enhance business continuity and work environment, as well as reduce climate impact. All while promoting sustainable development in the region.



1.1 Sustainable Development Goals

The Sustainable Development Goals (SDGs) are the blueprint for achieving a better and more sustainable future for all. They address the global challenges we face, including poverty, inequality, climate, environmental degradation, prosperity, and peace and justice. The Goals interconnect, and to leave no one behind, we must achieve each Goal and target by 2030.² As a leading agency in the fight against climate change, UNDP is committed to “walking the talk” by demonstrating that we run our operations in a resources-efficient, sustainable, and accountable way.



Figure 1 - The Global Goals for Sustainable Development

Substantial progress has been achieved in making UNDP “greener,” more resilient operations both at Head Quarters and in many COs and Regional Centers. Around the world, our offices are working to minimize the environmental impact associated with operations, from green building renovations and sustainable procurement practices to staff training and bicycling programs. By now, over 20 UNDP COs – out of 167 - have installed or are installing photovoltaic systems to reduce Green House Gas (GHG) emissions and enhance office energy security. Recently UNDP adopted a ‘Climate Neutrality and Sustainability Plan for Global UNDP Operations’ committing UNDP to reduce GHG emissions by 10% over five years and achieving climate neutrality for global operations starting effective 2014³.

² About the Sustainable Development Goals

(<https://www.un.org/sustainabledevelopment/sustainabledevelopment-goals/>)

³ UNDP - Greening the Blue Initiative (<http://www.greeningtheblue.org/what-the-un-is-doing/unitednationsdevelopment-programme-undp>)



1.2 Smart UN Facilities

The concept of Smart UN Facilities revolves around using data insights and interconnected technologies to transform UN COs and related facilities into “smart” premises; in effect, local capacity to carry out the UN’s goals is augmented. This concept is rooted in two aspects, which are manifested in multiple technology systems provided by ITM:

1. Fourth Industrial Revolution – the advent of connected technologies, including robotics, the Internet of Things (IoT), and autonomous vehicles.
2. Smart cities – utilization of sensors for data collection, insights, analysis, and subsequent enhancement of services.

Given the benefits, it makes the first step in transitioning into a low-carbon and digital organization through the smart integration of various equipment. As it is depicted below, [Figure 2](#) shows the main technologies that set and establish Smart UN Facilities, including:

- Smart Energy & Mobility
- Smart Connectivity - ICT, Business Intelligence & AI
- Smart Data & Internet of Things
- Smart Security

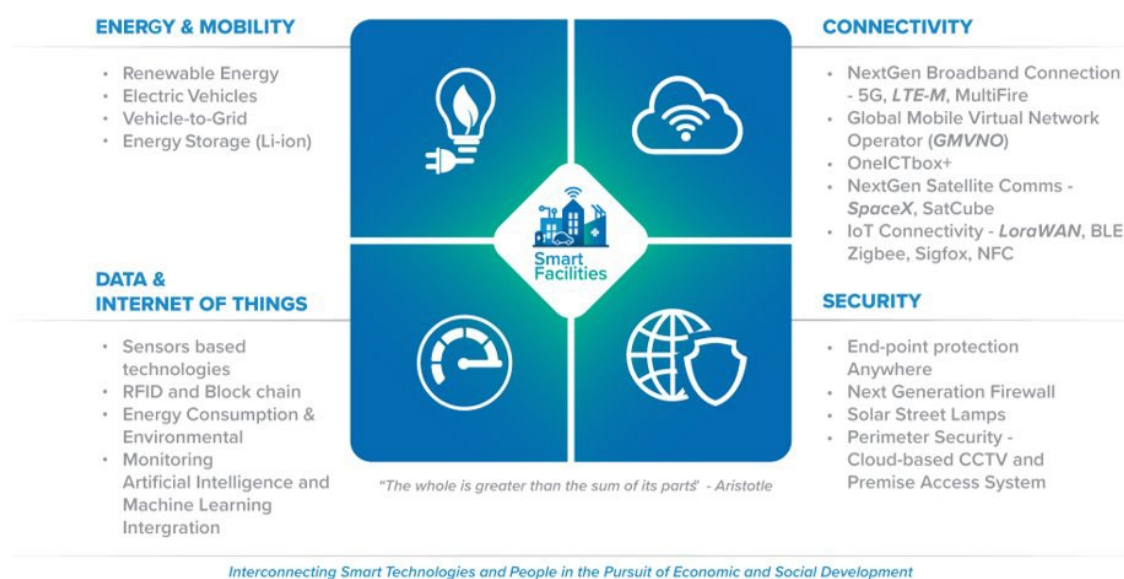


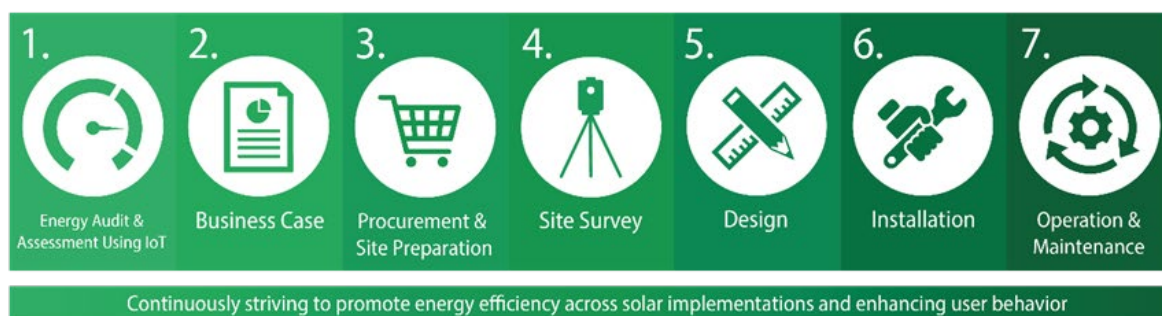
Figure 2 - Smart UN Facilities Framework

1.3 Seven Step Green Energy Process

Use of the United Nations Development Group's recommended 7-Step process is being adopted for this project. The approach is a holistic end-to-end process with a preliminary assessment of project practicability and the post-installation operation & maintenance. This solution is depicted in Figure 3 below and elaborated in the subsequent text.



7 STEP GREEN ENERGY SOLUTION



Recognized best practice by UNDG for Solar implementation

Figure 3 - Seven Step Green Energy Solution

Step 1: Energy Audit & Assessment using IoT

- The CO installs Internet of Things (IoT) devices to measure their load consumption, if applicable.
- ITM monitors the quality of the grid and generator(s). The proposed solution for the solar PV system should be compatible with this monitoring system.
- The CO is required to complete a **Preliminary Site Survey** form, which will provide detailed information on the physical structure and the electrical installations.
- The CO can choose to have a technical assessment mission to carry out the Preliminary Site Survey of the premises.

Step 2: Business Case

- This step serves to provide essential information and data for decision-making. With the information gathered during Assessment using IoT and CO schematics, ITM compiles a load profile of the energy consumption for the respective CO. This enables an analysis resulting in the drafting of a business case that presents potential green energy solutions for the CO.

Step 3: Procurement & Site Preparation

- Compilation and publication of solicitation documents will be carried out in accordance with UNDP rules as applied by the procurement unit in such projects.
- Before the bids are placed, all interested vendors perform a **Site Visit** to collect all the detailed data required for them to formulate their offer.
- Evaluation of bids/proposals will be carried out jointly between ITM, CO, and if desired a government representative/focal point.

Step 4: Site-survey – vendor

- The vendor carries out a **Site Survey** to exhaustively consider all aspects that can adversely affect the implementation of the project and information for the final project's design, including required materials/equipment and time frames.



- b. The vendor acts as the implementer, working closely with the focal point at the CO, where necessary, and ITM exercises technical oversight and project management. Submission of the final **Site Survey Report** marks the end of this step.

Step 5: Design

- a. The selected vendor drafts the final system design, considering findings from the site survey in the previous step.
- b. As part of technical oversight, ITM must endorse the final design before the actual installation starts. Submission of the final design and implementation schedule marks the end of this step.

Step 6: Installation

- a. The vendor carries out all the necessary installations, in the process giving regular progress updates to all stakeholders.
- b. Critical milestones are defined, at which point, ITM makes the necessary assessments as part of the technical oversight.
- c. Six-month stabilization period allows the end-user to get acquainted with the system and basic troubleshooting.
- d. Among other critical requirements, the step entails end-to-end testing, physical inspection of the installation, user training, and complete system documentation.
- e. This step involves carrying out User Acceptance, in which all parties play a role. A signed checklist confirming full compliance with all requirements marks the end of the step, giving way to Operation & Maintenance (O&M).

Step 7: Operation & Maintenance

- a. Regular bi-annual maintenance (the first 3 years of maintenance is included in the quote presented in the business case) and regular monitoring from UNDP.

Communication and Publicity

Parallel to the Seven Step Green Energy Solution process of green energy solution, ITM Communications Team and the Communications CO Team carry out the promotions of the successful project within the country and globally through the UN network. This process involves highlighting the benefits of the installed system and spread word about the human impact. Furthermore, this aims at motivating similar installations in other parts of the country.



2. Project Description

2.1 Project Objectives

The main goal of the smart Grid-tied solar PV system is to provide **affordable green energy** solutions for the UN smart facility as well as **smart integrated services** like security and adaptability. ITM requires **high quality** for the system as it will also serve as a showcase on a national and international scale. The following document provides requirements and guidelines for the project, but an innovative solution proposal is highly encouraged to improve the system.

2.2 Project High Level Requirements

This project seeks to enhance the energy supply for the UNDP premises with renewable energy. The current energy supply for the compound is based on reliable grid.

The requirement is for the vendor to provide a comprehensive offer for a **Grid-tied Solar PV Turnkey Solution** based on the following configuration:

1. Supply a **39.6 kWp Solar PV Turnkey Solution**.
2. Installation, User Acceptance Test (UAT), and Commissioning of the final system.
3. Integration of the final solution into the facility and the national grid.
4. Provision of bi-annual maintenance and after-sales by the local partner (for 3 years).
5. Training of the users on the system must also be provided to guarantee they will be able to perform the system's first-level operation and maintenance effectively.
6. Apply on behalf of UNDP Saudi Arabia to all necessary documentation required for net metering schemes in Saudi Arabia.

The setup will be based on Solar PV + Grid. The Solar PV System is required to serve as the primary energy source with the grid. In case of insufficient electricity production by the PV system, the load will be supplied by the national grid.

The grid-tied solar PV system is expected to provide around 17% of the total electricity demand of the site. A set of energy efficiency measures (out of the scope of this RFQ) have also been suggested (sealing openings, increasing temperature set on ACs, and providing motion sensors for ACs), which means the CO can potentially reduce its current consumption, therefore, increasing the system's renewable fraction.

The Solar PV + Grid system must operate in a robust, intelligent, and automated manner regarding energy supply for the CO. The system's proposal shall include an intelligent energy supply and management, prioritizing PV, and if more energy is required, supply with the grid.

The weather in Riyadh is very hot and dry usually, and due to its location, the area is prone to sandstorms (See section [Weather on Site](#)). Hence, the system installed must be designed and installed to withstand these harsh climatic conditions.



Please note that civil works can be one of the most sensitive parts of the project. It involves safety and dominant physical visibility directly impacting **UNDP's reputation** and functionality of a parking structure. The mounting structure becomes the signature and a showcase of the UN compound, as civil work will significantly alter the looks of UN facilities. The solar panel installation will become part of the UN compound signature. As per the UNDP Smart Facility vision, all results of civil work will become a showcase to inspire a movement locally and hopefully regionally.

2.3 Site Description

The Saudi Arabia UNDP CO premises is located at **the United Nations Building, Turnabout 9, Diplomatic Quarter, Riyadh** with the following GPS Coordinates: 24.683929, 46.622428. The building has 3 floors and an occupancy of 110 people. The compound's plan can be seen below in Figure 4.

A storage area can be made available on the CO's premises to place the goods during the installation. However, space may be limited, and the vendors must assess any security issues linked to the equipment's storage on-site.

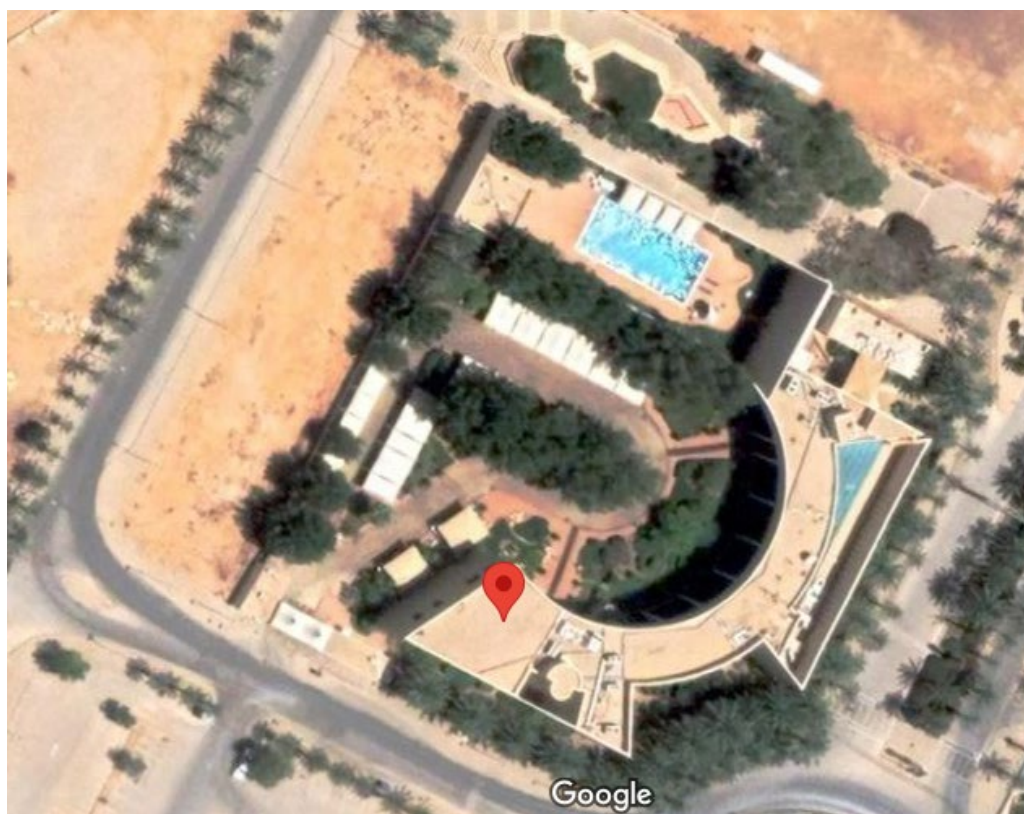


Figure 4 - Aerial view of the UNDP Premises

2.4 Weather on Site

Riyadh has a hot desert climate. The temperatures range between 44 to 9°C with record values of 49.8°C and -2.3°C. It receives very low precipitations which are the heaviest in March and April, with up to 28mm in a month. Sandstorms can be a significant inconvenience with visibility of less than 10m and the wind speed reaching as high as 63 km/h. Riyadh gets an average of 8.8 hours of sunshine hours a day



2.5 Potential Location of PV Inverters

The solar panels are suggested to be located on the UNDP CO's parking space. The suggested layout for the PV modules is shown in Figure 5 with the trees facing the south-eastern direction. PV inverters should have appropriate IP rating for outdoor conditions, and PV inverters should be installed under the carport in a way that its protected from direct sunlight and rain.



Figure 5 - Proposed Area for PV panels on the UNDP Building

2.6 Estimated Load Consumption

Electricity bills were provided by the Country Office, though which one year of consumption data was collected. Using the data, a yearly load profile was generated. Day-to-day and seasonal variability have been included to provide a more realistic estimation of the load demand. The final load profile used for the simulations is shown in Figure 6 and Table 1.

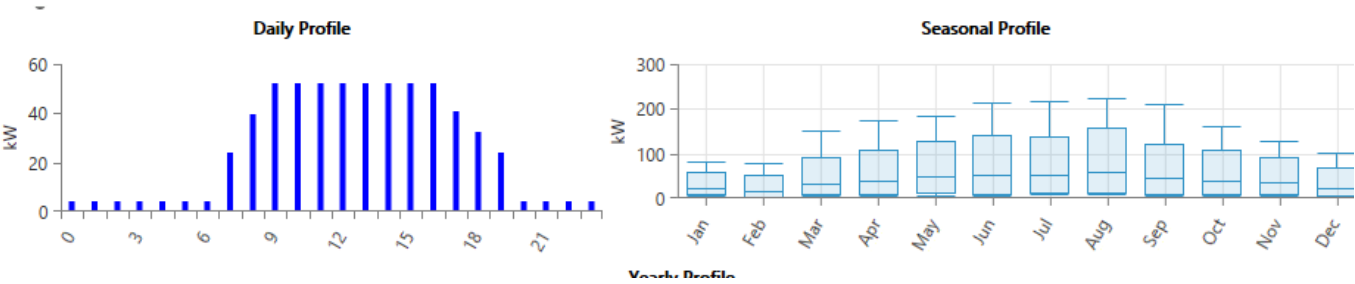


Figure 6 - UNDP Saudi Arabia CO Load Profile

Table 1 - Load Profile Metrics

Metric	Baseline
Average (kWh/day)	1,007.9
Average (kW)	42
Peak (kW)	246.53

2.7 Connectivity

A survey was completed to understand the options for remote monitoring and control after the installation of the Grid-tied Solar PV System. The compound has a stable internet connection.

2.8 Grid Quality

The grid in Riyadh is very reliable.

3. Statement of Work

3.1 Local Partner

In case the vendor is not located within a reasonable distance to allow for a response time within the maximum time specified in Table 4, it must show proof of a formal agreement with a local representative with relevant experience to perform such requirements. **This agreement is designed for support in the deployment of the Solar System with regards to the site visit, installation, and after-sales services and maintenance processes⁴.** This aligns with UNDP’s mission of developing local capacity. In case the vendor is based within a reasonable distance from UNDP Perú CO and can ensure to meet the required response times, a local partner is not necessary. Please note that an exclusivity agreement with the local partner is not a requirement.

⁴ Please refer to Section 3.6 for vendor’s tasks and responsibilities.



In case the vendor wishes to partner with a local representative, please include the following in the offer document:

1. Letter signed by both parties, confirming the relationship between vendor and local partner.
2. Profile of the local partner, including documentary evidence of relevant experience and services.
3. Official documentation stating that the Local Partner is a registered business in the country.

Both the vendor and the local partner (if applicable) need to agree to the maintenance terms discussed in **section 3.6.1.6, and must be aware of the high-quality expectations for the solution, as the system will serve as a showcase at both national and international levels.** This needs to be proved through a signed document stating the points mentioned.

Note that the **vendor is responsible** for the requirements mentioned in **section 3.6.1.6** and not the local partner. As the local partner may be required to go on-site during the O&M phase for corrective maintenance and troubleshooting, it should be based in a strategic location within proximity to the CO. In case of a critical incident, the local partner (or the vendor itself, if no local partner is needed) shall acknowledge the issue and perform the required activities depending on the identified incident priority.

3.2 After-sales services and response time

The vendor (represented by the local partner, if any) must be able to comply with the minimum requirements for after-sales services and maintenance processes. The logistics should allow for a response time within the maximum time specified in [Table 4](#). In case of a critical incident, the vendor/local partner shall acknowledge the issue and perform the required activities depending on the identified incident priority. The target resolution and response time for each Incident or Service Request depends on its Priority. Priority is determined by the Urgency and the Impact of the Incident or Service Request.

The response shall always include:

1. Acknowledge receipt of incident reporting.
2. Assess and evaluate Urgency as detailed in [Table 2](#).
3. Assess and evaluate Impact as detailed in [Table 3](#).
4. Commence implementing resolution actions with the timelines and modalities indicated below for each resulting priority.

Resolution shall always include:

1. Clear identification of incident.
2. Clear identification of incident causes.
3. Submission of resolution plan with clear activities and timelines.
4. Submission of request for procurement of any component's replacement.
5. Initiation of resolution plan activities.

The below tables and definitions describe the service agreed on targets and expected response time. The Priority defined in [Table 4](#) results in a combination of Urgency and Impact. As depicted in [Table 2](#), Urgency is defined as a measure of how long it will be until the incident has a significant impact on the business.



Table 2 - Urgency level definition

Urgency	Description
Critical	Event underway, it cannot be stopped or changed.
High	Event underway, time to resolution to be kept to a minimum.
Medium	Event scheduled or to occur, but enough time remains to respond without impacting the event.
Low	Event can be postponed or is far enough away in time to allow response without loss of productivity.

Impact, detailed in Table 3, is defined as a measure of the effect of an incident and how the service levels will be affected.

Table 3 - Impact Level Definition

Impact	Scope	Business	Operations
Extensive Widespread	80% to 100% Generation is lost. Incapacity to correctly feed the load from direct generation.	The event has extensive financial implications, the longer the issue takes to be resolved.	Interferes with core business functions, loss or potential loss of electricity supply.
Significant Large	Affects a significant part of the Grid-tied system. More than 50% to 80% power loss.	Some financial impact and few business units are impacted.	Interferes with few core businesses functions and potential loss of mission critical data.
Moderate Limited	Affects a minor part of the Grid-tied system. less than 50% power loss.	No financial impact but potential loss later if unresolved.	Interferes with non-core business functions and no loss on mission critical data.
Minor Localized	Less than 10% or no power.	No financial impact and no potential loss or economic implications.	Interferes with non-major business activities and no loss on mission critical data.

Once Urgency and Impact are evaluated, the Priority is determined with the corresponding Response and Resolution Time.

Table 4 - Priority definition and target response time

Impact	Urgency	Resulting Priority	Response Time Target and mandatory action ¹	Resolution Time Target
1-Extensive Widespread	1-Critical	Critical	2 hours – On site presence is required	48 hours
2-Significant Large	1-Critical	Critical	2 hours – On site presence is required	48 hours
1-Extensive Widespread	2-High	Critical	2 hours – On site presence is required	48 hours
3-Moderate Limited	1-Critical	High	12 hours – On site presence is required	72 hours
4-Minor Localized	1-Critical	High	12 hours – On site presence is required	72 hours
2-Significant Large	2-High	High	12 hours – On site presence is required	72 hours
1-Extensive Widespread	3-Medium	High	12 hours – On site presence is required	72 hours
3-Moderate Limited	2-High	High	12 hours – On site presence is required	72 hours
4-Minor Localized	2-High	Medium	24 hours – On site presence is required	6 days
2-Significant Large	3-Medium	Medium	24 hours – On site presence is required	6 days
3-Moderate Limited	3-Medium	Medium	24 hours – On site presence is required	6 days
4-Minor Localized	3-Medium	Medium	24 hours – On site presence is required	6 days
1-Extensive Widespread	4-Low	Low	48 hours	10 days
2-Significant Large	4-Low	Low	48 hours	10 days
3-Moderate Limited	4-Low	Low	48 hours	10 days
4-Minor Localized	4-Low	Low	48 hours	10 days

¹ Response time specified taking into consideration regular working hours schedule



3.3 Site Visit

Necessary site information, including photos, has been provided. However, for the preparation and submission of your offer, you shall engage your local partner or defined representative to conduct a Site Visit (without cost to UNDP). The data collected on the site assessment visit and the data included in this document shall be considered for the offer preparation and submission.

The Site Visit is scheduled for Error! Reference source not found.. The Site Visit can be conducted either by the vendor's staff, the local partner, or a third representative. Conducting a site visit is **Mandatory** for the offer to be valid.

The UNDP focal contact in Riyadh is Ahmed Alsalman and Abdulrahman Alghamdi. Please note that it is necessary to arrange the site visit in advance. As such, the vendors must inform its local partner accordingly.

Please confirm your intention to undertake Site Visit(s) (without cost to UNDP) **as mentioned on second page** by sending an email to ahmed.alsalman@undp.org; itm.green.energy@undp.org and Abdulrahman.alghamdi@undp.org. Kindly **provide in the email the following information** for UNDP CO and UNDP ITM to make the necessary arrangements for assessment.

Confirmation of site visit	
Name of company/local partner undertaking site visit	
Name of visitor, ID and contact details	
Please refer to the address stated in this RfQ:	UNDP Saudi Arabia UN Building, Turnabout 9, Diplomatic Quarter, Riyadh, Saudi Arabia

3.4 Bidders Conference

The **bidders' conference** aims to provide an open exchange between UNDP ITM and vendors, communicate the RFQ process to vendors, answer questions about the RFQ and ultimately ensure that prospective vendors have a clear understanding of the requirements. The conference will be conducted with interested vendors over a video conference, and the vendors' participation is mandatory for bidding.

The bidders' conference is scheduled on October 6, 2022 11:00 AM

<https://undp.zoom.us/j/84777799448>

Please confirm your participation by sending an email to: ahmed.alsalman@undp.org abdulrahman.alghamdi@undp.org and itm.green.energy@undp.org



3.5 Technical Requirements

Compliance with or deviations from the specification shall be clearly stated by the vendor in the below sections (3.5.1 - 3.5.7) and submitted as part of the offer (*Please refer to Appendix I*). The vendor shall apply good engineering practices and follow the applicable standards in the solar PV system's design. In addition, the vendor shall include technical and performance specifications of the equipment that will be used in the project. The system's electricity supply is expected to operate according to the follow logic/priorities shown in Figure 7, also further specified in section 3.5.5.1.



Figure 7 - System's operation logic

3.5.1 PV Modules

Table 5 - PV Modules Technical Requirements

3.5.1.1	PV Capacity	Total PV capacity of 39.6 kWp
3.5.1.2	Module Specifications	<p>Solar PV Panels shall follow these technical and performance specifications:</p> <ul style="list-style-type: none"> i. Mono- or polycrystalline silicon; CIGS thin film modules are also acceptable. ii. PV Panels with enough number of cells and energy efficiency ensuring the system offered has the capacity requested iii. Tolerance better than -0/+5% iv. Maximum weigh per module 28 kg (>28kg modules may be accepted as long as the total weigh of the structure does not compromise the integrity of the roof) v. Frameless modules are not allowed vi. Double insulation module with cables and connectors vii. Junction box with accessible bypass diodes viii. Anti-reflective glass cover ix. Modules must be PID (potential induced degradation) proof, or have passed the IEC 62804 standard test
3.5.1.3	Standards	<ul style="list-style-type: none"> i. Compliant with IEC 61215 (edition 2) or equivalent ii. Shall be qualified and be classified by class according to IEC 61730 or equivalent
3.5.1.4	Module Efficiency	Minimum shall be 18%.
3.5.1.5	Limited Power Warranty	The modules shall be subject to a 10-year limited product warranty or longer. The performance warranty shall ensure that the modules will produce at least 90% of their nominal power after 10 years and 80% of the nominal power after 20 years.



3.5.1.6	Voltage rating	Shall be compatible with the inverter voltage. Mismatch losses to be considered.
3.5.1.7	Disconnecting means	Shall be provided for the PV generator to isolate it from the rest of the system safely when needed.
3.5.1.8	Tilt	Shall be optimized for local condition and used technology.
3.5.1.9	Labelling	<p>The bidder shall provide the following information at the project completion:</p> <ul style="list-style-type: none"> i. Manufacturer, brand; model and serial number ii. Rated power; Efficiency iii. Color temperature iv. Clear indication of the connecting inlets and outlets v. Warranty and Safety warning

3.5.2 PV Modules mounting

Table 6 - PV modules mounting technical requirements

3.5.2.1	Features	<p>In this regard, vendors are requested to provide complete appropriate solution including supply of materials, civil works etc. as part of the UNDP Saudi Arabia Solar PV Grid-tied Project.</p> <p>Shadowing of the PV modules from trees, buildings or any other obstacles should be minimized over the whole day and there shall be no shadows in a period of ± 4 h w.r.t. solar noon.</p> <p>Bidders are requested to provide the solar field layout drawings of their solution coupled to a calculation of the required area (size) for Solar PV Modules in the offered system, as well as provide energy production forecast based on the orientation, tilt, and shadowing effects for Solar PV Modules.</p> <p>Any changes to the preliminary design of the mounting structure may be provided after the detailed site survey and the final design shall be approved by UNDP.</p>
3.5.2.2	Mounting Structure	<p>As the proposed solution consists of a carport mounting structure, the following shall apply:</p> <ul style="list-style-type: none"> i. Carport structures shall be designed and customized to withstand local weather and climate, structural loads such as solar panels, wind loads, seismic loads (dependent on location), etc. ii. The foundation and structural design shall be designed and signed by a licensed engineer. The detailed drawings shall be provided, indicating total dimensions, and providing minimum height of 3,0m on the lower edge of the structure. iii. Concrete foundations or solutions of equivalent stability shall be included in the structural design to prevent the carport structures from easily collapsing. Estimate for the foundations shall be included in the technical drawings.



		<ul style="list-style-type: none"> iv. The carport shall be aesthetically pleasing, use local materials (if possible) that adhere to quality standards and materials that have low embodied energy. v. The material of the structure shall be anodized aluminum 6005 T6 or of equivalent quality, and main structural beams shall be of stainless steel 304, galvanized mild steel, or of equivalent quality. vi. Easy access to solar panels on top of the carport is required for regular cleaning and maintenance of the solar panels. vii. The carport design and construction shall adhere to local standards and / or the International Building Code (IBC). viii. The BoM considered for the structure shall be included in the technical drawings. ix. Estimate for the foundations shall be included in the technical drawings.
3.5.2.3	Lifespan	Mounting structure should last at least the lifespan of project (25+ years).
3.5.2.4	Standards	<p>The design of the PV mounting structure/array should follow the guidelines specified in JIS C 8955:2011, AS/NZS 1170.2:2011 or equivalent. UNDP reserves the right to crosscheck the features.</p> <p>The design and installation should respect and meet the recommendations specified by the solar panels' installation guideline.</p>

3.5.3 Power electronics

Table 7 - Power electronics technical requirements

3.5.3.1	Features	The system must include a smart inverter to control the solar PV output.
3.5.3.2	Inverter Specifications	<p>Solar PV inverters and MPPT or integrated Grid-tied inverters are acceptable.</p> <p>Their design should be based on the requirements specified below:</p> <p><u>Solar inverters with:</u></p> <ul style="list-style-type: none"> i. The inverter shall be compatible with the PV module's layout, accounting for possible local temperature variations. ii. Inverter EU efficiency: min 95% (on-grid).
3.5.3.3	General Specifications	<ul style="list-style-type: none"> i. Operating Temperature: 0-50°C ii. 3-phase 400V (L-L), iii. Frequency 60 Hz.



		iv. It is preferable to have 3 independent inverters to make the 3-phase output. However, other suitable configurations are also acceptable.
3.5.3.4	Standards	<p>Regarding quality assurance, power electronics must follow these certifications, or equivalent ones (if equivalent, specify in the Appendix table, Section 5). Proof of compliance should be presented along with the technical offer, as previously specified.</p> <ul style="list-style-type: none"> i. Design: IEC 62093 or equivalent ii. CE-conformity LVD 2014/35/EC, including at least the following harmonized standards: <ul style="list-style-type: none"> a. Safety for converters: EN 62109-1 and EN 62109-2 jointly, or EN 60335-1 (in case of small power electronics), or equivalent iii. CE-conformity EMC 2014/30/EU, including at least the following harmonized standards: <ul style="list-style-type: none"> a. EN-IEC 61000-3-3 or EN-IEC 61000-3-11 b. EN-IEC 61000-3-2 or IEC 61000-3-12 iv. EMC conformity Emissions limits: Either EN 61000-6-3, 61000-6-4, or EN 55014-1 (according to size of equipment and application) v. EMC conformity Immunity limits: Either EN 61000-6-1, 61000-6-2 or EN 55014-2 (according to size of equipment and application) vi. For grid-tied systems : IEC 62116 - Test procedure of islanding prevention measures or equivalent <p>(if any equivalent standard, specify in the Appendix table, Section 5)</p>
3.5.3.5	Safety	<ul style="list-style-type: none"> i. Provide protection against overload and reverse polarity ii. IP protection class 65 or better
3.5.3.6	Warranties	The expected operating lifetime of the inverter shall be of at least 10 years and the warranty period of 5 years.



3.5.4 Online monitoring system

Table 8 - Monitoring requirements

3.5.4.1	Monitoring and Management overview	<p>Internet connectivity will be available at the site.</p> <p>The online monitoring system shall be user-friendly dashboard that shows real-time power consumption, indicating which sources are used to provide the required power (grid or solar PV).</p> <p>The information in the portal shall be presented in English.</p> <ul style="list-style-type: none"> i. Overview List of installed equipment (solar PV modules, inverter) ii. Generation Overview indicating the production of each device in the system (Solar PV, grid etc.) and Fault Diagnostic iii. Consumption overview (direct consumption, feedback to grid) iv. Earning/Saving in terms of energy (kWh), money (\$), and emissions (kgCO_{2eq}) from the solar system.
3.5.4.2	List of hourly basis parameters	<p>A local and remote monitoring system shall be provided to be able to track operation of the system with real-time & historical data with at least 3 years data storage capacity. It must include, at least, the following parameters on an hourly basis:</p> <ul style="list-style-type: none"> i. Total Electricity Consumption (from the loads) ii. Total Electricity PV Production iii. Total feedback to the grid iv. Alarms and configuration records v. Grid status and energy production
3.5.4.3	Standards	<p>It is an advantage for the monitoring system to follow the guidelines specified by IEC 61724 -1.</p>

3.5.5 Smart power management

Table 9 - Smart power management requirements

3.5.5.1	System's operation logic	<p>The Grid-tied energy solution shall include Smart Power Management that allows the working system to supply electricity according to the following logic/priorities:</p> <ul style="list-style-type: none"> 1st: Solar PV 2nd: Electricity grid <p>If excess electricity is available, it must be fed back to the grid</p>
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3.5.5.2	Details	<p>The Smart Power Management should be able to provide:</p> <ul style="list-style-type: none"> i. Connection with local building electrical distribution panel. ii. Integration all power sources and load to work as one system, as long as all components are functional. iii. Setup and activation of Internet-based (online) monitoring of Solar PV system for Performance/Availability/Status/etc. iv. Integration of Solar PV + Grid to operate in an integrated, intelligent, and automated manner with regards to energy supply for the Country Office. v. Allow for grid feedback in compliance with local regulations. vi. Ensure that the CO is able to benefit from solar PV support schemes for grid exports according to local regulations (e.g., by installing a bi-directional energy meter).
3.5.5.3	Changeover switch	A changeover switch shall be included to be able to bypass PV.
3.5.5.4	Power requirements	The system should not vary the power factor of the load. It shall not vary the reactive power intake from the grid and it shall not increase the peak consumption from the grid.

3.5.6 Wiring and safety

Table 10 - Wiring and safety requirements

3.5.6.1	Details	<ul style="list-style-type: none"> i. Cables needs to be sized according to the required local applicable standards, or otherwise to EU applied standards. Appropriate sizing of cable lengths and dimensions shall respect a maximum of 2% voltage loss at nominal load. ii. Cables installed outdoors must be able to handle high UV radiation, high temperatures, and must be weather resistant. Alternatively, they can be installed in cable trays that ensure they are protected them from the elements. iii. Overcurrent protection for the strings, PV and inverter shall be included. iv. Overvoltage surge and lightning protection on the AC and the DC side is required v. Protection against electric shock on the AC and DC side is also required
3.5.6.2	Standards	<ul style="list-style-type: none"> i. The electrical installation must be done accordingly to local safety and electrical regulations. If no local regulations are in place the installation should follow IEC 60364, the International Electrotechnical Commissions international standard on Electrical Installations for Buildings.



		The critical loads segregation must be performed by an electrical engineer according to local laws, safety, and electrical regulations.
3.5.6.3	Labelling and Documentation	The bidders shall provide the following information at project completion <ul style="list-style-type: none"> i. Detailed labelling must be provided clearly identifying each circuit. ii. Detailed Electrical wiring diagram.
3.5.6.4	Grounding	<ul style="list-style-type: none"> i. All components of the system must be properly grounded. ii. All work must be carried in conformance to international and local codes and electricity standards. iii. The devices must be installed in accordance with the grounding device manufacturer's specified instructions.

3.5.7 Warranty of the system

Table 11 - Warranty requirements

3.5.7.1	Details	<p>Warranty certification/documentation for the Grid-tied Energy System Main Components including summary overview of warranty arrangements (technical and logistical) shall be included in the system documentation.</p> <p>An overview of available warranty extension options for main components shall be provided.</p> <p>Any cost associated with warranty replacements during the warranty period will be borne by the supplier.</p> <p>Any cost associated with the maintenance and technical support for the energy system during maintenance subscription will be borne by the supplier.</p>
3.5.7.2	Length	The warranty for the complete system shall be at least 18 months from date of commissioning. This means that, for 18 months after the commissioning, the vendor is responsible for resolving any functionality issues with the complete system, without any financial liability on UNDP.



3.6 Tasks and Responsibilities

The overall tasks and responsibilities of the provider are indicated below in [Table 12](#).

Table 12 - Mandatory tasks and Responsibilities

3.6.1.1	Risk Assessment, Avoidance and Mitigation Plan	<p>A mandatory risk assessment must be conducted and presented along with the technical offer, including as minimum features:</p> <ul style="list-style-type: none"> i. All potential risks that the project might incur, in each step of the project. ii. The probability of incurrence and severity of the identified risks (e.g.: risk matrix). iii. The risk tolerance for the identified risks. iv. Proactive and reactive responses for risks surpassing the defined threshold of severity and/or probability. v. A mitigation plan for the risks identified as most severe or likely to happen (e.g., in case the final timeline is not respected due to external factors). <p>This risk assessment must include all major phases of the project, i.e., procurement, shipment and transportation of goods, installation of the system, training of the end-users and monitoring of the active system.</p>
3.6.1.2	Shipment of material	<p>Shipment if to be provided for all the components of the system, following all procedures and documentation specified in this document.</p> <p>It is recommended to perform check and verification of the good functioning of the System Solution, and all the equipment involved before shipping the container (ideally 2 weeks before shipment).</p> <p>A pre-shipping inspection should be planned in case UNDP chooses to inspect the equipment and products before shipment.</p>
3.6.1.3	Installation of the Solution	<ul style="list-style-type: none"> i. <u>Civil Works and Site Preparation</u>: implementation and/or technical guidance shall be provided by the vendor. ii. The safety of all components remains part of vendor's responsibility during civil works and installation phase, up until commissioning and official hand-over of the system. iii. Earth and lightning protection. iv. All necessary components of the system must be properly grounded v. Anti-theft protection of the whole system. vi. Solar Grid-tied Energy System mounting and installation. vii. The <u>engagement and involvement of local or regional partner</u> in order to enhance solar PV system deployment and after-sales services. viii. Connection to the national grid and readiness to participate to the grid feedback scheme. <p>The installation should follow the guidelines of IEC 63049.</p>



3.6.1.4	Commissioning, UAT and Training	<p>Training</p> <ul style="list-style-type: none"> i. Solar Grid-tied Energy System training must be provided to UNDP country office representative(s) by vendor. ii. The content of the training must also include topics such as: <ul style="list-style-type: none"> a. Smart use of appliances to avoid misuse of equipment b. Energy efficiency c. Awareness on energy consumption and cost of electricity iii. Solar Grid-tied Energy System Essentials (Basics) Maintenance and Troubleshooting Guide must be provided to Country Office in Arabic to ensure level 1 troubleshooting can be carried on by the focal point on-site. <p>User Acceptance Testing</p> <ul style="list-style-type: none"> i. The UAT shall be developed in collaboration with ITM UNDP, following a template and guidelines that will be provided by ITM UNDP further in the process. ii. User Inspection will be performed during commissioning by ITM and the CO Focal point. <p>Commissioning</p> <ul style="list-style-type: none"> i. Complete the UNDP Commissioning check list. ii. As-built diagrams must be provided. iii. If there have been any changes to the technical documentation, the updated documents should also be provided. iv. A representative from the supplier's own staff/team must be present on-site during commissioning of the system.
3.6.1.5	Stabilization of the System	<ul style="list-style-type: none"> i. The awarded vendor must remain at the disposal of the beneficiary for at least six months (stabilization period) after handover/commissioning to assist in answering any technical or other related questions. ii. The maintenance agreement starts after stabilization period of 6 months
3.6.1.6	Maintenance of the system	<ul style="list-style-type: none"> i. Mandatory after-sales services including: <ul style="list-style-type: none"> a. Maintenance (preventive and corrective) b. Technical support (onsite and/or remote) c. Continuous availability of the online monitoring system ii. The engagement and involvement of local or regional partner is mandatory for the Solar Grid-tied Energy System installation, commissioning, and after-sales services. iii. Vendor technical support and/or helpdesk contact information and procedures of local including escalation procedures. iv. Solar Grid-tied Energy System implementation and after-sales technical support is required, inclusive of appropriate escalation measures. v. Solar Grid-tied Energy System maintenance is required, inclusive of appropriate escalation measures. vi. Preventive maintenance shall include:



		<ul style="list-style-type: none"> a. Periodic cleaning of the panels in order to guarantee maximum efficiency (minimum twice a year). b. Technical room visual inspection and cleaning. c. General system checks and verifications (assessment of the structure status; assessment of the technical room status; cable connections check and securing...). d. Preventive maintenance shall be done in compliance to UNDP's template checklist. <p>vii. Corrective Maintenance shall include:</p> <ul style="list-style-type: none"> a. System troubleshooting in case of loss of production. b. Parameters adjustment and small changes in operational logic. <p>Maintenance should be performed following the guidelines of IEC 62446-2.</p>
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3.7 Timelines

3.7.1 Tasks and deliverables

The overall deliverables and their respective deadline after Purchase Order (PO) signature are indicated below in [Table 13](#). The tasks are to be performed within the proposed timeline. An overview of the general timeline including all deliverables can be found below this section, in [Figure 8](#).

Table 13 - Tasks and responsibilities timeline

No	Tasks and Deliverables	Deadline
3.7.1.1	Signature of the contract	PO
3.7.1.2	Site Survey Report	PO + 3 weeks
	Overview site details for a through survey.	
3.7.1.3	Final Technical Design	PO + 3-4 weeks
	Single line diagram with endorsement letter from manufacturer	
3.7.1.4	Pre-assembled technical solution tested and ready to be shipped	PO + 3 months
3.7.1.5	Transportation and delivery	PO + 5 months
3.7.1.6	Installation of the Solution	PO + 6 months
	Solar Grid-tied Energy System mounting and installation.	
3.7.1.7	Commissioning, UAT, Training and Net Metering Documentation	PO + 6 months and 1 week
	Complete UNDP Commissioning check list. User Acceptance Testing (UAT). Solar Grid-tied Energy System training to UNDP country office representative(s).	
3.7.1.8	Stabilization of the system	UAT + 6 months
	The maintenance agreement will start after the stabilization period of six months.	
	Maintenance of the system	UAT + 42 months



3.7.1.9	After-sales services including maintenance (preventive and corrective). Technical support (onsite and/or remote) including continues online monitoring.
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3.7.2 Documentation

After award of contract and formalization of purchase order (PO), the supplier shall deliver all the documents listed in [Table 14](#) by e-mail to UNDP ITM (itm.green.energy@undp.org) and copy UNDP Saudi Arabia Procurement Unit (abdurahman.alghamdi@undp.org). An overview of the general timeline including all documentation can be found below this section, in [Figure 8](#).

Table 14 - Documents after award of contract

No	Document	Description	Deadline for delivery
3.7.2.1	Project Plan Report	Complete report specifying all the steps that will be carried out to perform the project (from Site Survey to After sales services) with the corresponding timeline and who will be responsible of each step (vendor, local partner or both).	PO + 1 week
3.7.2.2	Site survey Report	<ul style="list-style-type: none"> i. Overview of the sites' details ii. Solar PV Module installation location details (assessment, measurements; photos, etc.). iii. Consideration and assessment for suitable Solar PV Modules mounting system iv. Technical room information and final proposal, including any necessary civil works to existing structure (ensuring that any necessary interventions such as drilling in existing wall for inverter fixation, or cabling connections will not compromise the integrity of the structure) v. Electric distribution panel and wiring overview details (measurements; photos etc.). vi. Assessment and documentation of any shading objects, including photos. vii. Gather current energy consumption profile provided by the client (local grid, estimate overview of daily use patterns, appliances and load profile). viii. Assessment and confirmation of the grid quality and feedback to the grid feasibility. ix. Assessment and confirmation of connectivity availability. x. Specific civil work requirements 	PO + 3 weeks
3.7.2.3	Design report including system design drawings	<ul style="list-style-type: none"> i. Site specific Solar PV Solution inclusive of appropriate sizing and optimization of related components e.g., Solar PV Modules; Batteries; inverter(s) inclusive of surge load capacity. 	PO + 3-4 weeks



		<ul style="list-style-type: none"> ii. Appropriate sizing of cable lengths and dimensions for maximum 2% voltage loss at nominal load. iii. Detailed design of the carport structures, indicating total dimensions and BoM considered for the structure. The design shall be inclusive of structural loads assessment (such as solar panels, wind loads, etc). Foundation and structural design shall be designed and signed by a licensed engineer. iv. Energy system components and wiring diagram for proposed solution. (Diagrammatical representation of the technical solution). v. Offer including Bill of Material (BoM) and technical datasheets for the main components. vi. Project delivery plan (including complete summary overview of entire project). vii. Endorsement letter certifying/proving the design from the (inverter and monitoring solution) manufacturer. viii. ISO9001 and ISO14001 certificates for manufacturers of main components (inverters and panels), if necessary. ix. Confirmation of the suitability of the solution (considering a detailed assessment of the loads). x. Draft of checklists/procedures that supplier will follow for UAT and commissioning. <p>Note: The design must be approved by ITM before proceeding, shipment must not be initiated before design has been approved.</p>	
3.7.2.4	Bill of materials	Complete list of materials grouped in assemblies	2 weeks before shipment of materials
3.7.2.5	Shipping documents	<ul style="list-style-type: none"> i. Invoice ii. Packing list iii. Bill of lading iv. Insurance 	ASAP after dispatch, minimum 3 weeks before arrival at destination port
3.7.2.6	Warranty documents	<p>Warranty certification/documentation for the Solar Grid-tied Energy System Main Components, including summary overview of warranty arrangements (technical and logistical).</p> <ul style="list-style-type: none"> i. Overview of available warranty extension options for main components. ii. Cost associated with warranty replacements during the warranty period will be borne by the supplier. 	<p>If not already sent with original offer:</p> <p>After dispatch, minimum 3 weeks before arrival at</p>



		iii. Cost associated with the maintenance and technical support for the installed system during maintenance subscription will be borne by the supplier.	destination port
3.7.2.7	Testing procedure	List of tests that will be carried out and respective pass/fail criteria	Latest 4 weeks before testing
3.7.2.8	Installation and commissioning report	i. Solar Grid-tied Energy System Commissioning Report. ii. Installation and commissioning activities, as-built drawings iii. Enrolment in the net metering scheme and relative documentation	Max. 4 weeks after testing
3.7.2.9	User acceptance testing report and proof of performance to UNDP	Results of the individual tests and system performance test as outlined in the testing procedure; sign off by vendor, UNDP ITM and system user; any deviations and pending tasks need to be recorded.	1 week after testing
3.7.2.10	Training manual/guide	i. On-Site Solar Grid-tied Energy System Training Guide. ii. Provide manuals iii. Include training videos	With training
3.7.2.11	O&M Manual and troubleshooting guide	i. Solar Grid-tied Energy System Maintenance and Troubleshooting Essentials Guide for Country Office (day-to-day operations). ii. Description of correct operation and maintenance of the system. Troubleshooting in case of errors. iii. Preventive and corrective maintenance logs.	With training
3.7.2.12	O&M schedule	Schedule of preventive maintenance activities	With training
3.7.2.13	After sales service agreement	Agreement between UNDP, vendor, and system user, defining the scope of the included maintenance (corrective and preventive) and technical support (on-site and remote).	With commissioning
3.7.2.14	Maintenance reports	Solar Grid-tied Energy System Regular Maintenance Technical Report(s).	1 week after maintenance visit
3.7.2.15	Photo and video documentation	Documentation of system installation, commissioning, and testing, such as: i. Civil works during installation ii. Training of local staff iii. Overview of installed system iv. Solar panels' location	During installation, training, commissioning, and testing

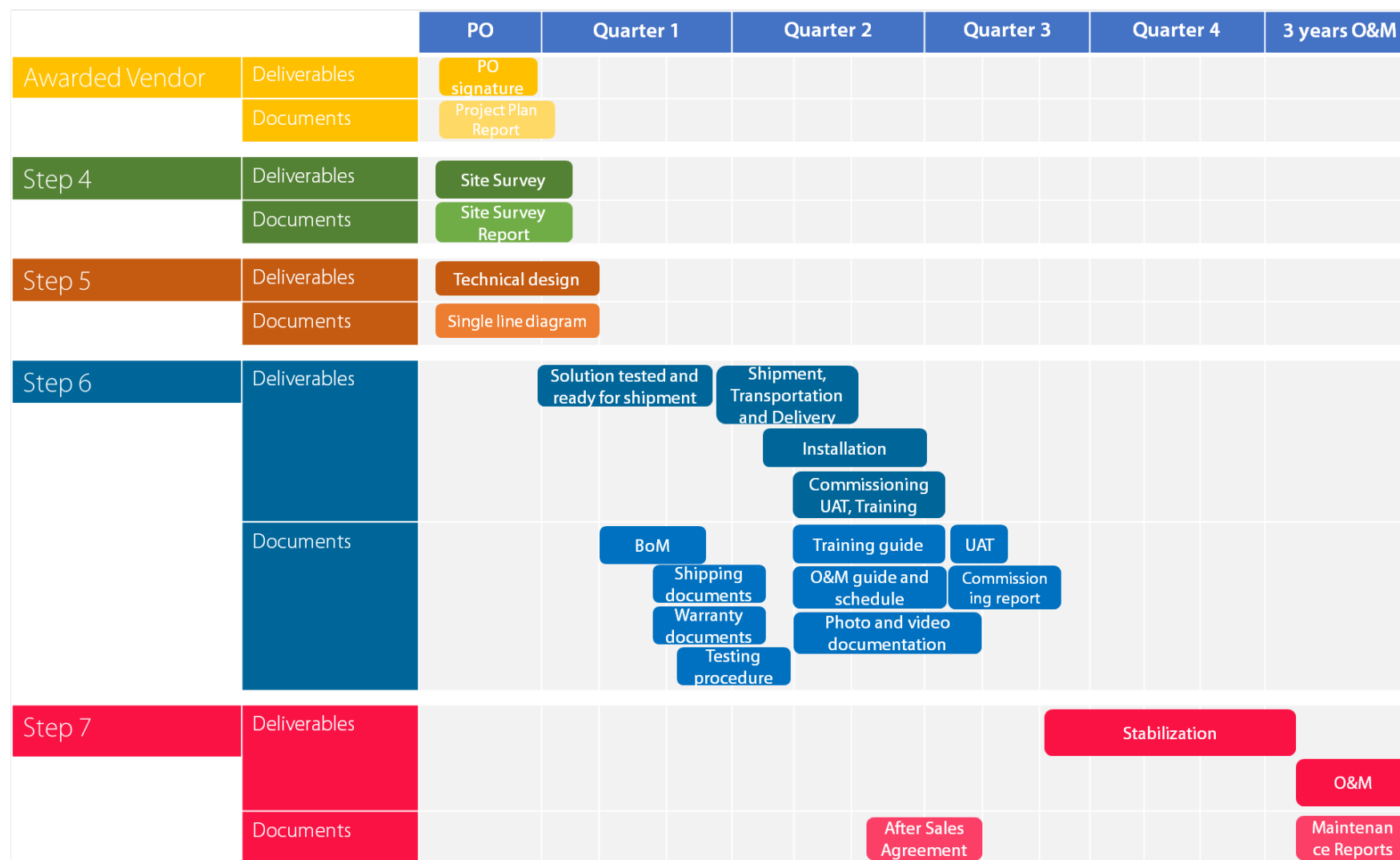
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Figure 8 - Documents and Deliverables Timeline

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4. Communications Management Plan

This section sets the communication framework for the life of the solar PV installation process. The overall desirable outcome is to keep all parties well informed in a timely fashion to avoid disruption and possible misaligned expectations.

	Communication Activity	Description	Frequency	Format/Channel	Deliverable	Responsible	Accountable	Consulted	Informed
1	Publishing RfQ	Final ToR & RfQ	As needed	e-mail	Final RFQ	Procurement Unit, GET	Procurement Unit	Vendors	CO
2	Site Visit Registration	Submission of list of attendees (including IDs).	As scheduled	e-mail	List of bidders	Vendors	Vendors	CO	Procurement Unit, GET
3	Site Visit	Initial visit by bidders	As scheduled	e-mail	List of bidders and list of questions and answers	CO, GET	CO	Vendors	Procurement Unit
4	Bidders Conference Registration	Submission of list of attendees	As scheduled	e-mail	List of bidders	Vendors	Vendors	Procurement Unit, GET	CO
5	Bidders Conference	Online conference	As scheduled	e-mail, videoconference	Compiled clarification list	Procurement Unit, GET	Procurement Unit	Vendors	CO
6	Clarifications	Responses & questions	As needed before deadline	e-mail	List of questions and answers	Procurement Unit, GET	Procurement Unit	CO	Vendors
7	Receipt of bids	Update on progress	Weekly	Meeting	Status update	Procurement Unit	Procurement Unit	GET	CO
8	Evaluation	Technical & financial	After submission	e-mail	Final assessment results	Procurement Unit, GET	GET		CO
9	Winner Announcement	Outcome notification	After evaluation	e-mail	Informational message, PO	Procurement Unit	GET	Vendors	CO
10	Installation Plan	GET shares installation plan template to all stakeholders	As needed	SharePoint	Installation Plan	Vendor, CO	Vendor, CO	GET	GET, Procurement Unit
11	Kickoff Meeting	Meeting of stakeholders	Once before project start	videoconference	Minutes of the meeting	GET	GET	Vendor, CO	Procurement Unit, CO
12	Site survey	Coordination of vendor visit	After project offer	e-mail	Site Survey Report	Vendor	Vendor	CO, GET	Procurement Unit
13	Final System Design	Confirmation of detail	As needed	e-mail, phone	Design, letter from manufacturers	Vendor	Vendor	GET	CO, Procurement Unit
14	Shipping	Shipment of goods	As per provided timeline	e-mail	Invoice, Packing list, Bill of lading, Insurance	Vendor	Vendor	CO, GET	CO, GET
15	Customs clearance	Clearance of good at the CO	As needed	In person, e-mail	Clearance confirmation	CO	CO	Vendor	GET

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	Communication Activity	Description	Frequency	Format/Channel	Deliverable	Responsible	Accountable	Consulted	Informed
16	Installation	General	As needed	e-mail, phone	General questions and change requests	Vendor, GET	Vendor	CO	Procurement Unit
17	Onsite Assessment	Assessment of all aspects of project	End of each installation	e-mail, In person		GET, Vendor	GET	Vendor	CO, Procurement Unit
18	Invoice Payment	Receipting and disbursement	As per agreed plan	e-mail, phone	Invoice, payment confirmation	GET	GET	Vendor	Procurement Unit, CO
20	Commissioning	Schedule for training, UAT, etc.	End of each installation	e-mail	Signed UAT, checklist, etc.	Vendor, GET	Vendor	CO	Procurement Unit
21	System Inauguration					CO, GET	CO	-	-
22	System Maintenance	Bi-annual and general support	As needed	e-mail, phone	Maintenance report	GET, Vendor	Vendor	CO	-

Installation phase: - Please note that during the installation phase, it is requested that all stakeholders are included in all email exchanges. The GET provides assistance in the general project management, nevertheless direct communication between the Vendor and the CO is advised. In case of delayed response time or in case of arisen problems, GET will step in to enhance communication flow.

4.1 Project Team Contact Details

Name	Designation	E-mail	Phone #
Saudi Arabia UNDP CO	End user	Ahmed.alsalman@undp.org and copy to Abdulrahman.alghamdi@undp.org	+966 503 89 89 98
ITM GET (GET)	Project Manager	itm.green.energy@undp.org	+45 45 33 61 14
<<Vendor name>> (Vendor)	Solution provider	Vendor's email TBA	TBA

4.2 Communications Conduct:

Meetings: - Ad-hoc project meetings will be convened whenever there is need for in-depth discussions that cannot be achieved through e-mail or telephone communication. A record of the meeting proceedings will be kept, particularly action points and agreed decisions.

Email: - E-mail communication is considered an official record in UNDP, and this applies for solar PV installation projects as well. Most issues and information with clear cut intents will be communicated through e-mail to the relevant parties. To keep all informed and for audit trail

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purposes, all parties should be copied as suitable, and the same thread used as much as possible. All circumstances that may impact on delivery timelines should be proactively communicated by the concerned party to allow for timely resolution.

Informal Communications: - For successful and timely project implement, informal communication is a necessary ingredient especially in solar PV projects. Given the nature of the projects, interaction between the parties, informal communication will form a sizable chunk of overall communication in this project. However, caution needs to be exercised to avoid negative consequences at a later stage. All communication that commits either part/stakeholder should be formally documented and communicated accordingly.

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5. Appendix I: Compliance Response Form		Understood	Understood with reservations	Comments	
6.1 Introduction					
1	Introduction	<input type="checkbox"/>	<input type="checkbox"/>		
1.1	Sustainable Development Goals	<input type="checkbox"/>	<input type="checkbox"/>		
1.2	Smart UN Facilities	<input type="checkbox"/>	<input type="checkbox"/>		
1.3	7-Step Green Energy Process	<input type="checkbox"/>	<input type="checkbox"/>		
6.2 Project Description					
2	Project Description	<input type="checkbox"/>	<input type="checkbox"/>		
2.1	Project Objectives	<input type="checkbox"/>	<input type="checkbox"/>		
2.2	Project High Level Requirements	<input type="checkbox"/>	<input type="checkbox"/>		
2.3	Description of Site	<input type="checkbox"/>	<input type="checkbox"/>		
2.4	Weather on Site	<input type="checkbox"/>	<input type="checkbox"/>		
2.5	Potential Location of PV Panels	<input type="checkbox"/>	<input type="checkbox"/>		
2.6	Estimated Load Consumption	<input type="checkbox"/>	<input type="checkbox"/>		
2.7	Connectivity	<input type="checkbox"/>	<input type="checkbox"/>		
6.3 Technical Requirements		Compliant	Deviations	Comments	Reference
3.1	Local Partner	<input type="checkbox"/>	<input type="checkbox"/>		
3.2	After-sales services and response time	<input type="checkbox"/>	<input type="checkbox"/>		
3.3	Site Visit	<input type="checkbox"/>	<input type="checkbox"/>		
3.4	Bidders Conference	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1 PV Modules					
3.5.1.1	PV Capacity	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.2	Module Specifications	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.3	Standards	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.4	Module Efficiency	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.5	Limited Power Warranty	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.6	Voltage rating	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.7	Disconnecting means	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.8	Tilt	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.1.9	Labelling	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.2 PV Modules mounting					
3.5.2.1	Features	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.2.2	Mounting Structure	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.2.3	Lifespan	<input type="checkbox"/>	<input type="checkbox"/>		


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3.5.2.4	Standards	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.3 Power electronics		Compliant	Deviations	Comments	Reference
3.5.3.1	Features	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.3.2	Inverter Specifications	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.3.4	Standards	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.3.5	Safety	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.3.6	Warranties	<input type="checkbox"/>	<input type="checkbox"/>		
Error! Reference source not found. Error! Reference source not found.					
Error! Reference source not found.	Specifications	<input type="checkbox"/>	<input type="checkbox"/>		
Error! Reference source not found.	Features	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.4 Online monitoring system					
3.5.4.1	Monitoring and Management Overview	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.4.2	List of hourly basis parameters	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.4.3	Standards	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.5 Smart power management					
3.5.5.1	System's operation logic	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.5.2	Details	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.5.3	Changeover Switch	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.5.4	Reactive power requirements	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.6 Wiring and safety					
3.5.6.1	Details	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.9.2	Load Segregation	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.9.3	Standards	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.9.4	Labelling and documentation	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.9.5	Grounding	<input type="checkbox"/>	<input type="checkbox"/>		
3.5.7 Warranty of the system					
3.5.7.1	Details	<input type="checkbox"/>	<input type="checkbox"/>		
3.6 Tasks and Responsibilities		Compliant	Deviations	Comments	Reference


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3.6.1.1	Risk Assessment, Avoidance and Mitigation Plan	<input type="checkbox"/>	<input type="checkbox"/>		
3.6.1.2	Shipment of material	<input type="checkbox"/>	<input type="checkbox"/>		
3.6.1.3	Installation of the Solution	<input type="checkbox"/>	<input type="checkbox"/>		
3.6.1.4	Commissioning, UAT and Training	<input type="checkbox"/>	<input type="checkbox"/>		
3.6.1.5	Stabilization of the System	<input type="checkbox"/>	<input type="checkbox"/>		
3.6.1.6	Maintenance of the system	<input type="checkbox"/>	<input type="checkbox"/>		
3.7 Timelines and Deliverables					
3.7.1.1	Signature of the contract	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.2	Site Survey	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.3	Final Technical Design	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.4	Pre-assembled technical solution tested and ready to be shipped	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.5	Transportation	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.6	Installation of the Solution	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.7	Commissioning, UAT, Training	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.8	Stabilization of the system	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.1.9	Maintenance of the system	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2 Documentation					
3.7.2.1	Project Plan Report	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.2	Site survey Report	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.3	Design report including system design drawings	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.4	Bill of materials	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.5	Shipping documents	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.6	Warranty documents	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.7	Testing procedure	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.8	Installation and commissioning report	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.9	User acceptance testing report and proof of performance to UNDP	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.10	Training manual/guide	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.11	O&M Manual and troubleshooting guide	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.12	O&M schedule	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.13	After sales service agreement including maintenance (corrective and preventive) and technical support (on-site and remote)	<input type="checkbox"/>	<input type="checkbox"/>		
3.7.2.14	Maintenance reports	<input type="checkbox"/>	<input type="checkbox"/>		

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3.7.2.15	Photo and video documentation	<input type="checkbox"/>	<input type="checkbox"/>		
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Who we are

UNDP ITM/SIS

Our Vision

Creating Smart Facilities to build local capacity and inspire a movement.

Our Mission

To support and guide Country Offices in leveraging technology for efficient delivery on the organization's mandate.

The Information and Technology Management unit is the leader in digital transformation, so UNDP can be agile and effective in its global delivery.

UNDP ITM is headquartered in New York and UN City Copenhagen Denmark, a smart facility which hosts 9 UN agencies and is built with a high focus on sustainability. Our combined efforts provide standardized practices for UNDP country offices to achieve the Sustainable Development Goals and incite other local and international entities to follow our lead.

To illustrate our work, in the wake of the 2014 West Africa Ebola outbreak, country offices in Guinea, Sierra Leone and Liberia could not rely on the grid to meet their energy requirements and diesel shortages restricted access to a sufficient power supply. In order to address this, UNDP ITM leveraged its experience in implementing smart facilities to roll out solar solutions in the affected countries.

Following this outbreak, UNDP ITM has aided the installation of solar panel systems in over 13 countries worldwide.

We look forward to implementing the Smart Facilities concept even further.



United Nations Development Programme

Information & Technology Management
Smart Infrastructure Services

UN City
Marmvej 51,
2100 Copenhagen
Denmark

www.undp.org

ANNEX 2: QUOTATION SUBMISSION FORM

Bidders are requested to complete this form, including the ompany 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:	RFQ-SAU-21/011 Supply, delivery and installation of grid-tied solar PV system for UNDP, Saudi Arabia	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?	<input type="checkbox"/> Yes <input type="checkbox"/> 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):	<input type="checkbox"/> Yes <input type="checkbox"/> 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):	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy)	<input type="checkbox"/> Yes <input type="checkbox"/> 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 institutions promoting such issues <i>(If yes, provide a Copy)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Is your company a member of the UN Global Compact	<input type="checkbox"/> Yes <input type="checkbox"/> 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	
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	Offer Validity Period: I/We confirm that this Quote, including the price, remains open for acceptance for the Offer Validity.
<input type="checkbox"/>	<input type="checkbox"/>	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.
<input type="checkbox"/>	<input type="checkbox"/>	By signing this declaration, the signatory below represents, warrants and agrees that he/she has been authorized 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 - GOODS

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:	RFQ-SAU-21/011 Supply, delivery and installation of grid-tied solar PV system for UNDP, Saudi Arabia	Date:	Click or tap to enter a date.

Currency of the Quotation: **SAR / USD**

INCOTERMS: DDP

Currency of the Quotation: SAR / USD INCOTERMS: DDP					
Category	Item	Description	Quantity	Unit Price	Total Price
1 Solar Panels	1.1	Solar Panels for 39.6 kWp			
	1.2	Design, Sizing and Documentation			
	1.3	Site Preparation and Civil Works			
	1.4	Carport Mounting Structure			
	1.5	Installation, Initial PV System Training, UAT and Commissioning			
	1.6	Integration with existing local office electric distribution and wiring.			
	1.7	Freight DPU cost to Riyadh, Saudi Arabia			
2 Power Electronics	2.1	Grid-tied Inverters and Smart Power Management Unit/Assembly			
	2.2	Technical room/container/technical cabinet			
	2.3	Lightning and Surge Protection			
	2.4	Ancillaries and cables			
		TOTAL FINAL ACQUISITION COST (sum of above items)			
3 Operation & Maintenance	3.1	Maintenance Cost Biannual maintenance by the local partner (annual cost, lasting for 3 years): after-sales services including maintenance (preventative and corrective) and technical support (on-site and/or remote) including continues online system and performance monitoring.	3 years		
TOTAL FINAL DPU COST					
Total Price					
VAT 15%					
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	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
Delivery Term (INCOTERMS) DDP, Riyadh	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
Delivery Lead Time	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
Warranty and After-Sales Requirements	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
Validity of Quotation	<input type="checkbox"/>	<input type="checkbox"/>	Click or tap here to enter text.
Payment terms	<input type="checkbox"/>	<input type="checkbox"/>	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.	
<div>Exact name and address of the company</div> <div>Company NameClick or tap here to enter text.</div> <div>Address:Click or tap here to enter text.</div> <div>Click or tap here to enter text.</div> <div>Phone No.:Click or tap here to enter text.</div> <div>Email Address:Click or tap here to enter text.</div>	<div>Authorized Signature: _____</div> <div>Date:Click or tap here to enter text.</div> <div>Name:Click or tap here to enter text.</div> <div>Functional Title of Authorised Signatory:Click or tap here to enter text.</div> <div>Email Address:Click or tap here to enter text.</div>