

**REQUEST FOR PROPOSAL**  
**FOR**  
**SELECTION OF FIRMS/COMPANIES/CONTRACTORS**  
**FOR**  
**“SOLARIZATION OF FUUAST CAMPUSES WITH TWO-  
YEAR OPERATIONS & MAINTENANCE”**



**FEDERAL URDU UNIVERSITY OF ARTS, SCIENCES AND**  
**TECHNOLOGY (FUUAST), ISLAMABAD**

**November 2024**

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## Section-I: Invitation to Bids

### 1.1 Invitation To Bidders

**SUBJECT: PROCUREMENT AND IMPLEMENTATION OF SOLARIZATION PROJECT AT FUUAST CAMPUSES WITH 2-YEAR OPERATION & MAINTENANCE (O&M)**

1. The **Federal Urdu University of Arts, Sciences and Technology (FUUAST)**, hereinafter referred to as the "Procuring Entity," invites proposals from eligible firms to provide contracting services for the solarization of its campuses in Islamabad and Karachi. The packages and scope of work are detailed below.
2. **Eligibility and Requirements:** The Procuring Entity invites sealed bids from firms certified under the Alternative Energy Development Board (AEDB) Certification Regulations, 2021, licensed by the Pakistan Engineering Council (PEC) in the appropriate category, and registered with the Income Tax & GST departments (FBR). Bidders are required to submit bids for the complete scope of work as per the project requirements. Bids will follow the Single Stage-Two Envelope (SSTE) bidding procedure under PPRA Rule 36(b).

1. **Bidding Document:** The Bidding Document is issued to all interested bidders and includes:

- INVITATION FOR BIDS
- INSTRUCTIONS TO BIDDERS
- TECHNICAL SPECIFICATIONS/SCOPE OF WORK/TECHNICAL COMPLIANCE SHEET
- BID DATASHEET
- PARTICULAR/SPECIAL CONDITIONS OF CONTRACT
- SCHEDULE OF REQUIREMENTS (SCHEDULE A TO D)
- SAMPLE FORMS

3. **Preliminary Project Details:**

Package	Project Site	Capacity	Bid Security (Rs.)
Package 1	FUUAST Islamabad Campus	220 kWp	Rs. 500,000/-
Package 2	FUUAST Gulshan Iqbal Campus, Karachi	250 kWp	Rs. 700,000/-
	FUUAST Abdul Haq Campus, Karachi	80 kWp	

**Note:** Fixed Bid security should be accompanied with the technical proposal. Detailed Bill of Quantities (BoQ) is mentioned in the respective section.

5. **Bidders may apply for one or both packages.** A separate Request for Proposal (RFP) document must be purchased for each package. Bids for each package must be prepared and submitted independently, clearly indicating the "Package No" on the covering letter, financial bid form, and outer envelope. Each Technical Bid must also include the Bid Security and proof of Tender Fee of Rs 5000/- per package.
6. **Bidding Documents:** Bidding documents, containing detailed terms and conditions, can be obtained from the Office of the undersigned, the university website, or the PPRA website. The



- price of the bidding documents is Rs. 5,000/- per package (non-refundable), payable via pay order or bank draft in favour of “FUUAST ISLAMABAD.”
7. **Bid Submission Requirements:** Bidders are required to submit separate Technical and Financial Bids for either or all packages mentioned above. The Bid Security and proof of Tender Fee submission must be enclosed in the Technical Bid.
  8. **Bid Security and Submission Deadline:** All bids must include a Bid Security amount as stated above, submitted via Bank Draft/Pay Order in the name of “FUUAST”. Bids must be delivered to the specified address on or before the deadline **(November 28, 2024 at 11:00am)** as per the Bid Data Sheet (BDS). Technical Bids will be opened on the same day at the specified time in the presence of bidders’ representatives who choose to attend.
  9. **Electronic Submission Requirement:** It is mandatory for bidders to submit the bid on the PPRA-EPADS (e-Pak Acquisition and Disposal Systems) system as well before the submission deadline. Any bids received physically after the deadline or without online submission on PPRA-EPADS will be rejected.
  10. **Quality of Work and Completion:** The works will be done to the complete satisfaction of the Project Director as well as the authorized Engineers (Technical Committee) by the FUUAST, whose judgment with regard to quality of the material and workmanship will be final and binding. In case the contractor fails to complete the work in the stipulated time, the FUUAST shall be free to award the balance incomplete work to another contractor at his risk and cost.
  11. **Pre-Bid Conference:** A Pre-Bid Conference will be held as per the schedule in the BDS. The Client’s representative and contact information are also provided in the BDS for any clarifications.
  12. **Bidders’ Attention** is drawn towards the Documents Checklist as specified in the BDS, and they are required to submit the documents as specified therein in the order and requirements specified.

**Important Notes:** Bids received without proof of Tender Fee payment and Bid Security will be rejected. Physical submission is required before the deadline, and submission on PPRA-EPADS is compulsory. FUUAST reserves the right to inspect all works to ensure they meet the standards and specifications outlined. Should the contractor fail to complete the project on time, FUUAST may assign the remaining work to another contractor at the original contractor’s risk and cost.

**Project Director**  
**Federal Urdu University of Arts, Sciences and Technology (FUUAST), Islamabad**  
**Tel: 051-9252860-4, Ext: 192**





## Section-II: Instructions to Bidders (ITB)

### 2.1. Introduction

#### 2.1.1 Scope of Bid

**Federal Urdu University of Arts, Sciences and Technology (FUUAST)** wishes to receive bids for the following scope of work:

**“Design, Supply, Installation, Commissioning and Net-metering of On-Grid Solar System for FUUAST Campuses in Islamabad and Karachi on EPC basis with two year O&M”. (For each package as mentioned).**

Following are the sites with respective solar capacity (kWp), for which bidder may bid package wise:

Package	Project Site	Capacity	Bid Security (Rs.)
Package 1	FUUAST Islamabad Campus	220 kWp	Rs. 500,000/-
Package 2	FUUAST Gulshan Iqbal Campus, Karachi	250 kWp	Rs. 700,000/-
	FUUAST Abdul Haq Campus, Karachi	80 kWp	

**Note: Fixed Bid security is mentioned for each package which should be accompanied with the technical proposal.**

**The Bidders are required to submit the Technical and Financial Bid separately for either or all packages as mentioned above. The Bid Security shall be enclosed in the Technical Bid for each proposal.**

**Bidders must quote for the complete scope of work, pursuant to Clause 2.1 above. Any Bid covering partial scope of work will be rejected as non-responsive.**

#### 2.1.2 Source of Funds

The above scope of work is funded by **Higher Education Commission (HEC)** of Pakistan and **Federal Urdu University of Arts, Sciences and Technology (FUUAST)**, Islamabad.

#### 2.1.3 Eligible Bidders

Bidding is open to all interested Contractor firms meeting the following requirements.

**Joint Ventures are not ALLOWED.**

1. Valid AEDB registration in C3 Category or above (Attach valid registration)
2. Valid Pakistan Engineering Council (PEC) Registration (C4 or above) with relevant codes e.g. (EE04, EE06, EE11, etc).
3. SECP/FBR Registration of firm will be considered. (Attach Certificate)



4. Undertaking that the Company / Firm is not blacklisted by Provincial or Federal Government Department, Agency, Organization or autonomous body anywhere in Pakistan. Affidavit on stamp paper shall be provided.
5. Valid evidence showing the Company / Firm has never been litigated, will allow participation in the bidding process. Affidavit on stamp paper shall be provided.
6. Audited Financial Statements of last three years shall be provided. Annual turnover shall be more than 100 Million PKR verifiable from audited statements.
7. Must provide details and evidence of similar Projects executed during last three years. Attach Completion Certificates of projects having capacity of greater than 150kWp (each) only.

Only Eligible Bidders will be evaluated further as per mandatory evaluation criteria BDS clause 24 (2.5.8).

**Eligibility Requirement is to be fulfilled for all respective packages.**

**Please see BDS Clause 13 (2.1.3) for details.**

The Eligible Bidders will be evaluated further as per following mandatory evaluation criteria:

8. Mandatory Evaluation/Marking Criteria:

**Please see BDS Section F Evaluation Criteria, clause 24 (2.5.8) for details**

*Financial Bids of Not-Qualified bidders will be returned un-opened.*

**2.1.4. Eligible Goods and Services**

- i) All goods and related services to be supplied under the Contract shall have their origin in eligible source countries, defined in the Bid Data Sheet and eligible countries listed in Appendix 'A'.
- ii) The origin of goods and services is distinct from the nationality of the Bidder.

**2.1.5. Cost of Bidding**

- i) The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Procuring Agency named in the Bid Data Sheet, hereinafter referred to as "the Procuring Agency," will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

**2.1.6. One person one bid**

- i) A Bidder shall submit only one Bid for either of the Packages in the Bidding process. A Bidder may apply for either or all of the Packages. Joint Ventures are **not** allowed.



## 2.2. The Bidding Documents

### 2.2.1. Content of Bidding Documents

- i) The goods required, Bidding procedures, and contract terms are prescribed in the Bidding documents. The Bidding documents, inter alia, include:
  - a. Invitation for bids
  - b. Instructions to bidders
  - c. Technical specifications/scope of work/technical compliance sheet
  - d. Bid datasheet
  - e. Particular/special conditions of contract
  - f. Schedule of requirements (schedule A to D)
  - g. Sample forms

**Bid Forms include**

  - h. bid form
  - i. Manufacturer's authorization form
  - j. Bidder profile form
  - k. General information form
  - l. Affidavit
  - m. Bid security form
  - n. Technical bid form
  - o. Contract form
  - p. Financial bid form / price schedule
  - q. Performance guarantee form
  - r. Company Experience Form
- ii) The Bidder is required to examine all instructions, forms, terms, and specifications in the Bidding documents. Failure to furnish all information as required by the Bidding documents or to submit a Bid not responsive to the Bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its Bid.
- iii) In case of discrepancies between the Invitation to Bid and the Bidding Documents listed in **ITB 2.2.1(i)** above, the said Bidding Documents, not in conflict with any provision of PPRA rules, will take precedence.
- iv) The Procuring Agency is not responsible for the completeness of the Bidding Documents and their addenda, if they were not obtained directly from the Procuring Agency or from its website or website of PPRA. Re-confirming from the Procuring Agency that all pages/ contents have been properly and clearly received is the prime responsibility of the Bidder.

### 2.2.2. Clarification of Bidding Documents

- i) A prospective Bidder requiring any clarification of the Bidding Documents may notify the Procuring Agency in writing or in electronic form that provides record of the content of



communication at the Procuring Agency's address indicated in the **BDS**.

- ii) The Procuring Agency will within three (3) working days after receiving the request for clarification, respond in writing or in electronic form to any request for clarification provided that such request is received not later than seven (7) days prior to the deadline for the submission of Bids. As prescribed in **ITB 2.2.2 (i), above**. However, this clause shall not apply in case of alternate methods of Procurement.
- iii) Should the Procuring Agency deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under **ITB 2.2.3**.

### **2.2.3. Amendment of Bidding Documents**

- i) At any time prior to the deadline for submission of Bids, but not later than three (3) days before the closing date of the submission of Bid, the Procuring Agency, 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. Any such change/amendment in the Bidding documents shall be provided in a timely manner, preferably through electronic means also, not later than three (3) days, and on equal opportunity basis as the case may be.
- ii) In order to allow prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Procuring Agency, at its discretion, may extend the deadline for the submission of Bids, in the manner similar to the original advertisements, so as to avoid any inconvenience and to doubly ensure level playing field for all prospective bidders.

## **2.3. Preparation of Bids**

### **2.3.1. Language of Bid**

- i) The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Procuring Agency shall be written in the language specified in the Bid Data Sheet. Supporting documents and printed literature furnished by the Bidder may be in same language.

### **2.3.2. Bid Form**

- i) The Bidder shall complete the Bid Form and the appropriate Price Schedule (Financial Bid) furnished in the Bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.



### 2.3.3. Bid Prices

- i) The Bidder shall indicate on form 8.10 the unit prices (where applicable) and total Bid price of the goods it proposes to supply under the contract.
- ii) Prices indicated on the Price Schedule shall be item wise.
- iii) The Bidder's separation of price components in accordance with ITB Clause 2.3.3(ii) above will be solely for the purpose of facilitating the comparison of Bids by the Procuring Agency and will not in any way limit the Procuring Agency's right to contract on any of the terms offered.
- iv) Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A Bid submitted with an **adjustable price quotation** will be treated as non-responsive and may be rejected.

### 2.3.4. Bid Currencies

Prices shall be quoted as required by mode the project mentioned in 2.3.3 and specified in the Bid Data Sheet.

### 2.3.5. Documents Establishing Bidder's Eligibility and Qualification

- i) Pursuant to ITB Clause 2.1.3, the Bidder shall furnish, as part of its Bid, documents establishing the Bidder's eligibility to Bid and its qualifications to perform the contract if its Bid is accepted.
- ii) The documentary evidence of the Bidder's eligibility to Bid shall establish to the Procuring Agency's satisfaction that the Bidder, at the time of submission of its Bid, is eligible as defined under ITB Clause 2.1.3.
- iii) The documentary evidence, of the Bidder's qualifications to perform the contract if its Bid is accepted, shall establish to the Procuring Agency's satisfaction:
  - (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 [*Manufacturer's Authorization form No. 8.3*] or producer to supply the same in Pakistan;
  - (b) that the Bidder has the financial, technical, and production capability necessary to perform the contract;
  - (c) that, in the case of a Bidder not doing business within Pakistan, the Bidder is or will be (if awarded the contract) represented by an Agent in that country equipped, and able to carry out the Supplier's maintenance, repair, and spare parts stocking



obligations prescribed in the Conditions of Contract and/or Technical Specifications; and

- (d) That the Bidder meets the qualification criteria listed in the Bid Data Sheet.

**2.3.6. Documents  
Establishing Goods'  
Eligibility and  
Conformity to  
Bidding Documents**

- i) Pursuant to ITB Clause 2.1.4, the Bidder shall furnish, as part of its Bid, documents establishing the eligibility and conformity to the Bidding documents of all goods and related services which the Bidder proposes to supply under the contract.
- ii) The documentary evidence of the eligibility of the goods and services shall consist of a statement in the Price Schedule/Financial Bid Form of the country of origin of the goods and services offered which shall be confirmed by a **Certificate of Origin** issued at the time of shipment.
- iii) The documentary evidence of conformity of the goods and services to the Bidding documents may be in the form of literature, drawings, data and shall consist of:
- (a) a detailed description of the essential technical and performance characteristics of the goods;
- (b) a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods for a period to be specified in the Bid Data Sheet, following commencement of the use of the goods by the Procuring Agency; and
- (c) An item-by-item commentary on the Procuring Agency's Technical Specifications demonstrating **responsiveness** of the goods and services to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications.
- iv) For purposes of the commentary to be furnished, the Bidder shall note that standards for workmanship, material, and equipment, as well as references to brand names or catalogue numbers designated by the Procuring Agency in its Technical Specifications, are intended to be descriptive only and not restrictive.
- vii) **Pursuant to the requirements as indicated in ITB 2.3.6, the Bidder shall furnish, as part of its Bid, all those documents establishing the eligibility in conformity to the terms and**



**conditions specified in the Bidding Documents for all goods and related services which the Bidder proposes to deliver.**

- viii) The Bidder shall also furnish a list giving full particulars, including available sources and current prices of goods, spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BIDS** following commencement of the use of the goods by the Procuring Agency.
- ix) The required documents and other accompanying documents must be in English. In case any other language than English is used the pertinent translation attested by the embassy in country of manufacturer into English shall be attached to the original version.

### **2.3.7. Bid Security**

- i) The Bidder shall furnish, as part of its Bid, a Bid security in the amount specified in the Bid Data Sheet.
- ii) The Bid security is required to protect the Procuring Agency against the risk of Bidder's conduct which would warrant the security's forfeiture Pursuant to ITB Clause 2.3.8. (vii).
- iii) The Bid security shall be in Pakistan Rupees and shall be in one of the following forms:
  - a. Bank Guarantee, Bank call-deposit (CDR), Demand Draft (DD), Pay Order (PO) or Banker's cheque valid for 120 Days, beyond the validity of Bid.
- iv) Any Bid not secured in accordance with ITB Clauses 2.3.8 (i) and (ii) maybe rejected by the Procuring Agency as non-responsive.
- v) Unsuccessful Bidders' Bid security will be discharged or returned as promptly as possible after the award of the contract to the successful bidder and the expiration of the period of Bid validity prescribed by the Procuring Agency pursuant to ITB Clause 2.3.8 (ii) or along with unopened financial proposal.
- vi) The successful Bidder's Bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 2.6.1, and furnishing the Performance Guarantee, pursuant to ITB Clause 2.6.2.
- vii) The Bid security may be forfeited:



- a. If a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
- b. In the case of a successful Bidder, if the Bidder:
  - i. Fails to sign the contract in accordance with ITB Clause 2.6.3; **or**
  - ii. Fails to furnish Performance Guarantee in accordance with ITB Clause 2.6.2; or
  - iii. If the blacklisting proceedings under PPRA rules 2004 amended till date are initiated and the bidder is declared blacklisted after due process of law.

**2.3.8. Period of Validity of Bids**

- i) Bids shall remain valid for the period specified in the Bid Data Sheet after the date of Bid opening prescribed by the Procuring Agency. A Bid valid for a shorter period may be rejected by the Procuring Agency as non-responsive.

**2.3.9. Format and Signing of Bid**

- i) The Bidder shall prepare and submit bid for each package separately. The bidder will submit an original and the two (01) number of copies of the Bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall prevail.
- ii) The Bidder shall authorize person/persons for signing, submission and further correspondence with Procuring Agency on behalf of bidder. Authority letter must be part of bid. However, in case of any issue bidder shall be responsible for all consequences.
- iii) The original and the copy or copies of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the **BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid shall be signed and stamped by the authorized person.

**2.4. Submission of Bids**

**2.4.1 Sealing and Marking of Bids**

- i) In case of Single Stage Two Envelope Procedure, The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Proposal and the other Financial Proposal. Both





envelopes to be enclosed together in an outer single envelope called the Bid. Each Bidder shall submit his bid as under:

- a) Bidder shall submit his TECHNICAL PROPOSAL and FINANCIAL PROPOSAL in separate inner envelopes and enclosed in a single outer envelope.
- b) ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
- (c) The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in BDS.

ii) The inner and outer envelopes shall:

- a) be addressed to the Procuring Agency at the address provided in the BDS;
- b) bear the name and identification number of the contract as defined in the BDS; and provide a warning not to open before the time and date for bid opening, as specified in the BDS, pursuant to ITB 2.4.2;
- c) In addition to the identification required in Sub- Clause (b) hereof, the inner envelope shall indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared "late" pursuant to ITB.2.4.3.

iii) If all envelopes are not sealed and marked as required by **ITB 2.4.1** or incorrectly marked, the Procuring Agency will assume no responsibility for the misplacement or premature opening of Bid.

#### **2.4.2 Deadline for Submission of Bids**

- i) Bids must be received by the Procuring Agency at the address specified under BDS no later than the time and date specified in the Bid Data Sheet, as well as on the PPRA EPADS System. Bids received through courier services shall not be entertained.

#### **2.4.3. Late Bids**

- i) Any Bid received by the Procuring Agency after the deadline for submission of Bids prescribed by the Procuring Agency pursuant to ITB Clause 2.4.2 will be rejected and returned unopened to the Bidder.

#### **2.4.4. Modification and Withdrawal of Bids**

- i) The Bidder may modify or withdraw its Bid after the Bid's submission, provided that written notice of the modification, including substitution or withdrawal of the Bids, is received by



the Procuring Agency prior to the deadline prescribed for submission of Bids.

## 2.5. Opening and Evaluation of Bids

### 2.5.1. Opening of Bids by the Procuring Agency

- i) In case of Single Stage Two Envelope Procedure, the Procuring Agency will open the Technical Proposals in public at the address, date and time specified in the **BDS** in the presence of Bidders` designated representatives who choose to attend and other parties with a legitimate interest in the Bid proceedings. The Financial Proposals will remain unopened and will be held in custody of the Procuring Agency until the specified time of their opening.
- ii) The envelopes holding the Technical Proposals shall be opened one at a time, and the following read out and recorded: (a) the name of the Bidder; (b) the presence of a Bid Security, if required; and (c) Any other details as the Procuring Agency may consider appropriate.

### 2.5.2. Confidentiality

- i) Information relating to the examination, clarification, evaluation and comparison of Bids and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with such process until the time of the announcement of the respective evaluation report in accordance with the requirements of PPRA. Any effort by a Bidder to influence the Procuring Agency processing of Bids or award decisions may result in the rejection of its Bid.

### 2.5.3. Clarification of Bids

- i) The Procuring Agency may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices to determine its reasonability, to assist in the examination, evaluation and comparison of Bids and post-qualification of the Bidders. Any clarification submitted by a Bidder that is not in response to a request by the Procuring Agency shall not be considered.
- ii) The request for clarification and the response shall be in writing or in electronic forms that provide record of the content of communication. In case of Single Stage Two Envelope Procedure, no change in the prices or substance of the Bid shall be sought, offered, or permitted.
- iii) The alteration or modification in The Bid which in any way affect the following parameters will be considered as a change in the substance of a bid:
  - a) Evaluation & qualification criteria;



- b) Required scope of work or specifications;
- c) All securities requirements;
- d) Tax requirements;
- e) Terms and conditions of bidding documents.
- f) Change in the ranking of the Bidder

#### 2.5.4. Preliminary Examination

- i) Prior to the detailed evaluation, the Procuring Agency will determine the responsiveness of each Bid to the Bidding documents, pursuant to ITB Clause 2.5.5. For purposes of these Clauses, a responsive Bid is one which conforms to all the terms and conditions of the Bidding documents without material deviations. Deviations from, or objections or reservations to critical provisions, **such as** those concerning **Bid Security** (ITB Clause 2.3.8), **Applicable Law** (GCC Clause 30), **Taxes and Duties** (GCC Clause 32) & mandatory Registrations/ Renewals will be deemed to be a material deviation. The Procuring Agency's determination of a Bid's responsiveness is to be based on the contents of the Bid itself without recourse to extrinsic evidence.
- ii) If a Bid is not responsive, it will be rejected by the Procuring Agency and may not subsequently be made responsive by the Bidder by correction of the non-conformity.
- iii) Prior to the detailed evaluation of Bids, the Procuring Agency will determine whether each Bid:
  - a) Meets the eligibility criteria defined in **ITB 2.1.3** and **ITB 2.1.4**;
  - b) Has been prepared as per the format and contents defined by the Procuring Agency in the Bidding Documents;
  - c) Has been properly signed;
  - d) Is accompanied by the required securities; and
  - e) Is responsive to the requirements of the Bidding Documents.

The Procuring Agency's determination of a Bid's responsiveness will be based on the contents of the Bid itself.

#### 2.5.5. Examination of Terms and Conditions; Technical Evaluation

- i) The Procuring Agency shall examine the Bid to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.
- ii) The Procuring Agency shall evaluate the technical aspects of the Bid submitted to confirm that all requirements specified in **Section III-Technical Specifications, Section VII – Schedule of**



**Requirements & Evaluation Criteria as provided in BDS,** have been met without material deviation or reservation.

- iii) If after the examination of the terms and conditions and the technical evaluation, the Procuring Agency determines that the Bid is not responsive in accordance, it shall reject the Bid.

#### **2.5.6. Correction of Errors**

- i) Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -
  - a) If there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which the total price 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 sub-totals, the sub-totals shall prevail and the total shall be corrected; and
  - c) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.
  - d) Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bid, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.
- ii) The amount stated in the Bid will, be adjusted by the Procuring Agency in accordance with the above procedure for the correction of errors. The concurrence of the Bidder shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, its Bid will then be rejected, and the Bid Security may be forfeited or the Bid Securing Declaration may be executed in accordance with **ITB 2.3.8.**

#### **2.5.7. Conversion to Single Currency**

- i) To facilitate evaluation and comparison, the Procuring Agency will convert all Bid prices expressed in the amounts in various currencies in which the Bid prices as follows:

For the purposes of comparison of bids quoted in different currencies, the price shall be converted into a single currency specified in the bidding documents. The rate of exchange shall be the selling rate, prevailing on the date of opening of bids specified in the bidding documents, as notified by the State Bank of Pakistan on that day, in



case of holiday in State Bank of Pakistan on the day of opening financial bids, then previous working day's ex-change rates will prevail.

#### 2.5.8. Post-Qualification & Evaluation of Bids

- i) The determination will take into account the Bidder's financial, technical, and production/ supplying capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 2.3.6, as well as such other information required for eligibility/qualification expressed in Bid Data Sheet as the Procuring Agency deems necessary and appropriate.
- ii) The Procuring Agency will **technically evaluate** and compare the Bids which have been determined to be responsive, pursuant to ITB Clause 2.5.5, as per Technical Specifications required.
- iii) The **financial evaluation** of a Bid will be on the basis of form of Price Schedules/Financial BidForm8.10 to be decided by the Procuring Agency which must include clear cut instruction regarding item wise or package wise evaluation inclusive of prevailing taxes, duties, fees etc.

#### 2.5.9. Contacting the Procuring Agency

- i) Any effort by a Bidder to influence the Procuring Agency during Bid evaluation, or Bid comparison may result in the rejection of the Bidder's Bid.

#### 2.5.10. Grievance Redressal

- i) In case of single stage - two envelope bidding procedure any bidder feeling aggrieved from technical evaluation may file a grievance within 5 days of announcement of the technical evaluation report. After completion of the technical evaluation process, the procuring agency shall immediately upload the technical evaluation report on the website of PPRA and Procuring Agency for obtaining/ receiving grievance petitions from the prospective bidders (if any).
- ii) In case, the complaint/grievance is filed after the issuance of the final evaluation report, the complainant cannot raise any objection on technical evaluation of the report. Provided that the complainant may raise the objection on any part of the final evaluation report in case where single stage one envelop bidding procedure is adopted.
- iii) The GRC shall investigate and decide upon the complaint within fifteen days of the receipt of the complaint. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.



## 2.6. Award of Contract

### 2.6.1. Notification of Award

- i) Prior to the expiration of the period of Bid validity, the Procuring Agency will notify the successful Bidder in writing by registered letter and by email to be confirmed in writing by registered letter, that its Bid has been accepted.
- ii) The notification of award will constitute the formation of the Contract.
- iii) Upon the successful Bidder's furnishing of the Performance Guarantee pursuant to ITB Clause 2.6.2 (i), the Procuring Agency will promptly notify each unsuccessful Bidder and will discharge its Bid security.

### 2.6.2. Performance Guarantee

- i) Within fifteen (15) days of the receipt of notification of award from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in accordance with the Conditions of Contract, in the Performance Guarantee Form provided in the Bidding documents, or in another form acceptable to the Procuring Agency.
- ii) Failure of the successful Bidder to comply with the requirement of ITB Clause (i) above or ITB Clause 2.6.3 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid security along with other remedies available under PPRA/PEC byelaws. After that, the Procuring Agency may decide to award the contract to the next lowest evaluated Bidder, keeping in view the Bid validity time, or call for new Bids keeping in view the concept of value for money as defined under rule-2(AE) read with Principles of Procurement as enunciated in PPRA.

### 2.6.3. Signing of Contract/ Issuance of Purchase Order

- i) At the same time as the Procuring Agency notifies the successful Bidder that its Bid has been accepted, the Procuring Agency will send the Bidder the Contract Form provided in the Bidding documents, incorporating all agreements between the parties or will issue the purchase order *[as the case may be]*.
- ii) The Procuring Agency requires formal signing of contract, within seven (07) days of receipt of the Contract Form, the successful Bidder shall sign and mention date of the contract and return it to the Procuring Agency.
- iii) Where no such formal signing is required by the procuring agency, the procuring agency shall issue purchase order after the receipt of required performance guarantee.



**2.6.4. Award Criteria**

- i) Subject to ITB Clause 2.6.2, the Procuring Agency will award the contract to the successful Bidder whose Bid has been determined to be responsive and has been determined to be the lowest evaluated Bid, provided that the Bidder has been determined to be qualified to perform the contract satisfactorily.

**2.6.5. Procuring Agency's Right to Vary Quantities at Time of Award**

- i) The Procuring Agency reserves the right at the time of contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions, on the analogy as per PPRA rules (not more than 15%).

**2.6.6. Procuring Agency's Right to accept or Reject All Bids**

- i) The Procuring Agency reserves the right to accept or reject all Bids or proposals (and to annul the Bidding process) at any time prior to the acceptance of any Bid or proposal, without thereby incurring any liability towards the Bidders.

**2.6.7. Re-Bidding**

- i) If the Procuring Agency rejects all the Bids under rule 35, it may proceed with the process of fresh Bidding but before doing that it shall assess the reasons for rejection and may, if necessary, revise specifications, evaluation criteria or any other condition for Bidders.

**2.6.8. Corrupt or Fraudulent Practices**

- i) The Procuring Agency Bidders, Suppliers, and Contractors observe the highest standard of ethics during the procurement and execution of contracts.

"Corrupt practices" in respect of procurement process, shall be as given in PPRA rules, which may stated as follows:

*"(d) "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official, bidder or Contractor in the procurement process or in Contract execution to the detriment of the procuring agency; or misrepresentation of facts in order to influence a procurement process or the execution of a Contract, collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, noncompetitive levels and to deprive the procuring agency of the benefits of free and open competition and any request for, or solicitation of anything of value by any public official in the course of the exercise of his duty; it may include any of the following:*

- i. *Coercive practice by impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;*



- ii. *Collusive practice by arrangement between two or more parties to the procurement process or Contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;*
- iii. *Offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;*
- iv. *Any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;*
- v. *Obstructive practice by harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a Contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit process.”*

**ii) Blacklisting & Debarment:**

Blacklisted Bidders i.e. firms/companies/sole proprietor/ general order suppliers/ JVs etc. and those found involved in “Corrupt Practices” are not allowed to participate in bidding.

**Requirements & Procedure for Blacklisting & Debarment:**

**“Blacklisting.**– (1) A procuring agency may, for a specified period and in the prescribed manner, debar a bidder or Contractor from participating in any public procurement process of the procuring agency, if the bidder or Contractor indulges in corrupt practice or any other prescribed practice.

(2) The Managing Director may, in the prescribed manner, debar a bidder or Contractor from participating in any public procurement process of all or some of the procuring agencies for a specified period.





(3) Any person, aggrieved from a decision of a procuring agency, may within prescribed period prefer a representation before the Managing Director.

(4) A procuring agency or any other person, aggrieved from a decision of the Managing Director, may within prescribed period prefer a representation before the Chairperson whose decision on such representation shall be final.]

**21. Blacklisting.**—(1) A procuring agency may, for a specified period, debar a bidder or Contractor from participating in any public procurement process of the procuring agency, if the bidder or Contractor has:

- (a) acted in a manner detrimental to the public interest or good practices;
- (b) consistently failed to perform his obligation under the Contract;
- (c) not performed the Contract up to the mark; or
- (d) indulged in any corrupt practice.

(2) If a procuring agency debars a bidder or Contractor under sub-rule (1), the procuring agency:

- (a) shall forward the decision to the Authority for publication on the website of the Authority; and
- (b) may request the Authority to debar the bidder or Contractor for procurement of all procuring agencies.

(3) The Managing Director may debar a bidder or Contractor of any procuring agency from participating in any public procurement process of all or some of the procuring agencies for such period as the Managing Director may determine.

(4) Any person aggrieved by a declaration made under rule 20 or a decision under sub-rule (1) of this rule may, within thirty days from the date of the publication of the information on the website of the Authority, file a representation before the Managing Director and the Managing Director may pass such order on the representation as he may deem fit.

(5) Any person or procuring agency aggrieved by an order under sub-rule (3) or (4) may, within thirty days of the order, file a representation before the Chairperson and the Chairperson may pass such order on the representation as he may deem appropriate.

(6) The mechanism or process for barring a bidder or Contractor from participating in procurement process of a procuring agency, procuring agencies and a representation under this rule is specified as:



### **BLACKLISTING MECHANISM OR PROCESS**

1. *The procuring agency may, on information received from any resource, issue show cause notice to a bidder or Contractor.*
2. *The show cause notice shall contain:*
  - (a) *precise allegation, against the bidder or Contractor;*
  - (b) *the maximum period for which the procuring agency proposes to debar the bidder or Contractor from participating in any public procurement of the procuring agency; and*
  - (c) *the statement, if needed, about the intention of the procuring agency to make a request to the Authority for debarring the bidder or Contractor from participating in public procurements of all the procuring agencies.*
3. *The procuring agency shall give minimum of seven days to the bidder or Contractor for submission of written reply of the show cause notice.*
4. *In case, the bidder or Contractor fails to submit written reply within the requisite time, the procuring agency may issue notice for personal hearing to the bidder or Contractor/ authorize representative of the bidder or Contractor and the procuring agency shall decide the matter on the basis of available record and personal hearing, if availed.*
5. *In case the bidder or Contractor submits written reply of the show cause notice, the procuring agency may decide to file the matter or direct issuance of a notice to the bidder or Contractor for personal hearing.*
6. *The procuring agency shall give minimum of seven days to the bidder or Contractor for appearance before the specified officer of the procuring agency for personal hearing.*
7. *The procuring agency shall decide the matter on the basis of the available record and personal hearing of the bidder or Contractor, if availed.*
8. *The procuring agency shall decide the matter within fifteen days from the date of personal hearing unless the personal hearing is adjourned to a next date and in such an eventuality, the period of personal hearing shall be reckoned from the last date of personal hearing.*
9. *The procuring agency shall communicate to the bidder or Contractor the order of debarring the bidder or Contractor from participating in any public procurement with a statement that the bidder or Contractor may, within thirty days, prefer a representation against the order before the Managing Director of the Authority.*



10. *The procuring agency shall, as soon as possible, communicate the order of blacklisting to the Authority with the request to upload the information on its website.*
11. *If the procuring agency wants the Authority to debar the bidder or Contractor from participating in any public procurement of all procuring agencies, the procuring agency shall specify reasons for such dispensation.*
12. *The Authority shall immediately publish the information and decision of blacklisting on its website.*
13. *In case of request of a procuring agency under Para 11 or representation of any aggrieved person under rule 21, the Managing Director shall issue a notice for personal hearing to the parties and call for record of proceedings of blacklisting. The parties may file written statements and documents in support of their contentions.*
14. *In case of representation of any aggrieved person or procuring agency under rule 21, the Chairperson shall issue a notice for personal hearing to the parties and may call for the record of the proceedings. The parties may file written statements and documents in support of their contentions.*
15. *In every order of blacklisting under rule 21, the procuring agency shall record reasons of blacklisting and also reasons for short, long or medium period of blacklisting.*
16. *The Authority shall upload all the decisions under rule 21, available with it, on its website. But the name of a bidder or Contractor shall immediately be removed from the list of blacklisted persons on expiry of period of blacklisting or order of the competent authority to that effect, whichever is earlier.*
17. *An effort shall be made for electronic communication of all the notices and other documents pursuant to this mechanism or process."*

- iii) Furthermore, Bidders must keep themselves aware of the provision stated in clause 5.4 and clause 24.1 of the General Conditions of Contract.

**2.6.9. Quantity and volume of the goods to be considered in mind**  
*[Framework Contract Modality]*

- i) While quoting the rate in a framework contract, the Bidder must consider the following facts:
  - a. Certain volume and quantity of the goods as prescribed in Bid Data Sheet.
  - b. The Bidder has to maintain the rates of the goods for the whole financial year.
  - c. The Bidder should quote the rate as per Price Schedule/Financial Bid form. In case of non-observance of prescribed format, Financial Bid may be rejected.



Appendix A to Instructions to Bidders

**NAME OF ELIGIBLE  
COUNTRIES**

[As per list allowed by Government of Pakistan]



## Section-III. BOQ and Technical Specifications

### 3.1 TECHNICAL COMPLIANCE SHEET/BILL OF QUANTITY (BOQ)

**Note: Project is on Lump sum Basis. The following quantities are tentative basis and bidder shall perform its own survey and diligence on site for technical and financial bids.**

**The BOQ has been prepared on the Best available Market Survey, and any queries may be entertained in the Pre-Bid Meeting.**

#### **BOQ Package 1: FUUAST Islamabad Campus (220kWp)**

Bidder must follow the specifications mention in section 3.2 Minimum Technical Specifications

<b>Technical BOQ for 220 KWp Grid Tied System with for FUUAST Islamabad</b>					
<b>No.</b>	<b>Item's</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Quoted Amount</b>
1	String Inverter	Three-Phase On Grid Inverter (1:1- or above) with Remotely Monitoring Devices. For 3 or 4 buildings/as per design or recommendations. The desired system should have 3 inverters (each with minimum of 100 kW)  Huawei/Goodwe/SunGrow/Equivalent or better	Sum	300-350 kW	
2	Communication Box  Remote Monitoring Data Acquisition System.	Data Logger, Access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging & also by Synchronization device.	No.	As per inverter configuration	
3	PV Module	Tier 1, 580 watt and above PV module Bifacial NTYPE. (Longi/Jinko/Trina/Canadian/Equivalent or better)  Manufactured according to bloom berg latest issued rankings with IEC 61215 Compliance.	Sum	220 KW	



4	PV Mount Structure for Rooftop with Installation	MS Elevated Structure including Civil Pads/Concrete formation (12"x12")  can be changed as per Requirement Structure 10-17° tilt	Sum	250 KW	
5	Lightening Arrestor	As per industry standards  Lightening system connect to the existing installed lighting system	Nos.	As per Design	
6	0.4kV LV Panel	IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out. The size of cabinet: H x L x D ft (4x2.5x2.5) Gauge: 16 AWG, 6021Mounting type = ground mounted <b>Details of breakers and SPD to be in housed in cabinet:</b>  <b>Other Specs:</b> RYB Indicator, Digital Ammeter and Voltmeter =Yes, AC grounding bus bar =Yes (length =1 ft, to be placed at the left bottom of the DB), DC grounding Bus bar=Yes	Nos.	As per Design	
7	DC Distribution Box	IP65 GI DB for each inverter for placing DC Strings  Expected Size but not limited to W x H x D= 3 x 1 x 0.75 Wall mount, single door with lock and with complete fitting scheme/ railing for DC Breakers  (Schneider/ Electric/ ABB/ Equivalent)	Nos.	As per no. of Inverters	
8	DC Breakers with base, 2-pole	1000 V DC, 32 A, 2P (Schneider Electric/ ABB/ Equivalent)	Nos.	As per inverter configuration	
9	DC wire for PV	4 mm Sq. DC flexible wire 1500V DC Copper conductor,  Cu XLPO/XLPE  ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	



10	AC wire from LV panel to Inverters	Cu, XLPE/PVC 0.6/1 kV, 3.5C x 90mm Sq. AC stranded  ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
11	AC wire for inverter Grounding	Cu, PVC 0.6/1 Kv, 1 x 16 mm Sq.  AC flexible Wire Stranded  ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
12	DC wire for frame - frame grounding	PVC 1 x 6mm Sq. AC Stranded Wire ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
13	DC wire for PV frames to grounding point	PVC 1 x 16mm Sq. AC Stranded Wire ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
18	DC Earthing	Earthing Bore with Resistance < 3 Ohms (including all necessary equipment)	Job.		
19	PV Diesel Genset Combiner	The synchronization of three inverters located in three separate buildings, with either separate or shared generators. For Synch of PV System with Genset during load shedding.	Job.		
20	MISC	Cable ties, rawal bolts, pvc tapes, steel and PVC clamps, pvc pipes, glands different sizes, thimbles, connectors, warning lables etc.	Job.		
23	Zero Export device as per the inverter specifications along with CTS and communication cables.	Required for restricting export to Grid till installation of Net Metlring.	As per no. of Inverters		



## BOQ Package 2(Part-A): FUUAST Karachi Campuses (Gulshan e Iqbal Campus: 250kWp)

Bidder must follow the specifications mention in section 3.2 Minimum Technical Specifications

Technical BOQ for 220 KWp Grid Tied System with for FUUAST Islamabad					
No.	Item's	Description	Unit	Quantity	Quoted Amount
1	String Inverter	Three-Phase On Grid Inverter (1:1- or above) with Remotely Monitoring Devices.  Huawei/Goodwe/SunGrow/Equivalent or better  For all buildings/as per design/recommendations.	Sum	250KW	
2	Communication Box  Remote Monitoring Data Acquisition System.	Data Logger, Access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging & also by synchronization device.	No.	As per inverter configuration	
3	PV Module	Tier 1, 580 watt and above PV module Bifacial NTYPE. (Longi/Jinko/Trina/Canadian/Equivalent or better)  Manufactured according to bloom berg latest issued rankings with IEC 61215 Compliance.	Sum	250 KW	
4	PV Mount Structure for Rooftop with Installation	Mounting Structure of suitable L1, L2 or L3 type standard or as per suitable approved design	Sum	250 KW	
5	Lightening Arrestor	As per industry standrads	Nos.	As per Design	





6	0.4kV LV Panel	<p>IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out.</p> <p>The size of cabinet: H x L x D ft (4x2.5x2.5) Gauge: 16 AWG, 6021 Mounting type = ground mounted</p> <p><b>Details of breakers and SPD to be in housed in cabinet:</b></p> <p><b>As per drawing attached</b></p> <p><b>Other Specs:</b>  RYB Indicator, Digital Ammeter and Voltmeter =Yes,  AC grounding bus bar =Yes (length =1 ft, to be placed at the left bottom of the DB),  DC grounding Bus bar=Yes</p>	Nos.	as per design	
7	DC Distribution Box	<p>IP65 GI DB for each inverter for placing DC Strings</p> <p>Expected Size but not limited to W x H x D= 3 x 1 x 0.75 Wall mount, single door with lock and with complete fitting scheme/ railing for DC Breakers</p> <p>(Schneider/ Electric/ ABB/ Equivalent)</p>	Nos.	As per no. of Inverters	
8	DC Breakers with base, 2-pole	<p>1000 V DC, 32 A, 2P (Schneider Electric/ ABB/ Equivalent)</p>	Nos.	As per inverter configuration	
9	DC wire for PV	<p>4 mm Sq. DC flexible wire 1500V DC Copper conductor,</p> <p>Cu XLPO/XLPE</p> <p>( PAKISTAN CABLES/FAST CABLE/ or Equivalent )</p>	mtr	As per Design	
10	AC wire from LV panel to Inverters	<p>Cu, XLPE/PVC 0.6/1 kV, 3.5C x 90mm Sq. AC stranded</p> <p>( PAKISTAN CABLES/FAST CABLE/ or Equivalent )</p>	mtr	As per Design	
11	AC wire for inverter Grounding	<p>Cu, PVC 0.6/1 Kv, 1 x 16 mm Sq.</p> <p>AC flexible Wire Stranded</p> <p>( PAKISTAN CABLES/FAST CABLE/ or Equivalent )</p>	mtr	As per Design	
12	DC wire for frame - frame grounding	<p>PVC 1 x 6mm Sq. AC Stranded Wire ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )</p>	mtr	As per Design	



13	DC wire for PV frames to grounding point	PVC 1 x 16mm Sq. AC Stranded Wire ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
18	DC & AC Earthing	Earthing Bore with Resistance < 3 Ohms (including all necessary equipment)		Job.	
19	PV Diesel Genset Combiner	For Synch of PV System with Genset during load shedding.		Job.	
20	MISC	Cable ties, rawal bolts, pvc tapes, steel and PVC clamps, pvc pipes, glands different sizes, thimbles, connectors, warning lables etc.		Job.	
23	Zero Export device as per the inverter specifications along with CTS and communication cables.	Required for restricting export to Grid till installation of Net Metrling.		As per no. of Inverters	

## BOQ Package 2 (Part-B): FUUAST Karachi Campuses (Abdul Haq Campus: 80kWp)

Bidder must follow the specifications mention in section 3.2 Minimum Technical Specifications

Technical BOQ for 220 KWp Grid Tied System with for FUUAST Islamabad					
No.	Item's	Description	Unit	Quantity	Quoted Amount
1	String Inverter	Three-Phase On Grid Inverter (1:1- or above) with Remotely Monitoring Devices.  Huawei/Goodwe/SunGrow/Equivalent or better  For all buildings/as per design/recommendations	Sum	80 kW	



2	Communication Box  Remote Monitoring Data Acquisition System.	Data Logger, Access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging & also by synchronization device.	No.	As per inverter configuration	
3	PV Module	Tier 1, 580 watt and above PV module Bifacial NTYPE. (Longi/Jinko/Trina/Canadian/Equivalent or better)  Manufactured according to bloom berg latest issued rankings with IEC 61215 Compliance.	Sum	80 KW	
4	PV Mount Structure for Rooftop with Installation	Mounting Structure of suitable L1, L2 or L3 type standard or as per suitable approved design	Sum	80 KW	
5	Lightening Arrestor (ESE Based)	As per industry standards	Nos.	As per Design	
6	0.4kV LV Panel	IP65 galvanized iron AC combiner Cabinet, 1 IN 1 Out. The size of cabinet: H x L x D ft (4x2.5x2.5) Gauge: 16 AWG, 6021Mounting type = ground mounted <b>Details of breakers and SPD to be housed in cabinet:</b>  <b>As per drawing attached</b>  <b>Other Specs:</b> RYB Indicator, Digital Ammeter and Voltmeter =Yes, AC grounding bus bar =Yes (length =1 ft, to be placed at the left bottom of the DB), DC grounding Bus bar=Yes	Nos.	4	



7	DC Distribution Box	IP65 GI DB for each inverter for placing DC Strings  Expected Size but not limited to W x H x D= 3 x 1 x 0.75 Wall mount, single door with lock and with complete fitting scheme/ railing for DC Breakers  (Schneider/ Electric/ ABB/ Equivalent)	Nos.	As per no. of Inverters	
8	DC Breakers with base, 2-pole	1000 V DC, 32 A, 2P (Schneider Electric/ ABB/ Equivalent)	Nos.	As per inverter configuration	
9	DC wire for PV	4 mm Sq. DC flexible wire 1500V DC Copper conductor,  Cu XLPO/XLPE  ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
10	AC wire from LV panel to Inverters	Cu, XLPE/PVC 0.6/1 kV, 3.5C x 90mm Sq. AC stranded  ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
11	AC wire for inverter Grounding	Cu, PVC 0.6/1 Kv, 1 x 16 mm Sq.  AC flexible Wire Stranded  ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
12	DC wire for frame - frame grounding	PVC 1 x 6mm Sq. AC Stranded Wire ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
13	DC wire for PV frames to grounding point	PVC 1 x 16mm Sq. AC Stranded Wire ( PAKISTAN CABLES/FAST CABLE/ or Equivalent )	mtr	As per Design	
18	DC & AC Earthing	Earthing Bore with Resistance < 3 Ohms (including all necessary equipment)	Job.		
19	PV Diesel Genset Combiner	For Synch of PV System with Genset during load shedding.	Job.		
20	MISC	Cable ties, rawal bolts, pvc tapes, steel and PVC clamps, pvc pipes, glands different sizes, thimbles, connectors, warning lables etc.	Job.		



23	Zero Export device as per the inverter specifications along with CTS and communication cables.	Required for restricting export to Grid till installation of Net Metlring.	As per no. of Inverters	
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### 3.2 Minimum Technical Specifications

**Note:** The technical specifications of the solar panels and allied equipment must fulfill the standard requirements (PSS & IEC) as per the import policy S.R.O 604(I)/2019, Dated 28<sup>th</sup> May, 2019. Verifiable Test certifications for the required standards must be [provided with the technical proposals. In case of the discrepancy, the mentioned S. R. O shall prevail.

The following are provided the minimum technical requirements for solar panels and allied equipment. "All products shall be compliant to relevant IEC standards/specifications; however, other equivalent international standards may be used where, IEC relevant standard is not available, as per the project requirement.

#### Solar PV Panels

Parameters	Min. Specifications required
<b>Module Make</b>	Brand should be verifiable for the procurement year
<b>PV Module Capacity</b>	580Wp or Above
<b>PV Module Type</b>	HJT/N-type/TopCon bifacial, Half cut Tier 1
<b>Cell Quality</b>	A Grade (verifiable)
<b>Module Efficiency</b>	21.5% or Above
<b>First year degradation</b>	≤ 1%
<b>Year 2-30 Power degradation</b>	≤ 0.4%
<b>Power Tolerance</b>	Must be + 3% or more
<b>Operating cell Temperature</b>	minus 40C to positive 85C
<b>Temperature coefficient</b>	Minus 0.29 %/ C or less Minus 40 %/ C or less
<b>bypass diode</b>	AS per design
<b>Certification</b>	IEC 61215, IEC 61730, IEC 61439, IEC 60947-3 as amended to date, PID FREE
<b>Frame</b>	Must withstand 5400 PA impulse Load
<b>Junction box</b>	IP 67 or better
<b>Cable</b>	4mm <sup>2</sup> (IEC), 300mm or higher (As per design)
<b>Connectors</b>	MC4 or comparable weather proof
<b>Cover Glass</b>	Double Glass, Minimum 2 mm
<b>Product Warranty and Guarantee</b>	12 years product warranty, power output within 12 years shall not fall below 90%Power output within 25 years shall not fall below 85%. (The Bidder will provide the warranty claim services from the Manufacturer/Authorized Dealer for the valid warranty period)



### On-Grid Solar Smart Inverter

Parameters	Min. Specifications required
<b>Inverter Manufacturer</b>	20 GW or above deployment in last two years. Renowned and verifiable brand having successful history in similar climatic conditions.
<b>Inverter Type</b>	String Inverter
<b>Max. Efficiency /European Efficiency</b>	$\geq 98\%$ or above
<b>Max. Input Voltage</b>	1,100V (or as per supported design)
<b>MPPT input current</b>	30A(or as per supported design)
<b>MPPT Operating Voltage Range</b>	200V ~ 1000V (or as per supported design)
<b>Output Voltage Range</b>	400 Vac/ 480 Vac, 3W+(N) + PE
<b>Max. Total Harmonic Distortion</b>	<3%. As per relevant IEC clauses.
<b>Power Factor</b>	0.8 leading ~ 0.8 lagging
<b>IP Protection</b>	IP 65 or better
<b>Standby power consumption</b>	Max 6 Watt.
<b>Protections</b>	<ol style="list-style-type: none"> <li>1) Input-side Disconnection Device</li> <li>2) Anti-islanding Protection</li> <li>3) AC Over current Protection</li> <li>4) DC Reverse-polarity Protection</li> <li>5) PV-array String Fault Monitoring</li> <li>6) DC Insulation Resistance Detection</li> <li>7) Residual Current Monitoring Unit</li> <li>8) DC Surge Arrester</li> <li>9) AC Surge Arrester</li> <li>10) Ripple Receiver Control</li> </ol>
<b>Operating temperature</b>	-25°C to 60°C
<b>Communication</b>	<ol style="list-style-type: none"> <li>1) With Remote Monitoring Feature, Mobile App, Web server user interface, Cloud Connected.</li> <li>2) Real Time System Monitoring. Alerts, Faults and Warning data display. System Statistics – System Parameters,</li> <li>3) Support WLAN/4G/RS485 communication</li> </ol>
<b>Minimum Applicable Standards and Compliances</b>	IEC62109-1/-2, IEC62116, IEC60068, IEC61683, IEC 61727, EN50530
<b>Warranty</b>	5 Years Standard replacement warranty; (The Bidder will provide the warranty claim services from the Manufacturer/Authorized Dealer for the valid warranty period).



## PV MOUNTING Structure

S/N	Parameters	Min. Specifications required
<b>The design should meet the following minimum specifications.</b> (Tentative outlines, the design will be site-dependent and may vary)		
1	Structure material	Elevated H Girder MS double coated with Red Oxide with the specs of: Poles I-Beam Girder 2.5"x5"x2.5" Thickness 3mm Base plate 8"X8"x8mm Main Rail H-Beam 2.5"x5"x2.5" Thickness 3mm Sub Rail MS C chanel 1.5"x1.5"x3"Thickness (4mm-4.5mm) Top plate 6"X6"x8mm Civil Foundation L2: PCC 1:2:4 1CFT Civil Foundation Elevated: PCC 1:2:4 2.25 CFT(1 ftx1ftx1ft) Chemical Anhoring is must for both type of foundations.
2	Wind loading	The mounting system should be able to allow air circulation for cooling in high temperatures and withstand wind speed of 140 Km/hour at 3-sec gust
3	Material surface protection	The mounting structure should be double coated with red-oxide Ground Slope should be adequately maintained to allow access to water drainage
4	Civil work	Ground Slope should be adequately maintained to allow access to water drainage All civil work must be included SAP analysis report of structure should be submitted at the time of execution. In the case of Ground, the Slope should be adequately maintained to allow access to water drainage.
5	Requirements at time of execution	Suitable gauge for MS (min 14 for c channel) or for Aluminum (min 2.5 mm for L2/L3) should be provided for each site, at the time of execution. This can't be specified as each site has different dynamics. Detail drawing of each structure that should withstand 140 KM/H wind gust for min. 3 sec. supported by SAP report, supported by certified structure engineer. Only concept drawing will be accepted at tender stage. Applicable strength tests of metal and civil will be





		<p>performed at the time of execution that includes but not limited to concrete tests, steel tests, bolts and welding joints test at the expense of contractor.</p> <p>Compliance of MBMA 2006 or equaling</p>
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## WIRING CABLES (DC&AC CABLES)

1. Cables to be used in wiring for the solar system and its allied components shall meet IEC/BS or equivalent internationally recognized standards. Will be tested on bidder's expense.
2. Applicable 4-core PVC/PVC or XLPE cables for inverter connections, non-armored, if building to building link is required by contractor's proposed execution plan, standard ground cabling techniques should be followed as per site.
3. Stranded and flexible, double insulated copper wires [over 99% copper] with proper color code shall be used.
4. XLPE/EVA or XLPE/PVC should be used in DC wiring with minimum 6mm for single string.
5. Cables shall be clearly labeled with essential electrical parameters including manufacturer name, standard of conformity etc.
6. All technical/electrical parameters of cables including important cables tests with in the acceptable results [Insulation test, resistance test etc.] shall have to be provided with cables.
7. All wiring shall be aesthetically neat and clean, over-all wiring/connection losses shall not exceed 1.5 %of the total rated output power or inverter supported datasheet.
8. All connections/socket outlets among array, controller, inverters, etc. must be made in junction boxes of adequate protection level and suitable u-shaped or o shaped thimbles.
9. All wires/cables should be in standard flexible UV-resistant conduits for outdoor installation and HDPE pipes for underground wiring and PVC ducts for indoor installation and GI ducts for external.
10. All underground and cross road wiring must be done with appropriate standards.
11. All junction boxes and electrical DBs must be IP 54 in case of indoor, and



IP65 in case of outdoor placement.

12. All wiring diagrams must be provided readily available at appropriate location.

### **CAMERAS AND MONITORING**

- 1- Minimum 1 night vision CCTV camera for each building particularly focusing the entry point/s for DVR recording not less than 30 days .
- 2- Minimum 1 smart LED screen per site for display of generation data as well as CCTV.

### **GEN-SET CONTROLLERS**

- 1- Suitable with existing generators and proposed inverters
- 2- Can function indirectly (LAN network) when internet is not available
- 3- Log the generation data in its ROM when the internet is not available, and push that data to cloud with time stamp when connected to internet.
- 4- Comprehensive reports for generation, utilization and export that can be gathered daily, weekly monthly and annually.
- 5- Cloud and other services should be minimum 5 years, extendable to 25 years

### **PV modules, inverters and allied testing**

- 1- No third party (external) CoC and PSI report will be acceptable, only direct import documents and products will be entertained.
- 2- Manufacturer authorization letter for concern local importer must be provided.
- 3- 2 % PV modules will be tested in lab and 2% on site, for each package, to verify the quality of product.
- 4- Standard/FAT tests on wires and other accessories may also be performed where necessary.
- 5- Onsite tests will also be conducted at each site
- 6- Cost of tests will be borne by contractor.



## Section-IV: Bid Data Sheet

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Section II. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

<b>A. Introduction</b>		
<b>BDS Clause No.</b>	<b>ITB Number</b>	<b>Amendments of, and Supplements to, Clauses in the Instruction to Bidders</b>
1.	2.1.1	<p>Name of Procuring Agency: <b>Federal Urdu University of Arts, Sciences and Technology (FUUAST), Islamabad</b></p> <p>The subject of procurement is: <b><u>PROCUREMENT AND IMPLEMENTATION OF SOLARIZATION PROJECT AT FUUAST CAMPUSES WITH 2-YEAR OPERATION &amp; MAINTENANCE (O&amp;M)</u></b></p> <ul style="list-style-type: none"> <li><i>Package 1: FUUAST Islamabad</i></li> <li><i>Package 2 (Part-A): FUUAST Gulshan e Iqbal Campus (Part-B): FUUAST Abdul Haq Campus</i></li> </ul> <p><b><i>(Separate bidding for each package is applicable)</i></b></p>
2.	2.1.2	<p>Financial year for the operations of Procuring Agency: <b>2024-2025</b></p> <p>Name of financing institution: HEC and <b>FUUAST</b></p>
3.	2.1.3 (iv)	<p>Maximum number of members in the joint venture, consortium or association shall be: [insert the number]. <b>JOINT VENTURES ARE NOT ALLOWED.</b></p>
4.		<p>Ineligible country(s) As per Appendix A to Instructions to Bidders</p>
5.	2.3.6(iii)	<p>Demonstration of authorization by manufacturer: [required/not required] form 8.3 should be followed. <b>REQUIRED AT THE TIME OF EXECUTION</b></p>
<b>B. Bidding Documents</b>		
6.	2.2.1	<p>The address for clarification of Bidding Documents is: <b>Federal Urdu University of Arts, Sciences and Technology, Islamabad.</b></p>
7.	2.2.2	<p>Pre-bid meeting will be scheduled on: Date: November 20, 2024. Time: 11:00am Venue: FUUAST, Islamabad The Client's representative is: Dr. Rahat Ullah <b>(Project Director)</b> Address: Federal Urdu University of Arts, Sciences and Technology, Islamabad. Telephone: 051 9252860-4 Ext:194</p>



		Fax: N/A E-mail: <a href="mailto:dr.rahmat@fuuast.edu.pk">dr.rahmat@fuuast.edu.pk</a>
8.	2.3.9	The number of bidding documents to be completed and returned is <b><u>one original and 02 Copy</u></b> . The bidder will also submit the bid for each applied Package to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System as well before the Submission Deadline.  <b>Note:</b> <i>Bid shall be prepared and submitted separately for each package, the indication of package number for which bidder is submitting bid, shall be clearly mentioned on covering letter, bid form and outer envelope.</i>
<b>C. Bid Price, Currency, Language and Country of Origin</b>		
9	2.3.1	<i>Language of Bid: English</i>
10	2.3.4	The price quoted shall be in <b>local currency PKR</b>
11.	2.3.4	<b>The price shall be fixed</b>
12.	2.1.4 (ii)	Country of origin: Pakistan
<b>D. Preparation and Submission of Bids</b>		
13.	2.1.3	<b>Qualification Criteria/Knock down criteria.</b> Eligibility as per following:  <b>Eligibility Requirement: (to be fulfilled). <u>(Joint Ventures are Not Allowed)</u>.</b>  <ol style="list-style-type: none"> <li>Valid AEDB registration C3 category or above (Attach Valid Registration)</li> <li>Valid Pakistan Engineering Council (PEC) Registration (C4 or above for Islamabad office &amp; C4 or above for other packages) with relevant codes e.g. (EE03, EE04, EE06, EE11)</li> <li>SECP or Federal AoP/ Registrar of firm will be considered for all sites while provincial will be applicable for respective province.</li> <li>Registration with Provincial Revenue department whichever is applicable.</li> <li>NTN / STRN</li> <li>Undertaking that the Company / Firm is not blacklisted by Provincial or Federal Government Department, Agency, Organization or autonomous body anywhere in Pakistan. Affidavit on stamp paper shall be provided.</li> <li>Valid evidence showing the Company / Firm has never been litigated, will allow participating in the bidding process. Affidavit on stamp paper shall be provided.</li> <li>Audited Financial Statements of last three years shall be</li> </ol>



		<p>provided. Annual average turnover shall be more than 100 Million PKR verifiable from audited statements.</p> <p>9. Must provide details and evidence of 02 Nos. relevant experiences during last three years for projects having capacity of greater than 150kWp (each).</p> <p>10. The bidders having their presence/office in respective locations, i.e. Rawalpindi/Islamabad and Karachi will be given preference.</p> <p>The Eligible Bidders will be evaluated further as per mandatory evaluation criteria BDS clause 24 (2.5.8) below</p>
14.	2.3.6&2.3.7	Spare parts required for 02 of years of operation.
15.	2.2.2	<p>Bid shall be submitted to:</p> <p>Address: Project Director, Federal Urdu University of Arts, Sciences and Technology (FUUAST), Islamabad Tel: 051-9252860-4 Fax: N/A</p> <p><b>Note:</b> It is <b>mandatory</b> for the bidders to submit the <b>bid</b> to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System <b>as well</b> before the Submission Deadline. <b>Bids received physically after the Submission Deadline, <u>and/or</u> without Application to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System by the submission deadline will be rejected.</b></p>
16.	2.4.2	The deadline for Bid submission is <b><u>November 25, 2024 (11:00am)</u></b>
17.		
18.	2.6.2	The amount of Performance Guarantee is <b>10%</b> in the shape of Bank Guarantee ( <b>Valid till the completion of the project</b> )
19.	2.3.8	<p>Estimated Contract Price is: As mentioned in Section II 2.1.1 Scope of Work</p> <p>Amount of Bid security is: As mentioned in Section II 2.1.1 Scope of Work</p>
20.	2.3.9	The bid validity period after opening of the Bid is <b>120 Days</b> .
21.	2.3.9	Number of copies (hard) of the Bid to be provided is: <b>02</b> .
<b>E. Opening and Evaluation of Bids</b>		
22.	2.5.1	<p>The Bid opening shall take place at:</p> <p><b><u>November 25, 2024 (11:30am)</u> at FUUAST, Islamabad</b></p> <p><b>Telephone: 051-9252860-4</b></p>
23.	2.3.5	The currency that shall be used for Bid evaluation and comparison purposes to convert all Bid prices expressed in various currencies is: <b>Pakistani Rupees</b>
<b>F. Bid Evaluation Criteria</b>		
24.	2.5.8	<b>Criteria to Bid Evaluation:</b>



		<p>Eligibility of Bidders will be determined as per BDS 13 (ITB 2.1.3):</p> <p>Eligible bidders will be evaluated further following mandatory evaluation criteria as given below:</p>
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## Marking Criteria

Following marking criteria will be followed for each package:

Parameters	Detail	Max Marks	Notes
<b>Past Experience</b>	Evidence of 3+ similar projects ( $\geq 200$ kWp each) in the last 5 years	<b>30</b>	Completion certificates/Generation Licenses/Work Orders required.
<b>Operational History</b>	Operational history of 5+ years	<b>10</b>	Full marks for $\geq 5$ years.
<b>Annual Energy Commitment</b> (Mandatory)	Bidder will provide the <b>affidavit on letter head</b> for Annual Guaranteed Energy generation (Total kWhs) for each year (up to two years). Below this energy, a penalty shall be imposed as per GCC clause 16 (SCC clause 12).	<b>10</b>	Highest marks will be awarded to Maximum Annual Energy yield among bidders and relative marking will be done. PVSYST P90 Values should be shown in the reports.
<b>Execution Plan Presentation</b> (Mandatory)	Understanding of project, design, execution, and O&M strategies. Includes evidence of at least 2 O&M contracts ( $\geq 200$ kW).	<b>10</b>	Each bidder will present their plan, and marks will be awarded accordingly.
<b>Technical System Details</b> (Mandatory)	All datasheets, documentations, certificates, simulations to support the technical design and specifications <b>SHALL be</b> provided.	<b>10</b>	Includes timeline (3), structure drawing (2), detailed BOQ (3), and O&M strategy (2).
<b>O&amp;M Period</b>	Basic O&M period of 2 years gets 2 marks. Extended O&M period (up to 5 years) gets full marks.	<b>5</b>	2 marks for 2 years, with additional 3 marks for extended period up to 5 years.
<b>Human Resource Strength</b>	Experienced team:	<b>15</b>	<b>Roles and marks:</b>
			Project Manager (Electrical Engineer with 10+ years Experience)(6) 2 Junior Engineers (Electrical)



			(3+3) 2 Site Engineers (Mechanical/Civil) (1.5+1.5)
<b>Financial Status</b>	Audited statements for last 3 years; annual average turnover > 100M PKR	<b>10</b>	Financial stability validated through audited statements. Relative scoring based on turnover.
<b>Total</b>		<b>100</b>	





### Document Check List:

**Note: The bidder shall prepare bid accordingly as per the bid forms, schedules and required documents for bid to be responsive.**

Sr.#	Description	Page #/Refer	Attachments
1	<b>Documents for Eligibility Check:</b> <ul style="list-style-type: none"> <li>i. Valid AEDB Registration C3 Category</li> <li>ii. Valid PEC as specified C4 and Above</li> <li>iii. SECP</li> <li>iv. Registration with Provincial Revenue department (e.g. PRA, SRA etc.) whichever is applicable.</li> <li>v. NTN / STRN</li> <li>vi. Non-Blacklisting Affidavit</li> <li>vii. Non-Litigation Affidavit</li> <li>viii. Audited Financial Statements of last three years</li> <li>ix. Projects/Experience as per Form 8.12 along with evidence of Experience</li> <li>x. Company's Profile/ Offices Details</li> <li>xi. Audited Financial Statements of last three years shall be provided. Annual turnover shall be more than 100 Million PKR verifiable from audited statements.</li> <li>xii. Details and evidence of similar Projects executed during last three years. Attach Completion Certificates of projects having capacity of greater than 200kWp (each)</li> </ul>		<b>Required</b>
2	<ul style="list-style-type: none"> <li>• Technical Form of Bid</li> <li>• Schedule to Bids (A to D) provided in Section VII</li> <li>• Forms (8.1 to 8.9 excluding Financial Bid form 8.10 which is to be attached in Financial bid envelope) provided in Section VIII accordingly to be filled and submitted in the technical proposal.</li> </ul>		<b>Required</b>
2	Filled Technical Compliance Sheet (BOQ) in Section III of the quoted products in compliance with the Technical Specifications / Employer's Requirement Section III and Schedule of Requirements Section VII.		<b>Required</b>
3	Bidders are required to submit the bid security within the Technical Proposal for an amount mentioned in 2.1.1 of Section II Scope of Bid.		<b>Required</b>



Sr.#	Description	Page #/Refer	Attachments
4	Energy Yield Commitment Affidavit (Total kWhs) for two years		Required
5	Company Profile and Offices Details and Operational History		Required
6	Duly signed and stamped by original RFP document should be submitted by firm/bidder.		Required
7	<ul style="list-style-type: none"> <li>Detailed BoQ as per format specified</li> <li>Technical datasheets,</li> <li>SLDs, Mounting Structure Concept Drawing</li> <li>literature, brochures, and</li> <li>Relevant technical documentations as per Minimum requirements</li> <li>O&amp;M Strategy</li> </ul>		Required
8	<p>Human Resource Strength:</p> <ul style="list-style-type: none"> <li>Only CVs of the mentioned positions shall be provided with clear mention of Tasks Assigned, qualification and relevant experience.</li> </ul> <p>Irrelevant CVs will not be considered for marking.</p>		Required



### G. Award of Contract

<b>2.6.5</b>	Percentage for quantity increase or decrease is: <b>15 %</b> .
<b>2.6.2</b>	The Performance Guarantee shall be: <b>10%</b> .
<b>2.6.2</b>	The Performance Guarantee (or Security) shall be in the form of: <b>Bank Guarantee from Schedule Bank of Pakistan (Valid till the project completion date)</b>



## Section-VII. Schedule of Requirements

### SCHEDULE – A TO BID

The scope of work covers Design, Supply, Installation, Testing, Commissioning and net-metering and 2 Year O&M of Grid interactive solar photovoltaic system for FUUAST campuses in Islamabad and Karachi.

**The Scope of Work includes but is not limited to the following:**

- The scope of services includes PV modules, on-grid inverters, junction boxes, AC, DC distribution boards and cables, DC/AC earthing, lightening arrestors with complete scope, net metering, communication interface, remote monitoring, security and surveillance, electrical up-gradation where required and any other equipment necessary for safe and efficient operation of the system. The scope of services also includes inter-connection of installed PV system with the national grid, and synchronization with existing generator sets.
- ***The Successful bidder will provide Manufacturer Authorizations (Solar PV module and Inverter); and warranty declarations for all major and allied equipment.***
- The successful bidder must submit shop drawing with layout out plan and Single Line Drawing (SLD), design calculation for PV mounting structure for approval from the Engineer before the commencement of the work. As built drawing should be provided by the contractor after the completion of work.
- The successful bidder must install Genset Synchronized Compatible Inverters.
- The civil works for the installation of the complete system is included in the scope of the successful bidder.
- Guaranteed energy must be equaling or more than committed, equaling deductions should be made in end of year if energy generation is low, on applicable grid rate (**FUUAST NEEDS TO CHECK IF NEEDED**).
- Prior to installation, **2% quantity of Solar PV Panels supplied by the successful bidder will be tested by the Client's approved laboratory, whereas 2% quantity will be tested on-site.**
- The equipment offered should conform in all respects to high standards of engineering, design and workmanship and be capable of performing in commercial operation.
- The supply includes essential spares necessary for operation, routine maintenance and testing of equipment supplied for the agreed time period.
- Any and all fittings and accessories that may not have been mentioned specifically in the specifications but are necessary for the solar PV plant, should be deemed



to be included in the specifications and shall be supplied and furnished by the successful bidder without incurring any extra charges.

- The successful bidder must comply with guidelines provided by the concerned management.
- The successful Bidder shall ensure that all work necessary for the safe and efficient working of the system is in compliance with applicable standards.
- The Employer/Engineer shall verify equipment, and detailed drawings and ensure that all technical specifications are complied with. It reserves its right to reject any work or material, which in its judgment is not in full accordance therewith. The Employer can further ask the successful bidder to provide samples at any stage for clarification.
- The successful bidder must provide a remote monitoring system, all execution and cloud data continuity will be bidder responsibility.
- The net-metering process includes all charges/fees, approvals, sanction load up-gradation (if required), bi-directional meter, related equipment and inspection.
- The successful bidder must provide a 4-core AC wire from Meter to Inverter Distribution Box (DB) if required.
- The successful bidder must ensure that any scrap material on site shall be handed over to the concerned management.
- **The Time for Completion is 03 months starting from the date of commencement of the project mentioned in the Letter of Commencement.** Bidder will provide delivery schedule and timeline as required by scope of project.

Number	Description	Quantity	Delivery schedule in weeks

**SCHEDULE – B TO BID****PROPOSED PROGRAMME OF WORKS**

Bidder shall provide a program in a bar-chart/CPM/PERT form showing the sequence of work items by which he proposes to complete the work of the entire Contract. The program should indicate the sequence of work items and the period of time during which he proposes to complete the Works including the activities like designing, schedule of submittal of drawings, ordering and procurement of materials, manufacturing, delivering, construction of civil works, erection, testing and commissioning of Works to be supplied under the Contract.

**SCHEDULE – C      TO BID****PROPOSED ORGANISATION**

The bidder shall list in this Schedule the key personnel he will employ from Head office and from Site office to direct and execute the Works, together with their names, ID, qualifications, experience, positions held and their nationalities.

Designation	Name	CNIC Number, Summary of Qualifications Experience, Present Position and Nationality
-------------	------	---

- Head Office:
- Site Office:
  - Contractor's Representative
  - Site Superintendent
  - Supervising Engineer
  - Plant Erectors
  - Construction Supervisors
  - Other Key Staff

**SCHEDULE – D TO BID****(INTEGRITY PACT)****DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS. 10.00 MILLION OR MORE**

Contract No. Dated Contract Value: Contract Title: \_

... [name of Supplier] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, [name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[name of Supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[name of Supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Supplier] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Supplier] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Buyer: .....

Name of Seller/Supplier: .....

Signature: .....

Signature: .....

[Seal]

[Seal]





## Section-VIII: Sample Forms

### 8.1 Bid Form

*[To be signed & stamped by the Goods Provider and reproduced on the letter head. To be attached with the Financial Bid, in case of Single Stage Two Envelope Procedure]*

Date: \_\_\_\_\_

To: *[name and address of Procuring Agency]*

Gentlemen and/or Ladies:

Having examined the Bidding documents including Addenda Nos. *[insert numbers]*, the receipt of which is hereby duly acknowledged, we, the undersigned, in conformity with the said Bidding documents for the sum of *[total Bid amount in words and figures]* or such other sums as may be ascertained in accordance with the Schedule of Prices attached herewith and made part of this Bid.

We undertake, if our Bid is accepted, specified in the Schedule of Requirements. If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to 10% of the Contract Price for the due performance of the Contract, in the form prescribed by the Procuring Agency.

We agree to a Bid by this Bid for a period of 120 days from the date fixed to Bid opening under Clause 2.3.8 of the Instructions to Bidders, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed (*if required*), this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.

The Composition of our bid consists on separate Technical and financial bids, detail of which is as follows:

#### **Technical bid includes the following:-**

- a) Complete bidding document (without filling) signed and stamped by the bidder.
- b) All the forms relevant to the technical bid, to be reproduced on the letter head of the bidder as indicated on each individual form.
- c) Copy of bid security form along with copy of financial instruments *[to be decided by the procuring agency i.e. Bank Guarantee / Bank call-deposit (CDR) / Demand Draft (DD) / Pay Order (PO) or Banker's cheque]* valid for 120 Days, beyond the validity of Bid in the manner as prescribed on the bid security form **8.10.**
- d) Any other document required by the procuring agency not inconsistent with PPRA.



**Financial bid includes the following:-**

- a) Original Bid form (as per **form 8.1 of** Bidding documents) on letter head of the firm, duly signed and stamped.
- b) Price schedule / financial form (as per **form 8.10**) to be reproduced on the letter head of the bidder duly signed and stamped.
- c) Original Bid security form (as per **form 8.11**) along with Original financial instrument *[to be decided by the procuring agency i.e. Bank Guarantee / Bank call-deposit (CDR) / Demand Draft (DD) / Pay Order (PO) or Banker's cheque]* valid for 120 Days, beyond the validity of Bid.
- d) *Any other document required by the procuring agency not inconsistent with PPRA.*

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:

**Name and address of goods provider**

**Amount and Currency**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(if none, state "none")

We understand that you are not bound to accept the lowest or any Bid you may receive.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

\_\_\_\_\_  
*[signature]*

\_\_\_\_\_  
*[in the capacity of]*

Duly authorized to sign Bid for and on behalf of \_\_\_\_\_



### 8.3. Manufacturer's Authorization Form

*[To be signed and stamped by the Bidder and to be attached with Technical Bid]*

#### TO BE SUBMITTED AT THE TIME OF EXECUTION

[See Clause 2.3.6 (iii) of the Instructions to Bidders.]

To: *[name of the Procuring Agency]*

WHEREAS *[name of the Manufacturer]*, who are established and reputable manufacturers of *[name and/or description of the goods]* having factories at *[address of factory]* do hereby authorize *[name and address of Agent]* to submit a Bid, and subsequently negotiate and sign the Contract with you against for the above goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract for the goods offered for supply by the above firm against this Invitation to Bids.

---

*[Signature for and on behalf of Manufacturer]*

*Note: This letter of authority should be on the letterhead of the Manufacturer and should be signed by a person competent and having the power of attorney to bind the Manufacturer. It should be included by the Bidder in its Bid.*



### 8.4. Bidder Profile Form

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]*

Sr.#	Particulars
1.	Name of the company:
2.	<b>Registered Office:</b>
Address:	
Office Telephone Number:	
Fax Number:	
3.	<b>Contact Person:</b>
Name:	
Personal Telephone Number:	
Email Address:	
4.	<b>Local office if any:</b>
Address:	
Office Telephone Number:	
Fax Number:	
5.	<b>Registration Details:</b>

**a) Audited Financial Statement Attachment/Income Tax Returns (Last \_\_\_\_ years)**

Yes	No
-----	----

**b) Details of Experience (Last \_\_\_\_ Years)**

(i)	Similar Project (Agency/Department)	Item Name
(ii)	Value of total Projects/Tenders/POs	Amount

**c) Staff Detail and last month Payroll**

Yes	No
-----	----



### 8.5. General Information Form

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]*

	Particulars			
<b>Company Name</b>				
<b>Abbreviated Name</b>				
<b>National Tax No.</b>			<b>Sales Tax Registration No</b>	
<b>PRA Tax No.</b>				
<b>No. of Employees</b>			<b>Company's Date of</b>	
			<b>Formation</b>	

\*Please attach copies of NTN, GST Registration & Professional Tax Certificate

<b>Registered Office Address</b>		<b>State/Province</b>	
<b>City/Town</b>		<b>Postal Code</b>	
<b>Phone</b>		<b>Fax</b>	
<b>Email Address</b>		<b>Website Address</b>	



## 8.6. Affidavit

*[To be printed on PKR 100 Stamp Paper, duly attested by oath commissioner. To be attached with Technical Bid]*

**Name:** \_\_\_\_\_  
(Applicant)

I, the undersigned, do hereby certify that all the statements made in the Bidding document and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary.

The undersigned hereby authorize and request the bank, person, company or corporation to furnish any additional information requested by the *[name of Procuring Agency]* of the Punjab deemed necessary to verify this statement regarding my (our) competence and general reputation.

The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the *[name of Procuring Agency]*. The undersigned further affirms on behalf of the firm that:

- (i) The firm is not currently blacklisted by the Procuring Agency.
- (ii) The documents/photocopies provided with Bid are authentic. In case, any fake/bogus document was found at any stage, the firm shall be blacklisted as per Law/ Rules.
- (iii) Affidavit for correctness of information.
- (iv) \*\*\*\*\*omitted\*\*\*\*\*

*[Name of the Contractor/ Bidder/ Supplier]* undertakes to treat all information provided as confidential.

*Signed by an authorized Officer of the company*

Title of Officer: \_\_\_\_\_

Name of Company: \_\_\_\_\_

Date: \_\_\_\_\_



### 8.7. Performance Guarantee Form

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]*

To,

*[name and address of the Procuring Agency]*

**WHEREAS** (Name \_\_\_\_\_ of \_\_\_\_\_ the Contractor/ \_\_\_\_\_ Supplier) \_\_\_\_\_ hereinafter called "the Contractor" has undertaken, in pursuance of "INVITATION TO BID FOR THE **"PROVISION OF \_\_\_\_\_"** procurement of the following:

1. **[Please insert details]**.

(Here in after called "the Contract").

**AND WHEREAS** it has been stipulated by you in the Contract that the Contractor shall furnish you with a bank guarantee by a scheduled bank for the sum specified therein as security for compliance with the Contractor's performance obligations in accordance with the Contract;

**AND WHEREAS** we have agreed to give the Contractor a Guarantee;

**THEREFORE WE** hereby affirm that we are Guarantor and responsible to you, on behalf of the Contractor, up to a total of \_\_\_\_\_ (Amount of the guarantee in words and figures), and we undertake to pay you, upon your first written demand declaring the Contractor to be in default under the Contract, and without cavil or argument, any sum or sums as specified by you, within the limits of \_\_\_\_\_ (Amount of Guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, or \_\_\_\_\_ [insert number of days] after the rectification of the Defects, whichever is later.

**[NAME OF GUARANTOR]**

**Signature**

\_\_\_\_\_

**Name**

\_\_\_\_\_

**Title**

\_\_\_\_\_

**Address**

\_\_\_\_\_

**Seal**

\_\_\_\_\_

**Date**

\_\_\_\_\_



### **8.8. Technical Bid Form(As per Section III, 3.1)**

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]*

To be filled and attached with technical proposal  
BOQ/Technical Compliance Sheet as per the BOQ requirement in Section III, 3.1

**Stamp & Signature of Bidder** \_\_\_\_\_





### 8.9. Contract Form

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Technical Bid]*

THIS AGREEMENT made on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ between *[name of Procuring Agency]* of *[country of Procuring Agency]* (hereinafter called “the Procuring Agency”) on the one part and *[name of Supplier]* of *[city and country of Supplier]* (hereinafter called “the Supplier”) on the other part:

WHEREAS the Procuring Agency invited Bids for certain goods and ancillary services, viz., *[brief description of goods and services]* and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
  - (a) the Bid Form and the Price Schedule submitted by the Bidder;
  - (b) the Schedule of Requirements;
  - (c) the Technical Specifications;
  - (d) the General Conditions of Contract;
  - (e) the Special Conditions of Contract; and
  - (f) the Procuring Agency’s Notification of Award.
  - (g) Contract agreement
  - (h) Complete Bidding document
3. In consideration of the payments to be made by the Procuring Agency to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring Agency to provide the goods and services and to rectify defects therein in conformity with all respects in accordance with the provisions of the Contract.
4. The Procuring Agency hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the rectification of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year mentioned above.

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Procuring Agency)

Signed, sealed, delivered by \_\_\_\_\_ the \_\_\_\_\_ (for the Supplier)



### 8.10. Financial Bid Form/Price Schedule

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Financial Bid]*

**Note: Project Item Rate basis. The following quantities are tentative basis and bidder shall perform its own survey and diligence on site for technical and financial bids.**

**BOQ Package 1: FUUAST Islamabad Campus (220kWp)**

#### SCHEDULE OF PRICES – SUMMARY OF BID PRICES

**Name of Project including package:**

Item No.	Project Description with package mention	Total Cost of Solar Equipment PKR	Total Cost of Services (Excluding O&M) PKR	Total Cost of O&M (02 Years) PKR	Total Cost of the Project PKR
1					

(Note: Total Price, in Pak Rupees, shall be provided in figures as well as in words, Prices should be included with all applicable Government taxes)

NOTE: Lump Sum (Summary of Bid Prices) and Item wise (BOQ of the System / Schedule of Prices (BOQ)) rate must be submitted in the Financial Proposal. The Bid not accompanied with the Item wise rates shall be rejected and declared non-responsive. Name of Project should be clearly mentioned in bold letters over the sealed envelope of the Financial Proposal.



## Financial Bill of Quantity (BOQ ) / Item Wise BOQ

## SCHEDULE OF PRICES – ITEM WISE BID PRICES

**ITEMWISE COSTS BREAKDOWN**

Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
<b>PV Modules and Power Generation System</b>						
Solar Modules (Tier One) of total rating not less than 220 KW						
On Grid Inverter/s with sum of not less than 300-350 KWac (1:1- or above)						
Cable for Interconnection (DC) 4 mm (UV Protected XLPE)						
PV Combiner Boxes with DC Breakers and DC SPD's etc. for string protections as per IESCO standards						
<b>SUB-TOTAL(A)</b>						
<b>AC Termination &amp; Accessories</b>						
LT Termination with AC breaker of not less than 1.35 times maximum Ampere of inverters and SPD of not less than 40KA along with supported items as per IESCO standard with each inverter						
Comprehensive Protection Cabinet with earthing and powder coating as per standards						
Secondary Comprehensive Protection Cabinet with earthing and powder coating as per standards with Ampere, Voltage and power display						
<b>SUB-TOTAL(B)</b>						
<b>Fabricated Items</b>						
MS Elevated Structure including Civil Pads/Concrete formation (12"x12") (for 250KW capacity) can be changed as per Requirement Structure 10-17° tilt						



Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
Cable Tray and ducts						
Distribution Boxes as per requirement						
<b>SUB-TOTAL(C)</b>						
<b>Cable &amp; Accessories</b>						
AC Cables for Inverter Interconnection and connection with Grid PCC of suitable size in sqmm, 4 core, double insulated Non-Armoured as per proposed design, that will be validated by consultant						
Installation Material (cable Ducts etc.)						
<b>SUB-TOTAL(D)</b>						
<b>Earthing / Grounding System / GenSet Controller Panels</b>						
Earthing System For Inverter / Grid / Generator Set Neutral Complete independent earthing system for inverter / Grid / Generator Set Neutral must be separated of the main earthing system to obtain < 3 ohm resistance.						
Earthing for PV SOLAR SYSTEM complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain < 3 ohm resistance.						
Surge protection device of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.						
<b>SUB-TOTAL(E)</b>						
<b>Remote Monitoring Data Acquisition System</b>						



Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring. Data logging. Alone with smart LCD of not less than 48" for display						
<b>Services (F)</b>						
Project Design & Execution						
Erecting of Mechanical Mounting Structure, Installation, testing and Commissioning of Solar System						
Operations and Maintenance "O&M Services (02 Year)						
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)						
<b>SUB-TOTAL(F)</b>						
<b>SUM(A+B+C+D+E+F)</b>						
<b>GRAND TOTAL</b>						

**Note:**

- **Financial BOQ must be filled and the total amount to be inserted in the Summary of Bid.**

Total Bid value (against which a Bid shall be evaluated) in figure.

Total Bid value (against which a Bid shall be evaluated) in words.

**Note:**

In case of difference between unit price and total price, unit price shall prevail and total price shall be "final". (Please refer ITB clause 2.5.6). In case of difference between amount in "words" and amount in "figures", amount in "words" shall be considered final.

**Stamp & Signature of Bidder** \_\_\_\_\_



**BOQ Package 2 Part-A: FUUAST Karachi Campuses (Gulshan e Iqbal Campus: 250kWp)**

**SCHEDULE OF PRICES – SUMMARY OF BID PRICES**

**Name of Project including package:**

<b>Item No.</b>	<b>Project Description with package mention</b>	<b>Total Cost of Solar Equipment PKR</b>	<b>Total Cost of Services (Excluding O&amp;M) PKR</b>	<b>Total Cost of O&amp;M (2 Years) PKR</b>	<b>Total Cost of the Project PKR</b>
1					

(Note: Total Price, in Pak Rupees, shall be provided in figures as well as in words, Prices should be included with all applicable Government taxes)

NOTE: Lump Sum (Summary of Bid Prices) and Item wise (BOQ of the System / Schedule of Prices (BOQ)) rate must be submitted in the Financial Proposal.

The Bid not accompanied with the Item wise rates shall be rejected and declared non-responsive. Name of Project should be clearly mentioned in bold letters over the sealed envelope of the Financial Proposal.



## Financial Bill of Quantity (BOQ ) / Item Wise BOQ

## SCHEDULE OF PRICES – ITEM WISE BID PRICES

## ITEMWISE COSTS BREAKDOWN

Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
<b>PV Modules and Power Generation System</b>						
Solar Modules (Tier One) of total rating not less than 250KW						
On Grid Inverter (1:1- or above) 250KWac						
Cable for Interconnection (DC) 6 mm (UV Protected XLPE)						
PV Combiner Boxes with DC Breakers and DC SPD's etc. for string protections as per KE standards						
<b>SUB-TOTAL(A)</b>						
<b>AC Termination &amp; Accessories</b>						
LT Termination with AC breaker of not less than 175 Ampere and SPD of not less than 40KA along with supported items as per K-E standard						
Secondary Comprehensive Protection Cabinet with earthing and powder coating as per standards with Ampere, Voltage and power display						
<b>SUB-TOTAL(B)</b>						
<b>Fabricated Items</b>						
Mounting Structure of suitable L1, L2 or L3 type standard or as per suitable approved design						
Cable Tray and ducts						
Distribution Boxes as per requirement						
<b>SUB-TOTAL(C)</b>						
<b>Cable &amp; Accessories</b>						
AC Cables for Inverter Interconnection of min. 70 sqmm, 4 core, double insulated Non-Armoured						



Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
Installation Material (cable Ducts etc.)						
<b>SUB-TOTAL(D)</b>						
<b>Earthing / Grounding System / GenSet Controller Panels</b>						
Earthing System For Inverter / Grid / Generator Set Neutral Complete independent earthing system for inverter / Grid / Generator Set Neutral must be separated of the main earthing system to obtain < 2 ohm resistance.						
Earthing for PV SOLAR SYSTEM complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain < 3 ohm resistance.						
Surge protection device of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.						
<b>SUB-TOTAL(E)</b>						
<b>Remote Monitoring Data Acquisition System</b>						
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring. Data logging. Alone with smart LCD of not less than 48" for display						
<b>Services (F)</b>						
Project Design & Execution						
Erecting of Mechanical Mounting Structure, Installation, testing and Commissioning of Solar System						





Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
Operations and Maintenance "O&M Services (02 Year)						
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)						
<b>SUB-TOTAL(F)</b>						
<b>SUM(A+B+C+D+E+F)</b>						
<b>GRAND TOTAL</b>						

**NOTE:**

- Financial BOQ must be filled and the total amount to be inserted in the Summary of Bid.

Total Bid value (against which a Bid shall be evaluated) in figure.

Total Bid value (against which a Bid shall be evaluated) in words.

**Note:**

In case of difference between unit price and total price, unit price shall prevail and total price shall be "final". (Please refer ITB clause 2.5.6). In case of difference between amount in "words" and amount in "figures", amount in "words" shall be considered final.

Stamp & Signature of Bidder \_\_\_\_\_


**BOQ Package 2 Part-B: FUUAST Karachi Campuses (Abdul Haq Campus: 80kWp)**
**SCHEDULE OF PRICES – SUMMARY OF BID PRICES**

<b>Name of Project including package:</b>
---

Item No.	Project Description with package mention	Total Cost of Solar Equipment PKR	Total Cost of Services (Excluding O&M) PKR	Total Cost of O&M (2 Years) PKR	Total Cost of the Project PKR
1					

(Note: Total Price, in Pak Rupees, shall be provided in figures as well as in words, Prices should be included with all applicable Government taxes)

NOTE: Lump Sum (Summary of Bid Prices) and Item wise (BOQ of the System / Schedule of Prices (BOQ)) rate must be submitted in the Financial Proposal.

The Bid not accompanied with the Item wise rates shall be rejected and declared non-responsive. Name of Project should be clearly mentioned in bold letters over the sealed envelope of the Financial Proposal.



## Financial Bill of Quantity (BOQ ) / Item Wise BOQ

## SCHEDULE OF PRICES – ITEM WISE BID PRICES

## ITEMWISE COSTS BREAKDOWN

Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
<b>PV Modules and Power Generation System</b>						
Solar Modules (Tier One) of total rating not less than 80 KW						
On Grid Inverter (1:1- or above) 80KWac						
Cable for Interconnection (DC) 6 mm (UV Protected XLPE)						
PV Combiner Boxes with DC Breakers and DC SPD's etc. for string protections as per KE standards						
<b>SUB-TOTAL(A)</b>						
<b>AC Termination &amp; Accessories</b>						
LT Termination with AC breaker of not less than 175 Ampere and SPD of not less than 40KA along with supported items as per K-E standard						
Secondary Comprehensive Protection Cabinet with earthing and powder coating as per standards with Ampere, Voltage and power display						
<b>SUB-TOTAL(B)</b>						
<b>Fabricated Items</b>						
Mounting Structure of suitable L1, L2 or L3 type standard or as per suitable approved design						
Cable Tray and ducts						
Distribution Boxes as per requirement						
<b>SUB-TOTAL(C)</b>						
<b>Cable &amp; Accessories</b>						
AC Cables for Inverter Interconnection of min. 70 sqmm, 4 core, double insulated Non-Armoured						



Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
Installation Material (cable Ducts etc.)						
<b>SUB-TOTAL(D)</b>						
<b>Earthing / Grounding System / GenSet Controller Panels</b>						
Earthing System For Inverter / Grid / Generator Set Neutral Complete independent earthing system for inverter / Grid / Generator Set Neutral must be separated of the main earthing system to obtain < 2 ohm resistance.						
Earthing for PV SOLAR SYSTEM complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain < 3 ohm resistance.						
Surge protection device of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.						
<b>SUB-TOTAL(E)</b>						
<b>Remote Monitoring Data Acquisition System</b>						
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring. Data logging. Alone with smart LCD of not less than 48" for display						
<b>Services (F)</b>						
Project Design & Execution						
Erecting of Mechanical Mounting Structure, Installation, testing and Commissioning of Solar System						



Description	Qty.	UOM	Brand & Model No	Total cost of item	GST/ PRA	Total Price (Incl. GST) / PKR
Operations and Maintenance "O&M Services (02 Year)						
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)						
<b>SUB-TOTAL(F)</b>						
<b>SUM(A+B+C+D+E+F)</b>						
<b>GRAND TOTAL</b>						

**NOTE:**

- Financial BOQ must be filled and the total amount to be inserted in the Summary of Bid.

Total Bid value (against which a Bid shall be evaluated) in figure.

Total Bid value (against which a Bid shall be evaluated) in words.

**Note:**

In case of difference between unit price and total price, unit price shall prevail and total price shall be "final". *(Please refer ITB clause 2.5.6).* In case of difference between amount in "words" and amount in "figures", amount in "words" shall be considered final.

Stamp & Signature of Bidder \_\_\_\_\_



### 8.11. Bid Security Form

*[To be signed & stamped by the Bidder and reproduced on the letter head. To be attached with Financial Bid]*

Whereas *[name of the Bidder]* (hereinafter called “the Bidder”) has submitted its Bid dated *[date of submission of Bid]* for the supply of *[name and/or description of the goods]* (hereinafter called “the Bid”).

KNOW ALL PEOPLE by these presents that WE*[name of bank]* of *[name of country]*, having our registered office at *[address of bank]* (hereinafter called “the Bank”), are bound unto *[name of Procuring Agency]* (hereinafter called “the Procuring Agency”) in the sum of for which payment well and truly to be made to the said Procuring Agency, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its Bid by the Procuring Agency during the period of Bid validity:
  - (a) fails or refuses to execute the Contract Form, if required; or
  - (b) fails or refuses to furnish the Performance Guarantee, in accordance with the Instructions to Bidders;

we undertake to pay to the Procuring Agency up to the above amount upon receipt of its first written demand, without the Procuring Agency having to substantiate its demand, provided that in its demand the Procuring Agency will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including thirty (30) days after the period of Bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

---

*[Signature of the bank]*



## 8.12. Company's Experience

### A- GENERAL EXPERIENCE

Evidence of the experience mentioned is mandatory.

COMPANY GENERAL EXPERIENCE								
Sr.	Name of Project	Location	Client	Description/System Capacity and Type of System	Implementation		Contract Cost of Project	Services provided by the Company
					Start	Complete		
1.								•
2.								
3.								
4.								
5.								
6.								
7.								
8.								

More rows can be added as required.



## B- PARTICULAR EXPERIENCE

Each copy of the form must be accompanied by evidence.

*Name of Applicant or Partner of a Joint Venture*

Use a separate sheet for each contract.

### Contract No:

1.	Name of Contract		
	Country		
2.	Name of Employer		
3.	Employer Address		
4.	Nature of works and special features relevant to the contract for which the Applicant wishes to qualify		
5.	Contract Role (Tick One)		
	(a) Sole Contractor <input type="checkbox"/>	(b) Sub- Contractor <input type="checkbox"/>	(c) Partner in a Joint Venture <input type="checkbox"/>
6.	Value of the total contract (in specified currencies) at completion, or at date of award for current contract Currency _____ PKR		
7.	Equivalent in Pak/Rs.		
8.	Date of Award		
9.	Date of Completion		
10.	O&M Contract Duration (Years)		
11.	Specified Requirements:		
12.	EPC of the Project involved: Yes <input type="checkbox"/> No <input type="checkbox"/>  If yes, Contract Role, a) Sole Contractor b) Sub- Contractor c) Partner in a JV		
13.	of the Project involved: Yes <input type="checkbox"/> No <input type="checkbox"/>  If yes, Please attach Generation License for evidence		





## Section-V: General Conditions of Contract

### 1. Definitions

1.1 In this Contract, the following terms shall be interpreted as indicated:

- (a) "The Contract" means the agreement entered into between the Procuring Agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein for complete scope of work in pursuant to ITB clause 2.1.1.
- (b) "The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) "The Goods" means all of the equipment, machinery, and/or other materials, and services which the Supplier is required to supply to the Procuring Agency under the Contract in pursuant to scope of work ITB clause 2.1.1.
- (d) "The Services" means obligations of the Supplier covered under the Contract in pursuant to scope of work ITB clause 2.1.1. "Design, Supply, Installation, Commissioning and Net-Metering Of On-Grid Solar System For FUUAST Campuses In Islamabad And Karachi On EPC basis With Two Year O&M".
- (e) "GCC" mean the General Conditions of Contract contained in this section.
- (f) "SCC" means the Special Conditions of Contract.
- (g) "The Procuring Agency" means the organization purchasing the Goods & Services, as named in SCC.
- (h) "The Procuring Agency's country" is the country named in SCC.
- (i) "The Supplier" means the Bidder or firm supplying the Goods and Services under this Contract.
- (j) "The Project Site," where applicable, means the place or places named in SCC.
- (k) "Day" means calendar day.

### 2. Application

2.1. These General Conditions shall apply to the extent that they are not superseded by provisions of other parts of the Contract.



### **3. Country of Origin**

3.1. All Goods and Services supplied under the Contract shall have their origin in the countries and territories eligible under the rules, as further elaborated in the SCC.

*[where applicable]*

3.2. For purposes of this Clause, “origin” means the place where the Goods were mined, grown, or produced, or from where the Services are supplied. Goods are produced when, through manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product is obtained that is substantially different in basic characteristics or in purpose or utility from its components.

3.3. The origin of Goods and Services is distinct from the nationality of the Supplier. In any case, the requirements of rules in PPRA 2004 amended till date, shall be followed.

### **4. Standards**

4.1. The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standards appropriate to the Goods’ country of origin. Such standards shall be the latest issued by the concerned institution.

### **5. Use of Contract Documents and Information; Inspection and Audit by the procuring agency.**

5.1. The Supplier shall not, without the Procuring Agency’s prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Procuring Agency in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

5.2. The Supplier shall not, without the Procuring Agency’s prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of executing the Contract.

5.3. Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Procuring Agency and shall be returned (all copies) to the Procuring Agency on completion of the Supplier’s performance under the Contract if so required by the Procuring Agency.

5.4. The Supplier shall permit the Procuring Agency to inspect the Supplier’s accounts and records relating to the performance of the



Supplier and to have them audited by auditors appointed by the donors, if so required by the donors.

## **6. Patent Rights**

6.1. The Supplier shall indemnify the Procuring Agency against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof in the Procuring Agency's country.

## **7. Performance Guarantee**

7.1. Within fifteen (15) days *[to be decided by the procuring agency]* of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring Agency the Performance Guarantee in the amount specified in SCC/Bid Data Sheet & clause 2.6.2 of ITB.

7.2. The proceeds of the Performance Guarantee shall be payable to the Procuring Agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3. The performance guarantee shall be denominated in the currency of the Contract acceptable to the Procuring Agency and shall be in one of the following forms:

- (a) a bank guarantee or an irrevocable letter of credit issued by a reputable bank located in the Procuring Agency's country, in the form provided in the Bidding documents or another form acceptable to the Procuring Agency; or
- (b) a Bank Guarantee, Bank call-deposit (CDR), Demand Draft (DD), Pay Order (PO) or Banker's cheque cashier's or certified cheque or CDR.

7.4. The performance guarantee will be discharged by the Procuring Agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

## **8. Inspections and Tests**

8.1. The Procuring Agency or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Procuring Agency. SCC and the Technical Specifications shall specify what inspections and tests the Procuring Agency requires and where they are to be conducted. The Procuring Agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives nominated for these purposes.

8.2. The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery, and/or at the



Goods' final destination. If conducted on the premises of the Supplier or its subcontractor(s) (if so allowed by the Procuring Agency), all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Procuring Agency.

8.3. Should any inspected or tested Goods fail to conform to the Specifications, the Procuring Agency may reject the Goods, and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Procuring Agency.

8.4. The Procuring Agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival in the Procuring Agency's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Procuring Agency or its representative prior to the Goods' shipment from the country of origin.

8.5. Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

## **9. Packing**

9.1. The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2. The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in SCC, and in any subsequent instructions ordered by the Procuring Agency.

## **10. Delivery and Documents**

*[in case of Framework Modality the Procuring Agency may amend these condition as per its requirements]*

10.1. Delivery of the Goods and/or the Services shall be made by the Supplier in accordance with the terms specified in the Schedule of Requirements. The details of shipping and/or other documents to be furnished by the Supplier are specified in SCC.

10.2. Upon delivery or completion of deliverables, the Procuring Agency shall give receiving certificate to the supplier with the statement that, "completion certificate along with satisfactory report shall be issued after due inspection as per clause-8 of GCC, which will enable the supplier to put up the bill".



*[Further conditions may be incorporated by the Procuring Agency keeping in view the nature of contract, DDP, CIF, C&F, FOR, FOP for example; for a DDP contract the clause may be as follows:].*

10.3. For purposes of the Contract, DDP trade term used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of *Inco terms*

10.4. Documents to be submitted by the Supplier are specified in SCC.

#### **11. Insurance**

*[If required and decided by the Procuring Agency]*

11.1. The Goods supplied under the Contract shall be delivered *[form of content to be decided by the Procuring Agency]* duty form paid under which risk is transferred to the buyer after having been delivered, hence *[details coverage to be decided by the Procuring Agency]* is sellers responsibility.

#### **12. Transportation**

12.1. The Supplier is required under the Contract to transport the Goods to a specified place of destination within the Procuring Agency's country, including *(details to be decided by Procuring Agency as per requirement)* insurance and storage, as shall be specified in the Contract, and related costs shall be included in the Contract Price.

#### **13. Incidental Services**

*[If required and decided by the Procuring Agency]*

13.1. The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:

- (a) satisfactory performance for specified time/ quantity on-site and/or supervision of on-site assembly and/or start-up of the supplied Goods;
- (b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;
- (c) furnishing of a detailed operations and maintenance manual for each appropriate unit of the supplied Goods;
- (d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and
- (e) training of the Procuring Agency's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance, and/or repair of the supplied Goods.



13.2. Prices charged by the Supplier for incidental services shall be included in the Contract Price for the Goods and shall not exceed:

- a. the prevailing rates charged for other parties by the Supplier for similar services; and
- b. original price of goods.

#### **14. Spare Parts**

14.1. As specified in SCC, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

*[If required and decided by the Procuring Agency]*

- (a) such spare parts as the Procuring Agency may choose to purchase from the Supplier, provided that this choice shall not relieve the Supplier of any warranty obligations under the Contract; and
- (b) in the event of termination of production of the spare parts:
  - (i) advance notification to the Procuring Agency of the pending termination, in sufficient time to permit the Procuring Agency to procure needed requirements; and
  - (ii) following such termination, furnishing at no cost to the Procuring Agency, the blueprints, drawings, and specifications of the spare parts, if requested.

#### **15. Warranty**

15.1. The Supplier warrants that the Goods supplied under the Contract are new, unused, of the most recent or current models selected by the Procuring Agency, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect, arising from design, materials, or workmanship (except when the design and/or material is required by the Procuring Agency's specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

15.2. This warranty shall remain valid for \_\_\_\_\_ *[to be decided by the Procuring Agency]* year/months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for \_\_\_\_\_ *[to be decided by the Procuring Agency]* year/months after the date of



shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

15.3. The Procuring Agency shall promptly notify the Supplier in writing of any claims arising under this warranty.

15.4. Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Procuring Agency.

15.5. If the Supplier, having been notified, fails to rectify the defect(s) within the period specified in SCC, within a reasonable period, the Procuring Agency may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring Agency may have against the Supplier under the Contract/relevant provision of PPRA including Blacklisting.

## **16. Payment**

16.1. The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.

16.2. The Supplier's request(s) for payment shall be made to the Procuring Agency in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and Services performed, and by documents submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the Contract.

16.3. Payments shall be made promptly by the Procuring Agency, but in no case later than thirty (30) days after submission of an invoice or claim by the Supplier, provided the work is satisfactory.

16.4. The currency of payment is Pakistani Rupees

## **17. Prices**

17.1. Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its Bid, with the exception of any price adjustments authorized in SCC.

## **18. Change Orders**

18.1. The Procuring Agency may at any time, by a written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract, only if required for the successful completion of the job, in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Agency;
- (b) the method of shipment or packing;



- (c) the place of delivery; and/or
- (d) the Services to be provided by the Supplier.

18.2. If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Procuring Agency's change order. But, in no case, the overall impact of the change should exceed 15% of the contract cost and no provisions of PPRA should be violated.

- |  |   |
|--|---|
| <p><b>19. Contract Amendments</b></p>                  | <p>19.1. Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by the mutual consent through written amendment signed by the parties. No variation in finalized brands/ makes/models shall be allowed except in special conditions where the manufacturer has stopped producing or suspended that model or the latest model of similar series or version has been launched by the manufacturer or non-availability due to international mergers of the manufacturers or similar unavoidable constraints.</p>  |
| <p><b>20. Assignment</b></p>                           | <p>20.1. The Supplier shall not assign the whole of contract to anybody else. However, some parts of contract or its obligations may be assigned to sub-contractors with the prior written approval of the procuring agency.</p>  |
| <p><b>21. Sub-contracts</b></p>                        | <p>21.1. The Supplier shall notify the Procuring Agency in the Bid of all subcontracts to be assigned under this Contract. Such notification, in the original Bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.</p> <p>21.2. Subcontracts must comply with the provisions of GCC Clause 20.</p>   |
| <p><b>22. Delays in the Supplier's Performance</b></p> | <p>22.1. Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Agency in the Schedule of Requirements-</p> <p>22.2. If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring Agency in writing of the fact of the delay, it's likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring Agency shall evaluate the situation and may at its discretion extend the Supplier's time for</p> |





performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.

22.3. Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the imposition of liquidated damages.

**23. Liquidated Damages**

23.1. Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Procuring Agency shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Procuring Agency may consider termination of the Contract pursuant to GCC Clause 24 along with other remedies available under PPRA.

**24. Termination for Default**

24.1. The Procuring Agency, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Clause 22;
- (b) if the Supplier fails to perform any other obligation(s) under the Contract; or
- (c) if the Supplier, in the judgment of the Procuring Agency has engaged in corrupt practices in competing for or in executing the Contract. For the purpose of this clause, corrupt practices will be defined as per PPRA.

*“Corrupt practices” in respect of procurement process, shall be as given in PPRA.*

*(d) “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official, bidder or Contractor in the procurement process or in Contract execution to the detriment of the procuring agency; or misrepresentation of facts in order to influence a procurement process or the execution of a Contract, collusive practices among bidders (prior to or after bid submission) designed to establish bid prices at artificial, noncompetitive levels and to deprive the procuring agency of the*



*benefits of free and open competition and any request for, or solicitation of anything of value by any public official in the course of the exercise of his duty; it may include any of the following:*

- vi. coercive practice by impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;*
- vii. collusive practice by arrangement between two or more parties to the procurement process or Contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;*
- viii. offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;*
- ix. any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;*
- x. obstructive practice by harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a Contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit process*

24.2. In the event the Procuring Agency terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring Agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring Agency for any excess costs for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

## 25. Force Majeure

25.1. Notwithstanding the provisions of GCC Clauses 22, 23, and 24, the Supplier shall not be liable for forfeiture of its Performance Guarantee, liquidated damages, or termination for default if and to the extent that it's delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.



25.2. For purposes of this clause, “Force Majeure” means an event beyond the control of the Supplier and not involving the Supplier’s fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Procuring Agency in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes. Both, the Procuring Agency and the Supplier, may agree to exclude certain widespread conditions e.g.: epidemics, pandemics, quarantine restrictions etc from the purview of “Force Majeure”.

25.3. If a Force Majeure situation arises, the Supplier shall promptly notify the Procuring Agency in writing of such condition and the cause thereof. Unless otherwise directed by the Procuring Agency in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event. Any difference of opinion concerning “Force Majeure” may be decided through means given herein below.

**26. Termination for Insolvency**

26.1. The Procuring Agency may at any time terminate the Contract by giving written notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Procuring Agency.

**27. Termination for Convenience**

27.1. The Procuring Agency, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Procuring Agency’s convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

27.2. The Goods that are complete and ready for shipment (if applicable) within thirty (30) days after the Supplier’s receipt of notice of termination shall be accepted by the Procuring Agency on the Contract terms and prices. For the remaining Goods, the Procuring Agency may choose:

- (a) to have any portion completed and delivered at the Contract terms and prices; and/or
- (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Services and for materials and parts previously procured by the Supplier.

**28. Resolution of Disputes**

28.1. After signing the contract or issuance of purchase order, The Procuring Agency and the Supplier shall make every effort to resolve



amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

28.2. If, after thirty (30) days from the commencement of such informal negotiations, the Procuring Agency and the Supplier have been unable to resolve amicably a Contract dispute, either party may require that the dispute be referred for resolution to the formal mechanisms specified in SCC. These mechanisms may include, but are not restricted to, conciliation mediated by a third party, adjudication in an agreed and/or arbitration as per PPRA and in accordance with Arbitration Act-1940.

- |                                      |   |
|--------------------------------------|---|
| <p><b>29. Governing Language</b></p> | <p>29.1. The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.</p>   |
| <p><b>30. Applicable Law</b></p>     | <p>30.1. The Contract shall be interpreted in accordance with the laws of Pakistan unless otherwise specified in SCC.</p>   |
| <p><b>31. Notices</b></p>            | <p>31.1. Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by any information technology mean for the time being in use and acceptable in ordinary course of business to the other party's address specified in SCC.</p> <p>31.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.</p> |
| <p><b>32. Taxes and Duties</b></p>   | <p>32.1. Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods &amp; Services to the Procuring Agency. In case of imposition of new taxes/duties or concession thereof after the deadlines for the submission of bids the effect thereof shall be borne or availed by the procuring agency as the case may be.</p>            |



## Section-VI. Special Conditions of Contract

### Special Conditions of Contract

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

#### 1. Definitions (GCC Clause 1)

GCC 1.1 (g)—The Procuring Agency is: Federal Urdu University of Arts, Sciences and Technology (FUUAST).

GCC 1.1 (h)—The Procuring Agency's country is: Pakistan

GCC 1.1 (i)—The Supplier is:

GCC 1.1 (j)—The Project Site is: as per package awarded *[if applicable]*

#### 2. Country of Origin (GCC Clause 3)

*[All countries and territories as indicated in Section IV, BDS, of the Bidding documents, as ineligible may be mentioned here]*

#### 3. Performance Guarantee (GCC Clause 7)

GCC 7.1—The amount of Performance Guarantee, as a percentage of the Contract Price, shall be: 5%

GCC 7.4—the Performance Guarantee shall be retained for to cover the Supplier's upto completion of work in accordance with Clause GCC 15.2

#### 4. Inspections and Tests (GCC Clause 8)

GCC 8.6—Inspection and tests prior to shipment of Goods and at final acceptance are as follows: 2% sample to be tested by approved laboratory and test report to be reviewed by Consultant.

#### 5. Packing (GCC Clause 9)

GCC 9.2—*[This SCC shall supplement GCC Clause 9.2, exact details of the requisite packages be provided]*

#### 6. Delivery and Documents

Delivery, documents, services as required by the procuring agency and mentioned in ITB clause 2.1.1

##### (GCC Clause 10)

GCC 10.3—Upon shipment, the Supplier shall notify the Procuring Agency the full details of the shipment, including Contract number, description of Goods, quantity and usual transport document. The Supplier shall mail the following documents to the Procuring Agency:

- (i) Design/drawings of system for approval
- (ii) Work/Execution Plan, Team details, Focal person
- (iii) copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;



- (iv) original and two copies of the usual transport document (for example, a negotiable bill of lading, a non-negotiable sea waybill, an inland waterway document, an air waybill, a railway consignment note, a road consignment note, or a multimodal transport document) which the buyer may require to take the goods;
- (v) copies of the packing list identifying contents of each package;
- (vi) Insurance certificate;
- (vii) Manufacturers or Supplier's valid Authorization certificates for solar PV modules and Inverters along with warranty certificate;
- (viii) Where applicable (Pre shipment/ port/ Procuring Agency Delivery site, inspection certificate), issued by the Procuring Agency nominated inspection agency, and the Supplier's factory inspection report (Inspection type depends on the nature of procurement and volume of procurement); and
- (ix) Certificate of origin (if applicable).
- (x) Suitable gauge for MS or Aluminum should be provided for each site, at the time of execution. This can't be specified as each site has different dynamics. Detail drawing of each structure that should withstand 140 KM/H wind gust for min. 3 sec. supported by SAP report, supported by certified structure engineer.
- (xi) Applicable strength tests will be performed at the time of execution, that includes but not limited to concrete tests, steel tests, bolts and welding joints test at the expense of contractor. Compliance of MBMA 2006 or equaling

*[Other similar documents should be listed, depending upon the Incoterm provisions.]*

## **7. Insurance**

**(GCC Clause 11)** [where applicable]

GCC 11.1— The Goods supplied under the Contract shall be delivered duty paid (DDP) under which risk is transferred to the buyer after having been delivered, hence insurance coverage is sellers' responsibility. Since the Insurance is sellers' responsibility, they may arrange appropriate coverage.

## **8. Incidental Services (GCC Clause 13)**

GCC 13.1—Incidental services to be provided are: Installation, Commissioning and O&M services (in pursuant to ITB clause 2.1.1)

*[Selected services covered under GCC Clause 13 and/or other should be specified with the desired features. The price quoted in the Bid price or agreed with the selected Supplier shall be included in the Contract Price.]*

## **9. Spare Parts**

**(GCC Clause 14)** NOT APPLICABLE



GCC 14.1—Additional spare parts requirements are:

GCC 14.1—Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods. Other spare parts and components shall be supplied as promptly as possible, but in any case, within six (6) months of placing the order and opening the letter of credit.

## **10. Warranty**

### **(GCC Clause 15)**

- i. Solar Panels: 25 Years**
- ii. Inverter: 05 Years**
- iii. All other allied accessories and Equipment: 02 Years**

## **11. Sample provision**

If the Contractor is unable to adhere to his contracted timeline of works/deliverables, the Procuring Agency may forfeit the performance guarantee or leading to the blacklisting of the Contractor.

GCC 15.2—In partial modification of the provisions, the warranty period shall be \_\_\_\_\_ hours of operation or \_\_\_\_\_ months from date of acceptance/satisfactory installation of the Goods or (\_\_\_\_\_) months from the date of shipment (if applicable), whichever occurs earlier. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract. If, for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall, at its discretion, either:

- (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4,
- (a) pay liquidated damages to the Procuring Agency in case of failure to meet the contractual guarantees. The rate of these liquidated damages shall be
  - a. In case of failure to comply with the work order, penalty will be imposed on defaulting Supplier as under:
  - b. 1% of the cost of entire order or of such work as remains uncompleted for every day upto maximum of 10% for 10 days exceeding the completion period.
  - c. If the job is not done even after payment of penalty for 10 consecutive days, the Commission reserves the right to cancel the work order and to obtain the required job from elsewhere at risk & cost of the defaulting Contractor.



- d. If the qualifying bidder refuses to sign the contract after giving acceptance then FUUAST reserves the right to select second lowest bidder for the award of work.
- e. If the firm failed to execute the required work within extended period, the Commission has the right to forfeit the amount of earnest money and black list the firm, for which no appeal will be entertained.
- f. Any job/maintenance work given to the contractor must be finished/rectified within One (01) Week of identification/FUUAST instructions, failing which a penalty upto 05% of contract value may be imposed on non-compliance.

*[rate to be decided by the Procuring Agency but it should be reasonable]*

GCC 15.4 & 15.5—The period for correction of defects in the warranty period is:

## 12. Payment (GCC Clause 16)

GCC 16.1—The method and conditions of payment to be made to the Supplier under this Contract shall be as follows:

### Payment for Goods supplied:

Payment by Employer to Contractor after completion of following Milestone/Deliverable shall be as per following break up:

Sr. #	Milestone/Deliverables	
1	Site Survey & Approval of Design, Site Preparation (Clearance of Roof, Civil work for PV Mounting Structure)	5%
2	Supply and Installation of PV Mounting Structure	10%
3	<ul style="list-style-type: none"> <li>Supply of Solar PV Modules at Site.</li> <li>Submission of approved test reports from Designated Laboratory</li> </ul>	15%
4	Supply of Equipment at Site. <ul style="list-style-type: none"> <li>Inverters</li> <li>Cables (AC &amp; DC)</li> <li>Earthing Equipment</li> <li>Allied Accessories</li> </ul>	15%
5	Installation of Solar Modules at Site	10%
6	Installation of <ul style="list-style-type: none"> <li>Invertors</li> <li>Cabling</li> <li>Earthing Equipment and</li> <li>Allied Accessories</li> </ul>	10%
7	<ul style="list-style-type: none"> <li>Complete Installation Commissioning of Solar System</li> <li>Genset Synchronization along</li> <li>Real time online monitoring access</li> </ul>	15%





8	Upon installation of Bi-Directional Meter (Net Metering) after following due process with DISCO, NEPRA and other stakeholders.	5%
9	Training of Designated Official (s) for Operation and Maintenance (O & M)	5%
10	Submission of Final Report after successful completion of the Project and submission of performance guarantee at the start for O&M period.	10%
	<b>Total</b>	<b>100%</b>

**Note:****Payment Terms:****Payments and Retention Money:**

Payments for all deliverables shall be made following verification by the Client. Retention money at the rate of 5% of each payment shall be deducted and retained by the University. This accumulated amount will serve as the Performance Guarantee/Security for the O&M period (2 years). It will be released upon the successful completion of the Defects Liability Period (2 years) and submission of the final report.

**Performance Guarantee:**

The contractor shall submit a Performance Guarantee equivalent to 10% of the total contract value in the form of a Bank Guarantee. This security will be released upon the successful completion of the project and the final acceptance of all awarded work under each package or contract, before the start of the O&M period.

**Scope of Services: Operation and Maintenance (O&M)** The contractor shall provide Operation and Maintenance (O&M) services for the Solar Power Generation System for a period of 2 years.

- **Guaranteed Energy Output:** The contractor guarantees energy output equal to or exceeding the committed level.
- **Deductions for Shortfall:** If energy generation falls below the committed level, deductions will be made based on the applicable grid rate at the end of each year.
- **Energy Ledger Settlement:** An Energy Generation Ledger will be maintained and settled annually, with the value of energy units calculated on the average grid price over 12 months from the date of system commissioning.



- **Penalty for Shortfall Exceeding 5%:** If energy generation is more than 5% below the committed level, the contractor shall install additional solar modules at their own cost to meet the energy commitment.
- **Retention Money as O&M Performance Guarantee:** The retained 5% deduction from each payment will serve as the Performance Guarantee/Security for the O&M period. This amount will be released after the successful completion of the O&M period and submission of the final report.

**Payment Currency:** All payments will be made in **Pakistani Rupees**.

### **13. Prices (GCC Clause 17)**

GCC 17.1—Prices shall be fixed and shall not be adjusted.

### **14. Liquidated Damages (GCC Clause 23)**

GCC 23.1—Applicable rate: 1% of contract value per day

Maximum deduction: 10%

### **15. Resolution of Disputes (GCC Clause 28)**

GCC 28.2—The dispute resolution mechanism to be applied pursuant to GCC Clause 28.2 shall be as follows:

In the case of a dispute between the Procuring Agency and the Supplier, the dispute shall be referred for arbitration in accordance with the Arbitration Act 1940. Any unsolved dispute may be referred by either party to an arbitrator Vice Chancellor of FUUAST shall be sole arbitrator whose decision shall be binding on both parties.

### **16. Governing Language (GCC Clause 29)**

GCC 29.1—The Governing Language shall be: English

### **17. Applicable Law (GCC Clause 30)**

GCC 30.1—The Contract shall be interpreted in accordance with the laws applicable in the jurisdiction of the Pakistan.

### **18. Notices (GCC Clause 31)**

GCC 31.1—Procuring Agency's address for notice purposes: **Project Director, Federal Urdu University of Arts, Sciences and Technology, Islamabad.**

—Supplier's address for notice purposes:

