



BIDDING DOCUMENT

HIRING OF FIRMS/COMPANIES (INTERESTED PARTIES) FOR THE “UPGRADATION OF SOLAR PV MODULE TESTING LABORATORY IN THE CENTER FOR ENERGY RESEARCH AND DEVELOPMENT (CERAD), UNIVERSITY OF ENGINEERING AND TECHNOLOGY (UET), LAHORE”

Single Stage Two Envelope

Issued on

17 November, 2025



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INVITATION FOR BIDS



**PUNJAB ENERGY EFFICIENCY & CONSERVATION
AGENCY (PEECA),
ENERGY DEPARTMENT
GOVERNMENT OF PUNJAB, LAHORE**



**FOR
HIRING OF FIRM/COMPANY (INTERESTED PARTIES) FOR SUPPLY
OF EQUIPMENT FOR “UPGRADATION OF SOLAR PV MODULE
TESTING LABORATORY IN THE CENTER FOR ENERGY RESEARCH
AND DEVELOPMENT (CERAD), UNIVERSITY OF ENGINEERING
AND TECHNOLOGY (UET), LAHORE”**

E-bids are invited from eligible Firms/Companies (Interested Parties) for the Supply of Equipment for “Upgradation of Solar PV Module Testing Laboratory in the Center for Energy Research and Development (CERAD), University of Engineering and Technology (UET), Lahore”

Single Stage Two Envelope (SSTE) Bidding procedure will be adopted through e- Pak Acquisition Disposal System (EPADS) www.punjab.eprocure.gov.pk. Firms/Companies (Interested Parties) are requested to submit their Technical and Financial proposals separately along with a **CDR in Original Form and a Copy** amounting to **2%** of the estimated amount mentioned in Bidding Document in the favor of **Managing Director-PEECA**, before closing time.

The bidding document will be available to the Firms/Companies (Interested Parties) on the Website of PEECA <https://peeca.punjab.gov.pk> and PPRA (www.ppra.punjab.gov.pk), immediately after the tender notice is published on Newspaper. The details of the tender are mentioned in the Bidding Document. The last date for submission of the Technical and Financial Proposals will be **04-12-2025** up to **02:00PM** and the Technical proposals will be opened on the same day at **02:30PM** as per Punjab Procurement Rules, 2014 (amended up to date). The Pre-Bid meeting will be held as per date and time to be announced through EPADS. Any clarification (s) received from prospective applicants relating to the Bidding Document shall be responded to accordingly.

The URL of the website of the PPRA is <http://eproc.punjab.gov.pk/ViewTender.aspx> and response time shall be calculated exclusively from the date of publication of the advertisement on the website of the PPRA.

MANAGER LEGAL
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(Email: peeca.qu@energy.punjab.gov.pk)



**INSTRUCTION TO BIDDERS
&
BIDDING DATA**

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INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid & Source of Funds

1.1 Scope of Bid

The Employer as defined in the Bidding Data as Punjab Energy Efficiency & Conservation Agency (PEECA) (hereinafter called “the Employer”), Energy Department, Government of the Punjab wishes to receive E-Bids for Supply of Equipment for the **“Upgradation of Solar PV Module Testing Laboratory in the Center for Energy Research and Development (CERAD), University of Engineering Technology (UET), Lahore.”**

The Bidders must quote for the complete Scope of Work, pursuant to Clause IB.23. Any Bid covering the partial Scope of Work will be rejected as non-responsive.

1.2 Source of Funds

The afore-mentioned Scope of Work is funded by the Government of the Punjab through its Annual Development Program (2025-26).

A complete set of Bidding Documents can be downloaded from EPADS free of cost for participation. The details are as follows:

Sr. No	Name of ADP Scheme	Estimated Capex (MPKR)	CDR @ 2%
01	Upgradation of Solar PV Module Testing Laboratory in the Center for Energy Research and Development (CERAD), University of Engineering and Technology (UET) Lahore	90 Million	1.8 Million

IB.2 Eligible Bidders

2.1 E-Bidding is open to all Firms/Companies meeting the following requirements:

All bids shall be evaluated on Technical and Financial responsiveness. The Technical evaluation process may include, but is not limited to the consideration of the following with respect to the functional requirements as follows:

- Technical Specifications of the proposed equipment as per the mentioned specific Work Data in Schedule B
- Warranty of the Equipment (At least 01 Year)



- The Financial Evaluation process may include, but is not limited to the consideration of the following:
 - Quoted Price (Inclusive of all Applicable Taxes)
 - Bidders are required to submit Original CDR/Bid Security (2% of Estimated Cost) before the opening date and time of the Technical Proposal otherwise the proposal will be considered as “Non-Responsive.”
- The Bidders are required to include the following documents/information in their Technical Proposals (all documents should be duly signed and stamped):
 - Name and Address of the Company/ Firm.
 - Duly filled Form of Bid & Schedules (A to F) as per instruction.
 - Profile of the Company/ Firm
 - Detailed Equipment Information/Brochure(s). The Equipment must be of European Origin.
 - Detailed Specifications of the Equipment Warranty/Guarantee Information/Technical Manuals/ Operating Manuals/Maintenance Manuals
 - Supply Contracts of imported machinery for accumulative amount of **PKR 50M** or equivalent amount in other currencies or above during last One Year. (Verifiable List of Customers with Details of Contact Person and Telephone/Fax No. must be provided)
 - Annual Turnover of **PKR 50M** or above for last One Year (Duly verified through Bank Account Statement in Company's Name)
 - Authorization letter from Original Equipment Manufacturer (OEM) to participate in this Bidding Process.
 - Letter from OEM confirming sale of at least 50 units of the Quoted Product.
 - Registration Proof of Company/Firm (SECP / Registrar of Firms, etc.)
 - Certificate of National Tax Registration (Active Status)
 - Certificate of Sales Tax Registration (Active Status)
 - An Affidavit on Rs.100/- E-Stamp Paper stating that they are not blacklisted or debarred by the Procuring Agency to participate in bidding and to supply equipment. Failure to submit such an affidavit may lead to disqualification.
 - Any additional information the bidder may like to furnish e.g. repair/maintenance workshop owned by supplier and other concerned facility.

NOTE:

Evaluation of Technical Bids will be carried out on a PASS/FAIL basis in accordance with the afore-mentioned requirements. The Bidder qualifying against the afore-mentioned mandatory criteria will be declared Technically Qualified. The Financial Bids of *only* Technically Qualified



Bidders will be opened.

- During the opening/ downloading of proposals from EPADS, if any error occurs and the file/ proposal is found to be corrupt, the proposal shall be deemed Non-Responsive and the Procuring Agency shall not be held liable.
- The Financial Bids of Technically Not-Qualified Bidders will remain un-opened.

In addition to the above, the proposal must include the following:

- (i) Detailed equipment specifications, proposed quantities mentioned in the request for proposal document duly filled and signed.
- (ii) Schedule which includes the delivery of equipment as per delivery time mentioned in the bidding document.
- (iii) Equipment price (FOR) duly entered on the attached form.

IB.3 Cost of Bidding

- 3.1 The bidder shall bear all costs associated with the preparation and submission of its bid and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

B. BIDDING DOCUMENTS

IB.4 Contents of Bidding Documents

- 4.1 In addition to Invitation for Bids, the Bidding Documents are those stated below, and should be read in conjunction with any Addendum issued in accordance with Sub-Clause IB.6.1.

1. Instructions to Bidders & Bidding Data
2. Form of Bid & Schedules to Bid
Schedules to Bid comprise the following:
 - (i) Schedule A: Schedule of Prices
 - (ii) Schedule B: Specific Works Data
 - (iii) Schedule C: Works to be Performed by Subcontractors
 - (iv) Schedule D: Proposed Programme of Works
 - (v) Schedule E: Method of Performing Works
 - (vi) Schedule F: Integrity Pact
3. Conditions of Contract & Contract Data
4. Standard Forms:
 - (i) Form of Bid Security
 - (ii) Form of Performance Security
 - (iii) Form of Contract Agreement
 - (iv) Form of Bank Guarantee for Advance Payment



5. Specifications
6. Drawings, if any

IB.5 Clarification of Bidding Documents

- 5.1 A prospective bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Engineer/Employer through EPADS indicated in the Bidding Data.
- 5.2 The Employer will respond to any request for clarification which it receives through EPADS as mentioned on EPADS. Employer's response will be uploaded on EPADS before dead line for submission of Bids.

IB.6 Amendment of Bidding Documents

- 6.1 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 through EPADS.
- 6.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub- Clause 6.1 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.
- 6.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may at its discretion extend the deadline for submission of Bids.

C. PREPARATION OF BIDS

IB.7 Language of Bid

- 7.1 The bid prepared by the bidder and all correspondence and documents relating to the Bid, exchanged by the bidder and the Employer shall be written in the English language, provided that any printed literature furnished by the bidder may be written in another language so long as accompanied by an English translation of its pertinent passages in which case, for purposes of interpretation of the Bid, the English translation shall govern.

IB.8 Documents Comprising the Bid

- 8.1 The bid prepared by the bidder shall comprise the following components:
 - (a) Covering Letter
 - (b) Form of Bid duly filled, signed and sealed, in accordance with Sub-Clause IB.14.3.
 - (c) Schedules (A to F) of Bid duly filled and initialed, in accordance with the instructions contained therein & in accordance with Sub-Clause IB14.3.



- (d) Bid Security furnished in accordance with Clause IB.13.
- (e) Power of Attorney in accordance with Sub-Clause IB 14.5.
- (f) Documentary evidence in accordance with Clause IB.11
- (g) Documentary evidence in accordance with Clause IB.12.

IB.9 Sufficiency of Bid

- 9.1 Each bidder shall satisfy himself before Bidding as to the correctness and sufficiency of his Bid and of the rates and prices entered in the Schedule of Prices, which 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 the Works.
- 9.2 The bidder is advised to obtain for himself at his own cost and responsibility all information that may be necessary for preparing the bid and entering into a Contract for execution of the Works.

IB.10 Bid Prices, Currency of Bid and Payment

- 10.1 The bidder shall fill up the Schedule of Prices (Schedule A to F) indicating the unit rates and prices of the Works to be performed under the Contract. Prices in the Schedule of Prices shall be entered keeping in view the instructions contained in the Preamble to Schedule of Prices.
- 10.2 Unless otherwise stipulated in the Conditions of Contract, prices quoted by the bidder shall remain fixed during the bidder's performance of the Contract and not subject to variation on any account.
- 10.3 The unit rates and prices in the Schedule of Prices shall be quoted by the bidder in the currency as stipulated in Bidding Data.

IB.11 Documents Establishing Bidder's Eligibility and Qualifications

- 11.1 Pursuant to Clause IB.8, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.
- 11.2 Bidder/Manufacturer must possess and provide evidence of its capability and experience as stipulated in Bidding Data and the Qualification Criteria stipulated in the Bidding Documents.

IB.12 Documents Establishing Works' Conformity to Bidding Documents

- 12.1 The documentary evidence of the Works' conformity to the Bidding Documents may be in the form of literature, drawings and data and the bidder shall furnish documentation as set



out in Bidding Data.

- 12.2 The bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers, if any, designated by the Employer in the Technical Provisions are intended to be descriptive only and not restrictive.

IB.13 Bid Security

- 13.1 Each bidder shall furnish, as part of his bid, at the option of the bidder, a Bid Security in the amount stipulated in Bidding Data in Pak. Rupees in the form of CDR or a Bank Guarantee issued by a Scheduled Bank in Pakistan valid for a period up to twenty-eight (28) days beyond the bid validity date.
- 13.2 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 13.3 The bid securities of unsuccessful bidders will be returned upon award of the contract to the successful bidder or on the expiry of the validity of the Bid Security whichever is earlier.
- 13.4 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security, pursuant to Clause IB.21 and signed the Contract Agreement, pursuant to Sub-Clauses IB.20.2 & 20.3.
- 13.5 The Bid Security may be forfeited:
- (a) if a bidder withdraws his bid during the period of bid validity; or
 - (b) if a bidder does not accept the correction of his Bid Price, pursuant to Sub-Clause 16.4 (b) hereof; or
 - (c) in the case of a successful bidder, if he fails to:
 - (i) furnish the required Performance Security in accordance with Clause IB.21, or
 - (ii) sign the Contract Agreement, in accordance with Sub-Clauses IB.20.2 & 20.3.

IB.14 Validity of Bids, Format, Signing and Submission of Bid

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data after the date of bid opening.
- 14.2 All Schedules to Bid are to be properly completed and signed.
- 14.3 No alteration is to be made in the Form of Bid except in filling up the blanks as directed. If any alteration be made or if these instructions be not fully complied with, the bid may



be rejected.

- 14.4 Each Bidder shall submit the Original Bid electronically through EPADS, as required under the Bidding Data and in accordance with Clause IB.8. In case any soft copies / scanned copies are uploaded in addition to the Original submission within EPADS, the version marked and submitted as “ORIGINAL” within EPADS shall prevail in the event of any discrepancy.
- 14.5 The Bidder shall ensure that the Original Bid submitted through EPADS is duly signed (digital / scanned signatures acceptable) by the authorized signatory(ies) of the Bidder. Authorization of such signatory(ies) shall be evidenced through submission / upload of a valid Power of Attorney within EPADS. All pages of the Bid shall be signed/initialed and bear the official seal of the authorized signatory(ies) of the Bidder.
- 14.6 The Bid shall be submitted / delivered electronically through EPADS only, strictly in accordance with the instructions provided in the Bidding Data. No physical submission / courier / postal delivery shall be accepted.

D. SUBMISSION OF BID

IB.15 Deadline for Submission, Modification & Withdrawal of Bids

- 15.1 Bids must be submitted electronically through EPADS no later than the date and time specified in the Bidding Data.
- 15.2 Bids submitted through telegraph, telex, fax, e-mail, courier or any physical medium shall not be entertained.
- 15.3 Any bid submitted after the deadline as prescribed in the Bidding Data within EPADS shall not be accepted by the system.
- 15.4 A Bidder may modify or withdraw its bid within EPADS prior to the bid submission deadline, subject to the provisions and functionalities available in EPADS.
- 15.5 Withdrawal of a bid after the submission deadline and before the expiry of the bid validity period may result in forfeiture of Bid Security in accordance with Sub-Clause IB.13.5(a).

E. BID OPENING AND EVALUATION

IB.16 Bid Opening, Clarification and Evaluation

- 16.1 The Employer will open (download) the bids, in the presence of bidders’ representatives who choose to attend, at the time, date and location stipulated in the Bidding Data.
- 16.2 The bidder’s name, Bid Prices, any discount, the presence or absence of Bid Security, and such other details as the Employer at its discretion may consider appropriate, will be announced by the Employer at the bid opening. The Employer will record the minutes of the bid opening. Representatives of the bidders who choose to attend shall sign the attendance sheet.

Any Bid Price or discount which is not read out and recorded at bid opening will not be



taken into account in the evaluation of bid.

16.3 To assist in the examination, evaluation and comparison of Bids the Engineer/Employer may, at its discretion, ask the bidder for a clarification of its Bid. The request for clarification and the response shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

16.4 (a) Prior to the detailed evaluation, pursuant to Sub-Clauses IB.16.7 to 16.9, the Engineer/Employer will determine the substantial responsiveness of each bid to the Bidding Documents. For the purpose of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Documents without material deviations. It will include the requirements listed in Bidding Data.

(b) Arithmetical errors will be rectified on the following basis:

If there is a discrepancy between the unit price and total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between the words and figures the amount in words shall prevail. If there is a discrepancy between the Total Bid price entered in Form of Bid and the total shown in Schedule of Prices-Summary, the amount stated in the Form of Bid will be corrected by the Employer in accordance with the Corrected Schedule of Prices.

If the bidder does not accept the corrected amount of Bid, his Bid will be rejected and his Bid Security forfeited.

16.5 A Bid determined as substantially non-responsive will be rejected and will not subsequently be made responsive by the bidder by correction of the non-conformity.

16.6 Any minor informality or non-conformity or irregularity in a Bid which does not constitute a material deviation may be waived by Employer, provided such waiver does not prejudice or affect the relative ranking of any other bidders.

16.7 The Engineer/Employer will evaluate and compare only the bids previously determined to be substantially responsive pursuant to Sub-Clauses IB.16.4 to 16.6 as per requirements given hereunder. Bids will be evaluated for complete scope of works. The prices will be compared on the basis of the Evaluated Bid Price pursuant to Sub-Clause 16.8 herein below.

(a) Technical Evaluation

It will be examined in detail whether the Works offered by the bidder complies with the Technical Provisions of the Bidding Documents. For this purpose, the bidder's data submitted with the bid in Schedule B to Bid will be compared with technical features/criteria of the Works detailed in the Technical Provisions. Other technical information submitted with the bid regarding the Scope of Work will also be reviewed.



(b) Commercial Evaluation

It will be examined in detail whether the bids comply with the commercial/contractual conditions of the Bidding Documents. It is expected that no material deviation/stipulation shall be taken by the bidders.

16.8 Evaluated Bid Price

In evaluating the bids, the Engineer/Employer will determine for each bid in addition to the Bid Price, the following factors (adjustments) in the manner and to the extent indicated below to determine the Evaluated Bid Price:

- (i) making any correction for arithmetic errors pursuant to Sub-Clause 16.4 hereof.
- (ii) making an appropriate price adjustment for any other acceptable variation or deviation.
- (iii) making an appropriate price adjustment for Deviations in terms of Payments (if any and acceptable to the Employer).
- (iv) discount, if any, offered by the bidders as also read out and recorded at the time of bid opening.

16.9 Evaluation Methods

Pursuant to Sub-Clause 16.8, Para (ii), and (iii) following evaluation methods for price adjustments will be followed:

(i) Price Adjustment for Technical Compliance

The cost of making good any deficiency resulting from technical non-compliance will be added to the Corrected Total Bid Price for comparison purposes only. The adjustments will be applied taking the highest price quoted by other bidders being evaluated in detail in their original Bids for the corresponding item. In case of non-availability of price from other bidders, the price will be estimated by the Engineer/Employer.

(ii) Price Adjustment for Commercial Compliance

The cost of making good any deficiency resulting from any quantifiable variations and deviations from the Bid Schedules and Conditions of Contract, as determined by the Engineer/Employer will be added to the Corrected Total Bid Price for comparison purpose only. Adjustment for commercial compliance will be added to the Corrected Total Bid Prices.

(iii) Price Adjustment for Deviation in Terms of Payments

Refer to Bidding Data



IB.17 Process to be Confidential

- 17.1 Subject to Sub-Clause IB.16.3 heretofore, no bidder shall contact Engineer/Employer on any matter relating to its Bid from the time of the Bid opening to the time the bid evaluation result is announced by the Employer. The evaluation result shall be announced at least ten (10) days prior to award of Contract. The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated.
- 17.2 Any effort by a bidder to influence Engineer/Employer in the Bid evaluation, Bid comparison or Contract Award decisions may result in the rejection of his Bid. Whereas, any bidder feeling aggrieved may lodge a written complaint not later than fifteen (15) days after the announcement of the bid evaluation result, however, mere fact of lodging a complaint shall not warrant suspension of procurement process.

F. AWARD OF CONTRACT

IB.18. Post Qualification

- 18.1 The Employer, at any stage of the bid evaluation, having credible reasons for or *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, 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.

- 18.2 The determination will take into account the bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the bidders' qualifications submitted under Clause IB.11, as well as such other information required in the Bidding Documents.

IB.19 Award Criteria & Employer's Right

- 19.1 Subject to Sub-Clause IB.19.2, 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 qualified to satisfactorily perform the Contract in accordance with the provisions of Clause IB.18.
- 19.2 Notwithstanding Sub-Clause IB.19.1, 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 to inform the affected bidders of the grounds for the Employer's action except that the grounds for its rejection of all bids shall upon request be communicated, to any bidder who submitted a bid, without justification of the grounds. Notice of the rejection of all the bids shall be given promptly to all the bidders.



IB.20 Notification of Award & Signing of Contract Agreement

- 20.1 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.
- 20.2 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 Form of Contract Agreement provided in the Bidding Documents, incorporating all agreements between the parties.
- 20.3 The formal Agreement between the Employer and the successful bidder shall be executed within seven (7) days of the receipt of Form of Contract Agreement by the successful bidder from the Employer.

IB.21 Performance Security

- 21.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Conditions of Contract within a period of fourteen (14) days after the receipt of Letter of Acceptance.
- 21.2 Failure of the successful bidder to comply with the requirements of Sub-Clauses IB.20.2 & 20.3 or 21.1 or Clause IB.22 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.22 Integrity Pact

The Bidder shall sign and stamp the Form of Integrity Pact provided at Schedule-F to Bid in the Bidding Document for all Federal Government procurement contracts exceeding Rupees ten (10) million. Failure to provide such Integrity Pact shall make the bid non-responsive.

IB.23 Scope of Bid

Enhancing Testing Capability to provide qualification testing for quality control of the imported as well as locally manufactured products. The uncontrolled quality imports as well as absence of quality assurance facilities in Pakistan are causing penetration of low quality/sub-standard products in consumer market. Therefore, this is a dire need, while promoting local manufacturing of these products along with assurance of high-quality imports, to provide wide range of testing services incorporating new technologies of solar PV such as N-type, Bi-facial, HJT as well as size of the modules.

23.1 Supply of Equipment & Instruments

- Procurement and delivery of advanced solar PV testing equipment (i.e. LED Sun Simulator, Fix Mounted IR Sensors, High resolution EL) for the up-gradation of existing facility
- Ensuring all equipment meets relevant **IEC/ISO/ASTM standards** for PV module testing.



23.2 Documentation & Technical Support

- Submission of detailed technical manuals, operational guidelines, and warranty documents.
- Provision of laboratory layout designs showing equipment placement, safety zones, and workflow.
- After-sales technical support (on-site/remote) for a defined period (e.g., 1–3 years).
- **23.3 Warranty & Maintenance**
- Minimum 12 months' warranty for all supplied equipment.
- Corrective maintenance support during the warranty period.



BIDDING DATA

Instructions to Bidders

Clause Reference

1.1 Name of Employer

Punjab Energy Efficiency and Conservation Agency (PEECA) Energy Department,
Government of the Punjab (GoPb)

Brief Description of Works

Supply of Equipment for “Upgradation of Solar PV Module Testing Laboratory in the Center for Energy Research and Development (CERAD), University of Engineering and Technology (UET) Lahore”. The Employer reserves the right to inspect the Equipment at the Site of delivery at the Contractor’s cost.

10.3 Bid shall be quoted entirely in Pak. Rupees. The payment shall be made in Pak. Rupees.

- 12.1 (a) A detailed description of the Works, essential technical and performance characteristics.
- (b) Complete set of technical information, description data, literature and drawings as required in accordance with Schedule B to Bid, Specific Works Data. This will include but not be limited to a sufficient number of drawings, photographs, catalogues, illustrations and such other information as is necessary to illustrate clearly the significant characteristics such as general construction dimensions and other relevant information about the works to be performed.

13.1 Amount of Bid Security

2 % of the estimated cost.

14.1 Period of Bid Validity

One hundred and twenty (120) days from the date of submission of Bids.

14.4 Number of Copies of the Bid to be Submitted

Not Applicable.

14.7 (a) Employer's Address for the Purpose of Bid Submission



Manager Legal

Punjab Energy Efficiency and Conservation Agency (PEECA)

Energy Department, Government of Punjab

48-A, Ghalib Road, Block C-II, Gulberg III, Lahore

Tel: 042-99268362

15.1 Deadline for Submission of Bids

02:00 PM on 4th December, 2025

16.1 Venue, Time, and Date of Bid Opening

Venue: Committee Room of PEECA

Time: 02:30 PM

Date: **4th December, 2025**

16.4 Responsiveness of Bids

- (i) the Bid is valid till required period.
- (ii) the Bid prices are firm during currency of contract (fixed price bid)
- (iii) completion period offered is within specified limits.
- (iv) the Bidder/Manufacturer is eligible to Bid and possesses the requisite experience, capability and qualification.
- (v) the Bid does not deviate from basic technical requirements (only 10 % of deviation from technical specifications of equipment is allowed based on the manufacturing company and its origin and that too if it does not compromise the outcome of the required output) and
- (vi) the Bids are generally in order, etc.



FORM OF BID AND SCHEDULES TO BID



FORM OF BID

(LETTER OF OFFER)

Bid Reference No. _____

(Name of Works)

To:

Gentlemen,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Contract Data, Specifications, Drawings, if any, Schedule of Prices and Addenda Nos.
_____ for the execution of the above-named Works, we, the undersigned, being a company doing business under the name of and address _____
_____ and being duly incorporated under the laws of Pakistan hereby offer to execute and complete such Works and remedy any defects therein in conformity with the said Documents including Addenda thereto for the Total Bid Price of Rs _____ (Rupees _____) or such other sum as may be ascertained in accordance with the said Documents.
2. We understand that all the Schedules attached hereto form part of this Bid.
3. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of _____
_____ drawn in your favour or made payable to you and valid for a period of twenty-eight (28) days beyond the period of validity of Bid.
4. We undertake, if our Bid is accepted, to commence the Works and to deliver and complete the Works comprised in the Contract within the time(s) stated in Contract Data.
5. We agree to abide by this Bid for the period of _____ days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.



7. We undertake, if our Bid is accepted, to execute the Performance Security referred to in Conditions of Contract for the due performance of the Contract.
8. We understand that you are not bound to accept the lowest or any bid you may receive.
9. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other person or persons making a bid for the Works.

Dated this _____ day of _____, 20

Signature _____

in the capacity of _____ duly authorized to sign bid for and on behalf of

(Name of Bidder in Block Capitals)

(Seal)

Address

Witness:

(Signature) _____

Name: _____

Address: _____



[SCHEDULES TO BID] INCLUDE THE FOLLOWING:

- Schedule A to Bid: Schedule of Prices
- Schedule B to Bid: Specific Works Data
- Schedule C to Bid: Works to be Performed by Subcontractors
- Schedule D to Bid: Proposed Programme of Works
- Schedule E to Bid: Method of Performing Works
- Schedule F to Bid: Integrity Pact

**SCHEDULE - A TO BID****SCHEDULE OF PRICES – SUMMARY OF BID PRICES**

Bill of Quantities (BOQ)		
Name of Bidder:		
Description	Qty	Total Price
1. 1.Solar Simulator and Electroluminescence Test System for Laboratory use and for integration into 20 ft container (max. module size (1400 mm x 2700 mm) having power range from 700W to 750W (max. module size (1400 mm x 2700 mm).	1	
2. Fixed Mounted IR Sensors	2	
Total Prices Inclusive of all applicable Taxes		
Total Prices Inclusive of all applicable taxes in Words		



COMPLIANCE SHEET			
Description	Qty	Specifications Offered	Compliance Yes/No
1. Solar Simulator and Electroluminescence Test System for Laboratory use and for integration into 20 ft container (max. module size (1400 mm x 2700 mm) having power range from 700W to 750W (max. module size (1400 mm x 2700 mm).	1		
2. Fixed Mounted IR Sensors	2		



**SCHEDULE - B TO
BID**

***SPECIFIC WORKS DATA**

**DETAILED TECHNICAL SPECIFICATIONS**

Feature	Description
Equipment	LED Sun simulator+ High Resolution EL+PV IV Curve
Package	All in one vertical station ; intergratable to container/trailer
Module Size Min	800 x 890 mm
Module Size Max	1400 x 2700 mm
Light Source	LED with UV and IR extended spectrum
No. of LED Lights	13
Lighting area	1360 x 2660 mm
Class	A+A+A+
Module Types	Framed, frameless glass-glass, glass-foil modules, mono-poly crystalline, PERC, Thin films
Current Measurement	0-2.5A, 0-5A, 0-10A, 0-20A
Current Measurement accuracy	+/- 0.2% (FSR)
Flash Pulse duration	200ms long pulse, 180ms at full irradiance usable for IV curve
Sampling	16Bit / 50kHz fully synchronously / configurable IV data recording time
Irradiance	200-1000 W/m ² @ 200ms flash duration
Spectrum	Class A+ IEC60904-9 Ed.3
Spectral Coverage (SPC)	~94.5%
Spectral deviation (SPD)	~35.5%
Repeatability	<0.1%
Accuracy of Pmax	±1% based on reference module usage
PC	The system is equipped with a PC, Microsoft Windows 10® 64 Bit, SSD, drive and additional network for database connection
User interface	Windows compliant graphical user interface. Easy to operate. Displays results, stores result in a database, and controls the system. User interface facilitates grading the module under test. Two user levels available.
System Control	Control of the cameras and the digital I/O signals via dedicated Gigabit ethernet work
No of Cameras	20 Camera used to detect cracks and defects in PV modules.
Resolution	≥30 Megapixel
Image acquisition time	~ 5 s (for a full panel image)
Operation Mode	Full automatic image acquisition, manual judgment through operator
Electrical tests	Connection; Diode Test



Feature	Description
Connection test	Electrical connection test to assure proper connection to and the interconnection in the module. Configurable current and voltage. Configurable thresholds
Diode Test	Diode testing is done by applying different illumination patterns on the panel, showing in the IV-curve proper operation of the diodes (steps in the curve). Two flashes for testing all diodes of the panels. Manual evaluation by the operator if passed or not ok.
Fixed Mounted IR Sensors	2 IR Sensors instead of the Hand-Held Device including Mounting Bracket and Cable Set



SCHEDULE – C TO BID

WORKS TO BE PERFORMED BY SUBCONTRACTORS

The bidder will do the work with his own forces except the work listed below which he intends to sub-contract.

Items of Works to be Sub-Contracted	Name and address of Sub-Contractors	Statement of similar works previously executed (attach evidence)
--	--	---

(NOT APPLICABLE)

Note:

1. No change of Sub-Contractors shall be made by the bidder without prior approval of the Employer.
2. The truthfulness and accuracy of the statement as to the experience of Sub-Contractors is guaranteed by the bidder. The Employer's judgment shall be final as to the evaluation of the experience of Sub-Contractors submitted by the bidder.
3. Statement of similar works shall include description, location & value of works, year completed and name & address of the clients.



SCHEDULE – D TO BID

PROPOSED PROGRAMME OF WORKS

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



SCHEDULE – E TO BID

METHOD OF PERFORMING WORKS

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:

- The sequence and methods in which he proposes to carry out the Works, including the number of shifts per day and hours per shift, he expects to work.
- A list of all major items of constructional and erectional plant, tools and vehicles proposed to be used in delivering/carrying out the Works at Site
- The procedure for installation of equipment and transportation of equipment and materials to the site.
- Organization chart indicating head office & field office personnel involved in management, supervision and engineering of the Works to be done under the Contract.



SCHEDULE – F TO BID

(INTEGRITY PACT)

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.
PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN
CONTRACTS WORTH RS. 10.00 MILLION OR MORE**

Contract No. _____ Dated _____

Contract Value: _____

Contract Title: _____

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

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

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

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

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

Name of Buyer:

Signature:

[Seal]

Name of Seller/Supplier:

Signature:

[Seal]



CONDITIONS OF CONTRACT



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CONDITIONS OF CONTRACT

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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 Data.
- 1.1.2 “Specifications” means the document as listed in the Contract Data, 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 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 Plant 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 Plant) to be supplied and incorporated in the Works by the Contractor.
- 1.1.16 “Plant” 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 whether Supply, Installation, Construction etc. and design (if any) 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 organisations. 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 Contract Data.

1.4 Law



The law of the Contract is the relevant Law of 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 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, licences or approvals which are required for the Works.

2.3 Engineer's/Employer's Instructions

The Contractor shall comply with all instructions given by the Employer or the Engineer, if notified 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. ENGINEER'S/EMPLOYER'S REPRESENTATIVES

3.1 Authorised Person

The Employer shall appoint a duly authorized person to act for him and on his behalf for the purposes of this Contract. Such 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.

3.2 Engineer's/Employer's Representative



The name and address of Engineer's/Employer's Representative is given in Contract Data.

4. THE CONTRACTOR

4.1 General Obligations

The Contractor shall carry out the Works properly and in accordance with 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 work 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 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 shall not subcontract any part of the Works without the consent of the Employer.

4.4 Performance Security

The Contractor shall furnish to the Employer within fourteen (14) days after receipt of Letter of Acceptance a Performance Security at the option of the bidder, in the form of Bank Draft or Bank Guarantee or an insurance company having atleast AA rating from PACRA/JCR for the amount and validity specified in Contract Data.

5. DESIGN BY CONTRACTOR (NOT APPLICABLE)

5.1 Contractor's Design

The Contractor shall carry out design to the extent specified, as referred to in the Contract Data. The Contractor shall promptly submit to the Engineer/Employer all designs prepared by him. Within fourteen (14) days of receipt the Engineer/Employer shall notify any comments or, if the design submitted is not in accordance with the Contract, shall reject it stating the reasons. The Contractor shall not construct any element of the Works designed by him within fourteen (14) days after the design has been submitted to the Engineer/Employer or which has been rejected. Design that has been rejected shall be promptly amended and



resubmitted. The Contractor shall resubmit all designs commented on taking these comments into account as necessary.

5.2 Responsibility for Design

The Contractor shall remain responsible for his bided design and the design under this Clause, 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 Specifications and Drawings.

6. EMPLOYER'S RISKS

6.1 The Employer's Risks

The Employer's Risks are:-

- a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies, within the Country;
- b) rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war, within the Country;
- c) 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;
- d) ionising radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly, except to the extent to which the Contractor/Sub-Contractors may be responsible for the use of any radio-active material;
- e) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;
- f) use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;
- g) late handing over of sites, anomalies in drawings, late delivery of designs and drawings of any part of the Works by the Employer's personnel or by others for whom the Employer is responsible;
- h) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- i) 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.

7.2 Programme

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 Employer/Engineer for a reasonable extension in the time for the completion of Works. Subject to the aforesaid, the Employer/Engineer 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 Employer/Engineer within such period as may be prescribed by the Employer/Engineer 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

Within fourteen (14) days of the receipt of the said notice of completion from the Contractor the Employer/Engineer shall either takeover the completed Works and



issue a Certificate of Completion to that effect or shall notify the Contractor his reasons for not taking-over the Works. While issuing the Certificate of Completion as aforesaid, the Employer/Engineer may identify any outstanding items of work which the Contractor shall undertake during the Maintenance Period.

9. REMEDYING DEFECTS

9.1 Remedying Defects

The Contractor shall for a period stated in the Contract Data from the date of issue of the Certificate of Completion carry out, at no cost to the Employer, repair and rectification work which is necessitated by the earlier execution of poor quality of work or use of below specifications material in the execution of Works and which is so identified by the Employer/Engineer in writing within the said period. Upon expiry of the said period, and subject to the Contractor's faithfully performing his aforesaid obligations, the Employer/Engineer shall issue a Maintenance Certificate whereupon all obligations of the Contractor under this Contract shall come to an end.

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. However, the cost of remedying defects not attributable to the Contractor shall be valued as a Variation.

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, Plant 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.

10. VARIATIONS AND CLAIMS

10.1 Right to Vary

The Employer/Engineer may issue Variation Order(s) in writing. Where for any reason it has not been possible for the Employer/Engineer to issue such Variations Order(s), the Contractor may confirm any verbal orders given by the Employer/Engineer in writing and if the same are not refuted/denied by the Employer/Engineer within seven (7) days of the receipt of such confirmation the same shall be deemed to be a Variation Orders for the purposes of this Sub-Clause.

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
- d) 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 minimise 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 itemised 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. In the absence of agreement, the Employer shall determine the value.

11. CONTRACT PRICE AND PAYMENT

11.1 (a) Terms of Payments

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall, subject to Clause 47, be paid by the Employer to



the Contractor within 30 days after such Interim Payment Certificate has been jointly verified by Employer and Contractor, or, in the case of the Final Certificate referred to in Sub Clause 60.8, within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor; Provided that the Interim Payment shall be caused in 42 days and Final Payment in 60 days in case of foreign funded project. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor compensation at the 28 days rate of KIBOR+2% per annum in local currency and LIBOR+1% for foreign currency, upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69.

(b) Valuation of the Works

The Works shall be valued as provided for in the Contract Data, subject to Clause 10.

11.2 Monthly Statements

The Contractor shall be entitled to be paid at monthly intervals:

- a) the value of the Works executed; and
- b) The percentage of the value of Materials and Plant reasonably delivered to the Site, as stated in the Contract Data, subject to any additions or deductions which may be due.

The Contractor shall submit each month to the Engineer/Employer a statement showing the amounts to which he considers himself entitled.

11.3 Interim Payments

Within a period not exceeding seven (7) days from the date of submission of a statement for interim payment by the Contractor, the Engineer shall verify the same and within a period not exceeding thirty (30) days from the said date of submission by the Contractor, the Employer shall pay to the Contractor the sum verified by the Engineer less retention money at the rate stated in the Contract Data.

11.4 Retention

Retention money shall be paid by the Employer to the Contractor within fourteen (14) days after either the expiry of the period stated in the Contract Data, or the remedying of notified defects, or the completion of outstanding work, all as referred to in Sub-Clause 9.1, whichever is the later.

11.5 Final Payment



Within twenty-one (21) days from the date of issuance of the Maintenance Certificate the Contractor shall submit a final account to the Engineer to verify and the Engineer shall verify the same within fourteen (14) days from the date of submission and forward the same to the Employer together with any documentation reasonably required to enable the Employer to ascertain the final contract value.

Within sixty (60) days from the date of receipt of the verified final account from the Engineer, the Employer shall pay to the Contractor any amount due to the Contractor. While making such payment the Employer may, for reasons to be given to the Contractor in writing, withhold any part or parts of the verified amount.

11.6 Currency

Payment shall be in the currency stated 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 demobilise from the Site leaving behind any 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.

If the default is not remedied within twenty-eight (28) days after the Employer's receipt of the Contractor's notice, the Contractor may by a second notice given within a further twenty-one (21) days, terminate the Contract. The Contractor shall then demobilise from the Site.

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 demobilise



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 Plant 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 demobilisation 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

Subject to Sub-Clause 9.1, the Contractor shall take full responsibility for the care of the Works from the Commencement Date until the date of the Employer's/Engineer'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 demobilise 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 Plant 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 (NOT APPLICABLE)

14.1 Arrangements

The Contractor shall, prior to commencing the Works, effect insurances of the types, in the amounts and naming as insured the persons stipulated in the Contract Data except for items (a) to (e) and (i) of the Employer's Risks under Sub-Clause 6.1. 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 Contractor Data from any other amounts due to the Contractor.

15. RESOLUTION OF DISPUTES

15.1 Engineer'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, 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 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 Work with all due diligence, and the Contractor and the Employer shall give effect forthwith to every such decision



of the Engineer 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 or if no decision is given within the time set out in Sub-Clause 15.1 hereabove, 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 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 Schedule-F 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 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

Sub-Clauses of Conditions of Contract

1.1.3 Employer's Drawings, if any
(To be listed by the Employer)

1.1.4 **The Employer** means

Punjab Energy Efficiency and Conservation Agency (PEECA), Energy Department,
Government of the Punjab

1.1.5 **The Contractor** means

1.1.7 **Commencement Date** means the date of issue of Employer's Notice to Commence which shall be issued on the same day as the signing of the Contract Agreement.

1.1.9 **Time for Completion** is 180 days (06 months) during which the equipment regarding upgradation of the lab will be supplied.

1.3 **Documents forming the Contract listed in the order of priority:**

- (a) The Contract Agreement
- (b) Letter of Acceptance
- (c) The completed Form of Bid
- (d) Contract Data
- (e) Conditions of Contract
- (f) The completed Schedules to Bid including the Schedule of Prices
- (g) The Drawings, if any
- (h) The Specifications

(The Employer may add, in order of priority, such other documents as form part of the Contract or delete the document, if not applicable)

2.1 **Provision of Site:** CERAD, University of Engineering & Technology, Kala Shah Kaku.
Campus

3.1 **Authorized Person:** As provided by Employer at the time of execution of Contract.

**4.4 Performance Security:**

Amount: 10 % of the Contract Price

Validity: Three months beyond the Completion Date of the Contract.

7.2 Programme:

Time for submission: Within Fourteen (14) days of the Commencement Date.

7.4 Amount payable due to failure to complete supply within prescribed time shall be 0.5 % per day up to a maximum of (5%) * of sum stated in the Letter of Acceptance

9.1 Period for remedying defects

To be prescribed by the Employer at the time of execution of Contract.

10.2 (e) Variation Procedure: (Not Applicable)**11.1 *(a) Terms of Payments**

The Payment of Contract Price shall be made as per the following Milestones/Deliverables:

Sr. #	Payment Milestones/ Deliverables	Percentage	PKR (Inclusive of all applicable Taxes)
1	On submission of Letter of Credit (LC) opening documents by a commercial bank to import Equipment for “Upgradation of Solar PV Module Testing Laboratory in the Center for Energy Research and Development (CERAD), University of Engineering and Technology (UET), Lahore” The LC must mention PEECA and reference of the Contract.	25%	
2	On submission of import documents, including Third Party Pre-Shipment Inspection Certificate from an internationally accredited/ISO Certified Inspection Agency certifying that goods are as per Technical Specifications of the Work Order.”	25%	
3	On Supply of Equipment for “Upgradation of Solar PV Module Testing Laboratory in the Center for Energy Research and Development (CERAD), University of Engineering and Technology (UET), Lahore” and submission of Final Delivery Report	50%	
	Total	100%	

11.1 *(b) Valuation of the Works*: (Not Applicable)



- 11.2 (b) **Percentage of value of Materials and Plant: (Not Applicable)**
- 11.3 **Percentage of Retention: (Not Applicable)**
- 11.6 **Currency of Payment:** Pak. Rupees
- 14.1 **Insurances: (Not Applicable)**
- Type of Cover:** The Works
- Amount of Cover**
- The sum stated in the Letter of Acceptance plus fifteen percent (15%)
- Type of Cover:** Contractor's Equipment
- Amount of Cover**
- Full replacement cost
- 14.2 **Amount to be Recovered (Not Applicable)**
- 15.3 **Arbitration (Not Applicable)**
- The Parties agree to resolve any disputes amicably without resorting to litigation or arbitration.



STANDARD FORMS

(Note: Standard Forms provided in this document for securities are to be issued by a bank. In case the bidder chooses to issue a bond for accompanying his bid or performance of contract or receipt of advance, the relevant format shall be tailored accordingly without changing the spirit of the Forms of securities).



FORM OF BID SECURITY
(Bank Guarantee)

Guarantee No. _____
Executed on _____

(Letter by the Guarantor to the Employer)

Name of Guarantor (Scheduled Bank in Pakistan) with
address: _____

Name of Principal (Bidder) with
address: _____

Penal Sum of Security (express in words and
figures): _____

Bid Reference No. _____ Date of Bid _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal, we the Guarantor above-named are held and firmly bound unto the _____, (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 Principal has submitted the accompanying Bid numbered and dated as above for _____ (Particulars of Bid) to the said Employer; and

WHEREAS, the Employer has required as a condition for considering the said Bid that the Principal furnishes a Bid Security in the above said sum to the Employer, conditioned as under:

- (1) that the Bid Security shall remain valid for a period of twenty- eight (28) days beyond the period of validity of the bid;
- (2) that in the event of;
 - (a) the Principal withdraws his Bid during the period of validity of Bid, or
 - (b) the Principal does not accept the correction of his Bid Price, pursuant to Sub-Clause 16.4 (b) of Instructions to Bidders, or
 - (c) failure of the successful bidder to
 - (i) furnish the required Performance Security, in accordance with Sub-Clause IB-21.1 of Instructions to Bidders, or
 - (ii) sign the proposed Contract Agreement, in accordance with Sub-Clauses IB-20.2 & 20.3 of Instructions to Bidders,

the entire sum be paid immediately to the said Employer for delayed completion and



not as penalty for the successful bidder's failure to perform.

NOW THEREFORE, if the successful bidder shall, within the period specified therefore, on the prescribed form presented to him for signature enter into a formal Contract Agreement with the said Employer in accordance with his Bid as accepted and furnish within fourteen (14) days of receipt 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 or in the event of non-withdrawal of the said Bid within the time specified then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.

PROVIDED THAT the Guarantor shall forthwith pay to the Employer the said sum stated above 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 Guarantor at its address given above.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal 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 Guarantor shall pay without objection the sum 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 bounded Guarantor has executed the instrument under its seal on the date indicated above, the name and seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

Guarantor (Bank)

Witness:

1. Signature _____

1. _____

2. Name _____

Corporate Secretary (Seal)

3. Title _____

2. _____

(Name, Title & Address)

Corporate Guarantor (Seal)



**FORM OF PERFORMANCE SECURITY
(Bank Guarantee)**

Guarantee No. _____
Executed on _____

(Letter by the Guarantor to the Employer)

Name of Guarantor (Scheduled Bank in Pakistan) with
address: _____

Name of Principal (Contractor) with
address: _____

Penal Sum of Security (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 bound unto the _____ (hereinafter called the Employer) in the penal 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 and of any and all modifications of the 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 9, Remedying Defects, 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, for 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 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 bounded Guarantor has executed this Instrument 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)

1. Signature _____

2. Name _____

3. Title _____

Corporate Guarantor (Seal)



FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the “Agreement”) is executed on the day of _____ 200 ____ between _____ (hereinafter called the “Employer”) of the one part and _____ (hereinafter 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 witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract 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 Agreement, viz:
 - (a) The Letter of Acceptance;
 - (b) The completed Form of Bid along with Schedules to Bid;
 - (c) Conditions of Contract & Contract Data;
 - (d) The priced Schedule of Prices;
 - (e) The Specifications; and
 - (f) The Drawings
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 within the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.



IN WITNESS WHEREOF the parties hereto have caused this 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 the Employer

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

(Name, Title and Address)
(Seal)

Witness:

(Name, Title and Address)
(Seal)



SPECIFICATIONS

[Note for Preparing the Specifications]

A set of precise and clear specifications is a prerequisite for bidders to respond realistically and competitively to the requirements of the user without qualifying their Bids. The specifications must be drafted to permit the widest possible competition and, at the same time, present a clear statement of the required standards of workmanship, materials, performance of the works. Only if this is done objectives of economy, efficiency, and fairness in procurement will be realized and responsiveness of Bids can be ensured, and the subsequent task of bid evaluation can be facilitated. The specifications should require that materials to be incorporated in the works be new, unused, and of the most recent or current models, and incorporated all recent improvements in design and materials unless provided for otherwise in the contract.

Samples of specifications from similar ~~to~~ previous procurements are useful in this respect. The use of metric units is encouraged. Depending on the complexity of the works and the repetitiveness of the type of procurement, it may be advantageous to standardize the Technical Specifications that should cover all classes of workmanship, materials and equipment although not necessarily to be used in a particular procurement.

Care must be taken in drafting specifications to ensure that they are not restrictive. In the specification of standards for equipment, materials, and workmanship, recognized international standards should be used as much as possible. The specifications shall consider all conditions but not limited to seismic conditions, weather conditions and environmental impact. The specifications should state that equipment, materials, and workmanship that meet other authoritative standards, and which ensure at least a substantially equal quality than the standards mentioned, will also be acceptable. The following clause may be inserted in the Specifications.

Sample Clause: Equivalency of Standards and Codes

Wherever reference is made in the Specifications to specific standards and codes to be met by Works to be furnished and tested, the provisions of the latest current edition or revision of the relevant shall apply, unless otherwise expressly stated in the Contract. Other authoritative standards that ensure equivalence to the standards and codes specified will be acceptable.

