



INVITATION TO BID

**Supply and Installation of 25-kW Solar PV System and Implementations
of Energy Conservation Measures**

Project: Greening the ONE UN Headquarter Building

CAPE VERDE

**RE – ADVERTISED – EXTENSION OF DEADLINE
NOVEMBER 12, 2012 16:00H CAPE VERDE TIME**

UNITED NATIONS IN CAPE VERDE

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATIONS

ECOWAS REGIONAL CENTER FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY

October 2012

Section 1. Letter of Invitation

Praia, October 26 2012

Subject: Supply and Installation of 25-kW Solar PV System and Implementations of Energy Conservation Measures

Dear Sirs.:

The United Nations Development Programme (UNDP) hereby invites you to submit a Bid to this Invitation to Bid (ITB) for the above-referenced subject.

This ITB includes the following documents:

- Section 1 – This Letter of Invitation
- Section 2– Instructions to Bidders (including Data Sheet)
- Section 3– Schedule of Requirements and Technical Specifications (ToR)
- Section 4– Bid Submission Form
- Section 5– Documents Establishing the Eligibility and Qualifications of the Bidder
- Section 6– Technical Bid Form
- Section 7– Price Schedule Form
- Section 8– Form for Advanced Payment Guarantee
- Section 9 – Contract to be Signed, including General Terms and Conditions

Your offer, comprising of a Technical Bid and Price Schedule, in separate sealed envelopes, should be submitted in accordance with Section 2.

You are kindly requested to submit an acknowledgment letter to UNDP to the following address:

The Joint Office of UNDP, UNFPA and UNICEF
Av. OUA, Achada Santo António, Praia, Cape Verde
Attention: Mr. Octavio Silva

The letter should be received by UNDP no later than **November 5, 2012 at 16:00 Cape Verde Time**. The same letter should advise whether your company intends to submit a Bid. If that is not the case, UNDP would appreciate your indicating the reason, for our records.

If you have received this ITB through a direct invitation by UNDP, transferring this invitation to another firm requires notifying UNDP accordingly.

Should you require any clarification, kindly communicate with the contact person identified in the attached Data Sheet as the focal point for queries on this ITB.

UNDP looks forward to receiving your Bid and thanks you in advance for your interest in UNDP procurement opportunities.

Yours sincerely,

Octavio Silva, Operations Manager

Section 2: Instruction to Bidders

Definitions

- a) *“Bid”* refers to the Bidder’s response to the Invitation to Bid, including the Bid Submission Form, Technical Bid and Price Schedule and all other documentation attached thereto as required by the ITB.
- b) *“Bidder”* refers to any legal entity that may submit, or has submitted, a Bid for the supply of goods and provision of related services requested by UNDP.
- c) *“Contract”* refers to the legal instrument that will be signed by and between the UNDP and the successful Bidder, all the attached documents thereto, including the General Terms and Conditions (GTC) and the Appendices.
- d) *“Country”* refers to the country indicated in the Data Sheet.
- e) *“Data Sheet”* refers to such part of the Instructions to Bidders used to reflect conditions of the tendering process that are specific for the requirements of the ITB.
- f) *“Day”* refers to calendar day.
- g) *“Goods”* refer to any tangible product, commodity, article, material, wares, equipment, assets or merchandise that UNDP requires under this ITB.
- h) *“Government”* refers to the Government of the country where the goods and related services provided/rendered specified under the Contract will be delivered or undertaken.
- i) *“Instructions to Bidders”* refers to the complete set of documents which provides Bidders with all information needed and procedures to be followed in the course of preparing their Bid
- j) *“ITB”* refers to the Invitation to Bid consisting of instructions and references prepared by UNDP for purposes of selecting the best supplier or service provider to fulfil the requirement indicated in the Schedule of Requirements and Technical Specifications.
- k) *“LOI”* (Section 1 of the ITB) refers to the Letter of Invitation sent by UNDP to Bidders.
- l) *“Material Deviation”* refers to any contents or characteristics of the bid that is significantly different from an essential aspect or requirement of the ITB, and (i) substantially alters the scope and quality of the requirements; (ii) limits the rights of UNDP and/or the obligations of the offeror; and (iii) adversely impacts the fairness and principles of the procurement process, such as those that compromise the competitive position of other offerors.
- m) *“Schedule of Requirements and Technical Specifications”* refers to the document included in this ITB as Section 3 which lists the goods required by UNDP, their specifications, the related services, activities, tasks to be performed, and other information pertinent to UNDP’s receipt and acceptance of the goods.

- n) “Services” refers to the entire scope of tasks related or ancillary to the completion or delivery of the goods required by UNDP under the ITB.
- o) “Supplemental Information to the ITB” refers to a written communication issued by UNDP to prospective Bidders containing clarifications, responses to queries received from prospective Bidders, or changes to be made in the ITB, at any time after the release of the ITB but before the deadline for the submission of Bid.

A. GENERAL

1. UNDP hereby solicits Bids as a response to this Invitation to Bid (ITB). Bidders must strictly adhere to all the requirements of this ITB. No changes, substitutions or other alterations to the rules and provisions stipulated in this ITB may be made or assumed unless it is instructed or approved in writing by UNDP in the form of Supplemental Information to the ITB.
2. Submission of a Bid shall be deemed as an acknowledgement by the Bidder that all obligations stipulated by this ITB will be met and, unless specified otherwise, the Bidder has read, understood and agreed to all the instructions in this ITB.
3. Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of any Bid by UNDP. UNDP is under no obligation to award a contract to any Bidder as a result of this ITB.
4. 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)
5. In responding to this ITB, UNDP requires all Bidders to conduct themselves in a professional, objective and impartial manner, and they must at all times hold UNDP’s interests paramount. Bidders must strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. All Bidders found to have a conflict of interest shall be disqualified. Without limitation on the generality of the above, Bidders, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this solicitation process, if they:
 - 5.1 Are, or have been associated in the past, with a firm or any of its affiliates which have been engaged UNDP to provide services for the preparation of the design, Schedule of Requirements and Technical Specifications, cost analysis/estimation, and other documents to be used for the procurement of the goods and related services in this selection process;
 - 5.2 Were involved in the preparation and/or design of the programme/project related to the goods and related services requested under this ITB; or
 - 5.3 Are found to be in conflict for any other reason, as may be established by, or at the discretion of, UNDP.

In the event of any uncertainty in the interpretation of what is potentially a conflict of interest, Bidders must disclose the condition to UNDP and seek UNDP's confirmation on whether or not such conflict exists.

6. Similarly, the following must be disclosed in the Bid:

- 6.1 Bidders who are owners, part-owners, officers, directors, controlling shareholders, or key personnel who are family of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving the goods and related services under this ITB; and
- 6.4 Others that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices.

Failure of such disclosure may result in the rejection of the Bid.

- 7. The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered as an independent entity, the extent of Government ownership/share, receipt of subsidies, mandate, access to information in relation to this ITB, and others that may lead to undue advantage against other Bidders, and the eventual rejection of the Bid.
- 8. All Bidders must adhere to the UNDP Supplier Code of Conduct, which may be found at this link: <http://web.ng.undp.org/procurement/undp-supplier-code-of-conduct.pdf>

B. CONTENTS OF BID

9. Sections of Bid

Bidders are required to complete, sign and submit the following documents:

- 9.1 Bid Submission Cover Letter Form (see ITB Section 4);
- 9.2 Documents Establishing the Eligibility and Qualifications of the Bidder (see ITB Section 5);
- 9.3 Technical Bid (see prescribed form in ITB Section 6);
- 9.4 Price Schedule (see prescribed form in ITB Section 7);
- 9.5 Bid Security, if applicable(if required and as stated in the DSnos. 9-11, see prescribed Form in ITB Section 8);
- 9.6 Any attachments and/or appendices to the Bid (including all those specified under the **Data Sheet**)

10. Clarification of Bid

- 10.1 Bidders may request clarification of any of the ITB documents no later than the number of days indicated in the **Data Sheet** (DSno. 16) prior to the Bid submission date. Any request for clarification must be sent in writing via courier or through electronic means to the UNDP address indicated in the **Data Sheet** (DSno. 17). UNDP will respond in writing, transmitted by electronic means and will transmit copies of the response (including an explanation of the query but without identifying the source of inquiry) to all Bidders who have provided confirmation of their intention to submit a Bid.
- 10.2 UNDP shall endeavor to provide such responses to clarifications in an expeditious

manner, but any delay in such response shall not cause an obligation on the part of UNDP to extend the submission date of the Bid, unless UNDP deems that such an extension is justified and necessary.

11. Amendment of Bid

- 11.1 At any time prior to the deadline for submission of Bid, UNDP may for any reason, such as in response to a clarification requested by a Bidder, modify the ITB in the form of a Supplemental Information to the ITB. All prospective Bidders will be notified in writing of all changes/amendments and additional instructions through Supplemental Information to the ITB and through the method specified in the **Data Sheet** (DS No. 18).
- 11.2 In order to afford prospective Bidders reasonable time to consider the amendments in preparing their Bid, UNDP may, at its discretion, extend the deadline for submission of Bid, if the nature of the amendment to the ITB justifies such an extension.

C. PREPARATION OF BID

12. Cost

The Bidder shall bear any and all costs related to the preparation and/or submission of the Bid, regardless of whether its Bid was selected or not. UNDP shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.

13. Language

The Bid, as well as any and all related correspondence exchanged by the Bidder and UNDP, shall be written in the language (s) specified in the **Data Sheet** (DS No. 4). Any printed literature furnished by the Bidder written in a language other than the language indicated in the **Data Sheet**, must be accompanied by a translation in the preferred language indicated in the **Data Sheet**. For purposes of interpretation of the Bid, and in the event of discrepancy or inconsistency in meaning, the version translated into the preferred language shall govern. Upon conclusion of a contract, the language of the contract shall govern the relationship between the contractor and UNDP.

14. Bid Submission Form

The Bidder shall submit the Bid Submission Form using the form provided in Section 4 of this ITB.

15. Technical Bid Format and Content

Unless otherwise stated in the **Data Sheet** (DSno. 28), the Bidder shall structure the Technical Bid as follows:

- 15.1 Expertise of Firm/Organization – this section should provide details regarding management structure of the organization, organizational capability/resources, and experience of organization/firm, the list of projects/contracts (both completed and on-going, both domestic and international) which are related or similar in nature to the requirements of the ITB, manufacturing capacity of plant if Bidder is a manufacturer,

authorization from the manufacturer of the goods if Bidder is not a manufacturer, and proof of financial stability and adequacy of resources to complete the delivery of goods and provision of related services required by the ITB (see ITB Clause 18 and DS No. 26 for further details). The same shall apply to any other entity participating in the ITB as a Joint Venture or Consortium.

- 15.2 Technical Specifications and Implementation Plan – this section should demonstrate the Bidder's response to the Schedule of Requirements and Technical Specifications by identifying the specific components proposed; how each of the requirements shall be met point by point; providing a detailed specification and description of the goods required, plans and drawings where needed; the essential performance characteristics, identifying the works/portions of the work that will be subcontracted; a list of the major subcontractors, and demonstrating how the bid meets or exceeds the requirements, while ensuring appropriateness of the bid to the local conditions and the rest of the project operating environment during the entire life of the goods provided. Details of technical bid must be laid out and supported by an Implementation Timetable, including Transportation and Delivery Schedule where needed, that is within the duration of the contract as specified in the **Data Sheet** (DS No. 29 and 30).

Bidders must be fully aware that the goods and related services that UNDP require may be transferred, immediately or eventually, by UNDP to the Government partners, or to an entity nominated by the latter, in accordance with UNDP's policies and procedures. All bidders are therefore required to submit the following in their bids:

- a) A statement of whether any import or export licences are required in respect of the goods to be purchased or services to be rendered, including any restrictions in the country of origin, use or dual use nature of the goods or services, including any disposition to end users;
- b) Confirmation that the Bidder has obtained license of this nature in the past, and have an expectation of obtaining all the necessary licenses, should their bid be rendered the most responsive; and
- c) Complete documentation, information and declaration of any goods classified or may be classified as "Dangerous Goods".

- 15.3 Management Structure and Key Personnel – This section should include the comprehensive curriculum vitae (CVs) of key personnel that will be assigned to support the implementation of the technical bid, clearly defining their roles and responsibilities. CVs should establish competence and demonstrate qualifications in areas relevant to the requirements of this ITB.

In complying with this section, the Bidder assures and confirms to UNDP that the personnel being nominated are available to fulfil the demands of the Contract during its stated full term. If any of the key personnel later becomes unavailable, except for unavoidable reasons such as death or medical incapacity, among other possibilities, UNDP reserves the right to render the Bid non-responsive. Any deliberate substitution of personnel arising from unavoidable reasons, including delay in the implementation of the project of programme through no fault of the Bidder, shall be made only with UNDP's acceptance of the justification for substitution, and UNDP's approval of the qualification of the replacement who shall be either of equal or superior credentials as the one being replaced.

15.4 Where the **Data Sheet** requires the submission of the Bid Security, the Bid Security shall be included along with the Technical Bid. The Bid Security may be forfeited by UNDP, and reject the Bid, in the event of any or any combination of the following conditions:

- a) If the Bidder withdraws its offer during the period of the Bid Validity specified in the **Data Sheet** (DSno. 11), or;
- b) If the Bid Security amount is found to be less than what is required by UNDP as indicated in the **Data Sheet** (DSno. 9), or;
- c) In the case the successful Bidder fails:
 - i. to sign the Contract after UNDP has awarded it;
 - ii. to comply with UNDP's variation of requirement, as per ITB Clause 35; or
 - iii. to furnish Performance Security, insurances, or other documents that UNDP may require as a condition to rendering effective the contract that may be awarded to the Bidder.

16. Price Schedule

The Price Schedule shall be prepared using the attached standard form (Section 7). It shall list all major cost components associated with the goods and related services, and the detailed breakdown of such costs. All goods and services described in the Technical Bid must be priced separately on a one-to-one correspondence. Any output and activities described in the Technical Bid but not priced in the Price Schedule, shall be assumed to be included in the prices of the items or activities, as well as in the final total price of the bid.

17. Currencies

All prices shall be quoted in the currency indicated in the **Data Sheet** (DSno. 15). However, where Bids are quoted in different currencies, for the purposes of comparison of all Bid:

- 17.1 UNDP will convert the currency quoted in the Bid into the UNDP preferred currency, in accordance with the prevailing UN operational rate of exchange on the last day of submission of Bid; and
- 17.2 In the event that the Bid found to be the most responsive to the ITB requirement is quoted in another currency different from the preferred currency as per **Data Sheet** (DSno. 15), then UNDP shall reserve the right to award the contract in the currency of UNDP's preference, using the conversion method specified above.

18. Documents Establishing the Eligibility and Qualifications of the Bidder

18.1 The Bidder shall furnish documentary evidence of its status as an eligible and qualified vendor, using the forms provided under Section 5, Bidder Information Forms. In order to award a contract to a Bidder, its qualifications must be documented to UNDP's satisfactions. These include, but are not limited to the following:

- a) That, in the case of a Bidder offering to supply goods under the Contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' manufacturer or producer to supply the goods in the country of final destination;

- b) That the Bidder has the financial, technical, and production capability necessary to perform the Contract; and
- c) That, to the best of the Bidder's knowledge, it is not included in the UN 1267 List or the UN Ineligibility List, nor in any and all of UNDP's list of suspended and removed vendors.

18.2 Bids submitted by two (2) or more Bidders shall all be rejected by UNDP if they are found to have any of the following:

- a) they have at least one controlling partner, director or shareholder in common; or
- b) any one of them receive or have received any direct or indirect subsidy from the other/s; or
- c) they have the same legal representative for purposes of this ITB; or
- d) 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 ITB process;
- e) 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
- f) an expert proposed to be in the bid of one Bidder participates in more than one Bid received for this ITB process. This condition does not apply to subcontractors being included in more than one Bid.

19. Joint Venture, Consortium or Association

If the Bidder is a group of legal entities that will form or have formed a joint venture, consortium or association at the time of the submission of the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the joint venture jointly and severally, and this shall be duly evidenced by a duly notarized Agreement among the legal entities, which shall be submitted along 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 entities that comprise the joint venture.

After the bid has been submitted to UNDP, the lead entity identified to represent the joint venture shall not be altered without the prior written consent of UNDP. Furthermore, neither the lead entity nor the member entities of the joint venture can:

- a) submit another Bid, either in its own capacity; nor
- b) as a lead entity or a member entity for another joint venture submitting another Bid.

The description of the organization of the joint venture/consortium/association must clearly define the expected role of each of the entity in the joint venture in delivering the requirements of the ITB, both in the bid and in the Joint Venture Agreement. All entities that comprise the joint venture shall be subject to the eligibility and qualification assessment by UNDP.

Where a joint venture is presenting its track record and experience in a similar undertaking as those required in the ITB, it should present such information in the following manner:

- a) Those that were undertaken together by the joint venture; and

- b) Those that were undertaken by the individual entities of the joint venture expected to be involved in the performance of the services defined in the ITB.

Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the joint venture or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.

If the Bid of a joint venture is determined by UNDP as the most responsive Bid that offers the best value for money, UNDP shall award the contract to the joint venture, in the name of its designated lead entity, who shall sign the contract for and on behalf of all the member entities.

20. Alternative Bid

Unless otherwise specified in the **Data Sheet** (DSnos. 5 and 6), alternative bid shall not be considered. Where the conditions for its acceptance are met, or justifications are clearly established, UNDP reserves the right to award a contract based on an alternative bid.

21. Validity Period

- 21.1 Bid shall remain valid for the period specified in the **Data Sheet** (DSno. 8), commencing on the submission deadline date also indicated in the **Data Sheet** (DSno. 21). A Bid valid for a shorter period shall be immediately rejected by UNDP and rendered non-responsive.
- 21.2 In exceptional circumstances, prior to the expiration of the Bid validity period, UNDP may request Bidders to extend the period of validity of their Bid. The request and the responses shall be made in writing, and shall be considered integral to the Bid.

22. Bidder's Conference

When appropriate, a Bidder's conference will be conducted at the date, time and location specified in the **Data Sheet** (DSno. 7). All Bidders are encouraged to attend. Non-attendance, however, shall not result in disqualification of an interested Bidder. Minutes of the Bidder's conference will be either posted on the UNDP website, or disseminated to the individual firms who have registered or expressed interest with the contract, whether or not they attended the conference. No verbal statement made during the conference shall modify the terms and conditions of the ITB unless such statement is specifically written in the Minutes of the Conference, or issued/posted as an amendment in the form of a Supplemental Information to the ITB.

D. SUBMISSION AND OPENING OF BID

23. Submission

- 23.1 The Technical Bid and the Price Schedule must be submitted together and sealed together in one and the same envelope, delivered either personally, by courier, or by electronic method of transmission. If submission will not be done by electronic means, the Technical Bid and Price Schedule must be sealed together in an envelope whose external side must :

- a) Bear the name of the Bidder;
- b) Be addressed to UNDP as specified in the **Data Sheet** (DSno.20); and
- c) Bear a warning not to open before the time and date for Bid opening as specified in the **Data Sheet** (DSno. 24).

If the envelope is not sealed nor labeled as required, the Bidder shall assume the responsibility for the misplacement or premature opening of Bid due to improper sealing and labeling by the Bidder.

23.2 Bidders must submit their Bid in the manner specified in the **Data Sheet** (DSnos. 22 and 23). When the Bid is expected to be in transit for more than 24 hours, the Bidder must ensure that sufficient lead time has been provided in order to comply with UNDP's deadline for submission. UNDP shall indicate for its record that the official date and time of receiving the Bid is the actual date and time when the said Bid has physically arrived at the UNDP premises indicated in the **Data Sheet** (DSno. 20).

23.3 Bidders submitting Bid by mail or by hand shall enclose the original and each copy of the Bid, in separate sealed envelopes, duly marking each of the envelopes as "Original Bid" and the others as "Copy of Bid". The two envelopes, consisting of original and copies, shall then be sealed in an outer envelope. The number of copies required shall be as specified in the **Data Sheet** (DS no. 19). In the event of any discrepancy between the contents of the "Original Bid" and the "Copy of Bid", the contents of the original shall govern. The original version of the Bid shall be signed or initialed by the Bidder or person(s) duly authorized to commit the Bidder on every page. The authorization shall be communicated through a document evidencing such authorization issued by the highest official of the firm, or a Power of Attorney, accompanying the Bid.

23.4 Bidders must be aware that the mere act of submission of a Bid, in and of itself, implies that the Bidder accepts the General Contract Terms and Conditions of UNDP as attached hereto as Section 11.

24. Deadline for Submission of Bid and Late Bids

Bid must be received by UNDP at the address and no later than the date and time specified in the **Data Sheet** (DSno.20 and 21).

UNDP shall not consider any Bid that arrives after the deadline for submission of Bid. Any Bid received by UNDP after the deadline for submission of Bid shall be declared late, rejected, and returned unopened to the Bidder.

25. Withdrawal, Substitution, and Modification of Bid

25.1 Bidders are expected to have sole responsibility for taking steps to carefully examine in detail the full consistency of its Bid to the requirements of the ITB, keeping in mind that material deficiencies in providing information requested by UNDP, or lack clarity in the description of goods and related services to be provided, may result in the rejection of the Bid. The Bidder shall assume any responsibility regarding erroneous interpretations or conclusions made by the Bidder in the course of understanding the ITB out of the set of information furnished by UNDP.

- 25.2 A Bidder may withdraw, substitute or modify its Bid after it has been submitted by sending a written notice in accordance with ITB Clause 23, duly signed by an authorized representative, and shall include a copy of the authorization (or a Power of Attorney). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be received by UNDP prior to the deadline for submission and submitted in accordance with ITB Clause 23 (except that withdrawal notices do not require copies). The respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or "MODIFICATION".
- 25.3 Bid requested to be withdrawn shall be returned unopened to the Bidders.
- 25.4 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bid and the expiration of the period of Bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.

26. Bid Opening

UNDP will open the Bid in the presence of an ad-hoc committee formed by UNDP of at least two (2) members. If electronic submission is permitted, any specific electronic Bid opening procedures shall be as specified in the **Data Sheet** (DSno. 23).

The Bidders' names, modifications, withdrawals, the condition of the envelope labels/seals, the number of folders/files and all other such other details as UNDP may consider appropriate, will be announced at the opening. No Bid shall be rejected at the opening stage, except for late submission, for which the Bid shall be returned unopened to the Bidder.

27. Confidentiality

Information relating to the examination, evaluation, and comparison of Bid, and the recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process, even after publication of the contract award.

Any effort by a Bidder to influence UNDP in the examination, evaluation and comparison of the Bid or contract award decisions may, at UNDP's decision, result in the rejection of its Bid.

In the event that a Bidder is unsuccessful, the Bidder may seek a meeting with UNDP for a debriefing. The purpose of the debriefing is discussing the strengths and weaknesses of the Bidder's submission, in order to assist the Bidder in improving the bid presented to UNDP. The content of other bid and how they compare to the Bidder's submission shall not be discussed.

E. EVALUATION OF BID

28. Preliminary Examination of Bid

UNDP shall examine the Bid to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, whether or not the Bidder is in the UN Security Council 1267/1989 Committee's list of terrorists and terrorist financiers, and in UNDP's list of suspended and removed vendors, and whether the Bid are generally in order, among other indicators that may be used at this stage. UNDP may reject any

Bid at this stage.

29. Evaluation of Bid

29.1 UNDP shall examine the Bid to confirm that all terms and conditions under the UNDP General Terms and Conditions and Special Conditions have been accepted by the Bidder without any deviation or reservation.

29.2 The evaluation team shall review and evaluate the Bids on the basis of their responsiveness to the Schedule of Requirements and Technical Specifications and other documentation provided, applying the procedure indicated in the **Data Sheet** (DS No. 25). Absolutely no changes may be made by UNDP in the criteria after all Bids have been received.

29.1 UNDP reserves the right to undertake a post-qualification exercise, aimed at determining, to its satisfaction the validity of the information provided by the Bidder. Such post-qualification shall be fully documented and, among those that may be listed in the **Data Sheet** (DS No.33), may include, but need not be limited to, all or any combination of the following :

- a) Verification of accuracy, correctness and authenticity of the information provided by the bidder on the legal, technical and financial documents submitted;
- b) Validation of extent of compliance to the ITB requirements and evaluation criteria based on what has so far been found by the evaluation team;
- c) Inquiry and reference checking with Government entities with jurisdiction on the bidder, or any other entity that may have done business with the bidder;
- d) Inquiry and reference checking with other previous clients on the quality of performance on ongoing or previous contracts completed;
- e) Physical inspection of the bidder's plant, factory, branches or other places where business transpires, with or without notice to the bidder;
- f) Testing and sampling of completed goods similar to the requirements of UNDP, where available; and
- g) Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract.

30. Clarification of Bid

To assist in the examination, evaluation and comparison of bids, UNDP may, at its discretion, ask any Bidder to clarify its Bid.

UNDP's request for clarification and the Bidder's response shall be in writing. Notwithstanding the written communication, no change in the prices or substance of the Bid shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by UNDP in the evaluation of the Bid, in accordance with ITB Clause 35.

Any unsolicited clarification submitted by a Bidder in respect to its Bid, which is not a response to a request by UNDP, shall not be considered during the review and evaluation of the Bid.

31. Responsiveness of Bid

UNDP's determination of a Bid's responsiveness will be based on the contents of the Bid itself.

A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the ITB without material deviation, reservation, or omission.

If a Bid is not substantially responsive, it shall be rejected by UNDP and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

32. Nonconformities, Reparable Errors and Omissions

32.3 Provided that a Bid is substantially responsive, UNDP may waive any non-conformities or omissions in the Bid that, in the opinion of UNDP, do not constitute a material deviation.

32.4 Provided that a Bid is substantially responsive, UNDP may request the Bidder to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

32.5 Provided that the Bid is substantially responsive, UNDP shall correct arithmetical errors as follows:

- a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of UNDP there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to the above.

32.6 If the Bidder does not accept the correction of errors made by UNDP, its Bid shall be rejected.

F. AWARD OF CONTRACT

33. Right to Accept, Reject, or Render Non-Responsive Any or All Bid

33.1 UNDP reserves the right to accept or reject any Bid, to render any or all of the Bids as non-responsive, and to reject all Bids at any time prior to award of contract, without incurring any liability, or obligation to inform the affected Bidder(s) of the grounds for UNDP's action. Furthermore, UNDP is not obligated to award the contract to the lowest price offer.

33.2 UNDP shall also verify, and immediately reject their respective Bid, if the Bidders are found to appear in the UN's Consolidated List of Individuals and Entities with Association to Terrorist Organizations, in the List of Vendors Suspended or Removed from the UN

Secretariat Procurement Division Vendor Roster, the UN Ineligibility List, and other such lists that as may be established or recognized by UNDP policy on Vendor Sanctions. (See http://www.undp.org/content/undp/en/home/operations/procurement/procurement_protest/)

34. Award Criteria

Prior to expiration of the period of Bid validity, UNDP shall award the contract to the qualified and eligible Bidder that is found to be responsive to the requirements of the Schedule of Requirements and Technical Specification, and has offered the lowest price (See DS No. 32).

35. Right to Vary Requirements at the Time of Award

At the time of award of Contract, UNDP reserves the right to vary the quantity of the goods and/or related services, 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.

36. Contract Signature

Within fifteen (15) days from the date of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to UNDP.

Failure of the successful Bidder to comply with the requirement of ITB Section F.3 and this provision shall constitute sufficient grounds for the annulment of the award, and forfeiture of the Bid Security if any, and on which event, UNDP may award the Contract to the Bidder with the second highest rated Bid, or call for new Bid.

37. Performance Security

A performance security, if required, shall be provided in the amount and form provided in Section 9 and by the deadline indicated in the **Data Sheet** (DSno. 14), as applicable. Where a Performance Security will be required, the submission of the said document, and the confirmation of its acceptance by UNDP, shall be a condition for the effectivity of the Contract that will be signed by and between the successful Bidder and UNDP.

38. Bank Guarantee for Advanced Payment

Except when the interests of UNDP so require, it is the UNDP's preference to make no advanced payment(s) on contracts (i.e., payments without having received any outputs). In the event that the Bidder requires an advanced payment upon contract signature, and if such request is duly accepted by UNDP, and the said advanced payment exceeds 20% of the total Bid price, or exceed the amount of USD 30,000, UNDP shall require the Bidder to submit a Bank Guarantee in the same amount as the advanced payment. A bank guarantee for advanced payment shall be furnished in the form provided in Section 10.

39. Vendor Protest

UNDP's vendor protest procedure provides an opportunity for appeal to those persons or firms not awarded a purchase order or contract through a competitive procurement process. In the event that a Bidder believes that it was not treated fairly, the following link provides further details regarding UNDP vendor protest procedures: <http://www.undp.org/procurement/protest.shtml>

Instructions to Bidders

DATA SHEET

The following data for the supply of goods and related services shall complement / supplement the provisions in the Instruction to Bidders. In the case of a conflict between the Instruction to Bidders and the Data Sheet, the provisions in the Data Sheet shall prevail.

DS No.	Cross Ref. to Instructions	Data	Specific Instructions / Requirements
1		Project Title :	Greening the ONE UN Headquarter Building
2		Title of Goods/Services/Work Required:	Supply and Installation of 25-kW Solar PV System and Implementations of Energy Conservation Measures
3		Country:	CAPE VERDE
4	C.13	Language of the Bid:	English or Portuguese
5	C.20	Conditions for Submitting Bid for Parts or sub-parts of the Total Requirements	<p>Allowed for each project.</p> <p>Project 1: Install High Efficient LED Tube lamps to Replace Inefficient T8 Fluorescent Lighting Systems and Install Occupancy Sensors for Efficient Lighting System Controls for Increased Efficiency.</p> <p>Project 2: Install a 25-kW grid-connected photovoltaic (PV) system), on the roof of the UN its office building in the Achada Santo Antonio section of Praia, Cape Verde.</p>
6	C.20	Conditions for Submitting Alternative Bid	Shall not be considered
7	C.22	A pre-Bid conference will be held on:	N/A
8	C.21.1	Period of Bid Validity commencing on the submission date	60 days
9	B.9.5 C.15.4 b)	Bid Security	Not Required
10	B.9.5	Acceptable forms of Bid Security	N/A

11	B.9.5 C.15.4 a)	Validity of Bid Security	N/A
12		Advanced Payment upon signing of contract	Allowed up to a maximum of 20% of contract ¹
13		Liquidated Damages	Will be imposed under the following conditions : Percentage of contract price per day of delay :0.5% Max. no. of days of delay : 1 calendar month Next course of action: UNDP may terminate the contract.
14	F.37	Performance Security	Not Required
15	C.17 C.17.2	Preferred Currency of Bid and Method for Currency conversion	United States Dollars (US\$) <i>Reference date for determining UN Operational Exchange Rate: <u>Tuesday, November 13, 2012.</u></i>
16	B.10.1	Deadline for submitting requests for clarifications/ questions	5 working days before the submission date.
17	B.10.1	Contact Details for submitting clarifications/questions ²	Focal Person in UNDP: Octavio Silva Address: Av. OUA, Achada Santo Antonio, Praia, Cape Verde Fax No. : 238 262 1404 E-mail address dedicated for this purpose: octavio.silva@cv.jo.un.org
18	B.11.1	Manner of Disseminating Supplemental Information to the ITB and responses/clarifications to queries	Direct communication to prospective Bidders by email or fax
19	D.23.3	No. of copies of Bid that must be submitted	Original : 1 Copies : 2
20	D.23.1 b) D.23.2 D.24	Bid submission address	The Joint Office of UNDP, UNFPA and UNICEF Av. OUA, Achada de Santo Antonio Praia, Cabo Verde

¹If the advanced payment that the Bidder will submit will exceed 20% of the Price Offer, or will exceed the amount of USD 30,000, the Bidder must submit an Advanced Payment Security in the same amount as the advanced payment, using the form and contents of the document in Section 10

²This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was officially received.

21	C.21.1 D.24	Deadline of Bid Submission	November 12, 2012 4:00 PM – Cape Verde – Local Time
22	D.23.2	Manner of Submitting Bid	Courier/Hand Delivery and Electronic submission of Bid ³
23	D.23.2 D.26	Conditions and Procedures for electronic submission and opening, if allowed	<ul style="list-style-type: none"> - Official Address for e-submission: procurement.cv@cv.jo.un.org - Free from virus and corrupted files - Format : PDF files only, password protected - Password <u>must</u> not be provided to UNDP until the date and time of Bid Opening as indicated in No. 24 - Max. No. of transmission : 1 - No. of copies to be transmitted : 1 - Mandatory subject of email : “Technical proposal ITB: Comprehensive Hazard Assessment and Mapping in Cape Verde - DO NOT OPEN IN ADVANCE” and separate email “Financial proposal ITB: Comprehensive Hazard Assessment and Mapping in Cape Verde - DO NOT OPEN IN ADVANCE” - Time Zone to be Recognized: <i>CAPE VERDE</i> - <u>Any proposal sent to the private email addresses of any procurement staff will be automatically disqualified.</u>
24	D.23.1 c)	Date, time and venue for opening of Bid	Date : 13 November 2012 Time : 9:00 AM Venue : UN House, Praia, Cape Verde
25		Evaluation method to be used in selecting the most responsive Bid	<ul style="list-style-type: none"> - Non-Discretionary “Pass/Fail” Criteria on the Technical Requirements; and - Lowest price offer of technically qualified/responsive Bid
26	C.15.1	Required Documents that must be Submitted to Establish Qualification of Bidders (In “Certified True Copy” form only)	<ul style="list-style-type: none"> - Company Profile, which should <u>not</u> exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods/services being procured, - Members of the Governing Board and their Designations duly certified by the Corporate Secretary, or its equivalent document if Bidder is not a corporation, - List of Shareholders and Other Entities Financially Interested in the Firm owning 5% or more of the stocks and other interests, or its equivalent if Bidder is not a corporation,

³ If this will be allowed, security features (e.g., encryption, authentication, digital signatures, etc.) are strictly required and must be enforced to ensure confidentiality and integrity of contents.

			<ul style="list-style-type: none"> - Tax Registration/Payment Certificate issued by the Internal Revenue Authority evidencing that the Bidder is updated with its tax payment obligations, or Certificate of Tax exemption, if any such privilege is enjoyed by the Bidder, - Certificate of Registration of the business, including Articles of Incorporation, or equivalent document if Bidder is not a corporation, - Trade name registration papers, if applicable, - Local Government permit to locate and operate in the current location of office or factory, - Official Letter of Appointment as local representative, if Bidder is submitting a Bid in behalf of an entity located outside the country, - Quality Certificate (e.g., ISO, etc.) and/or other similar certificates, accreditations, awards and citations received by the Bidder, if any - Environmental Compliance Certificates, Accreditations, Markings/Labels, and other evidences of the Bidder's practices which contributes to the ecological sustainability and reduction of adverse environmental impact (e.g., use of non-toxic substances, recycled raw materials, energy-efficient equipment, reduced carbon emission, etc.), either in its business practices or in the goods it manufactures, - Patent Registration Certificates, if any of technologies submitted in the Bid is patented by the Bidder, - Plan and details of manufacturing capacity, if Bidder is a manufacturer of the goods to be supplied, - Certification or authorization to act as Agent in behalf of the Manufacturer, or Power of Attorney, if bidder is not a manufacturer, - Latest Audited Financial Statement (Income Statement and Balance Sheet) including Auditor's Report for the past 3 years, - Statement of Satisfactory Performance from the Top 5 Clients in terms of Contract Value the past 2 years, - List of Bank References (Name of Bank, Location, Contact Person and Contact Details), - All information regarding any past and current litigation during the last five (5) years, in which the bidder is involved, indicating the parties concerned, the subject of the litigation, the amounts involved, and the final resolution if already concluded.
27		Other documents that may be Submitted to Establish	Additional information as requested in the ToR

		Eligibility	
28	C.15	Structure of the Technical Bid and List of Documents to be Submitted	As per the ToR
29	C.15.2	Latest Expected date for commencement of Contract	Upon Contract Signature
30	C.15.2	Maximum Expected duration of contract	5 Months
31		UNDP will award the contract to:	One Bidder only
32	F.34	Criteria for the Award and Evaluation of Bid	<p><u>Award Criteria</u></p> <ul style="list-style-type: none"> - Non-discretionary “Pass” or “Fail” rating on the detailed contents of the Schedule of Requirements and Technical Specifications, - Compliance on the qualification requirements indicated in the ToR. <p><u>Bid Evaluation Criteria</u></p> <p>As indicated in the ToR (section 3).</p>
33	E.29	Post qualification Actions	<ul style="list-style-type: none"> - Verification of accuracy, correctness and authenticity of the information provided by the bidder on the legal, technical and financial documents submitted; - Validation of extent of compliance to the ITB requirements and evaluation criteria based on what has so far been found by the evaluation team; - Inquiry and reference checking with Government entities with jurisdiction on the bidder, or any other entity that may have done business with the bidder; - Inquiry and reference checking with other previous clients on the quality of performance on ongoing or previous contracts completed;
34		Conditions for Determining Contract Effectivity	<ul style="list-style-type: none"> - UNDP’s approval of plans, drawings, samples, etc. - Signature of Contract by duly authorized persons representing both parties, UNDP and the selected bidder.
35		Other Information Related to the ITB	UNDP shall effect payments to the Contractor after acceptance by UNDP of the invoices submitted by the contractor, upon achievement of the corresponding deliverables as set in the Terms of Reference (ToR). All prices/rates quoted must be exclusive of all taxes, since the UNDP is exempt from taxes.

			<p>PAYMENT TERMS</p> <ul style="list-style-type: none"> • 10% on submission of complete set of system drawings by successful Bidder and approval of the same by UN. The payment shall be made against an advance payment guarantee (bank bond or bank guarantee) for the total amount received and for a period covering three months after completion of contract. • 50% on receipt of complete material at the One UN Building site. • 20 % percent after successful installation, testing, commissioning and stabilization of operation to the satisfaction of UN office in Cape Verde. • 20 %percent after three months successful operation of the system and receipt on certificate of acceptance signed by Head of UN Office in Cape Verde
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Section 3: Schedule of Requirements and Technical Specifications (ToR)

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BACKGROUND

The United Nations Industrial Development Organization (UNIDO) in partnership with the ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE) recently completed a process of identifying Energy Conservation and Greenhouse Gas (GHG) mitigation measures at the One UN Headquarter building located in the Achada, San Antonio section of Praia, Cape Verde.

The next stage of the process is the implementation of the identified measures. This tender is being issued through this offer for the supply and installation of the proposed measures.

The United Nations Office in Praia, Cape Verde now invites sealed bids from eligible bidders for the supply and installation of various measures as indicated below. Bidder may choose to tender for the implementation of any of these measures pertaining to the criteria herein outlined under, **‘Qualification Requirements and Evaluation Criteria’**.

- a. **Project 1: Install High Efficient LED Tube lamps to Replace Inefficient T8 Fluorescent Lighting Systems and Install Occupancy Sensors for Efficient Lighting System Controls for Increased Efficiency.**
- b. **Project 2: Install a 25-kW grid-connected photovoltaic (PV) system), on the roof of the UN its office building in the Achada Santo Antonio section of Praia, Cape Verde.**

The objective of this installation is to ensure the availability of green electricity for the operation of the 1UN building, leading to a reduction in electricity bills and GHG emissions mitigation.

PURPOSE OF THE CONTRACT

The contract is in two parts aimed at reducing electricity consumption; improve efficiency and identifying new sources for power through the installation of a 25-kW Solar PV at the One UN Headquarter building in Praia, Cape Verde.

The first part of the project covers energy conservation in terms of replacing the existing lighting system with energy efficient types, and enhanced load management with a dual technology occupancy sensor installation on the lighting system.

As an alternative offer the proponent can present a proposal for an overall energy control system using different technology.

The second system is the installation of a 25-kW Solar PV system on the roof of the building. On a turnkey basis, the contract calls for the design and installation of a 25-kW Solar PV Power System to provide power for the electrical systems in the One UN Headquarter building. The solar system will provide part of the total building energy consumption. Any excess power from the PV system shall be diverted for sale to the Electra Power Company of Cape Verde, by a bidirectional energy counter registering the energy supplied by the solar system to the grid.

Testing and commissioning of the system constitute an important part of these terms of reference. The contract includes also the training of local technicians on site to operate and maintain the system.

SCOPE OF THE CONTRACTING SERVICES

The Contract services are expected to cover the following:

1. Supply and installation of an efficient lighting system based on LED tube lamps replacing the T8 fluorescent lamps and a dual-technology occupancy sensors

2. Provide detailed design with drawings of the solar PV Power system for UN/UNIDO/ECREEE approval.
3. Supply equipment specifications and quantities referred to in attached Bills of Quantities (refer to the Appendix 1). The contractor may make appropriate variations to the bill of quantities as seen fit, but this has to be approved by UN/UNIDO/ECREEE team. These equipment specifications and quantities are to be cleared beforehand.

NOTE that the quotations have to include all charges like custom clearances of goods entering Cape Verde from other countries, transport to the project site in Praia.

4. Ensure the timely supply and installation of the equipment at the identified site.
5. Conduct training as described under the Purpose of Contract including a theoretic inception session giving an overview and explaining the expected roles of different stakeholders in running and maintaining the system.
6. Among the trained, examine and select 5, at least 2 of whom should have been involved in the on-job training (hired as general labourer) during the whole system installation process, to be the operators of the power system.
7. Starting-up and final commissioning of the facility and providing test certificates, in coordination with UN/UNIDO/ECREEE team.
8. Record the different stages of establishing the facility on a DVD film and submit to UN/UNIDO/ECREEE.
9. The entire job is a turnkey contract, and on a fixed cost basis.
10. The bid tender may be submitted for either one of the projects or for both

CONTACT PERSON IN CAPE VERDE:

Octavio Silva
 UN Operations Manager
 Achada Santo Antonio
 One UN Building
 C.P. 62, Praia, Cape Verde
octavio.silva@cv.jo.un.org / petra.lanz@cv.jo.un.org
 Tel.+238 2609600

TARGET BENEFICIARIES

The project will serve to reduce electric energy consumption, supply clean electricity from renewable energy source to the UN building, reduce GHG emissions and reduce operating cost to the UN. The successful implementation of the project will offer relief to the ELECTRA power distribution system in Praia, Cape Verde.

MAIN LOCAL COUNTERPARTS FOR PROJECT IMPLEMENTATION

- United Nations Office in Cape Verde
- ECOWAS Regional Centre for Renewable Energy and Energy Efficiency (ECREEE)
- UNIDO, UN Headquarter Building, Achada San Antonio, Cape Verde
- ELECTRA, Praia, Cape Verde.

COMPOSITION AND PROFILE OF THE SUB-CONTRACTORS TEAM

A team shall be composed of qualified technical personnel to effect the project installation at every level for successful operation of the system. Their profile will cover (but not limited to) civil, mechanical and electrical engineering. The sub-contractor and the team members will have, at least 2 years of proven experiences in solar PV technology, and significant working experience in the West Africa sub-region. The working language required is English and Portuguese.

GENERAL TIME SCHEDULE AND REPORTING

The activities should be completed before the end of **31 May 2013**, including any travel time and reports compilation.

The subcontractor shall prepare the following reports, to be reviewed by UNIDO Project Manager.

- i. **First Progress Report:** To include the work plan for the activities, including schedule of works, Shipping Documents, Quality Certification of the Equipment, pre-shipment test results as well as the programme of the Performance Tests.
- ii. **Second Progress Report:** To include commissioning and start-up of the Equipment at the Project Site, on-the-job training of personnel and testing results and including the Certificate of Acceptance, duly signed by the Contractor, the Project Counterpart and Head of UN Office in Cape Verde. The Sub-Contractor should also include any recommendation; lessons learnt and advise, should the project be replicated at another site. A DVD record as specified above shall be submitted as well.
- iii. **Final Report:** covering all the work under this Contract. Should any delay occur or unexpected circumstances arise the sub-contractor should notify UN Office in Cape Verde in writing in a timely manner. All report must be in English and presented in electronic form as well as in hard copy.

CUSTOMS CLEARANCE

The Sub-Contractor shall enquire from the responsible government department for the correct procedures and necessary documents for the custom clearance of any imported goods for tender. **(NOTE: the foreseen clearance charges have to be included in the main quotation)**. However, in general: Section 7 of the Convention on the Privileges and Immunities of the United Nations is applicable. The Section provides, inter alia, that the United Nations, including its subsidiary organs, is exempt from all direct taxes, except charges for utilities services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use. In the event any governmental authority refuses to recognize UN's exemption from such taxes, duties or charges, the Supplier shall immediately consult with UN to determine a mutually acceptable procedure.

Accordingly, the Supplier authorizes UN to deduct from the Supplier's invoice any amount representing such taxes, duties or charges, unless the Supplier has consulted with UN before the payment thereof and UN has, in each instance, specifically authorized the Supplier to pay such taxes, duties or charges under protest. In that event, the Supplier shall provide UN with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

Risk of loss: Risk of loss, damage to or destruction of the goods shall be governed in accordance with DDU INCOTERMS 2010, unless otherwise agreed upon by the Parties on the front side of this Purchase Order.

Export licences: Notwithstanding any INCOTERMS 2010 used in this Purchase Order, the Supplier shall obtain any export/import licences required for the goods.

However experience has shown importation normally takes a long time and so Companies with local presence should use their local offices to directly import the equipment to Cape Verde.

AMENDMENTS OF BIDDING DOCUMENTS

- At any time prior to the deadline for submission of bids, UN, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the bidding documents by amendment.
- All prospective bidders that have received the bidding documents will be notified of the amendment in writing or by cable, and will be binding on them.
- In order to allow prospective bidders reasonable time in which to take the amendment into account in preparing their bids, UN, at its discretion, may extend the deadline for the submission of bids.

QUALIFICATION REQUIREMENTS AND EVALUATION CRITERIA

1 QUALIFICATION REQUIREMENTS	11 EVALUATION CRITERIA
<p><u>OPERATIONAL</u></p> <p><u>Certificate of Incorporation:</u> The Proposer should be registered as a legal Entity authorized to enter into contracts for provision of services and goods. As a proof, the Proposer should provide a certified copy of Certificate of Incorporation or other documents setting forth the legal basis of the company .It is highly recommended to register as UN User at the United Nation Global Marketplace (www.ungm.org) prior to submitting the offer.</p> <p><u>Licenses/Authorizations:</u> The proposer should provide a copy of relevant licenses and/or authorizations, where applicable, enabling the company to perform the required services /work required under the RFP.</p> <p><u>International scope of operations:</u> The invitee should provide, if available, information on operations outside of the country of origin.</p> <p><u>Internationally recognized Quality Standard:</u> The Proposer is to indicate if and which established international recognized Quality Control System /Standards are applied to their activity (eg.,.CE.ISO 9001, .ISO 14001 or Eurovent/ARI). If applicable, the</p>	<p><u>PRICE /COST</u></p> <p>Total price i.e. total sum of unit price as per cost breakdown required in Appendix 3 of the RFP documents.</p> <p><u>Other cost requirements</u></p> <p>Price for equipment, parts and supplies shall be quoted DDU (INCOTERMS 2010) Project site. <i>Note: While price is an important factor, however, it shall not be the primary consideration in evaluating responses to this RFP.</i></p> <p><u>Proposed payment terms</u></p> <p>Requirement for the advance payment, progress payments plan, etc, evaluated versus UN’ s normal requirements in the Model Contract.</p> <p><u>CONTRACTUAL</u></p> <p>Agreement to the UN contractual terms and conditions .Acceptance of UN ’s Model Contract and Conditions of Contract; .All other statements as required in the ToR.</p> <p><u>TECHNICAL</u></p>

certificates should be provided.

PRODUCT

Internationally recognized quality standards for goods/service: The Invitee should provide information that the required goods meet international quality standards and, if yes, exactly which standards.

EXPERIENCE

Years in business: The Proposer should justify at least three (3) years of experience in the field of services/works. The bidder shall list those previous experiences in fulfilling contracts of similar to the subjects RFP for the private sector and for UN Agencies.

MANDATORY FINANCIAL QUALIFICATION REQUIREMENTS

A certified copy of the Financial Statement has to be provided and the proposer shall meet the following basic financial Criteria;

Profitability: Profit Margin ratio or Return on Assets Ratio should be in excess of 1 percent. **Solvency ratio:** A solvency ratio (ratio of current assets to current liabilities) of more than 1 is required.

Turnover: The average annual turnover for the past 3 years (or for whatever period of the time the contractor has been in the business for, if it has not yet reached 3 years) should be at least four times more than anticipated value of the contract.

Litigation in progress: The impact of any pending claims, arbitration and other pending legal action should not exceed 50% of total contract cost.

Compliance with the Terms of Reference with particular attention to the following: If alternate products or solutions are offered, all necessary documentation has to be attached to the technical offer to prove the equivalence.

MANAGEMENT

Contractor's organization, structure and overall facilities.

Contractor's facilities and resources available for this contract;

Proposed subcontracting effort in connection with obtaining additional resources;

Adequacy of management organization and plan to satisfy requirements with particular attention to **turn-key projects in African Countries**

Guarantee Terms and Conditions

Adequacy of proposed guarantee terms and conditions in comparison with those defined in the TOR.

Personal qualifications

Technical experience of principal personnel related to the performance of the requirement. Education qualification related to the performance of the requirement should be provided in CV when applicable.

PAYMENT TERMS

- 10% on submission of complete set of system drawings by successful Bidder and approval of the same by UN. The payment shall be made against an advance payment guarantee (bank bond or bank guarantee) for the total amount received and for a period covering three months after completion of contract.
- 50% on receipt of complete material at the One UN Building site.
- 20 % percent after successful installation, testing, commissioning and stabilization of operation to the satisfaction of UN office in Cape Verde.
- 20 %percent after three months successful operation of the system and receipt on certificate of acceptance signed by Head of UN Office in Cape Verde

GENERAL TIME SCHEDULE AND REPORTING

The activities should be completed **at most five months after the signing of the contract**, including any travel time and reports compilation. The bidder shall prepare the following reports, to be reviewed by UN:

- iv. **First Progress Report at latest after one month:** To include the work plan for the activities, including schedule of works, drawings of the systems, shipping documents, quality certification of the equipment.
- v. **Final Report:** To include commissioning and start-up of the equipment at the project site, on-the-job training of personnel, testing results including the certificate of acceptance duly signed by the Contractor and UN. The contractor should also include any recommendations; lessons learnt and advise, should the project be replicated at another site. A DVD covering all the work under this contract will be provided.

Should any delay occur or unexpected circumstances arise, the contractor should notify UN office in Cape Verde in writing in a timely manner. All reports must be in English or Portuguese and presented in electronic form as well as in hard copy.

SUBMISSION AND DEADLINE FOR OFFERS

Bidders shall submit their technical and financial proposals written in English or Portuguese (two copies each and 1 original) in two sealed separate and stamped envelopes. These envelopes shall be wrapped up in a third large envelope:

- The first stamped sealed envelope, written on the bidder's name, containing the technical proposal (in two copies, 1 original) and all required supporting documents (e.g. financial statement, certificate of incorporation, company profile, quality certificates) shall bear the title "TECHNICAL PROPOSAL".
- The second stamped sealed envelope, written on the bidder's name, containing the financial proposal (in two copies, 1 original), shall bear the title "FINANCIAL PROPOSAL".
- The third large envelope containing the other two sealed envelopes with the technical and financial proposals shall bear the title:
 - "Supply and Installation of High Efficient LED Lighting System at the One UN Headquarter building", and
"Supply and Installation of Dual Technology Occupancy Sensors at the One UN Headquarter building", and/or
 - "Supply and Installation of a 25 kW grid-connected PV System at the One UN Headquarter building".

No distinctive sign indicating the name of the bidding company shall be visible on the envelope.

The third envelope must be sent latest by, 12 November 2012, 16:00hrs, Cape Verdean time, to:

Octavio Silva
UN Operations Manager
Achada Santo Antonio
One UN Building
C.P. 62, Praia, Cape Verde
octavio.silva@cv.jo.un.org / petra.lanz@cv.jo.un.org
Tel.+238 2609600

Project 1

- a) **SUPPLY AND INSTALLATION OF HIGH-EFFICIENT LED LIGHTING SYSTEMS TO REPLACE EXISTING T12 LIGHTING UNITS, AND**
 - b) **SUPPLY AND INSTALLATION OF OCCUPANCY SENSORS IN THE ONE UN HEADQUARTER BUILDING IN PRAIA, CAPE VERDE**
-

TERMS OF REFERENCE

1. Background and Purpose of Tender

- a) The purpose of the measure is to replace the lighting systems in the building with a more efficient system, by replacing the existing fluorescent lighting tubes for an equivalent LED tubes. The LED lamps consume 3 to 4 times less than equivalent fluorescent lamps without thermal losses and with a long lifetime. Only the existing Compact Fluorescent Lighting (CFL) shall be left in place 'as is' under this contract.

This measure includes also the replacement of the 400-Watt mercury vapor fixtures with equivalent LED fixtures

- b) In addition the project aims to install dual technology Occupancy Sensors in the lighting circuitry as necessary to curtail energy waste. This shall minimize and prevent inadvertent lighting power consumption. Individual offices will have the existing lighting switch adapted with wall-mounted occupancy sensors, while lighting in the common opened office spaces will be controlled with ceiling-mounted sensors. The lighting sensors shall have dual technology (infrared and ultrasonic) specifications for the required versatility.

The ceiling-mounted (just like the existing smoke detectors) sensors will be tied into the existing lighting circuitry in a matrix to provide complete coverage of the floor spaces. The lighting switches will be left in the 'on' position for the sensors to control lighting energy based on occupancy and timed 'off' setup.

In this system, areas are only lit based on actual occupancy or detected motion, thereby preventing lighting energy waste while serving the dual purpose of energy conservation and security alert.

- Install Occupancy sensors in designated office locations

2. Scope of the Contract

This scope of work is to perform energy saving lighting replacements and installation of dual technology occupancy sensors at the One UN Building per the following.

- (a) The installer of the designated system is herein referred to as the "subcontractor".
- (b) The Subcontractor shall be familiar with such installation projects in experience. The subcontractor shall be supplied with the materials for the completion of the job by the UN personnel.
- (c) The subcontractor shall verify with the project manager that the under-specified technical highlights are for most part provided with the material supply.
- (d) The subcontractor shall make sample installation for inspection by the project manager before continuing to completion.

- (e) This subcontract is to perform a **COMPLETE** lighting replacement and installation of the dual technology occupancy sensors at the One UN Building. It is suggested that the subcontractor confirm lighting counts for appropriate material supply for the project.
- (f) **As an alternative offer the proponent can present a proposal for an overall energy control system using different technology.**
- (g) The Sub-contractor shall supply and install the following;

Lot	Material	Qty	Unit Price	Total Cost
1a	Supply LED tube lamps equivalent for replacing normal 36W T8 fluorescent lamps	560		
	Supply LED tube lamps equivalent for replacing normal 18W T8 fluorescent lamps	90		
	LED Spotlight stud-mounted Metal Halide fixture (complete), equivalent to 400-Watt mercury vapor fixtures	10		
	250 Watt, Stud-mounted Metal Halide fixture (complete)	10		
1b	Dual Technology (infrared & ultrasonic) Occupancy Sensors, Ceiling-mounted unit	30		
	Dual Technology (infrared & ultrasonic) Occupancy Sensors, Wall-mounted unit	20		
1c	Alternative offer for an overall energy control system using different technology			
	Total			

Note: Include any other devices such as screws and cables that would be required for complete equipment installation.

- Subcontractor shall obtain all the lighting material to be installed from the UN building's Operation Manager. Other items such as wire, wire nuts, paint, etc shall be the responsibility of the contractor
- Subcontractor is responsible for entire building lighting replacements as well as all costs associated with missed areas, omissions and errors in the survey
- All costs for permits and inspections are included in the subcontract price.
- All materials furnished will be new in every respect. All conductors shall be copper. All conductors shall be installed in approved conduits
- Subcontract price includes all applicable taxes
- It is agreed that the unit prices contained in the attached scope of work can be used by UN in additions and deletions to the project throughout the duration of same. All additions and/or deletions must be approved in writing by UN prior to implementation.
- It is anticipated that most of the work will be accomplished during unoccupied hours. All costs for after hours work is included in the subcontract price.

- Properly dispose of all trash and debris. Subcontract price includes all fees and charges associated with storage and removal of related trash and debris.
- Subcontractor shall provide all necessary materials, tools, equipment, machinery, labour and supervision to accomplish work.
- All work is to be in strict accordance with all state and local codes and ordinances
- Workmanship shall be warranted for one year from date of acceptance.
- Appropriate insurance and bonding will be provided by subcontractor.
- Subcontractor shall inventory material and provide receipts of acceptance to UN within 48 hours. Subcontractor shall provide adequate security to safeguard material against theft, weather or other eventuality and shall provide UN with a running total of material used and keep UN updated on material available status. This shall be done with the cooperation of the UN Project Officer.
- Upon conclusion of project, all material not installed continues to be the property of UN and subcontractor shall provide UN with an inventory of contents.
- Subcontractor shall coordinate and obtain approval for jobsite storage or materials, tools, equipment, etc. with the building manager/superintendent and UN. If additional storage is required it is subcontractor's responsibility arrange that with UN
- It is agreed that adequate manpower, fully trained, will be provided to meet the agreed schedule. If subcontractor should fall behind schedule, subcontractor shall immediately take whatever steps are necessary (additional manpower, crews, etc.) to meet and maintain the UN's schedule. If subcontractor is not found to be in compliance within two (2) working days, UN reserves the right to supplement the subcontractor's workforce and deduct the cost from the contract
- Under no circumstances is the normal operation of any building or building affairs of the owner/occupants to be impaired or disrupted unless scheduled and approved in advance by the UN contract officer
- Thoroughly clean and restore to original condition all work areas at the end of each day or when the task is complete, whichever is sooner. Do not block or restrict access to any area at any time without prior approval of the UN contract officer.
- Subcontractor shall coordinate and obtain approval for jobsite access with the UN contract officer.
- Jobsite safety is of the utmost concern to UN on this project.
 - Report any unsafe jobsite condition to UN immediately
 - Submit a complete accident report on any serious job injury within 24 hours of such occurrence.
 - Hold meaningful jobsite safety meetings at a minimum of once a week.
- Provide full time project manager to supervise personnel during the installation period. This is to include daily walk-through and inspections at the request of UN. Subcontractor shall provide a written weekly status report indicating work completed, work schedule, and any coordination issues requiring UN contract officer's assistance.
- Unless specifically noted, UN's obligations expressly exclude any work or services of any nature associated or connected with the identification, abatement, cleanup, control,

removal, or disposal of hazardous materials or substances including but not limited to asbestos or PCB's, in or on the premises. Subcontractor will not enter into or undertake any such action for or on behalf of UN

- UN will contract for PCB ballast and lamp recycling. Subcontractor and UN will coordinate for removal from the jobsite. The PCB ballasts will be disposed of by current local and/or national Environmental Agency requirements.
- Subcontractor shall provide to UN a copy of the building's footprint containing the number and type of fixture replacements by room or area.
- In areas that presently have multi-level switching for lighting circuits, subcontractor shall maintain this function and obtain advance approval from the UN to deviate from this method of operation.
- Subcontractor shall be responsible for the image portrayed from their employees. UN reserves the right to demand removal of any such employee found to be portraying any improper image or for misconduct. No smoking is allowed within any structure at the building sites and is grounds for removal.
- Subcontractor's personnel shall have no unwarranted verbal or nonverbal communication with any UN employee or client.
- Subcontractor shall submit two (2) copies of their MSDS and safety manuals within five (5) days of award of subcontract.
- Subcontractor shall provide a replacement work schedule within three (3) days upon award of subcontract.
- Subcontractor shall submit progress billing requests by the first of the month with 10 % retention shown. Payment will be made within 45 days of invoice date after work in place approval is received by UN personnel.
- Subcontractor is responsible for all efforts necessary to gain permit approval for the job

Sample Occupancy Sensors



Ceiling-mounted unit



Wall-mounted unit

3. Technical and Operational Specifications

a) LED Tube Lamps

The following specifications apply to the selected LED Tube Lamps:

- The LED Tube Lamps are to replace the existent fluorescent tube lamps
- Lifetime of minimum 50.000 hours;
- White Color light;
- Manufacturers: Philips, Osram or Trilux;

b) Dual Technology Occupancy Sensors

- i. Sensor shall be available with a two-way coverage pattern.
- ii. Sensor shall activate the electrical load upon entry into the controlled area and deactivate it after the area is vacated.
- iii. Sensor shall be able to detect the moderate types of motion (that is picking up a telephone, raising a hand in class) of people seated anywhere in classrooms, offices and conference rooms.
- iv. Sensor shall maintain a constant level of sensitivity to motion regardless of changes in environmental conditions including airflow.
- v. Sensor shall have the ability to resist false activation in high airflow.
- vi. Sensor shall utilize passive infrared sensing technology to activate lights and other equipment connected to it.
- vii. Sensor shall maintain lighting in one of two selectable modes: (1) either (passive infrared or ultrasonic technology), (2) both (passive infrared and ultrasonic technology).
- viii. Sensor shall cover areas from 60 to 160 m² of half-step motion and 80 m² of moderate motion in rooms without partitions.
- ix. Sensor shall contain timing circuitry to provide adjustable “time to lights off” delay of 15 seconds or less (for installer checkout) to 30 minutes. A 10-minute delay shall automatically default if the potentiometer is left at minimum.
- x. Sensor shall incorporate separate, concurrent time delays for ultrasonic and infrared detectors.
- xi. Sensor shall provide a ten-second “grace period” that allows lights to be turned on by motion anywhere in a room after they are turned off due to inactivity.
- xii. Sensor shall have capacity to be wired to a momentary pushbutton switch for manual on/off control, or to a relay (up to 25 Amp) for start/stop control of selected circuitry.
- xiii. Sensor shall be fully self-resetting in Automatic mode; lights turned off manually via the pushbutton switch shall stay off while the room remains occupied. After the room is vacated and the time delay and grace period have elapsed, lights

shall turn on automatically upon re-entry. The BAS relay shall remain active as long as occupancy is detected.

- xiv. Sensor shall self-adjust sensitivity (range) and time delay in real-time to optimize performance.
- xv. Sensor shall include a manual on option which requires occupants to turn on lights and activate BAS relay manually via a wall switch.
- xvi. Sensor shall provide a Building Automation system (BAS) interface via (1) a built-in isolated Form C relay output, (2) an open collector output, with or without pull-up option, or (3) a direct BAS connection.
- xvii. Sensor shall provide a “Zero Time Delay” contact closure for systems, eg. Air conditioners, with an internal timing function.
- xviii. Sensor shall provide a bi-Color LED to indicate which technology detects motion.
- xix. Sensor shall provide a manual override switch, which closes the BAS relay and allows the lighting load to be turned on without tools in the event of sensor malfunction.
- xx. Sensor electronics shall be replaceable, in the event of failure, without disturbing hard-wiring or sensor mounting.
- xxi. Sensor housing shall comply with UL 94V0 or equivalent specification and shall be equipped with a protective grill to shield the detectors from damage.
- xxii. Sensor shall be UL (or equivalent specification) listed.
- xxiii. Sensor shall be designed for parallel wiring to allow coverage of large areas.
- xxiv. Sensor shall perform within the US FDA’s guidelines (or equivalent specification) for ultrasonic devices.

Project 2

INSTALLATION OF A 25-kW GRID-CONNECTED PHOTOVOLTAIC SYSTEM AT THE ONE UNITED NATION HEADQUARTER BUILDING IN PRAIA, CAPE VERDE

TERMS OF REFERENCE

1. Objective and Purpose of tender

UN calls for offers to design, supply components, install and commission a 25-kW grid-connected photovoltaic (PV) system on the roof of the One UN Headquarter building. The PV system will be grid-connected, without battery bank.

The photovoltaic modules will be installed on the roof of the building, supported on a galvanized metal as shown in appendix 5.

The panels will be installed with the optimum inclination to ensure maximum output from the system. The lower end of the mounted solar panels shall flush with the parapet to prevent obstruction to the sun's incidence.

Other accessories/equipment (including charge controllers, inverter, etc.) will be located in a duly prepared space in the building. A small electronic counter board will be installed in the UN building to indicate the real-time the power output of the PV system, GHG emissions and costs savings. The contract will also include a video documentary on the installation to be used for hands-on training activities.

2. Scope of the Contract

The Contract services are expected to cover the following:

- Provide detailed design of the solar PV system for UN approval.
- Supply equipment specifications and quantities referred to in attached Bills of Quantities (Appendix 1). The bidder can make appropriate variations to the bill of quantities – but needs the approval of UN.
- Installation of the equipment at the identified project site, performance testing and final commissioning of the facility (provide test certificates for various components of the system).
- On job training for UN staff on the operation and maintenance of the system; deliver an easy understandable operation/user manual in English and Portuguese; this includes instructions on how to operate and maintain the PV system (including troubleshooting, list of suppliers and spare parts).
- Warranty of the system for one-year faultless operation and technical advisory service during the first year.
- Risk liability of all personnel associated with implementation and realization of the project.
- The entire job is a turnkey contract on fixed cost basis.

3. Technical and Operational Specifications

General

An energy audit of the electricity bills of the One UN building shows significant daily power consumption. The table below is an end-use breakdown of power consumption of various systems in the building. The systems in the building are mainly categorized into the following,

- Air conditioning
- Lighting, and
- Miscellaneous office equipment

Table 1: Electricity End-Use Breakdown at the One UN Building

System	Peak Load (kVA)	Equivalent Full Load Hours/year	Energy Consumption (kWh)
Air Conditioning	65	4 000	156 000
Lighting	24	3 000	61 881
Miscellaneous Equipment	13	3 000	31 200

The monthly average electricity consumption of the UN office is estimated at 19,000 kWh. A total annual consumption of 232,000 kWh is recorded in 2011. This figure was obtained from previous monthly electricity bills. From the analysis of the energy end-use breakdown of power consumption in the building it is estimated that lighting consumes approximate as presented above.

The relatively high electricity consumer tariff in Cape Verde (29 EUR/cents/kWh in this case) and the new renewable energy law which allows IPPs to feed into the grid of the ELECTRA, opens up opportunities for the installation of PV projects by private customers.

OPERATIONAL

The system will operate as follows:

- The system connects automatically to the grid, supplying electricity directly to the building through a bidirectional counter, registering the energy supplied by the solar system to the grid;
- In case of electricity failure on the public grid, the building will be powered by the existent backup generator, and the PV system.

All system components have to meet guarantee/warranty terms and high-quality standards (provide certification) to ensure long-term sustainability of the PV system. The local conditions have to be taken into consideration (proximity to the sea, strong wind). The system will be constructed such that a user can perform routine maintenance and replacing works, and a technician can easily perform system diagnostics or replace components. The bidder will provide the most appropriate system integration, components, assembly and packaging that meet all specifications.

PV Modules

- PV modules must be listed on any applicable UN's list of preferred Solar PV module list, and must qualify for eligibility under the any CV's such program.
- System must comply with **IEEE 1262** "Recommended Practice for Qualifications of Photovoltaic Modules", **IEC 61215** "Crystalline silicon terrestrial photovoltaic modules – Design qualification and type approval" and **IEC 61730-1** and **61730-2** "Photovoltaic module safety qualification, requirements for construction and testing.
- The available roof space for the PV installation is the Southeast section of the building's roof. The space must be modified with a PV mounting structure (see Appendix 4 for a sketch), allowing the installation of all photovoltaic panels for the provision of a total installed power of 25 kW. The solar panel should be prepared for installation in saline environment, with protection of **IP 66** and a safety of **class II**.
- The available space must be assessed by the bidder to accommodate the selected Solar PV modules with adequate room for maintenance
- The intended final construction of the supporting metal frame and the Solar PV module has been sketched and shown in Appendix 4 for review.

Inverter and miscellaneous accessories

The inverter has to be specified for the maximum load of the PV system. Other accessories needed for the installation and operation of the system shall be specified according to the installed PV capacity and the local conditions (roof of the building). A small electronic counter board will be installed at the One UN Building which shows the current output of the PV system, GHG emissions and costs saved.

Electric Power Requirements:

- Power provided must be compatible with the onsite distribution system (**three phase voltage**).
- Power capacity should be measured at the inverter AC output using the PV USA Test Conditions (PTC), i.e. 1,000 Watts/m², 20 °C ambient temperature and wind speed of 1 m/s.
- The System must include all the hardware needed for the solar PV.
- All systems must be installed in accordance with all applicable requirements of local electrical codes and the US National Electrical Code (NEC), including but not limited to Article 690, "Solar Photovoltaic Systems" and Article 705 - "Interconnected Electrical Power Production Sources" or the EU equivalent.
- Systems must be designed and installed using UL or ETL listed components, including mounting systems.
- Modules must be certified to UL 1703 - "Flat-Plate Photovoltaic Modules and Panels" or equivalent.
- Inverters must comply with the following requirements or EU equivalent:
 - IEEE 929-2000 - "Recommended Practice for Utility Interface of Photovoltaic Systems"
 - UL 1741 - "Standard for Static Inverters and Charge Controllers for use in Photovoltaic Systems"
 - Listed on the CEC list of eligible inverters
- Other technical codes that will apply include:
 - US AMSE PTC 50 (solar PV performance)

- ANSI Z21.83 (solar PV performance and safety)
 - US NFPA 853 (solar PVs near buildings) or equivalent
 - US NEPA 70 (electrical components) or equivalent
 - IEEE 1547 (interconnections) or equivalent
 - US National Electrical Safety Code - ANSI C2 - 1999 or equivalent
 - All applicable CV Building Codes and requirements
- The remaining components of the system (wiring, component, wiring, conduits, and connections) must be suited for conditions for which they are to be installed. It is preferred by UN that when possible, inverters are located inside out of the weather in a minimum NEMA 12 enclosure or equivalent. If inverters are in exterior locations, they shall be installed in all-weather NEMA 4X enclosures or equivalent. An interval data meter must be installed to measure the AC output of the inverter. This meter should be located in a location accessible to CV Building inspectors, UN officials.
 - Interconnection must comply with any applicable to local Cape Verde regulations on such Interconnection Standards for non-Utility generation. Subcontractor will assist the UN in preparing and submitting appropriate interconnection agreements with Electra of Cape Verde. This shall be done at no cost or liability to UN.

Meters

- Subcontractor will provide revenue grade Interval Data Recording (IDR) meters complete with industry standard telemetry for communication with Ethernet, cellular or other common output capabilities.
- Subcontractor will provide connection to the UN Building's Energy Management System (EMS) for the purposes of metering, monitoring and data collection of solar production.
- Meters must connect to a monitoring/data collection recording solar production through Time-of-Use (TOU) increments applicable to the local utility standards, with a minimum 15 minute intervals or to match the Electra's mode of metering.

Structural Requirements

- All structures and structural elements, including array structures, shall be designed in accordance with all applicable CV Building Codes and standards pertaining to the erection of such structures.
- The subcontractor shall provide structural calculations, stamped by a licensed professional structural engineer in good standing in CV.
- All structural components, including array structures, shall be designed in a manner commensurate with attaining a minimum 25-year design life. Particular attention shall be given to the prevention of corrosion at the connections between dissimilar metals.
- The structural design should provide for easy and cost effective repair or replacement of the roof. The Subcontractor shall be expected to remove and replace roof-mounted solar systems no more than one time during the contract period at no expense to the United Nations, to allow for major roofing maintenance, including installing a new roof.
- Any roof penetrations must be designed and constructed in collaboration with the roofing professional or manufacturer responsible for the roof and roofing material warranty for the specific site, to ensure that the existing roof warranty is not invalidated by the installation of the solar PV system.

- For rooftop installations where there is no parapet or the parapet is less than 1.5 meters, a 2-metre safety zone from the roof edge to the PV system must be maintained. A 1-metre clear path of travel must be maintained around all rooftop equipment.

Operation and Maintenance

The Subcontractor will be responsible for the operation and all maintenance of the solar PV system at the Subcontractor's own cost. The Subcontractor shall operate and maintain the solar system so as not to disrupt the operation of the facility per the Solar License Agreement.

The Subcontractor shall provide notification to the UN Project Officer as early as practical, but in no event less than five days, prior to any planned maintenance and repairs. The Subcontractor will provide a minimum of ten days notification to the UN Project Officer if any planned repairs or maintenance that will result in any disruption to the building electrical load.

The UN Project Officer will use all reasonable efforts to maintain the facilities in good condition and repair to be able to receive and utilize the solar electricity supplied by the proposed project.

Maintenance for the solar PV system shall be outlined and included in the Solar License Agreement (SLA) and Solar Power Purchase Agreement (SPPA). All system warranties and workmanship guarantees will be in effect during the SLA and the SPPA periods.

As part of the acceptance of the solar PV system the subcontractor shall instruct and provide operations manuals on how to shut down the solar PV system in the event of an emergency. The Subcontractor shall insure that the UN Building emergency first responders can easily identify what to do in the event of an emergency and able to perform these tasks quickly and safely.

Labeling

Label whether the system is stand-alone, grid-tied or hybrid.

- Conductor sizes.
- Conductor insulation types (i.e., THHN, THWN, direct burial cable, etc.).
- Conductor material (i.e., copper/aluminum).
- Conduit sizes.
- Conduit material (i.e., non-metallic, EMT, etc.).
- Over-current device ratings.
- Existing and new panel amperage ratings (buss ratings).
- Series and parallel configuration of the module connections.
-

Equipment Requirements

Provide the following general information.

- Module short circuit current ratings.
- Module open circuit voltage ratings.
- Module series fuse ratings.
- Inverter output circuit current rating.
- Inverter UL listings.
- All associated documentation (i.e., batteries, inverters, disconnects,

- Modules, charge controllers, over-current devices etc.).
- Method of grounding for modules and array.

Note: Voltage correction factor is based on 125% (USA, 2008 NEC Table 690.7) or equivalent.

Panels

Roof Mounted Panels

Provide the Following Information:

- An Engineer's evaluation regarding the dead-load capability of the existing roof structure and its ability to support the added weight of the PV panels.
- For flat roof installations provide method of repair for roof penetrations.

Pole or Ground Mounted Panels

Provide the following Information:

- Site Plan Review approval
- Site Plan to include the following:
 - Location of panel(s) on property.
 - Dimensions from panels to property lines.
 - Dimensions from panels to other structures on the property and property easements.
 - Engineered footing design.

Solar PV Technical Specifications

Technical parameter for main equipment - 250Wp (or higher) polycrystalline PV Panels)

- Optimum operating voltage: 105V
- Open-circuit voltage: 136V
- Optimum operating current: 0.95A
- Short circuit current: 1.17A
- System max. voltage : 1000V
- Temperature coefficient of open-circuit voltage: -0.28V%/°C

SMA (or equivalent) Grid-connected inverter

Technical characteristic:

- Sine wave current output
- High conversion efficiency
- MPPT
- MPPT efficiency >99%
- Voltage input at wide range
- Frequency transformer isolation
- Perfect protection function and high system reliability

- Various communication interface
- Simple installation and operation
- Optional multilingual LCD
- Settable the protection and operational factor

Technical parameters:

DC side:

Max. DC voltage: 880Vdc

Max. Power voltage tracking range: 450—820Vdc

Max. Input loop : 1

AC side:

Rated grid voltage: 310—450Vac

Rated grid frequency: 50/60Hz

Total current waveform distortion rate: <3% (rated power)

Power factor: >0.99 (rated power)

System

Max. Efficiency: 96%

Europe efficiency: 95%

Protection grade: IP20 (indoor)

Internal power consumption at night: 0W

Operating temperature: -20℃ —+40℃

Cooling-down method: forced air cooling

Relative humidity: 0-95%, non-condensation

Display: LCD

Communication interface: RS232/485、Ethernet/GPRS

APPENDIX 1: BILLS OF QUANTITIES – ONE UN HEADQUARTER BUILDING 25 KW SOLAR PV SYSTEM

APPENDIX 1.1: ROOFTOP-MOUNTED 25-KW SOLAR PV SYSTEM ON THE ONE UN BUILDING IN PRAIA, CAPE VERDE WITH (PV OF 25-KW, BATTERY BANK STORAGE CAPACITY OF 2500 KWH EITHER AT 24 V OR 48 V BATTERY BANK VOLTAGE)

Item No.	Description	Unit	Qty	Unit Price (US\$)	Total Price (US\$)
1	Solar Panels of total 25 kW (polycrystalline 250 W each or higher)	pcs.	100		
2	Sufficient Connection Boxes (according to the PV module unit size and therefore total number)	pcs.			
3	Solar Structure for above panels	pcs.	1		
9	Inverter for the 25 KW PV plant	pcs.	1		
11	Correct Solar Cable size and quantity	pcs.			
13	Correct Earth cable size and quantity	pcs.			
14	Correct Solar Cable size and quantity	pcs.			
15	Correct size of Ducts and Plugs	pcs.			
15	Earth Rod Set 2m, ERB2000	pcs.			
16	Distribution Box DC	pcs.	1		
17	Distribution Box AC 12-way	pcs.	1		
18	Switch Surface 1-way (correct quantity)	pcs.			
19	Back Box	pcs.			
22	Fuse Holder 200A	pcs.	1		
23	Fuse 80A	pcs.	1		
25	Security Lighting	pcs.	1		
	CIF Praia, Cape Verde				
	INLAND FREIGHT				
	DUTIES				
	INSTALLATION				
	TOTAL SITE INCL. INSTALLATION				

*) compliance with the specified items in the table must be confirmed by the bidder's offer and technical documentation and will be verified by ECREEE during technical evaluation. If the proposed item does not comply with ECREEE's specifications, the supplier(s) must indicate that in the "Remarks" column.

Please note!

Offers should factor in taxes (e.g. VAT) and custom clearance charges in their quotations. Offers should not include import duties. The signed Headquarters Agreement between United Nations (UN) and the Cape Verdean Government provides, inter alia, that the UN, is exempt from all direct taxes, except charges for utilities services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use in Cape Verde.

After arrival of the equipments at the custom clearance the UN will provide the contractor with all necessary documents for the custom duty exemption. In the event any governmental authority refuses to recognize the UN's exemption from such taxes, duties or charges, the Supplier shall immediately consult with the UN to

determine a mutually acceptable procedure. Once the contractor pays duty, they should show the invoices and in case of surplus, they are required to refund the cost to the UN. The proposer shall enquire from the responsible government department for the correct procedures and necessary documents for the custom clearance of any imported goods for the tender.

Accordingly, the Supplier authorizes the UN to deduct from the Supplier's invoice any amount representing such taxes, duties or charges, unless the Supplier has consulted with the UN before the payment thereof and the UN has, in each instance, specifically authorized the Supplier to pay such taxes, duties or charges under protest. In that event, the Supplier shall provide the UN with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

Risk of loss and CIF: UN does not assume any responsibility for any risk of loss, damage to or destruction of goods in whatever form and at any level of transportation of goods. The contractor is fully responsible to organize the Cost Insurance Freight (CIF). Risk of loss, damage to or destruction of the goods shall be governed in accordance with the CIF, unless otherwise agreed upon by the Parties on the front side of this Purchase Order.

APPENDIX 2: Location of One UN Headquarter Building – Praia, Achada Santo Antonio



ONE UN Office

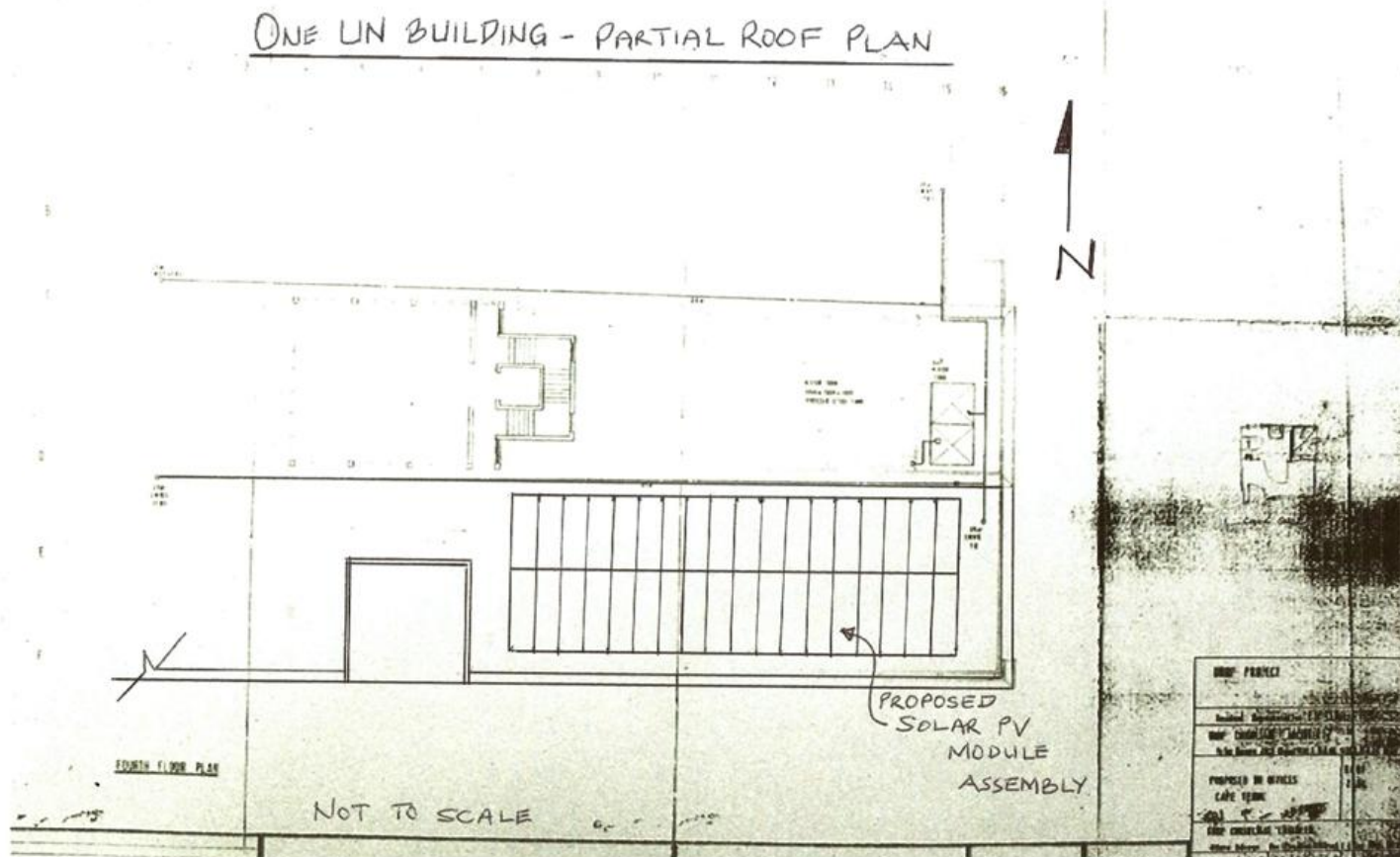


Appendix 3: Climate Data:
Praia, Cape Verde

	Unit	Climate data location	Project location
Latitude	°N	14,9	14,9
Longitude	°E	-23,5	-23,5
Elevation	m	35	35
Heating design temperature	°C	19,2	
Cooling design temperature	°C	30,1	
Earth temperature amplitude	°C	2,7	

Month	Air temperature °C	Relative humidity %	Daily solar radiation - horizontal kWh/m²/d	Atmospheric pressure kPa	Wind speed m/s	Earth temperature °C	Heating degree-days °C-d	Cooling degree-days °C-d
January	22,4	73,6%	5,42	101,1	7,1	23,6	0	384
February	22,2	75,9%	6,17	101,1	6,5	22,7	0	342
March	22,8	76,8%	7,33	101,0	6,0	22,6	0	397
April	23,3	76,7%	7,81	101,0	6,0	22,8	0	399
May	24,1	77,3%	7,47	101,0	6,0	23,1	0	437
June	25,0	77,8%	7,22	101,1	5,2	24,0	0	450
July	25,6	78,6%	6,22	101,0	3,6	25,6	0	484
August	26,4	81,0%	5,75	100,9	3,5	27,0	0	508
September	26,9	82,9%	5,97	100,9	4,0	27,6	0	507
October	26,7	79,5%	5,94	100,9	5,1	27,6	0	518
November	25,5	75,5%	5,17	100,9	5,7	26,7	0	465
December	23,6	74,8%	4,53	101,0	6,5	25,1	0	422
Annual	24,6	77,5%	6,25	101,0	5,4	24,9	0	5.312
Measured at	m				10,0	0,0		

APPENDIX 4: UN Building Roof – Solar Panel Assembly



APPENDIX 5: Metal Structure Schematic to support the Solar panels

SKETCH - PROPOSED MOUNTING FRAME OF SOLAR MODULES

