



Incharge Project Director
Solarization

OFFICE OF THE INCHARGE PROJECT DIRECTOR
SOLARIZATION PROJECT UNIVERSITY OF SINDH
JAMSHORO SINDH PAKISTAN

No.SU/ADPP/IPDS/08
Dated: 08/04/2024

NOTICE FOR INVITING OF TENDERS

All the interested Contractors / Firms / Parties /meeting eligibility criteria, viz. having registration with Federal Board of Revenue (FBR) for Income Tax, SalesTax in case of procurement of goods, registration with the Sindh Revenue Board in case of procurement of Works and Services and registration with Pakistan Engineering Council as the case may be and not black listed in any procuring agency or authority, are invited to participate in full / item rate tender for the following work:

Name of Work	Tender Fee	Procedure	Completion Time	Call Deposit/ Security Deposit
Supply, Installation, Testing, Commissioning, Training and Operations & Maintenance of <u>2.25 MW Solar Grid (on 11kv) connected plant, under the scheme Solarization of Sindh University campus, Jamshoro. (sdg # 4)</u>	Rs. 5000 In Favor of Director Finance, University of Sindh	Single Stage Two Envelope Procurement Rule 46 (2) SPPRA Rule Amended upto Date	Completion Time 12 Months	2 % of quoted bid price

<u>1st Schedule</u>	<u>2nd Schedule</u>
<ul style="list-style-type: none">► Issuance start date & time: 17-04-2024 till office Hours► Issuance end date & time: 08-05-2024 till office Hours► Submission date & time: 09-05-2024 till 12:00 P.M► Opening date & time: 09-05-2024 till 12:30 P.M	<ul style="list-style-type: none">► Issuance start date & time: 10-05-2024 till office Hurs.► Issuance end date & time: 27-05-2024till office Hours► Submission date & time: 28-05-2024 till 12:00 P.M► Opening date & time: 28-05-2024 till 12:30 P.M

The terms and conditions are given as under: -

1. The tender documents can be had from above office or can be downloaded from SPPRA/ PPMS website and University of Sindh official website <http://ww.usindh.edu.pk> on the payment noted above (non-refundable) on any working day. In case of any unforeseen situation resulting in closure of office on the date of opening or if Government declares Holiday the tenders shall be submitted / opened on the next working day at the same time & venue. Any conditional or un-accompanied of the earnest money, tender will not be considered in the competition.


**INCHARGE PROJECT DIRECTOR
(Solarization)
University of Sindh,
Jamshoro.**



OFFICE OF THE INCHARGE PROJECT DIRECTOR
SOLARIZATION PROJECT UNIVERSITY OF SINDH
JAMSHORO SINDH PAKISTAN

2. The Method of Procurement is:

The procedure adopted for bidding is open competitive bidding, single stage-Two Envelopes Procedure rule 46(2) of Sindh Public Procurement Rules, 2010 amended up to date.

3. The Bidders are required to submit proposals in accordance with the Technical Evaluation Criteria given in the Bidding Documents.

4. Financial Proposals of firms failing to qualify technically if any, shall be returned back as sealed/unopened, while Financial Proposals of qualified firms shall be opened in presence of firms or their authorized representatives at the time to be determined later.

5. The Bidders should have at least 05 years' experience of same services in any university or large organization.

6. The Bidders should be registered with tax paying agencies which would be verified by concerned agencies.

7. The Bidders should not Black Listed in any procuring agency. (Affidavit is required)

7- Average Annual Turnover not less than equivalent cost of the scheme/project during last five years.

8- All bids need to be submitted on Standard Format of Request for Proposal (RFP) dully signed/stamped with all requisite documents. Failing to submit the bid if any on Standard Format of RFP, bid (s) shall be considered as non-responsive/rejected.

The competent authority reserves the right to reject any or all bid proposals, subject to the relevant provisions of SPPRA Rules 2010 amended upto date.


8/4/24

Incharge Project Director **INCHARGE PROJECT DIRECTOR**
Solarization **(Solarization)**
University of Sindh Jamshoro **University of Sindh,**
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OFFICE OF THE INCHARGE PROJECT DIRECTOR
(SOLARIZATION)
UNIVERSITY OF SINDH JAMSHORO



Supply, Installation, Testing, Commissioning, Training and Operations &
Maintenance of 2.25 MW Solar Grid (on 11KV) Connected Plant

UNDER THE SCHEME

Solarization of Sindh University Campus, Jamshoro. (SDG # 4)

At Allama I.I Kazi Campus University of Sindh at Jamshoro.

(Single Stage Two Envelope Bidding Procedure)

(National Competitive Bidding)



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INVITATION FOR BIDS



NOTICE FOR INVITING OF TENDERS

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Name of Work	Tender Fee	Procedure	Completion Time	Call Deposit/ Security Deposit
Supply, Installation, Testing, Commissioning, Training and Operations & Maintenance of 2.25 MW Solar Grid (on 11kv) connected plant, under the scheme Solarization of Sindh University campus, Jamshoro. (sdg # 4)	Rs. 5,000 In Favor of Director Finance, University of Sindh	Single Stage Two Envelope Procurement Rule 46 (2) SPPRA Rule Amended upto Date	12 Months	2% of quoted bid price

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2. The Method of Procurement is:
The procedure adopted for bidding is open competitive bidding, single stage-Two Envelopes Procedure rule 46(2) of Sindh Public Procurement Rules, 2010 amended up to date.
3. The Bidders are required to submit proposals in accordance with the Technical Evaluation Criteria given in the Bidding Documents.



4. Financial Proposals of firms failing to qualify technically if any, shall be returned back as sealed/unopened, while Financial Proposals of qualified firms shall be opened in presence of firms or their authorized representatives at the time to be determined later.
5. The Bidders should have at least 05 years' experience of same services in any university or large organization.
6. The Bidders should be registered with tax paying agencies which would be verified by concerned agencies.
7. The Bidders should not Black Listed in any procuring agency. (Affidavit is required)
- 8- Average Annual Turnover not less Rs:526.52 Million during last five years.
- 9- All bids need to be submitted on Standard Format of Request for Proposal (RFP) dully signed/stamped with all requisite documents. Failing to submit the bid if any on Standard Format of RFP, bid (s) shall be considered as non-responsive/rejected.

The competent authority reserves the right to reject any or all bid proposals, subject to the relevant provisions of SPPRA Rules 2010 amended upto date.

Incharge Project Director
(Solarization)
University of Sindh Jamshoro
Phone: 022-9213265
Email: pd@usindh.edu.pk



INSTRUCTIONS TO BIDDERS



INSTRUCTIONS TO BIDDERS

(Note: These Instructions to Bidders along with Bidding Data will not be part of the Contract and will cease to have effect once the contract is signed.)

A. GENERAL

IB.1 Scope of Bid

The Employer as defined in the Bidding Data hereinafter referred to as "THE EMPLOYER" wishes to receive bids for Supply, Installation, Testing, Commissioning, Training and Operations & Maintenance of 2.25 MW Solar Grid (on 11KVA) Connected Plant.

1.1 as described in these Bidding Documents, and summarized in the Bidding Data hereinafter referred to as the "Works".

12 The successful bidder will be expected to complete the Works within the time specified in Appendix-A to the Bid.

IB.2 Source of Funds

2.1 The Employer has available to it sufficient resources / funds to completely finance the design, construction and completion of the Works.

IB.3 Eligible Bidders

3.1 This Invitation for Bids is open to all bidders meeting with criteria as defined in the Bid Data Sheet.

IB.4 One Bid per Bidder

4.1 Each bidder shall submit only one bid either by himself, or as a partner in a Joint Venture. A bidder who submits or participates in more than one bid will be disqualified.

IB.5 Cost of Bidding

5.1 The bidders shall bear all costs associated with the preparation and submission of their respective bids and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

IB.6 Site Visit

6.1 The bidders are advised to visit (pre requisite) and examine the Site of Works and its surroundings and obtain for themselves on their own responsibility all information that may be necessary for preparing the bid and entering into a contract for the design and construction of the Works. All cost in this respect shall be at the bidder's own expense.



6.2 The bidders and any of their personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such inspection, but only upon the express condition that the bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.

B. BIDDING DOCUMENTS

IB.7 Contents of Bidding Documents

7.1 The Bidding Documents, in addition to invitation for bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9.

1. Instructions to Bidders.
2. Bidding Data.
3. Conditions of Contract.
4. Form of Bid & Appendices to Bid.
5. Bill of Quantities (Appendix-H to Bid).
6. Form of Bid Security.
7. Forms of Performance Security.
8. Form of Contract Agreement.
9. Site Specific Information, Scope of Works & System Design Specifications.

7.2 The bidders are expected to examine carefully the contents of all the above bidding documents. Failure to comply with the requirements of bid submission will be at the Bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

IB.8 Clarification of Bidding Documents

8.1 Any prospective bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Employer in writing at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification which he receives at least seven (7) days prior to the deadline for submission of bids.

8.2 Copies of the Employer's response will be forwarded to all purchasers of the Bidding Documents, including a description of the enquiry but without identifying its source.

IB.9 Amendment of Bidding Documents

9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by issuing addendum.



- 9.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub-Clause 7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer.
- 9.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.20

C. PREPARATION OF BIDS

IB.10 Language of Bid

- 10.1 The bid and all correspondence and documents related to the bid exchanged by a bidder and the Employer shall be in the bid language stipulated in the Bidding Data and particular Conditions of Contract. Supporting documents and printed literature furnished by the bidders may be in any other language provided the same are accompanied by an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

IB.11 Documents Comprising the Bid

- 11.1 The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Bid and the other Financial Bid, containing the documents listed in Bidding Data under the heading of 11.1 A & B respectively. Both envelopes to be enclosed together in an outer single envelope called the Bid. Each bidder shall furnish all the documents as specified in Bidding Data at 11.1 A & B.
- 11.2 Bids submitted by a Joint Venture (JV) shall include original copy of the JV Agreement entered into by all partners. Alternatively, a letter of intent to execute a JV Agreement in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement. The role to be played by each partner to be specified therein. Bids submitted by a JV of two (2) or more firms shall comply with the following requirements:
- (a) In case of successful bid, the form of JV Agreement shall be signed and be registered as per law so as to be legally binding on all partners within 7 days of the receipt of Letter of Acceptance failing which the contract and the Letter of Acceptance shall stand void and redundant.
- (b) One of the JV partners shall be nominated as being in charge and all JV Partners must be registered with AEDB/PPIB under AEDB (Certification in category C1) Regulations 2021 and this Authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the JV partners. In case of a company submitting chain of Authority including board resolution to this effect or any authorization required under the law shall be mandatory.
- (c) The partners-in-charge shall always be duly authorized to deal with



the employer regarding all matters related with and/or incidental to the execution of works as per the terms and conditions of JV Agreement and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the JV.

- (d) All partners of the JV shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the Contract terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para (b) above as well as in the Form of Bid and in the Form of JV Agreement (in case of a successful bid); and
- (e) A copy of JV Agreement shall be submitted before signing of the Contract, stating the conditions under which JV will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the JV, and any other information necessary to permit a full appraisal of its functioning. The JV agreement shall be deemed part of the Contract. No amendments/modifications whatsoever in the JV agreement shall be agreed to between the JV partners without prior written consent of the Employer.

113 The Bidder shall furnish, as part of the Technical Bid, a Technical Proposal including all engineering designs and drawings, a statement of work methods, equipment, personnel, schedule and any other information as stipulated in the Bidding Forms, in sufficient detail to demonstrate the adequacy of Bidders' proposal to meet the Works requirements and the completion time referred to in sub-clause 1.2 hereof.

1B.12 Bid Prices

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in Sub-Clause 1.1 hereof.
- 12.2 The bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.
- 12.3 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause shall be included in the rates and prices and the total Bid Price submitted by a bidder. After the date of signing of the Contract, any additional / reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed / deducted.
- 12.4 The rates and prices quoted by the bidders are subject to adjustment during the performance of the Contract as per actual work carried out at site.



IB.13 Currencies of Bid and Payment

13.1 The unit rates and the prices shall be quoted by the bidders entirely in Pak rupees.

IB.14 Bid Validity

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data after the Date of Bid Opening specified in Clause IB.23.
- 14.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the bidders extend the period of validity for a specified additional period which shall in no case be more than the original bid validity period. The request and the responses thereto shall be made in writing. A bidder may refuse the request without forfeiting his Bid Security. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.15 in all respects.

IB.15 Bid Security

- 15.1 Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data in Pak Rupees or an equivalent amount in a freely convertible currency.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of Bank Guarantee issued by a Scheduled Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan or in the form of pay order / demand draft in favor of the Employer valid for a period thirty (30) days beyond the Bid Validity date.
- 15.3 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 15.4 The bid securities of unsuccessful bidders will be returned as promptly as possible, but not later than thirty (30) days after the expiration of the period of Bid Validity.
- 15.5 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security and signed the Contract.
- 15.6 The Bid Security may be forfeited:
- (a) if the bidder withdraws his bid except as provided in Sub-Clause 22.1;
 - (b) if the bidder does not accept the correction of his Bid Price pursuant to Sub-Clause 27.2 hereof; or
 - (c) In case of successful bidder, if he fails within the specified time limit to:
 - (i) furnish the required Performance Security; or
 - (ii) sign the Contract.
 - (iii) Furnish the required JV agreement within seven (7) Days of thereceipt of Letter of Acceptance.



IB.16 Alternate Proposal by Bidder

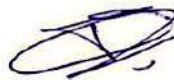
DELETED

IB.17 Pre-Bid Meeting

- 17.1 The Employer may, on his own motion or at the request of any prospective bidder(s), hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the Bidding Documents. The date, time and venue of pre-bid meeting, if convened, is as stipulated in the Bidding Data. All prospective bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 The bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than seven (7) days before the proposed pre-bid meeting.
- 17.3 Minutes of the pre-bid meeting, including the text of the questions raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. Any modification of the Bidding Documents listed in Sub-Clause 7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

IB.18 Format and Signing of Bid

- 18.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.
- 18.2 All appendices to Bid are to be properly completed and signed.
- 18.3 No alteration is to be made in the Form of Bid nor in the Appendices thereto except in filling up the blanks as directed. If any such alterations be made or if these instructions be not fully complied with, the bid may be rejected.
- 18.4 Each bidder shall prepare by filling out the forms completely and without alterations one (1) original and one (1) copy of the documents comprising the bid and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 18.5 The original and the copy of the bid shall be typed or written in indelible ink (in the case of copies, Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder. This authorization shall consist of written confirmation as specified in the Bidding Data 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, except for un-amended printed literature, shall be signed or initiated by the person signing the bid.



- 18.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the bidder, in which case such corrections shall be initiated by the person or persons signing the bid.
- 18.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.
- 18.8 Bidders should retain a copy of the Bidding Documents as their file copy.

D. SUBMISSION OF BIDS

IB.19 Sealing and Marking of Bids

- 19.1 Each bidder shall submit his bid as under:
- (a) ORIGINAL and the COPY of the Bid shall be separately sealed and put in separate envelopes and marked as such.
 - (b) The envelopes containing the ORIGINAL and COPY will be put in one sealed envelope and addressed / identified as given in Sub- Clause 19.2 hereof.
 - (c) The technical bid should comprise of documents listed in 11.1 (A) of Bidding Data & the price bid should comprise of documents listed in 11.1 (B) of Bidding Data which shall be placed in separate envelopes in accordance with 11.1.
- 19.2 The inner and outer envelopes shall:
- (a) be addressed to the Employer at the address provided in the Bidding Data;
 - (b) bear the name and identification number of the contract as defined in the Bidding Data; and
 - (c) provide a warning not to open before the time and date for bid opening, as specified in the Bidding Data.
- 19.3 In addition to the identification required in Sub- Clause 19.2 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 Clause IB.21.
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

IB.20 Deadline for Submission of Bids

- 20.1 (a) Bids must be received by the Employer at the address specified no later than the time and date stipulated in the Bidding Data or such extended deadlines as the Employer has duly notified in accordance with Clause IB.9.



(b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of bids. No claims will be entertained for refund of such expenses.

(c) Where delivery of a bid is by mail and the bidder wishes to receive an acknowledgment of receipt of such bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed bid package.

(d) Upon request, acknowledgment of receipt of bids will be provided to those making delivery in person or by messenger.

202 The Employer may, at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.21 Late Bids

21.1 (a) Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 will be returned unopened to such bidder.

(b) Delays in the mail, delays of person in transit, or delivery of a bid to the wrong office shall not be accepted as an excuse for failure to deliver a bid at the proper place and time. It shall be the bidder's responsibility to determine the manner in which timely delivery of his bid will be accomplished either in person, by messenger or by mail.

IB.25 Clarification of Bids

25.1 To assist in the examination, evaluation and comparison of bids, the Employer may, at his discretion, ask any bidder for clarification of his bid, including breakdowns of unit rates. The request for clarification and the response shall be in writing but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause IB.28.

25.2 If a bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its bid may be rejected.

IB.26 Examination of Bids and Determination of Responsiveness

26.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.

26.2 A substantially responsive bid is one which (i) meets the eligibility and qualification criteria under the Bidding Documents; (ii) has been properly signed; (iii) is accompanied by the required Bid Security; and (iv) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation



is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids. Only substantially responsive bids shall be considered for further evaluation.

- 26.3 If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation. The Employer may, however, seek confirmation / clarification in writing which shall be responded to in writing.

IB.27 Correction of Errors

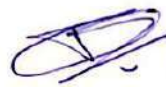
- 27.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- (a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and
- (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.

- 27.2 The amount stated in the Form of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid Security shall be forfeited in accordance with Sub-Clause 15.6(b) hereof.

IB.28 Evaluation and Comparison of Bids

- 28.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26.
- 28.2 In evaluating the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) Making any correction for errors pursuant to Clause IB.27;
 - (b) Excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced Day work; and
 - (c) Making an appropriate adjustment for any other acceptable Variation or deviation.
- 28.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, taken into account.



28.4 If the Bid of the successful bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analysis for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, the Employer may require that the amount of the Performance Security set forth in Clause IB.32 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.

E. AWARD OF CONTRACT IB.29

Award

29.1 Subject to Clauses IB.30 and IB.34, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be eligible in accordance with the provisions of Clause IB.3 and qualify pursuant to criteria provided in the Bidding Documents.

29.2 The Employer, at any stage of the bid evaluation, having credible reasons for *prima facie* evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, engineering team, technical, financial, legal or managerial competence whether already pre-qualified or not:

Provided that such qualification shall only be laid down after recording reasons therefor in writing. They shall form part of the records of that bid evaluation report.

IB.30 Employer's Right to Accept any Bid and to Reject any or all Bids

30.1 Notwithstanding anything contained herein, the Employer reserves the right to accept or reject any Bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidders or any obligation except that the grounds for rejection of all bids shall upon request be communicated to any bidder who submitted a bid, without justification of grounds. Rejection of all bids shall be notified to all bidders promptly.

IB.31 Notification of Award

31.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing ("Letter of Acceptance") that his Bid has been accepted. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Contract Price").

31.2 No Negotiation with the bidder having evaluated as lowest responsive bid.



other bidder shall be permitted.

31.3 The notification of award and its acceptance by the bidder will constitute the formation of the contract, binding the Employer and the bidder till signing of the formal Contract.

31.3 Upon furnishing by the successful bidder of a Performance Security, the Employer will promptly notify the other bidders that their Bids have been unsuccessful and return their bid securities.

IB.32 Performance Security

32.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Bidding Data and the Conditions of Contract within a period of seven (7) days after the receipt of Letter of Acceptance.

32.2 Failure of the successful bidder to comply with the requirements of Sub-Clause IB.32.1 or Clauses IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 Signing of Contract Agreement

33.1 Within seven (7) days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Contract in the form provided in the Bidding Documents, incorporating all agreements between the parties.

33.2 The formal Contract between the Employer and the successful bidder shall be executed within seven (7) days of the receipt of the Contract by the successful bidder from the Employer.

IB.34 General Performance of the Bidders

The Employer reserves the right to obtain information regarding the performance of the bidders on their previously awarded contracts/works. The Employer may in case of consistent poor performance of any Bidder as reported by the employers of the previously awarded contracts, *inter alia*, reject his bid and/or refer the case to the AEDB. Upon such reference, AEDB in accordance with its rules/ regulations take such action as may be deemed appropriate under the circumstances of the case including blacklisting of such Bidder.

IB.35 Integrity Pact

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-G to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

IB.36 Instructions not Part of Contract

Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.



BIDDING DATA



BIDDING DATA

The information in this section is complementary to, amends or supplements the provisions in the provisions in the instruction to Bidder. Whenever there is conflict, the provisions herein shall take precedence over those in the Instructions to Bidders.

<p>1</p>	<p>Name of the Project & Summary of the Works:</p> <p>Supply, Installation, Testing, commissioning, Training and Operations & Maintenance of 2.25 MW Solar Grid (on 11KV) Connected Plant under the scheme "Solarization of Sindh University Campus, Jamshoro". (SDG # 4)</p> <p>The university is seeking proposals from well reputed firms to deliver the turnkey solar power solution, specifying the 2250 kilowatt (KW) capacity and two (02) years' Service Level Agreement (SLA) within the fixed budget at single location. Our objective is to harness sustainable solar energy to meet apportion of our energy requirements and contribute to a greener future. The bid should include a clear breakdown of costs associated with the installation and provide detailed projections of power generation in kWh in the budgeted amount. Your proposal should showcase your firm's technical expertise, cost efficiency, and commitment to meet project timelines.</p> <p><u>BASIC REQUIREMENTS FOR FIRMS TO PARTICIPATE IN THE BID</u></p> <p>The interested firms should fulfill the following Criteria to meet the eligibility for participation in the bidding process.</p> <ol style="list-style-type: none"> 1. Registered with Security Exchange Commission of Pakistan (SECP). 2. Valid copy of registration Certificate of firm with Electrical Inspectorate Hyderabad Region. 3. Registered with Sindh Revenue Board (SRB). 4. Registered with FBR / NTN / Sales Tax Number. 5. Registration with Pakistan Engineering Council (PEC) in C3 Category or above having specific codes of EE02, EE04, EE06, EE11 (Solar), EE11 (General Electrical Works), CE01 and CE10 and related specialization codes related to Solar Power Energy Installation. 6. At least one similar nature works having minimum cost 80% of the estimated cost of the work OR At least two similar nature works having minimum cost 50% of the estimated cost.
<p>1.1</p>	<p>Name and Address of Employer University of Sindh Jamshoro</p>
<p>IB-10 10.1</p>	<p><u>Bid Language:</u> English</p>



IB-11 11.1	11.1 (A) The Bidder shall submit with its Technical Bid the following documents:
	Copy of registration certificate with Securities & Exchange Commission of Pakistan (SECP) (MANDATORY)
	Valid copy of registration Certificate of firm with Electrical Inspectorate Hyderabad Region (MANDATORY)
	Copy of registration certificate of Firm with Professional Body i.e. Valid PEC certificate of category-C3 or above with minimum 5 years post registration PEC Certificates and working experience (MANDATORY)
	National Tax Number / Free Tax Number Certificates in the Name Of organization mentioned and certificate attached (MANDATORY)
	Copy of Registration Certificate with Sindh Revenue Board (SRB). (MANDATORY)
	Audited Financial Statements / Accounts Statements showing Financial Position of last Five (05) Years. (MANDATORY)
	Bank Statements of firms accounts of last Five (05) years starting from 1 st July 2018 to 30 th June 2023. (MANDATORY)
	Letter of Association / Consortium, if applicable attached.
	Copy of Work Orders and Completion / Performance Certificates of the completed projects and projects in hand. (MANDATORY)
	Declaration by authorized person to submit the Bid signed & attached
	Detailed Description of Approach, Methodology and Work Plan for Performing the Assignment (MANDATORY)
	Detailed CVs of the Core Staff that will be assigned for the assignment and working with the firm for last three (03) years along with copies of qualification certificates (Degrees, PEC certificate & other.) (MANDATORY)
	Registration certificates with Autonomous bodies / Private Entities (National or International if any supplement requirement)
	Affidavit on stamp paper of Rs. 100/- that the firm is not blacklisted or in litigation by/with any public or private sector organization in Pakistan. (MANDATORY) The Blacklisting undertaking should be from each JV Partner instead of the alone.
	Copy of Valid Registration Certification with AEDB / PPIB (C1 Category) and in case of JV then registration in C1 Category for all JV Partners at AEDB/PPIB is must. (MANDATORY)



	<p>(a) Letter of Technical Bid</p> <p>(b) Bid Security (IB.15)</p> <p>(c) Written confirmation authorizing the signatory of the Bid to commit the Bidder (IB.18.5)</p> <p>(d) Pending litigation information that may have impact on the Bid or Bidding process</p> <p>(e) Proposed Construction Schedule (Appendix-A)</p> <p>(f) Method of Performing the Works (Appendix-B)</p> <p>(g) Organization Chart for Supervisory Staff (Appendix-D)</p> <p>(i) Eligibility, Past Performance, Current Commitments, Personnel Capabilities and Financial Strength (Appendix-E)</p> <p>(j) Joint Venture Agreement (in original, if applicable) (Appendix-F)</p> <p>(k) Integrity Pact (Appendix-G)</p>
	<p>11.1 (B)</p> <p>The Bidder shall submit with its Financial Bid the following documents:</p> <p>(a) Letter of Financial Bid</p> <p>(b) Bill of Quantities (Appendix-H)</p>
IB-12	<p><u>Bid Evaluation Criteria shall be as follows:</u></p> <p>Single Stage Two Envelope Bidding Process</p>
IB-14 14.1	<p><u>Bid Validity</u></p> <p>Period of Bid Validity is 90 days after the date of Bid Opening.</p>
IB-15 15.1	<p><u>Bid Security</u></p> <p>Amount of Bid Security is 2% of the quoted bid price.</p> <p>The Bid security shall be in the form of Pay Order, Demand Draft or Bank Guarantee issued by a schedule Bank of Pakistan.</p>
IB-17 17.1	<p><u>Pre-Bid Meeting</u></p> <p>The Scope of work is already obvious. However upon submission request from the bidders (if any), the date shall be fixed later.</p>
IB-19	<p><u>Employer address for the purpose of Bid submission:</u></p> <p>Office of the Incharge Project Director (Solarization)</p> <p>University of Sindh Jamshoro</p>
IB-20 20.1	<p><u>Deadline for submission of Bids:</u></p> <p>As per NIT</p>
IB-32 32.1	<p><u>Performance Security:</u></p> <p>Amount of Performance Security is 5%</p> <p>Successful bidder needs to submit 5% performance Security of contract amount mentioned in letter of Acceptance (LOI). On Production of Performance Security, the retained 2% call deposit shall be released.</p>



IB.37 Sufficiency of Bid	<p>Following clauses are added in Instruction of bidders:</p> <p>Each Bidder shall be deemed to have satisfied fully, before submitting the Bid, as to all aspects of the works, correctness and sufficiency of his Bid and of rates and prices stated in the Bills of Quantities, which a rates and prices shall, except in so far as it is otherwise expressly provided in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper completion of Works.</p> <p>Objections, excuses or claims made by the bidder after submission of his Bid to the Employer shall not be entertained.</p>
IB.38 Sub-Contractors	<p>Any Sub-Contractor is subject to the acceptance of the Employer and the Sub-Contract shall be subject to the same Conditions of Contract as the main Contract. A list, as set forth in Appendix "I" showing the name and address and credentials of each proposed sub-Contractor, the type of work to be sub-let and the reason for sub-letting shall be submitted with the Bid. Overall responsibility of all works, whether parts of it subcontracted or not, shall rest with the Bidder.</p>
IB.39 Taxes & Duties	<p>The Bidder shall obtain all information as to Pakistan Income Tax, Sales Tax, Sindh Revenue Board Tax, and any other taxes imposed by the local bodies, export and import duties, import surcharge, iqra surcharge, etc. and necessary permits and confirm the requirements thereof at his own responsibility and include all such cost in his Bid price. The quoted rate shall also include the cost of accepting the general risks/liabilities and obligations set forth or implied in the Contract.</p>
IB.40 Insurance	<p>The Bidder shall estimate the amounts required to be provided for all the insurances under the Contract from approved insurers, and the Bid Price shall be deemed to include all such amounts.</p>



CONDITIONS OF CONTRACT



CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

In the Contract as defined below, the words and expressions defined shall have the following meanings assigned to them, except where the context requires otherwise:

The Contract

- 1.1.1 "Contract" means the Contract Agreement and the other documents listed in the Contract.
- 1.1.2 "Specifications" means the document as listed in the Bidding Documents, including Employer's requirements in respect of design to be carried out by the Contractor (if any), and any Variation to such document.
- 1.1.3 "Drawings" means the Employer's approved drawings of the Works as listed in the Contract Data, and any Variation to such drawings.

Persons

- 1.1.4 "Employer" means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Contractor) any assignee.
- 1.1.5 "Contractor" means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Employer) any assignee.
- 1.1.6 "Party" means either the Employer or the Contractor.

Dates, Times and Periods

- 1.1.7 "Commencement Date" means the date fourteen (14) days after the date the Contract comes into effect, or any other date named in the Contract Data.
- 1.1.8 "Day" means a calendar day.
- 1.1.9 "Time for Completion" means the time for completing the Works as stated in the Contract Data (or as extended under Sub-Clause 7.3), calculated from the Commencement Date.

Money and Payments

- 1.1.10 "Cost" means all expenditure properly incurred (or to be incurred) by the Contractor, whether on or off the Site, including overheads and similar charges but does not include any allowance for profit.



Other Definitions

- 1.1.11 "Contractor's Equipment" means all machinery, apparatus and other things required for the execution of the Works but does not include Materials or System intended to form part of the Works.
- 1.1.12 "Country" means the Islamic Republic of Pakistan.
- 1.1.13 "Employer's Risks" means those matters listed in Sub-Clause 6.1.
- 1.1.14 "Force Majeure" means an event or circumstance which makes performance of a Party's obligations illegal or impracticable and which is beyond that Party's reasonable control.
- 1.1.15 "Materials" means things of all kinds (other than System) to be supplied and incorporated in the Works by the Contractor.
- 1.1.16 "System" means the machinery and apparatus intended to form or forming part of the Works.
- 1.1.17 "Site" means the places provided by the Employer where the Works are to be executed, and any other places specified in the Contract as forming part of the Site.
- 1.1.18 "Variation" means a change which is instructed by the Engineer/Employer under Sub-Clause 10.1.
- 1.1.19 "Works" means any or all the works including design, supply, installation, construction, testing and commissioning of the System to be performed by the Contractor including temporary works and any Variation thereof.
- 1.1.20 "Engineer" means the person notified by the Employer to act as Engineer for the purpose of the Contract and named as such in Contract Data.

1.2 Interpretation

Words importing persons or parties shall include firms and organizations. Words importing singular or one gender shall include plural or the other gender where the context requires.

1.3 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found in the documents, the priority of the documents shall be in accordance with the order as listed in the General Provisions of the Conditions of Contract.

1.4 Law

The rights and obligations of the Parties under the Contract shall be governed by laws of the Islamic Republic of Pakistan



1.5 Communications

All Communications related to the Contract shall be in English language.

1.6 Statutory Obligations

The Contractor shall comply with the laws of the Islamic Republic of Pakistan and shall give all notices and pay all fees and other charges in respect of the Works.

2. THE EMPLOYER

2.1 Provision of Site

The Employer shall provide the Site and right of access thereto at the times stated in the Contract Data.

2.2 Permits etc.

The Employer shall, if requested by the Contractor, assist him in applying for permits, licenses or approvals which are required for the Works.

2.3 Engineer / Employer's Instructions

The Contractor shall comply with all instructions given by the Employer, in respect of the Works including the suspension of all or part of the Works.

2.4 Approvals

No approval or consent or absence of comment by the Engineer/Employer shall affect the Contractor's obligations.

3. EMPLOYER'S REPRESENTATIVES

3.1 Authorized Person

The Employer shall appoint with precise scope of authority and notify in writing a duly authorized person to act for him and on his behalf for the purposes of this Contract. Such an authorized person shall be duly identified in the Contract Data or otherwise notified in writing to the Contractor as soon as he is so appointed. In either case the Employer shall notify the Contractor, in writing, of the precise scope of the authority of such authorized person at the time of his appointment.

3.2 Engineer / Employer's Representative

The name and address of Engineer / Employer's Representative is given in Contract Data. However, the Contractor shall be notified by the Engineer/Employer, the delegated duties and authority before the Commencement of Works.



4. THE CONTRACTOR

4.1 General Obligations

The Contractor shall carry out the Works as per the highest standards of workmanship in the solar industry and in accordance with the terms and conditions of the Contract. The Contractor shall provide all supervision, labour, materials, plant and Contractor's equipment which may be required.

4.2 Contractor's Representative

The Contractor shall appoint a representative at site on full time basis to supervise the execution of Works and to receive instructions on behalf of the Contractor but only after obtaining the consent of the Employer for such appointment which consent shall not be unreasonable withheld by the Employer. Such an authorized representative may be substituted/replaced by the Contractor at any time during the Contract Period but only after obtaining the consent of the Employer as aforesaid.

4.3 Subcontracting

The Contractor shall not subcontract the whole of the Works. The Contractor may subcontract any part of the Works subject to restriction stipulated in the Contract Data.

4.4 Performance Security

The Contractor shall furnish to the Employer within ten (10) days after receipt of Letter of Acceptance a Performance Security, in the form of Bank Guarantee or Pay Order or Demand Draft for the amount and validity specified in Contract Data.

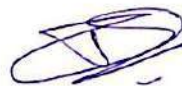
5. DESIGN BY CONTRACTOR

5.1 Contractor's Design

The Contractor MUST carry out detailed design of the Project during the bid preparation and before the bid submission and contractor will submit high level engineering design along with the tender/bidding documents for further evaluation of the employer. Bidders MUST submit complete design calculations, reports of energy yield (KWh) and PR performance ratio along with technical bid.

5.2 The Bidders must visit project sites to collect entire data including but not limited to existing infrastructure of electrical, civil and mechanical sectors. The bidders (EPC Companies) will be sole responsible for designing of 2.25 MW solar project; following prerequisites are to be met by all interested bidders:

- a. The Bidders must visit project sites before participating in bids,
- b. Preparing design of solar plant that must include the designing of 2.25 MW solar plant at high voltage 11KV terminations (two separate terminations),
- c. Designing of distribution and transmission lines from project sites to both termination points,
- d. Designing of extensions including towers for 11KV transmission lines from HESCO feeders till university premises,



- e. Designing of complete SCADA, Control and networking systems,
- f. Designing of LED lighting Poles for 100% PV areas and 100% new buildings up till boundaries,
- g. Designing of CCTV surveillance systems for inverter rooms, LV including MV rooms, Control rooms, Transformer rooms and 100% PV areas,
- h. Designing and management of water distribution networks for cleaning of solar panels,
- i. Designing of fire alarms and/or suppression system for safety of 2.25 MW solar project,
- j. Conducting all Geo-technical and soil investigation studies of project sites including:
 - i. trees cutting,
 - ii. land leveling,
 - iii. earth filling,
 - iv. compaction,
 - v. construction of boundary fence of the entire PV areas, control rooms, new buildings, transformer rooms, MV rooms, LV rooms,
 - vi. Drainage and slopping including water drainage system for rain and/or flood water;
 - vii. construction of buildings including:
 - 1) Construction of servants quarters and security rooms,
 - 2) Construction of transformers rooms,
 - 3) Construction of LV and MV substations and SCADA systems,
 - 4) Construction of Inverter rooms,
 - 5) Construction of trenches for underground DC and AC cables,
 - 6) Construction works for DTR structures as per WAPDA standards,
 - 7) Construction works for manhole chambers for DC strings and AC Cables,

5.3 The proposed bidders' design and implementation must be in accordance with relevant engineering standards (IEC/NEC/Civil and mechanical codes on all project supplies and services such as Solar panels, Inverters, LV/MV switchgears, enclosures, AC/DC Earthing, lightning protection systems, Distribution poles, LV distribution lines, transformers, LV/MV substation, communication and SCADA system, LV/MV Cables, Earthing cables, cable trays, ducting, trenches system, electrical, civil and mechanical installations. If any equipment or scope of work is found not in accordance with the applicable engineering standards or codes, the supplier is obligated to rectify it at their own cost to meet client requirements. A final inspection will be carried out to ensure compliance with the specified scope of work. Additionally, the supplier is required to submit all necessary third-party test reports for structures, MV/LV switchgears, transformers, protection systems, transmission and distribution systems, civil materials, soil investigation, pull out testing, and other relevant tests. Each Bidder is required to submit all above prerequisites through detailed engineering drawings (Must be enclosed with Technical Bid) explaining all engineering standards as defined above.

5.4 The bidder must provide and adhere to all the applicable safety standards and compliance requirements, including the construction of a secure work environment, installation of an entrance gate, placement of signs and boards, provision of first aid facilities, certified machinery, implementation of adequate workspace lighting, installation of CCTV cameras, availability of safety kits, provision of personal protective equipment (PPE), and the implementation of safety training programs and plans. Each Bidder is required to submit all above prerequisites through detailed implementation plan (Must be enclosed with Technical Bid) explaining all requirements and plans.




5.5 Responsibility for Design

The Contractor shall remain responsible for his tendered design and the design under this Contract, both of which shall be fit for the intended purposes defined in the Contract and he shall also remain responsible for any infringement of any patent or copyright in respect of the same. The Engineer/Employer shall be responsible for the approval of the design including Drawings submitted by the Contractors.

6. EMPLOYER'S RISKS

6.1 The Employer's Risks

The Employer's Risks are: -

- a) riot, commotion or disorder by persons other than the Contractor's personnel and other employees including the personnel and employees of Sub-Contractors, affecting the Site and/or the Works;
- b) use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;
- c) late handing over of sites;
- d) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- e) physical obstructions or physical conditions other than climatic conditions, encountered on the Site during the performance of the Works, for which the Contractor immediately notified to the Employer and accepted by the Employer.

7. TIME FOR COMPLETION

7.1 Execution of the Works

The Contractor shall commence the Works on the Commencement Date and shall proceed expeditiously and without delay and shall complete the Works, subject to Sub-Clause 7.3 below, within the Time for Completion as stated in the Contract Data.

7.2 Program

Within the time stated in the Contract Data, the Contractor shall submit to the Engineer/Employer a programme for the Works in the form stated in the Contract Data.

7.3 Extension of Time

The Contractor shall, within such time as may be reasonable under the circumstances, notify the Employer/Engineer of any event(s) falling within the scope of Sub-Clause 6.1 or 10.3 of these Conditions of Contract and request the Engineer / Employer for a reasonable extension in the time for the completion of Works. Subject to the aforesaid, the Engineer/Employer shall determine such reasonable extension in the time for the completion of Works as may be justified in the light of the details/particulars supplied by the Contractor in connection with the such determination by the Engineer / Employer within such period as may be prescribed by the Engineer / Employer for the same; and the Employer shall extend the Time for Completion as determined.



7.4 Late Completion

If the Contractor fails to complete the Works within the Time for Completion, the Contractor's only liability to the Employer for such failure shall be to pay the amount stated in the Contract Data for each day for which he fails to complete the Works.

8. TAKING-OVER

8.1 Completion

The Contractor may notify the Engineer/Employer when he considers that the Works are complete.

8.2 Taking-Over Notice

The Engineer/Employer shall, subject to prior approval of the Employer, notify the Contractor when he considers that the Contractor has completed the works stating the date accordingly. Alternatively, the Engineer/Employer may notify the Contractor that the works are not ready for taking over, stating the reasons accordingly.

The Employer shall take over the works upon the issue of this notice and issue Taking Over Certificate to the Contractor. The Contractor shall promptly complete any outstanding work and, subject to Clause 9, clear the site.

8.3 Defect Liability Period

Defect Liability Period shall be as stated in the Contract Data.

9. REMEDYING DEFECTS

9.1 Remediating Defects

The Employer or the Engineer may at any time prior to the expiry of the period stated in the Contract Data, notify the Contractor of any defects. The Contractor shall remedy at no cost to the Employer any defects due to the Contractor's design, Materials, System or workmanship not in accordance with the Contract.

The Cost of remediating defects attributable to any other cause shall be valued as a Variation. Failure to remedy any such defects or complete outstanding work within a reasonable time shall entitle the Employer to carry out all necessary works at the Contractor's cost.

9.2 Uncovering and Testing

The Engineer/Employer may give instruction as to the uncovering and/or testing of any work. Unless as a result of an uncovering and/or testing it is established that the Contractor's design, Materials, System or workmanship are not in accordance with the Contract, the Contractor shall be paid for such uncovering and/or testing as a Variation in accordance with Sub-Clause 10.2.



9.3 The Contractor at his own responsibility shall arrange all hoisting and fixing equipment necessary for the satisfactory completion of work and shall make good any damage to the existing surface.

10. VARIATIONS AND CLAIMS

10.1 Right to Vary

The Engineer/Employer may instruct Variations.

10.2 Valuation of Variations

Variations shall be valued as follows:

- a) at a lump sum price agreed between the Parties, or
- b) where appropriate, at rates in the Contract, or
- c) in the absence of appropriate rates, the rates in the Contract shall be used as the basis for valuation, or failing which at appropriate new rates, as may be agreed or which the Engineer/Employer considers appropriate, or
- e) if the Engineer/Employer so instructs, at day work rates set out in the Contract Data for which the Contractor shall keep records of hours of labour and Contractor's Equipment, and of Materials, used.

10.3 Early Warning

The Contractor shall notify the Engineer/Employer in writing as soon as he is aware of any circumstance which may delay or disrupt the Works, or which may give rise to a claim for additional payment.

To the extent of the Contractor's failure to notify, which results to the Engineer/Employer being unable to keep all relevant records or not taking steps to minimize any delay, disruption, or Cost, or the value of any Variation, the Contractor's entitlement to extension of the Time for Completion or additional payment shall be reduced/rejected.

10.4. Valuation of Claims

If the Contractor incurs Cost as a result of any of the Employer's Risks, the Contractor shall be entitled to the amount of such Cost. If as a result of any Employer's Risk, it is necessary to change the Works, this shall be dealt with as a Variation subject to Contractor's notification for intention of claim to the Engineer/Employer within fourteen (14) days of the occurrence of cause.

10.5 Variation and Claim Procedure

The Contractor shall submit to the Engineer/Employer an itemized make-up of the value of Variations and claims within twenty-eight (28) days of the instruction or of the event giving rise to the claim. The Engineer/Employer shall check and if possible agree the value of the



absence of agreement, the Employer shall determine the value.

11. CONTRACT PRICE AND PAYMENT TERMS

11.1 Contract Price

Payment of the Contract price shall be as provided in the Contract Data.

11.2 Payment Terms and Statements

The Contractor shall be entitled to be paid the Contract Price at such intervals as given in the Contract Data.

12. DEFAULT

12.1 Default by Contractor

If the Contractor abandons the Works, refuses or fails to comply with a valid instruction of the Engineer/Employer or fails to proceed expeditiously and without delay, or is, despite a written complaint, in breach of the Contract, the Employer may give notice referring to this Sub-Clause and stating the default.

If the Contractor has not taken all practicable steps to remedy the default within fourteen (14) days after receipt of the Employer's notice, the Employer may by a second notice given within a further twenty-one (21) days, terminate the Contract. The Contractor shall then immediately demobilize from the Site leaving behind any and all Contractor's Equipment which the Employer instructs, in the second notice, to be used for the completion of the Works at the risk and cost of the Contractor.

12.2 Default by Employer

If the Employer fails to pay in accordance with the Contract, or is, despite a written complaint, in breach of the Contract, the Contractor may give notice referring to this Sub-Clause and stating the default. If the default is not remedied within fourteen (14) days after the Employer's receipt of this notice, the Contractor may suspend the execution of all or parts of the Works.

12.3 Insolvency

If a Party is declared insolvent under any applicable law, the other Party may by notice terminate the Contract immediately. The Contractor shall then immediately demobilize from the Site leaving behind, in the case of the Contractor's insolvency, any Contractor's Equipment which the Employer instructs in the notice is to be used for the completion of the Works.

12.4 Payment upon Termination

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and System reasonably delivered to the Site, adjusted by the following:



- a) any sums to which the Contractor is entitled under Sub-Clause 10.4,
- b) any sums to which the Employer is entitled,
- c) if the Employer has terminated under Sub-Clause 12.1 or 12.3, the Employer shall be entitled to a sum equivalent to twenty percent (20%) of the value of parts of the Works not executed at the date of the termination, and
- d) if the Contractor has terminated under Sub-Clause 12.2 or 12.3, the Contractor shall be entitled to the cost of his demobilization together with a sum equivalent to ten percent (10%) of the value of parts of the Works not executed at the date of termination.

The net balance due shall be paid or repaid within twenty-eight (28) days of the notice of termination.

13. RISKS AND RESPONSIBILITIES

13.1 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works from the Commencement Date until the date of the Engineer's/Employer's issuance of Certificate of Completion under Sub-Clause 8.2. Responsibility shall then pass to the Employer. If any loss or damage happens to the Works during the above period, the Contractor shall rectify such loss or damage so that the Works conform with the Contract.

Unless the loss or damage happens as a result of any of the Employer's Risks, the Contractor shall indemnify the Employer, or his agents against all claims loss, damage and expense arising out of the Works.

13.2 Force Majeure

If Force Majeure occurs, the Contractor shall notify the Engineer/Employer immediately. If necessary, the Contractor may suspend the execution of the Works and, to the extent agreed with the Employer demobilize the Contractor's Equipment.

If the event continues for a period of eighty-four (84) days, either Party may then give notice of termination which shall take effect twenty-eight (28) days after the giving of the notice.

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and System reasonably delivered to the Site, adjusted by the following:

- a) any sums to which the Contractor is entitled under Sub-Clause 10.4,
- b) the cost of his demobilization, and



c) less any sums to which the Employer is entitled.

The net balance due shall be paid or repaid within thirty-five (35) days of the notice of termination.

14. INSURANCE

14.1 Arrangements

The Contractor shall, prior to commencing the Works, obtain and maintain insurances of the types, in the amounts and naming as insured the persons stipulated in the Contract Data except for items (a) to (e) of the Employer's Risks. The policies shall be issued by insurers and in terms approved by the Employer. The Contractor shall provide the Engineer/Employer with evidence that any required policy is in force and that the premiums have been paid.

14.2 Default

If the Contractor fails to effect or keep in force any of the insurances referred to in the previous Sub-Clause, or fails to provide satisfactory evidence, policies or receipts, the Employer may, without prejudice to any other right or remedy, effect insurance for the cover relevant to such as a default and pay the premiums due and recover the same plus a sum in percentage given in Contract Data from any other amounts due to the Contractor.

15. RESOLUTION OF DISPUTES

15.1 Engineer/Employer's Decision

If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with the Works, the matter in dispute shall, in the first place, be referred in writing to the Engineer/Employer, with a copy to the other party. Such reference shall state that it is made pursuant to this Clause. No later than the twenty-eight (28) days after the day on which he received such reference, the Engineer/Employer shall give notice of his decision to the Employer and the Contractor.

Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Works with all due diligence, and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer/Employer unless and until the same shall be revised, as hereinafter provided in an arbitral award.

15.2 Notice of Dissatisfaction

If a Party is dissatisfied with the decision of the Engineer/Employer or if no decision is given within the time set out in Sub-Clause 15.1 here above, the Party may give notice of dissatisfaction referring to this Sub-Clause within fourteen (14) days of receipt of the decision or the expiry of the time for the decision. If no notice of dissatisfaction is given within



the specified time, the decision shall be final and binding on the Parties. If notice of dissatisfaction is given within the specified time, the decision shall be binding on the Parties who shall give effect to it without delay unless and until the decision of the Engineer/Employer is revised by an arbitrator.

15.3 Arbitration

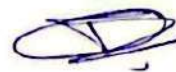
A dispute which has been the subject of a notice of dissatisfaction shall be finally settled as per provisions of Arbitration Act 1940 (Act No. X of 1940) and Rules made thereunder and any statutory modifications thereto. Any hearing shall be held at the place specified in the Contract Data and in the language referred to in Sub-Clause 1.5.

16 INTEGRITY PACT

16.1 If the Contractor, or any of his Sub-Contractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Appendix-G to his Bid, then the Employer shall be entitled to:

- (a) recover from the Contractor an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Contractor or any of his Sub-Contractors, agents or servants;
- (b) terminate the Contract; and
- (c) recover from the Contractor any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Contractor or any of his Sub-Contractors, agents or servants.

On termination of the Contract under Sub-Para (b) of this Sub-Clause, the Contractor shall immediately demobilize from the Site leaving behind Contractor's Equipment which the Employer instructs, in the termination notice, to be used for the completion of the Works at the risk and cost of the Contractor. Payment upon such termination shall be made under Sub-Clause 12.4, in accordance with Sub-Para (c) thereof, after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.



**Contract Data
Conditions of Contract**

Sr. #	Description	Clause Conditions of Contract	Explanation
1.	Employer's name and address	1.1.3	Sindh University Jamshoro, Sindh, Pakistan
2.	Contractor's name	1.1.5	Name of the Successful Bidder
3.	Engineer's name and address	1.1.20	Incharge Project Director Solarization
4.	Access to site	2.1	Within five (5) days of signing of Contract
5.	Authorized Person of the Employer	3.1	Engr. Tanveer Gulfam Memon
6.	Subcontracting	4.3	Subcontracting is not allowed
7.	Amount of Performance Security	4.4	Five percent (05%) of Contract Amount stated in the Letter of Acceptance.
8.	Validity of Performance Security	4.4	Performance Security will be released after expiry of (SLA)
9.	Time for issue of Engineer/ Employer's Notice to Commence	7.1	Within 7 days of signing of Contract by the Employer.
10.	Time for Commencement	7.1	From the date as notified in the Engineer / Employer's Notice to Commence.
11.	Time for Completion	7.1	12 months calculated from the commencement date, notified in Engineer/ Employer's Notice to Commence.
12.	Time for furnishing programme	7.2	Within 7 days from the date of receipt of Letter of Acceptance.
13.	Amount of Liquidated Damages	7.4	The rate of the Liquidated Damages (LD) shall be 0.05% of the Contract Amount stated in the Letter of Acceptance for every day of delay in which whole or part of the work(s) remained unfurnished subject to a maximum of 05% of the Contract Amount stated in Letter of Acceptance.
14.	Taking Over Certificate	8.2	By Parts Certificates may be issued.
15.	Defects Liability Period	8.3	One (01) year calculated from the date of completion of the works certified by the Engineer / Employer.
16.	Remedying Defect Period	9.1	Within fourteen (14) days after notice of defect
17.	Contract Price	11.1	As stated in the Letter of Acceptance
18.	Percent of Retention Money	60.2	05% of the amount of Interim payment certificate
19.	Refund of Retention Money	-	- 75% after presenting No Defect Certificate from end-user & remaining 25% shall be released after expiry of defect liability period




20.	Payment Terms	11.2	<p>(i) Mobilization Advance: (15%) Fifteen percent of the Contract Price against Scheduled Bank Guarantee.</p> <p>(ii) Delivery of Machinery, Equipment and Material of the System at Site as following deliverable:</p> <p>(a) (75%) Seventy-Five percent of the cost of Solar Panels supplied at project site.</p> <p>(b) (75%) Seventy-Five percent of the cost of Solar Inverters supplied at project site.</p> <p>(c) (75%) Seventy-Five percent of the cost of Mechanical Structure installed at project site.</p> <p>(d) (75%) Seventy-Five percent of the cost of Transformers supplied at project site.</p> <p>(e) (75%) Seventy-Five percent of the cost of AC/MV/DC/Earthing Cables supplied at project site.</p> <p>(f) 75%) Seventy-Five percent of the cost of other supplied items viz- Monitoring Device, Weather Monitoring Device, SCADA system with control Room and other items supplied at site.</p> <p>(iii) Installation & Testing Commission: (25%) shall be released on Installation & Testing Commissioning of the project. Mobilization Advance will be deducted in five (05) equal installments of first three payments.</p> <p>(iv) The payment on civil works shall be made as per (%) of satisfactory completion of work at site of that quoted item.</p>
21.	Types, amounts & persons named in the insurance.	14.1	The Director Finance University of Sindh Jamshoro




FORMS OF BID & APPENDICES TO BID



LETTER OF TECHNICAL BID

Date: _____

Bid Reference No: _____
(Name of Contract/Works)

To:

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with instructions to Bidders (IB) 9;
- (b) We offer to execute and complete in conformity with the Bidding Documents the following works: [●]
- (c) Our Bid Consisting of the Technical Bid and the Bid Price shall be valid for a period of [●] days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) As security for due performance of the under takings and obligations of our bid, we submit here with a Bid security, in the amount specified in Bidding Data, which is valid (at least) thirty (30) days beyond validity of Bid itself;
- (e) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process; and
- (f) We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB 11.1 of the Bidding Data.

Name _____

In the Capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of: _____

Date: _____

Address: _____



[Handwritten signature]



LETTER OF FINANCIAL BID

Dated: _____
Bid Reference No. _____
(Name of Contract/Works)

To,

We, the undersigned, declare that:

- a. We have examined and have no reservations to the bidding documents, including Addenda issued in accordance with instructions to Bidders (IB);
- b. The software based total Kilowatt generation through Solar Power System is: [●]
- c. Our Bid shall be valid for a period of [●] days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- d. If our Bid is accepted, we commit to obtain and post a performance security in accordance with the Bidding Documents;
- e. We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed and we do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the works;
- f. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive;
- g. We agree to permit Employer or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors. This permission is extended for verification of any information provided in our Technical Bid which comprises all documents enclosed herewith in accordance with IB 11.1 of the Bidding Data; and
- h. If awarded the contract, the person named below shall act as Contractors Representative.

Name: _____

In the capacity of: _____

Signed: _____

Duly authorized to sign the Bid for and on behalf of: _____

Date: _____

Address: _____



Appendix-A to Bid PROPOSED CONSTRUCTION SCHEDULE

[Please note that the Works shall be completed on or before the date stated in the Contract Data. The Bidder shall provide as Appendix-A to Bid, the Construction Schedule in the bar chart showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the Works and parts of the Works shall not exceed the time period specified in the Contract Data. Such period shall commence and counted from the date of receipt of Engineer/Employer's Notice to Commence in accordance with the terms and conditions of the Contract Agreement.]



METHOD OF PERFORMING THE WORKS

[Please note that the Bidder is required to submit a narrative outlining the method of performing the Works. The narrative should indicate in detail and include but not be limited to:

1. Organization Chart indicating head office and field office personnel involved in management and supervision, Engineering, equipment maintenance and purchasing.
2. Mobilization, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.
3. The method of executing the Works, the procedures for installation of equipment and machinery and transportation of equipment and materials to the site.
4. Quality control / Quality assurance to be adopted including procedures to be followed for carrying out all tests required under specifications.]



ORGANIZATION CHART
FOR THE SUPERVISORY STAFF AND LABOUR

[Please insert the complete details of the supervisory including project executing staff along with their CVs (senior staff already based/posted at Contractor's local office at Hyderabad/Jamshoro who will monitor and ensure the quality installation and commissioning of the System in accordance with the Specifications given under the Bidding Documents.)]

The Bidders should have minimum following Engineering Human Resources employed in the company:

- a) At least two electrical engineers registered with PEC as "Professional Engineers" along with proof of company's computerized payment receipt income tax (CPT-IT) certificates showing that the professional engineers are attached with company.
- b- At least four electrical engineers registered with PEC as "Registered Engineers" along with proof of company's professional tax showing electrical engineers are attached with company,
- c- At least one civil engineer registered with PEC as "Registered Engineer" along with proof of company's professional tax showing civil engineer is attached with company,



PAST EXPERIENCE, CURRENT COMMITMENTS, PERSONNEL CAPABILITIES
AND FINANCIAL STRENGTH

[Please provide necessary documentary evidence to substantiate the past experience, current commitments, personnel capabilities and financial strength of your Company for evaluation as per the Qualification Criteria given below.]



Qualification Criteria

1. Qualification evaluation criteria is as follows:

Sr.#	Category	Weightage/Marks
I.	Experience Record	50
II.	Personnel Capabilities	25
III.	Financial Soundness	25
	Total:	100

Note: Qualification status shall be decided on the basis of Pass / Fail basis.
The applicant must secure at least 50% score in each category.

2. The further detailed criteria for each category will be given under each head as follows:

I. Experience

Credit Marks for experience shall be awarded based on following qualifications:

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
a.	Solar PV Projects have been completed in last five years. No Marks will be awarded for projects less than 1MW.	20	20 Marks will be awarded if the Bidder has completed a minimum of 04 solar projects (having size of 1MW or higher) in last five years. For less than 4 projects completed the following weightage shall be used. =20 x (A/4) A= No. of Solar Projects of 1MW+ Completed
B.	Solar PV Projects at 11KV termination completed in last five years. (at least one project of 1MW or higher must be at 11KV termination) No Marks will be awarded for projects less than 1MW.	10	10 Marks will be awarded if the Bidder has completed minimum 01 solar project (having size of 1MW or higher) at 11KV termination in last five years. Marks will be awarded based on Yes or No with project details as evidence and the same projects will be visited by the employer to check the quality of products and services.



c.	<p>Solar PV Projects awarded and are under construction and yet to be commissioned.</p> <p>No Marks will be awarded for projects less than 2MW PV capacity for each projects.</p>	10	<p>Full Marks will be given if the Bidder has maximum of 02 project (02MW or higher) in-hand.</p> <p>For less than 02 projects of 2MW or higher are in-hand, use the following weightage.</p> <p>=10 x (A/2)</p> <p>A= No. of Solar Projects of minimum 2MW or higher are under-construction</p>
d.	<p>Solar PV Projects awarded and are under construction and yet to be commissioned and terminated at 11KV or 6.3KV voltage.</p> <p>(at least one project of 02MW or higher must be at 11KV or 6.3KV voltage termination)</p> <p>No Marks will be awarded for projects if the PV Capacity is less than 2MW and if the termination is not at High Voltage.</p>	10	<p>Full Marks will be awarded if the Bidder has minimum 01 solar project (having size of 2MW or higher) at High voltage termination in-hand / under-construction.</p> <p>Marks will be awarded based on Yes or No.</p>
Total Marks Allowed		50	



II. Personnel Capabilities

Credit Marks shall be awarded under this category using the following criteria:

Sr. No.	Description	Marks Assigned	Explanation for Marks Obtained
a.	Professional Electrical Engineers	10	<p>10 Marks will be given if at least 02 BE/ B.Sc (Professional Electrical Engineers) are in employment with the firm. Submission of evidence (computerized payment receipt income tax "CPT-IT" certificates) that both professional engineers are attached with the firm is MUST.</p> <p>For less than 02 Professional Electrical Engineers, use the following weightage.</p> <p>=10 x (A/2)</p> <p>A= No. of Professional Electrical Engineers.</p>
b.	Registered Electrical Engineer	08	<p>08 Marks will be given if at least 04 BE/ B.Sc Electrical Engineers (Registered Electrical Engineers) are in employment with the firm. Submission of evidence (computerized payment receipt income tax "CPT-IT" certificates) that both professional engineers are attached with the firm is MUST.</p> <p>For less than 04 Registered Electrical Engineers, use the following weightage.</p> <p>=08 x (A/4)</p> <p>A= No. of Registered Electrical Engineers.</p>
c.	Registered Civil Engineer	02	<p>Full Marks will be given if at least 01 BE/ B.Sc Civil Engineer (Registered Civil Engineer) is in employment with the firm. Submission of evidence (computerized payment receipt income tax "CPT-IT" certificates) that both professional engineers are attached with the firm is MUST</p> <p>Marks will be awarded based on Yes or No.</p>



d.	Diploma Engineer in Employment of the Firm	05	<p>One Mark will be given for each of 05 Associate Engineers in employment with the firm. Submission of evidence (computerized payment receipt income tax "CPT-IT" certificates) that both professional engineers are attached with the firm is MUST</p> <p>For less than 05 DAE Engineers, use the following weightage.</p> <p>=05 x (A/5) A= No. of DAE Engineers.</p>
Total Marks Allocated			25



III. Financial Position

Credit Marks shall be awarded based on the following criteria:



Sr. No.	Description	Marks Assigned	Criteria for Marks Obtained
a.	Working Capital in last five years.	15	<input type="checkbox"/> 100% Marks will be given if the available average working capital for last five years and available bank credit line found not less than Rs:526.624 Millions. <input type="checkbox"/> No mark shall be awarded if the working capital is less than the amount Rs:526.624 Millions.
b.	QMS ISO certified 9001, 14001	10	No points will be given if certificate is not attached and 10 points will be given in case of valid certificate.
Total Marks Allocated			25



JOINT VENTURE AGREEMENT

[Please provide certified true copy of Joint Venture (JV) Agreement, if applicable.]

JOINT VENTURE AGREEMENT



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 Number: _____
Contract Value: _____

Dated: _____

Contract Title:

[Name of Contractor] 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 or any administrative subdivision or agency thereof or any other entity owned or controlled by it (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, fee 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 consultations 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 Contractor] 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, representative or warranty.

[Name of Contractor] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact 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 right 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 Contractor] 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 Employer: _____

Name of Contractor: : _____

Signature: _____

Signature: _____

Seal

Seal



BILL OF QUANTITIES



BILL OF QUANTITIES (SUMMARY)

SOLARIZATION OF SINDH UNIVERSITY CAMPUS JAMSHORO

Supply, Installation, Testing, Commissioning, Training and Operations & Maintenance of 2.25 MW Solar Grid (on 11KVA) Connected Plant

PART-1: TECHNICAL DESIGNED BASED BILL OF QUANTITIES (BoQ for Solar Equipment)

Bill of Quantities (BoQ) for 2.25 MW Solar Grid Connected Project				
	Components	Specification	Origin	Qty.
1	Solar Modules	Tier-1 (Latest Technology of N Type Bifacial, 540w or higher Solar Cell : 144, Connector QC : 1500V, JC : 1P68 operating Temperature : -40C to +85C Safety class: II, Fire Performance : UL type I 12-year product warranty 30-year linear power output warranty IEC 61215, IEC 61730 61730 (with positive tolerance) ISO 9001: 2015 Quality management systems -ISO 14001: 2015 Environmental management ISO 45001: 2018 Occupational Health and safety management systems IEC TS 62941: 2019 Terrestrial photovoltaic (PV) modules, Quality system for PV module manufacturing	Tier-1 Manufacturer (Top 5 Brands) (EU/USA or EQV.)	2.25 MW
2	Inverters	200kW or higher wattage inverter (99% efficiency) Out put voltage:800 V, 3w+PE Isolation method feature. Power factor at nominal power / Adjustable power factor must be within Engineering standard. Protection degree: 1P66 String level disconnection feature, IV diagnosis, Built in AC&DC SPD, SSLD IEC certificate tripping, Harmonics less than 1%, Modbus communication, SCTD, smart connector temperature detector. Operating ambient temperature range: -25 to 60 °C Cooling method: Smart Air cooling. Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control. IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683	Top 05 Manufacturer (EU/USA or EQV)	02 MW
3	Monitoring Device	Support of RS485, Ethernet and WiFi communication, energy meter, meteo station, sensors and other equipment must be class B or A. PV-Plant maintenance via remote Web access for optimized OPEX. Active and reactive power control Local monitoring. Operating Temperature -30°C ~ 60 °C Storage Temperature -40 °C ~70°C Relative air humidity ≤95 % (non-condensing)		As per requirement




4	Weather Monitoring Devices	Temperature (ambient and cell), humidity, wind and O2 Pyranometers for (GHI measurement) at the meteorological station-in the horizontal plane 0 to 2000 W/m ² , 285 to 2800 nm, -40°C to 80°C Prerequisite: Accuracy Class : +/- 2.0% Product selection as per IEC - 61724-1	(EU/USA or EQV)	As per site requirement
5	Control Room with SCADA Systems	Plant performance analysis, Calculation, and logging of plant Performance ratio. Monthly & Daily reporting, Suppressed energy calculation, PR Calculation. Automated real-time monitoring system for the acquisition, processing, transmission, storage and archiving & graphic representation Display on-site with real time monitoring + historian will also be maintained in the server placed at each site. Visualization of all measurement values and calculations. Integration of multiple plants, identification of each plant and central monitoring. Lists indicating the precise date and time as well as the specified solution, in the actual occurrence order of events. Operator access to control and operate downstream devices. If provision of command would be available in protection relay the breaker of RMU could also be controlled. Recording and monitoring of energy analyzer over Modbus TCP protocol. Weather Station for measurement of ambient conditions: Temperature, Wind speed, horizontal and incident irradiance to calculate insolation & availability of plant Identification of Grid & gen-set failure time in a month & also Indicate the suppressed energy based on failure of bus-bar. The proposed solution must be including of web license and 1000-2000 tags and 2x Core i 9, 13 th generation or RAM 32GB and 2TB SSD Desktop system with display screen, Air Conditioners & additional LCD 43 inch of reputed brand. Bidders MUST submit complete design calculations, reports of energy yield (KWh) and PR performance ration along with technical bid.	(EU/USA or EQV)	As per site requirement
6	Mechanical Mounting Structures	Ground Mount (P2), Hot Dip Galvanized mechanical structure (compatible for Bi-facial PV Module to get maximum Bi-Facial PV gain / effect) suitable to withstand at wind speed of 126-150KMPH (higher the better for technical evaluation) as per design. Structural Vendor be either imported or PEC Registered if local vendor, having additional certificate of ISO9001:2000 Quality Management system. Design life of product should be 25 years. SAP Report for designing of PV Structural is MUST to submit along with Technical Bid and soft copy for the SAP Model will be asked during bid evaluation (PV area is Rocky)	Imported / Local	As per site requirement



7		MCCB 320A, 3 Pole -800/1000Vac, 25KA IEC : 60947-2	(EU/USA)	As per site requirement
8		ACB, 1250 A, 3 Pole -800/1000Vac, 66KA IEC : 60947-2	(EU/USA)	As per site requirement
9	Low/medium Voltage Switch gear	Low Voltage Combiner, IP54, IEC : IEC 61439 Must be follows IEC 61349 FORMS (FORM 1 – FORM 3) as per site requirement	Schneider/ABB authorized manufacturers	For Two PV Plants
10		I/O, 11KV Medium Voltage Panel, Must be included of Cts. PTs, SPD, energy analyzer Relays and customized design Panel, IEC 60 298 Type Tested, IEC 60 694, (IEC 62271-1), IEC 62 271-100, IEC 60 071 - 1, IEC 60 529, IEC 62 271-102, IEC 60 282 - 1, IEC 61 243-5, IEC 60 044 -1, IEC 60 044 -2	Siemens/Schneider	For Two PV Plants
11		I/O, AUX TF Panel, including load distribution circuit breakers CT's. PTs, SPD, energy analyzer Relays and customized design Panel	Schneider/ABB authorized manufacturers	For Two PV Plants
12		I/O, 11KV Medium Voltage Panel, Must be including HESCO HT Energy Meter, CTs PTs, Protection relays with separate incoming and outgoing cabinets and HESCO approved. IEC 60 298 Type Tested, IEC 60 694, (IEC 62271-1), IEC 62 271-100, IEC 60 071 - 1, IEC 60 529, IEC 62 271-102, IEC 60 282 - 1, IEC 61 243-5, IEC 60 044 -1, IEC 60 044 -2	Schneider/ABB authorized manufacturers	For Two PV Plants
13		Mechanical Structure	DTR structure for outgoing feeder including protection component including lightning -arrestor, 11KV Horn Gap Fuse, GOS and its accessories, pipe type earthing and installation complete at all aspect	As per WAPDA standard
14	Protection	Type II, Surge protection Class 60KA	(EU/USA)	As per site requirement
15	Optical Fiber Cable	12 core Multi-mode outdoor rated optical fiber UV resistance, IEC : 60793-2-10	(EU/USA or EVQ)	As per site requirement
16	DC Cable	1500Vdc, Tinned copper wire (4mm & 6mm) and DC voltage drop must be less than 1.8% (bidders must submit DC voltage drop calculations with technical bid, must consider design temperature of 50 degree), Standard: EN50618 Flame test: IEC 60332. Cold impact test:-40°C*16h/1000g : 100mm No cracking Ozone resistance:25±2°C*24h No cracking Tensile strength of After aging : ≤30% Weathering/UV-resistance:720h, No cracking Thermal endurance properties: 25 Years	(EU/USA or EVQ)	As per site requirement
17	Low/medium Voltage Cable	Inverter output cable: Cu/XLPE/PVC, Max Temperature : 250 Degree. BS EN 60228, IEC 60502-1 Voltage drop must be less than 0.5% (bidders must submit AC voltage drop calculations along with Amperage calculations considering all derating factors and submit with technical bid, must consider design temperature of 50 degree). Tensile Strength of Insulation (Before Ageing): 12.5 N/mm ² . Tensile Strength of Insulation (After Ageing) : 20% variation	Top 03 Manufacturer (Local or Imported)	For Two PV Plants
18		MV Cable : 95 sqmm 3 Core Al or CU/XLPE/PVC/SWA Voltage drop must be less than 0.5% 8.7/15 (17.5) KV, WAPDA P-29:2010		For Two PV Plants



19		Main LV Cable : Max Voltage drop must be less than 1% , Temperature : 160 Degree, BS EN 60228, IEC 60502-1. (bidders must submit AC voltage drop calculations along with Amperage calculations considering all derating factors and submit with technical bid, must consider design temperature of 50 degree) Tensile Strength of Insulation (Before Ageing): 12.5 N/mm ² . Tensile Strength of Insulation (After Ageing) : 20% variation		For Two PV Plants
20		2.5sqmm-1 Core, 4sqmm-1 Core, 6sqmm-1 Core, 25sqmm-1 Core, 35sqmm-1 Core, 70sqmm-1 Core, 120sqmm-1 Core, Earthing Cables, Class 01/02, BS EN 60228, BS 6004		For Two PV Plants
21	11KV incoming and outgoing Termination	11KV Injection including T boots connectors, jumper and other required complete components and its accessories with complete installation testing and commissioning	As per WAPDA standard	For Two PV Plants
22	Cable trays	Hot dip Galvanized 14/16SWG with SS nut bolts and complete accessories	Local/Imported	For Two PV Plants
23	HDPE or UPVC Pipes	UPVC or HDPE Pipes with complete accessories	Local/Imported	As per site requirement
24	Earthing Works	AC/DC/MV/DTR structure and Transformer earthing. Minimum resistance: less than 1 Ohm Earthing material : Copper Earthing sizing as per IEC 60364-5-54	Local/Imported	As per site requirement
25	Lightning Arrestor	Mini Rating : 60 ΔT: 60μs. ISO 9001,10002, IEC 62561-2.IEC 62561-1:2017 RLV. NFC 17.102:2011, UNE 21.186:2011, TS EN 62305. IP65 rated enclosure, 6 digit display counter pole height value set out in EN 13709 and NFC 17-102	(EU/USA or EQV)	For Two PV Plants
26	Step-Up Transformers	1250KVA , 0.8KV - 11KV Step Up Oil Type , Vector group: Dd0. 3 x Winding Temperature with PT100 sensor. IEC 600-76, IEC-60296 , IEC 60296 Pressure Relief Valve (with contacts), Oil Thermometer, Double Float Buchholz Relay, Marshalling Box with IP54 including Transformers sheds and Transformer foundations (Rocky area) with boundary fencing (customize having provision for O&M and/or lifting of transformer as per need)	WAPDA approved or Imported	For Two PV Plants
27	Step-Down Transformers	AUX 25KVA , 11KV -440V Step down Oil Type , Vector group: Dyn11. 3 x Winding Temperature with PT100 sensor. IEC 600-76, IEC-60296 , IEC 60296 with all necessary protections. including Transformers sheds and Transformer foundations (Rocky area) with boundary fencing (customize having provision for O&M and/or lifting of transformer as per need)	WAPDA approved or imported	For Two PV Plants
28	Boundary Fencing	Material : Hot Dip Galvanized Boundary Fencing height : 6ft Including 100% civil works: 1. Barbed wire 14 swg x 04 & twisted wire 12 swg 2. pole dia 48-50mm/, 3mm thick , Box 75x75mm, with including civil works with installation Must be including of one main fencing gate for PV	Local/Imported	For Two PV Plants



		plant entrance		
29	Boundary LED Lighting Systems	<p>LED Lights : 100Wp. Voltage Ranges : 100-277 V PF ≥0.95, Colour Temp. (CCT): 3000 - 6500 K. Working Temperature: -40~+55 C LED Chip Luminous Efficiency Lm/ W : ≥110-160 HDG Poles: 4-6 meters, 3-4mm thickness including AC Cables plus protection systems and ON/OFF Switches, excavation, RCC foundations, DB Boxes along with complete accessories to cover complete PV Area and new buildings . Must be including of Master Breaker and Bypass Breaker, SPD, Photocell Switch and Magnetic Contactor (bidders must submit complete LED Lighting DIALux design, detailed BOQ and detailed drawings showing illumination and coverage for PV area, control room, new buildings, inverters room, transformers room and residential areas and entrances along with technical bid)</p>	Local/Imported	For Two PV Plants
30	CCTV Cameras	<p>IR Bullet IP Camera & PTZ IP Camera with complete solution . Efficient H.265+ compression technology Water and dust resistant (IP67) 120 dB WDR technology including all accessories having HDG poles and complete networking cables and electrification equipment. The CCTV Solution must be including of HDMI cable, Optical fiber cable, 2x display screens more than 43inch reputed brand and motion sensor alarm system. (bidders must submit complete CCTV design, detailed BOQ and detailed drawings showing coverage for PV area, control room, new buildings, inverters room, transformers room and residential areas and entrances along with technical bid)</p>	(EU/USA or EVQ)	For Two PV Plants
31	Water Distribution Network	<p>PPRC/HDPE & GI Pipe Network including complete cleaning equipment and accessories for Solar PV Panels. Must be including of control valve and distribution valve system alongwith storage tank (bidders must submit complete water networking design, detailed BOQ and detailed drawings showing complete cleaning of PV plant along with technical bid)</p>	Complete Job	For Two PV Plants
32	Fire Alarm system	<p>Fire alarm system complete and directly interface with SCADA system along with fire extinguishers Design as per ISO 7240-14</p>	Complete Job	For Two PV Plants
33	Battery backup	<p>UPS along with lithium battery backup system for control system, SCADA system, emergency load (APC or equivalent brand)</p>	Complete Job	For Two PV Plants
33	Battery backup	<p>UPS along with minimum 20KWh battery backup system for boundary LED Lights and CCTVs security surveillance system. Bidder must submit complete design of electrical load and sizing of UPS system.</p>	Complete Job	For Two PV Plants



34	Technical Reports	Soil investigation analysis including professional / engineering reports of complete area (for PV area, Buildings etc.), two load flow studies, PFI studies, Topographic study, and other required studies, wind loading analysis on proposed angels of panel	Complete Job	For Two PV Plants
35	Complete Accessories	Electrification installation accessories including for new buildings, LV sheds/ MV sheds/ MV rooms and outdoor lighting system alongwith required standard furniture's (complete job)	Complete Job	For Two PV Plants
36	Installation, Testing, and Commissioning	Complete installation on turnkey basis-complete with all aspects (area: Rocky)	Complete Job	For Two PV Plants
37	Net Metering	Complete process including documentation, equipment as per NEPRA & DISCO requirements	Complete Job	For Two PV Plants
38	O & M	Preventive maintenance and Corrective Maintenance excluding cleaning of solar panels (for two years). (Professional Engineer having minimum 2MWs Solar Project experience of "2MW single project experience" and must have at least "1MW Solar experience of 11KV project" and will be based at Jamshoro for 24/7 during complete O&M period)	Complete Job	2 Years
39	Spares	1. 40pcs of solar panels 2. 01 pc of MCCB Breaker 320A-3P 3. Two coils GI Flexible Pipe (25mm and 32mm) 4. 100pcs of MC4 Connectors 5. 04 sets of LED Lights 6. 04 sets of CCTV Cameras 7. Two sets of tool kits		

PART-2: TECHNICAL DESIGNED BASED BILL OF CIVIL WORKS (BoQ for Civil Works)

1	Civil Works	Construction of Two inverter sheds with boundary fencing - (Area: Rocky) Bidders must submit complete CAD drawings and design calculations and submit along with Technical Bid.	Complete Job	For Two PV Plants
2		Construction of MV Room (minimum 30 x 20' x 12' or larger size) with proper cooling system (having 02 units of Inverters based 1.5 ton ACs) - (Area: Rocky) with fully furnished office setup. Bidders must submit complete CAD drawings and design calculations and submit along with Technical Bid.		
3		Construction of Servant quarter (1 bed room -12' x 12' x 12', 01 Lounge 12' x 12' x 12', 01 washroom 4' x 4' x 9', 01 kitchen 4' x 4' x 9') including complete electrification and fans and lighting- (Area: Rocky) Bidders must submit complete CAD drawings and design calculations and submit along with Technical Bid.		
4		Construction of Sheds for Step up Transformers and Sheds for Auxillary Transformers with boundary fencing (customize having provision for O&M and/or lifting of transformer as per O&M need)		



		Bidders must submit complete CAD drawings and design calculations and submit along with Technical Bid.		
5		Excavation, Land leveling, Filling, Compaction and Clearance of PV area, and construction of buildings (Area: Rocky) Bidders must submit complete CAD drawings, topography studies and design calculations and submit along with Technical Bid.		
6		Civil works for transformer foundations - complete - (Area: Rocky) Bidders must submit complete CAD drawings and design calculations and submit along with Technical Bid.		
7		Civil works for DTR Structure foundations - complete - (Area: Rocky) Bidders must submit complete CAD drawings and design calculations and submit along with Technical Bid.		
Total Amount				

Amount in Words: _____

Note:

- 1- The quoted price/rates shall be included all cartages, direct/indirect taxes, escalations, royalties, differences. No Escalations/difference of cost shall be allowed on any stage. The Quoted Rates shall be compatible throughout the project duration.
- 2- All warrantees/guarantees /documents of supply/import/local of equipments shall be submitted to the Project Engineer before bringing at site for approval.

Company Seal: _____

Sig of Bidder : _____



FORMS BID
SECURITY
PERFORMANCE SECURITY
CONTRACT AGREEMENT



BID SECURITY
(Bank Guarantee / Pay Order / Demand Draft)

Security Executed on

_____ (Date)

Name of Surety (Bank) with Address:

_____ (Scheduled Bank in Pakistan)

Name of Principal (Bidder) with

Address

Security Amount in Rupees. _____ (Rs.

_____)

Bid Reference No.

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and _____ firmly bound unto

(hereinafter called the 'Employer') in the sum stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted _____ the accompanying Bid _____ for Bid No. _____ dated _____ for _____ (Particulars of Bid) to the said Employer; and



WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum from a Scheduled Bank in Pakistan or from a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan, to the Employer, conditioned as under:

- (1) that the Bid Security shall remain in force up to and including the date 30 days after the deadline for validity of bids as stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived;
- (2) that the Bid Security of unsuccessful Bidders will be returned by the Employer after expiry of its validity or upon signing of the Contract Agreement; and
- (3) that in the event of failure of the successful Bidder to execute the proposed Contract Agreement for such work and furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefor, on the prescribed form presented to him for signature enter into a Contract Agreement with the said Employer in accordance with his Bid as accepted and furnish within ten (10) days of issuance of Letter of Acceptance, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract Agreement or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Surety shall forthwith pay the Employer the said sum upon first written demand of the Employer (without cavil or argument) and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Employer forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed this Guarantee under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

SURETY (Bank)



WITNESS:

1. _____

Corporate Secretary (Seal)

2. _____

Name, Title & Address

Signature _____

Name _____

Title _____

Corporate Guarantor (Seal)



FORM OF PERFORMANCE SECURITY
(Bank Guarantee / Pay Order / Demand Draft)

[Letter by the Guarantor to the

Employer]Name of Guarantor (Bank)

with address:

Name of Principal (Contractor) with
address:Guarantee No.____ Executed on _
Expiry date

(Scheduled Bank in Pakistan)



Security Amount (express in words and figures) _____

Letter of Acceptance No. _____ Dated _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly and irrevocably and unconditionally bound unto the _____ (hereinafter called the Employer) in the sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has accepted the Employer's above said Letter of Acceptance for _____ (Name of Contract) for the _____ (Name of Project).

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract Agreement and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 8.3, Defects Liability, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee. We, _____ (the Guarantor), waiving all objections and defences under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract Agreement which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract Agreement or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.



IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Guarantee under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Witness:

1. _____

Corporate Secretary
(Seal)

2. _____

Name, Title & Address

Guarantor (Bank)

Signature _____

Name _____

Title _____

Corporate Guarantor (Seal)



FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Contract Agreement") made on the _____ day of _____ (month) 20____ between _____ (hereafter called the "Employer") of the one part and _____ (hereafter called the "Contractor") of the other part.

WHEREAS the Employer is desirous that certain Works, viz _____ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnesses 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 hereinafter referred to.
2. The following documents after incorporating addenda, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Contract Agreement, viz:
 - (a) The Letter of Acceptance;
 - (b) The Financial Bid Letter, Technical Bid Letter and Appendices;
 - (c) Conditions of Contract;
 - (d) Contract Data;
 - (e) The Drawings and Design of the System;
 - (f) The Scope of Work and System Design Specifications.
 - (g) _____ (any other)
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of this Contract Agreement.

4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of this Contract Agreement, the Contract Price or such other sum as may become payable under the provisions of this Contract Agreement at the times and in the manner prescribed therein.



IN WITNESS WHEREOF the parties hereto have caused this Contract Agreement to be executed on the day, month and year first before written in accordance with their respective laws.

Signature of the Contactor

(Seal)

Signature of Employer

(Seal)

In the presence of:

Witness:

(Name, Title and Address)

Witness:

(Name, Title and Address)

SCOPE OF WORKS & SYSTEM DESIGN
SPECIFICATIONS



SCOPE OF WORKS & SYSTEM DESIGN
SPECIFICATIONS



SCOPE OF WORKS & SYSTEM DESIGN SPECIFICATIONS

SCOPE OF WORK

1. Preparation of Design / Drawings, Quality Assurance/Post Shipment Design:

The Contractor shall carry out detailed design of the Project during the bid preparation and before the bid submission and contractor will submit high level engineering designs, drawings and layouts and detailed BOQs against all scope of works along with the tender documents (technical bid) for further evaluation of the employer.

The Bidders must visit project sites to collect entire data including but not limited to existing infrastructure of electrical, civil and mechanical sectors.

The bidders (EPC Companies) will be sole responsible for designing of 2.25 MW solar projects; following prerequisites are to be met by all interested bidders:

The Bidders must visit project sites before participating in bids,

Preparing design of solar system which must include the designing of 2.25 MW solar plant at high voltage 11KVA terminations (two separate terminations),

Designing of distribution and/or transmission lines from project sites to both termination points,

Designing of extensions including towers for 11KVA transmission lines from HESCO feeders till university premises,

Designing of complete SCADA, Control and networking systems,

Designing of LED lighting Poles for PV areas and new buildings and boundaries, inverter rooms, LV including MV rooms, Control rooms, Transformer rooms and PV areas and residential houses/quarters,

Designing of CCTV surveillance systems for inverter rooms, LV including MV rooms, Control rooms, Transformer rooms and PV areas and residential houses/quarters,

Designing and management of water distribution networks for cleaning of solar panels,

Designing of fire alarms and/or suppression system for safety of



2.25 MW solar projects,

Conducting all Geo-technical and soil investigation studies of project sites including;

- Trees cutting,
- Land leveling,
- Earth filling,
- Compaction,
- Construction of boundary fence of the entire PV areas, inverter rooms, LV including MV rooms, Control rooms, Transformer rooms and PV areas and residential houses/quarters,
- Drainage and slopping including water drainage system for rain and/or flood water;

Construction of buildings including:

- Construction of servants residences/quarters and security rooms,
- Construction of transformers rooms,
- Construction of LV and MV substations and SCADA systems,
- Construction of Inverter rooms/sheds,
- Construction of trenches for underground DC cables,
- Construction works for DTR structures as per WAPDA standards,
- Construction works for manhole chambers for DC strings,

The proposed bidders' design and implementation must be in accordance with relevant engineering standards (IEC/NEC/Civil and mechanical codes on all project supplies and services such as Solar panels, Inverters, LV/MV switchgears, enclosures, AC/DC Earthing, lightning protection systems, Distribution poles, LV distribution lines, transformers, LV/MV substation, communication and SCADA system, LV/MV Cables, Earthing cables, cable trays, ducting, trenches system, electrical, civil and mechanical installations. Bidders must submit complete engineering details in technical bid.

If any equipment or scope of work is found not in accordance with the applicable engineering standards or codes, the supplier is obligated to rectify it at their own cost to meet client requirements. A final inspection will be carried out to ensure compliance with the specified scope of work. Additionally, the supplier is required to submit all necessary third-party test reports for structures, MV/LV switchgears, transformers, protection systems, transmission and distribution systems, civil materials, soil investigation, pull out testing, and other relevant tests.

The bidder must provide and adhere to all the applicable safety standards and compliance requirements, including the construction of a secure work environment, installation of an entrance gate, placement of signs and boards, provision of first aid facilities, certified machinery, implementation of adequate workspace lighting, installation of CCTV cameras, fire alarms, security alarms, fire extinguishers availability of safety kits, provision of personal



protective equipment (PPE), and the implementation of safety training programs and plans.

Responsibility for Design

The Contractor shall remain responsible for his tendered design and the design under this Contract, both of which shall be fit for the intended purposes defined in the Contract and he shall also remain responsible for any infringement of any patent or copyright in respect of the same. The Engineer/Employer shall be responsible for the approval of the design including Drawings submitted by the Contractors.

2. Engineering:

The contractor is expected to engage in the engineering phase, where the development of sophisticated engineering solutions is paramount to facilitate the seamless integration of the solar power system with the existing power infrastructure of the buildings.

3. Procurement:

The procurement phase necessitates the efficient sourcing and acquisition of all required equipment, materials, and components essential for the successful execution of the solar power system installation. This includes the careful procurement of quality components as per BOQ.

4. Construction:

The construction phase entails the physical installation of the solar power system on the designated areas, encompassing the intricate task of integrating it with the existing building power infrastructure. The contractor must ensure that all construction activities strictly adhere to industry standards, safety protocols, and the precise design requirements.

5. Operations & Maintenance:

Beyond the installation phase, the contractor assumes the responsibility of overseeing the operation and maintenance of the solar power system. This entails ongoing monitoring, proactive troubleshooting, and the implementation of preventive maintenance measures to ensure the uninterrupted and efficient operation of the system.

The contractor's meticulous execution of these project phases is pivotal to the overall success of the solar power system installation within the university campus. It is imperative that the contractor upholds the highest standards of quality, safety, and precision throughout the entire project.



lifecycle with following scope.

- A. Warrantee and Defect Liability Period will include rectification /replacement of all the defective and consumable components/items. However, all the non- functional parts / materials / items replaced during the Warrantee and Defect Liability Period shall be the property of the Contractor.
- B. After commissioning of the System, the Contractor will conduct on-site training of the purchaser's/ user's personnel regarding assembly, start-up, operation, maintenance and repairs of the System.
- C. During Defect Liability Period, the Contractor will have to make all necessary arrangements including training of the Employer manpower at site for satisfactory operation, maintenance and performance of the System.
- D. Rectification of all the defects developed in the System during Warrantee and Defect Liability Period shall have to be done by the Contractor promptly, at the most within time mentioned in these tender documents from the date of receipt of complaint.
- E. During Defect Liability Period, the Contractor shall have to submit annual performance & functionality report based on the collected data/data logs. The Employer will share the data with the contractor in this regard.
- F. During the Warrantee and Defect Liability Period, the Employer will have all the rights to cross check the performance of the System. The Employer may randomly pick up its components to get them tested at accredited labs or any government approved test center. If during such tests any part is not found as per the specified technical parameters, the Employer will take the necessary action to recover the losses and to black list the firm and the same may be communicated to AEDB/PPIB and other nodal agencies. The decision of the Employer in this regard will be final and binding on the Contractor.
- G. Bidders MUST submit complete design calculations, reports of energy yield (KWh) and PR performance ratio along with technical bid.
- H. During the Warrantee and Defect Liability period, it is the responsibility of the contractor to engage a technical person as per requirement who ponder the trouble shoots if any and make it rectify for smooth operation of the installed system throughout Warrantee and Defect Liability Period.
- I. All warranties/guarantees /documents of supply/import/local of equipments shall be submitted to the Project Engineer before bringing at site for approval.





UNIVERSITY OF SINDH

JAMSHORO SINDH PAKISTAN

OFFICE OF THE INCHARGE PROJECT DIRECTOR (SOLARIZATION)

TENDER NOTICE

All the interested contractors / firms / parties meeting eligibility criteria viz. registration with Federal Board of Revenue (FBR) for Income Tax, Sales Tax in case of procurement of goods, registration with Sindh Revenue Board in case of procurement of Works and Services and registration with Pakistan Engineering Council as the case may be and not blacklisted in any procuring agency or authority, are invited to participate in full / item rate tenders for the following work:

Name of Work	Tender Fee	Procedure	Complt: Period	Call Deposit / Security Deposit
Supply, Installation, Testing, Commissioning, Training and Operations & Maintenance of 2.25 MW Solar Grid (on 11kv) connected plant, under the scheme Solarization of Sindh University Campus, Jamshoro. (sdg # 4)	Rs. 5000/- In favor of Director Finance, University of Sindh	Single Stage Two Envelopes Procurement Rule 46(2) SPPRA Rules Amended upto Date	12 Months	2% of quoted bid price

1st Schedule	2nd Schedule
> Issuance start date & time: 17-04-2024 till office hours	> Issuance start date & time: 10-05-2024 till office hours.
> Issuance end date & time: 08-05-2024 till office hours	> Issuance end date & time: 27-05- 2024 till office hours.
> Submission date & time: 09-05-2024 till 12:00 noon	> Submission date & time: 28-05-2024 till 12:00 noon
> Opening date & time: 09-05-2024 till 12:30 PM	> Opening date & time: 28-05-2024 till 12:30 PM

Terms and conditions are given as under: -

- The tender documents can be had from above office or downloaded from SPPRA/PPMS website and University of Sindh official website <http://www.usindh.edu.pk> on payment noted above (non-refundable) on any working day. In case of any unforeseen situation resulting in closure of office on the date of opening or government declares any holiday, the tenders shall be submitted/opened on the next working day at the same time & venue. Any conditional or unaccompanied of the earnest money, tender will not be considered in the competition.
- The Method of Procurement is:
The procedure adopted for bidding is open competitive bidding; Single Stage-Two Envelopes Procedure rule 46(2) of Sindh Public Procurement Rules, 2010 amended upto date.
- The bidders are required to submit proposals in accordance with the Technical Evaluation Criteria given in the Bidding Documents.
- Financial Proposals of firms failing to qualify technically if any shall be returned as sealed / unopened, while Financial Proposals of qualified firms shall be opened in presence of firms or their authorized representatives at the time to be determined later.
- The bidders should have at least 05 years experience of same services in any university or large organization.
- The bidders should be registered with taxpaying agencies which would be verified by concerned agencies.
- The bidders should not be blacklisted in any procuring agency (Affidavit is required).
- Average Annual Turnover not less than equivalent cost of the scheme/project during the last five years.
- All bids need to be submitted on Standard Format of Request for Proposal (RFP) duly signed/stamped with all requisite documents. Failing to submit the bid, if any, on Standard Format of RFP, the bids shall be considered as non-responsive/rejected.

The competent authority reserves the right to reject any or all bid proposals, subject to the relevant provision of SPPRA Rules 2010 amended upto date.

Sd/-

INCHARGE PROJECT DIRECTOR

(Solarization)

University of Sindh Jamshoro

Phone: 022-9213265

Email: pd@usindh.edu.pk

يونيورسٽي آف سنڌ

جامشورو سنڌ پاڪستان

آفيس آف ڊي انچارج پروجيڪٽ ڊائريڪٽر (سولرائزيشن)



ٽينڊر گھرائڻ لاءِ نوٽيس

هيٺين ڪمن لاءِ اهلليت معيار تي پورو لهندڙ يعني گڏجي پروڪيورمينٽ جي صورت ۾ انڪم ٽيڪس، سيلز ٽيڪس لاءِ فيڊرل بورڊ آف روينيو (FBR) سان رجسٽريشن رکندڙ، ورڪس ۽ سروسز جي پروڪيورمينٽ جي صورت ۾ سنڌ روينيو بورڊ سان رجسٽريشن رکندڙ ۽ جيئن به صورت حال هجي پاڪستان انجنيئرنگ ڪائونسل سان رجسٽريشن رکندڙ ۽ ڪنهن پروڪيورنگ ايجنسي يا اختياري وٽ بليڪ لسٽ نه ٿيل سمورن خواهشمند ٽيڪيڊارن/فرمن/ڌرين کي مڪمل/آئٽر ريٽ ٽينڊر ۾ شرڪت جي ڪوٺ ڏجي ٿي.

ڪم جو نالو	ٽينڊر في	طريقيڪار	تڪميل جو ملو	ڪال ڊپازٽ/سيڪيورٽي ڊپازٽ
سنڌ يونيورسٽي ڪئمپس ڄامشورو جي سولرائزيشن اسڪيم تحت، 2.25 MW سولر گرڊ (11 KV تي) ڪنيڪٽڊ پلاٽ جي فراهمي، تنصيب، ٽيسٽنگ، ڪميشننگ، ٽريننگ ۽ آپريشن ۽ سارڻيال (sdg # 4)	5000 روپيا	سنگل اسٽيج ٻه لفافا پروڪيورمينٽ رول 46(2) SPPRA رول هيستائين ترميم ٿيل	12 مهينا	اڇيل واڪ قيمت جو 2 سيڪڙو

پهريون شيڊيول:	ٻيون شيڊيول:
<ul style="list-style-type: none"> اجراء جي شروعاتي تاريخ ۽ وقت: 17-04-2024 آفيس وقت تائين اجراء جي آخري تاريخ ۽ وقت: 08-05-2024 آفيس وقت تائين جمع ڪرائڻ جي تاريخ ۽ وقت: 09-05-2024 منجهند 12 وڳي تائين ڪولڻ جي تاريخ ۽ وقت: 09-05-2024 منجهند 12:30 وڳي تائين 	<ul style="list-style-type: none"> اجراء جي شروعاتي تاريخ ۽ وقت: 10-05-2024 آفيس وقت تائين اجراء جي آخري تاريخ ۽ وقت: 27-05-2024 آفيس وقت تائين جمع ڪرائڻ جي تاريخ ۽ وقت: 28-05-2024 منجهند 12 وڳي تائين ڪولڻ جي تاريخ ۽ وقت: 28-05-2024 منجهند 12:30 وڳي تائين

شرط ۽ ضابطا هيٺين ريت آهن:

- ٽينڊر دستاويز مٿين آفيس مان ڪنهن به ڪم ڪار واري ڏينهن مٿي ذڪر ڪيل (ناقابل واپسي) اداڻي ڪرڻ تي حاصل ڪري سگهجن ٿا يا SPPRA/PPMS ويب سائيٽ ۽ سنڌ يونيورسٽي جي ويب سائيٽ <https://www.usindh.edu.pk> تان ڏٺون لوڊ ڪري سگهجن ٿا. ڪولڻ واري تاريخ تي ائٽر حالتن سبب آفيس بند ٿيڻ يا حڪومت پاران موڪل ڪرڻ جي صورت ۾ ٽينڊر ورنڊو ڪم ڪار واري ڏينهن ساڳئي وقت ۽ هنڌ تي جمع ڪيا/ڪوليا ويندا. ڪوبه شرط يا سوئي رقم کانسواءِ ٽينڊر چٽاڀيٽي ۾ غور حاصل نه ڪندو.
- پروڪيورمينٽ جو طريقيڪار هيٺين ريت آهي.
 - واڪ عمل لاءِ کليل چٽاڀيٽي طريقيڪار اختيار ڪيو ويندو؛ سنڌ پبلڪ پروڪيورمينٽ رولز 2010 هيستائين ترميم ٿيل جي رول 46(2) تحت سنگل اسٽيج ٻه لفافا طريقيڪار.
- واڪ ڏينڙن کي واڪ دستاويزن ۾ ڏنل ٽيڪنيڪل چئڊرڇاڻ معيار مطابق پروپوزل جمع ڪرائڻا پوندا.
- ٽيڪنيڪل نااهل ٿيندڙ فرمن جا فنانشل پروپوزل کين اٽڪليل/مهريند واپس ڪيا ويندا، جڏهن ته اهل فرمن جا فنانشل پروپوزل بعد ۾ تعين ڪيل وقت تي فرمن يا سندن مجاز نمائندن جي روبرو ڪوليا ويندا.
- واڪ ڏينڙ وٽ ڪنهن يونيورسٽي يا وڏي اداري اندر ساڳين خدمتن جو گهٽ ۾ گهٽ 5 سال تجربو هجي.
- واڪ ڏينڙ ٽيڪس حاصل ڪندڙ ايجنسين سان رجسٽرڊ هجي جنهن جي تصديق لاڳاپيل ايجنسين کان ڪئي ويندي.
- واڪ ڏينڙ ڪنهن پروڪيورنگ ايجنسي وٽ بليڪ لسٽ ٿيل نه هجي. (قشر نامو گهربل هوندو)
- گذريل 5 سالن دوران اسڪيم/پروجيڪٽ جي مساوي لاڳت کان نه گهٽ سراسر ساليانو ٽرن اوور.
- سمورا واڪ گهربل دستاويزن سان گڏ مهر لڳل/دستخط ٿيل پروپوزل لاءِ درخواست (RFP) جي معياري فارميٽ تي جمع ڪرايا وڃن. RFP جي معياري فارميٽ تي واڪ جمع نه ڪرائڻ جي صورت ۾، واڪ تي موٽ نه مليل/رد تصور ڪيو ويندو. مجاز اختياري SPPRA رولز 2010 هيستائين ترميم ٿيل جي لاڳاپيل فٽرن جي شرط سان ڪوبه يا سمورا واڪ/پروپوزل رد ڪرڻ جو حق محفوظ رکي ٿي.

انچارج پروجيڪٽ ڊائريڪٽر (سولرائزيشن)

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پڙهندي سنڌ توڙهندي سنڌ