



# **Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur**

**KHYBER PAKHTUNKHWA**

## **REQUEST FOR PROPOSAL (RFP)** **for** **“Supply, Installation and Commissioning of Solar Power Solution for Campus Network Equipment”**

**Submission of Bids: Monday the May 24, 2021 @ 12:00 noon**

**Opening of Bids: Monday the May 24, 2021 @ 12:30 pm**

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## Section 1. Letter of Invitation

The Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology (PAF- IAST), Hairpur invites sealed bids from interested firms for the “Supply, Installation and Commissioning of Solar Power Solution for Campus Network Equipment”.

Sr. No.	Item Specification	Qty.
1	Invertor with MPPT Built-in Solar Charger (03KW or more)	03
2	Invertor with MPPT Built-in Solar Charger (05KW or more)	01
3	Invertor with MPPT Built-in Solar Charger (10KW or more)	02
4	Invertor with MPPT Built-in Solar Charger (15KW or more)	02

The bidder must be registered and duly recognized in Pakistan, and be registered with FBR; possess Manufacturer’s status or Distributor/ Dealer status with authorization from Manufacturer/ Principal specific for this tender, with sufficient financial, technical and human resources to take up the task assigned and complete the same within prescribed time limit on the finalization of contract with PAF- IAST.

Tender document containing instructions to bidders covering definitions, introduction/background of the Project, scope of work, general terms and conditions, and special terms, procedure for submission of bids, opening of bid, evaluation criteria, and other related information, can be obtained against a written request on company’s letterhead, from Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology, Haripur – Pakistan. Cost of the document is Rs. 500/- Non-refundable (Stationery charges). Tender document can also be downloaded from <http://www.paf-iast.edu.pk/> free of cost, however, interested bidders will be required to have registered copy purchased from PAF-IAST, in order to participate in tender process.

Bidder(s) interested in participating in the tender process are advised to submit their Bid Proposal(s), along with the Earnest Money amounting 2% of their Bid Value in the shape of CDR, in accordance with the instructions in this tender document. Bid Proposal(s) must reach PAF-IAST, Haripur on Monday the May 24, 2021 by 1200 hrs. Any late Bid(s) shall not be accepted and returned unopened. Accepted Bids will be opened on the same day at 1230 hrs, in presence of bidders who chose to attend. In case of sudden holiday on bid opening day, bids will be opened on next working day. The Tender shall be executed in accordance with KPPRA Rule 6 (2)(a) “Single Stage, One Envelope Procedure”.

This advertisement is also available on PAF: IAST and KPPRA websites <http://www.paf-iast.edu.pk/> & <http://www.kppra.org.pk>.

### Project Director

**Pak-Austria Fachhochschule: Institute of Applied Sciences & Technology (PAF-IAST)**

**Haripur – Khyber Pakhtunkhwa**

**Phone:0995-645112-13 E-Mail: [info@paf-iast.edu.pk](mailto:info@paf-iast.edu.pk)**

## Section 2. Instruction to Bidders (ITB)

<b>A. GENERAL TERMS</b>	
1. Introduction	<p>1.1 Bidders shall adhere to all the requirements of this ITB, including any amendments made in writing by PAF-IAST. This ITB will be governed under Clause 6 (2)(a) "Single Stage, One Envelope Procedure" of Khyber Pakhtunkhwa Public Procurement Rules, 2014, as amended from time to time and instructions of the Government of Khyber Pakhtunkhwa received during the completion of the project.</p> <p>1.2 Any Bid submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Bid by PAF-IAST. The Institute is under no obligation to award a contract to any Bidder as a result of this ITB.</p> <p>1.3 PAF-IAST reserves the right to cancel the procurement process at any stage without any liability of any kind for PAF-IAST, upon notice to the bidders or publication of cancellation notice on PAF- IAST website.</p>
2. Fraud & Corruption, Gifts and Hospitality	<p>2.1 PAF-IAST strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of PAF-IAST vendors and requires all bidders/ vendors observe the highest standard of ethics during the procurement process and contract implementation.</p> <p>2.2 Bidders/ vendors shall not offer gifts or hospitality of any kind to PAF-IAST staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches or dinners.</p> <p>2.3 In pursuance of this policy, PAF-IAST:</p> <p>(a) Shall reject a bid if it determines that the bidder is or has been engaged in any corrupt or fraudulent practices in competing for the tender in question;</p> <p>(b) Shall declare a bidder ineligible, either indefinitely or for a stated period, to be awarded a contract if at any time it determines that the bidder is or has been engaged in any corrupt or fraudulent practices in competing for, or in executing any contract; or counseling or canvassing staff or elected representatives; or engaging in collusion with other bidders.</p>
3. Eligibility	<p>3.1 A Bidder should not be suspended, debarred, or otherwise identified as ineligible by any Government/ Semi-government/ or any other international Organization. Bidders are therefore required to disclose to PAF-IAST whether they are subject to any sanction or temporary suspension imposed by these organizations.</p> <p>3.2 It is the Bidder's responsibility to ensure that its employees, sub-contractors, service providers, suppliers and/ or their employees meet the eligibility requirements as established by PAF-IAST.</p>
4. General Terms	<p>4.1 The Bidder should be registered with Sales Tax and Income Tax Department as well as with the Khyber Pakhtunkhwa Revenue Authority.</p> <p>4.2 The Bidder should have not been blacklisted by any Government/ semi Government organization.</p> <p>4.3 There should be no litigation against the bidder/ firm.</p>
<b>B. PREPARATION OF BIDS</b>	

<p>5. General Considerations</p>	<p>5.1 In preparing the Bid, the Bidder is expected to examine the ITB in detail. Material deficiencies in providing the information requested in the ITB may result in rejection of the Bid.</p> <p>5.2 The Bidder will not be permitted to take advantage of any errors or omissions in the ITB. Should such errors or omissions be discovered, the Bidder must notify the Project Director, PAF-IAST accordingly.</p>
<p>6. Cost of Preparation of Bid</p>	<p>6.1 The Bidder shall bear all costs related to the preparation and/ or submission of the Bid, regardless of whether its Bid is selected or not. PAF-IAST shall not be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.</p>
<p>7. Language</p>	<p>7.1 The Bid, as well as any, and all related correspondence exchanged by the Bidder and PAF- IAST, shall be written in the language(s) specified in the BDS.</p>
<p>8. Documents Comprising the Bid</p>	<p>8.1 The Bid shall comprise of the following documents and related forms of which details are provided in the BDS. All pages of the Bid shall be signed, stamped and properly paginated.</p> <ul style="list-style-type: none"> <li>a) Returnable Forms as referred in Section 6 shall be properly filled in Ink or Typed. Forms filled in using a pencil shall not be considered and substantiate the annulment of the Bid Proposal.</li> <li>b) Documents Establishing the Eligibility and Qualifications of the Bidder;</li> <li>c) Bid covering Technical Specifications in detail, and covering Price Schedule;</li> <li>d) Bid Security, if required by BDS;</li> <li>e) Any attachments and/ or appendices to the Bid.</li> </ul>
<p>9. Documents Establishing the Eligibility and Qualifications</p>	<p>9.1 The Bidder shall furnish documentary evidence of its status as an eligible and qualified supplier, using the Forms provided under Section 6 and providing documents required in those forms. In order to award a contract to a Bidder, its qualifications must be documented to PAF-IAST's satisfaction.</p>
<p>10. Technical Bid Format and Content</p>	<p>10.1 The Bidder is required to submit a Bid using the Standard Forms and templates provided in Section 6 of the ITB.</p> <p>10.2 Samples of items, when required as per Section 5, shall be provided within the time specified and unless otherwise specified by the Purchaser, at no expense to the Institute. If not destroyed by testing, samples will be returned at Bidder's request and expense, unless otherwise specified.</p> <p>10.3 When applicable and required in Section 5, the Bidder shall describe the necessary training program available for the maintenance and operation of the equipment offered as well as the cost to the Institute. Unless otherwise specified, such training as well as training materials shall be provided in the language of the Bid as specified in the BDS.</p> <p>10.4 When applicable and required in Section 5, the Bidder shall certify the availability of spare parts for a period of at least five (5) years from date of delivery, or as otherwise specified in this ITB.</p>
<p>11. Price Schedule</p>	<p>11.1 The Price Schedule shall be prepared using the Forms provided in Section 6 of the ITB and taking into consideration the requirements in the ITB.</p> <p>11.2 Any requirement described in this ITB but not priced in the Price Schedule, shall be assumed to have been included in the prices of other activities or items, as well as in the final total price.</p>

<p>12. Bid Security</p>	<p>12.1 A Bid Security shall be provided in the amount and form indicated in the BDS. The Bid Security shall be valid for the duration as referred in BDS.</p> <p>12.2 The Bid Security shall be included along with the Bid. If Bid Security not found in the Bid, the Bid shall be rejected.</p> <p>12.3 If the Bid Security amount or its validity period is found to be less than what is required, PAF-IAST shall reject the Bid.</p> <p>12.4 In the event an electronic submission is allowed in the BDS, Bidders shall include a copy of the Bid Security in their bid and the original of the Bid Security must be sent via courier or hand delivery as per the instructions in BDS.</p> <p>12.5 The Bid Security will be forfeited by PAF-IAST, and the Bid rejected, in the event of any, or combination, of the following conditions:</p> <ul style="list-style-type: none"> <li>a) If the Bidder withdraws its offer during the period of the Bid Validity specified in the BDS, or;</li> <li>b) In the event the successful Bidder fails: <ul style="list-style-type: none"> <li>i. to sign the Contract after PAF-IAST has issued an award; or</li> <li>ii. to furnish the Performance Security, insurances, or other documents that PAF-IAST may require as a condition precedent to the effectivity of the contract that may be awarded to the Bidder.</li> </ul> </li> </ul>
<p>13. Currencies</p>	<p>13.1 All prices shall be quoted in the currency indicated in the BDS. Where prices are quoted in different currencies, for the purposes of comparison:</p> <ul style="list-style-type: none"> <li>a) PAF-IAST will convert the currency quoted into the currency indicated in BDS, in accordance with the prevailing Inter Bank rate of exchange on the last day of submission of Bids; and</li> <li>b) In the event that PAF-IAST selects a Bid for award that is quoted in a currency different from the preferred currency in the BDS, PAF-IAST shall reserve the right to award the contract in the currency of PAF-IAST's preference, using the conversion method specified above.</li> </ul>
<p>14. Joint Venture, Consortium or Association</p>	<p>14.1 If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Bid, they shall confirm in their Bid that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by an intent letter or an Agreement among the legal entities duly notarized, and submitted with the Bid; and (ii) if they are awarded the contract, the contract shall be entered into, by and between PAF-IAST and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.</p> <p>14.2 After the Deadline for Submission of Bid, the lead entity identified to represent the JV, Consortium or Association Or any change in the constitution of the JV, Consortium or Association shall not be altered without the prior written consent of PAF-IAST/ Procurement Committee.</p> <p>14.3 The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Clause 15 herein in respect of submitting only one Bid.</p> <p>14.4 The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entities in the joint venture in delivering the requirements of the ITB, both in the Bid and the JV, Consortium</p>

	<p>or Association Agreement or Intent Letter. All entities that comprise the JV, Consortium or Association shall be cumulatively subject to the eligibility and technical qualification assessment by PAF-IAST as defined in Section 4: Evaluation Criteria.</p> <p>14.5 A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:</p> <ul style="list-style-type: none"> <li>a) Those that were undertaken together by the JV, Consortium or Association; and</li> <li>b) Those that were undertaken by the individual entities of the JV, Consortium or Association.</li> </ul> <p>14.6 Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.</p>
<p><b>15. Only One Bid</b></p>	<p>15.1 The Bidder (including the individual members of any Joint Venture) shall submit only one Bid, either in its own name or as part of a Joint Venture.</p> <p>15.2 Bids submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:</p> <ul style="list-style-type: none"> <li>a) they have at least one controlling partner, director or shareholder in common; or</li> <li>b) any one of them receive or have received any direct or indirect subsidy from the other/s; or</li> <li>c) they have the same legal representative for purposes of this ITB; or</li> <li>d) they are subcontractors to each other's Bid, or a subcontractor to one Bid also submits another Bid under its name as lead Bidder; or some key personnel proposed to be in the team of one Bidder participates in more than one Bid received for this ITB process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Bid.</li> </ul>
<p><b>16. Bid Validity Period</b></p>	<p>16.1 Bids shall remain valid for the period specified in the BDS, commencing on the Deadline for Submission of Bids. A Bid valid for a shorter period may be rejected by PAF-IAST and rendered non-responsive.</p> <p>16.2 During the Bid validity period, the Bidder shall maintain its original Bid without any change, including the availability of the Key Personnel.</p>
<p><b>17. Extension of Bid Validity Period</b></p>	<p>17.1 In exceptional circumstances, prior to the expiration of the Bid validity period, PAF-IAST may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing and shall be considered integral to the Bid.</p> <p>17.2 If the Bidder agrees to extend the validity of its Bid, it shall be done without any change to the original Bid.</p> <p>17.3 The Bidder has the right to refuse to extend the validity of its Bid, in which case, the Bid shall not be further evaluated.</p>

<p>18. Clarification on ITB (from the Bidders)</p>	<p>18.1 Bidders may request clarifications on any of the ITB documents no later than the date indicated in the BDS. Any request for clarification must be sent in writing in the manner indicated in the BDS. If inquiries are sent other than specified channel, even if they are sent to a PAF-IAST staff member, PAF-IAST shall have no obligation to respond or confirm that the query was officially received.</p> <p>18.2 PAF-IAST will provide the responses to clarifications through the method specified in the BDS.</p> <p>18.3 PAF-IAST shall endeavor to provide responses to clarifications in an expeditious manner, but any delay in such response shall not cause an obligation on the part of PAF-IAST to extend the submission date of the Bids, unless PAF-IAST deems that such an extension is justified and necessary.</p>
<p>19. Amendment in ITB</p>	<p>19.1 At any time prior to the deadline of Bid submission, PAF-IAST may for any reason, such as in response to a clarification requested by a Bidder, modify the ITB in the form of an amendment to the ITB. Amendments will be made available to all prospective bidders.</p> <p>19.2 If the amendment is substantial, PAF-IAST may extend the Deadline for submission of Bid to give the Bidders reasonable time to incorporate the amendment into their Bids.</p>
<p>20. Alternative Bids</p>	<p>20.1 Unless otherwise specified in the BDS, alternative Bids shall not be considered. If submission of alternative Bid is allowed by BDS, a Bidder may submit an alternative Bid, but only if it also submits a Bid conforming to the ITB requirements. Where the conditions for its acceptance are met, or justifications are clearly established, PAF-IAST reserves the right to award a contract based on an alternative Bid.</p> <p>20.2 If multiple/ alternative bids are being submitted, they must be clearly marked as "Main Bid" and "Alternative Bid"</p>
<p>21. Pre-Bid Conference</p>	<p>21.1 When appropriate, a pre-bid conference may be conducted at the date, time and location specified in the BDS. All Bidders are encouraged to attend. Nonattendance, however, shall not result in disqualification of an interested Bidder. Minutes of the Bidder's conference will be disseminated on the procurement website and/ or shared by email as specified in the BDS. No verbal statement made during the conference shall modify the terms and conditions of the ITB, unless specifically incorporated in the Minutes of the Bidder's Conference or issued/ posted as an amendment to ITB.</p>

### C. SUBMISSION AND OPENING OF BIDS

<p>22. Bid Proposal Submission</p>	<p>22.1 The Bidder shall submit a duly signed and numbered all pages of the complete Bid in an Envelope sealed and marked as per ITB 22.6, and in accordance with <b>KPPRA Rule 6 (2)(a)</b>.</p> <p>22.2 The Envelope should contain all the <b>Returnable Forms (A – G)</b> along with <b>Technical Specifications</b> meeting or exceeding the requirements as stipulated in this ITB, and <b>supporting documents</b> in accordance with requirements in the BDS.</p> <p>22.3 The Bid Security as referred in BDS must be placed in the Bid Envelope.</p> <p>22.4 Bid can be delivered by courier only as specified in the BDS.</p> <p>22.5 The Bid shall be signed by the Bidder or person(s) duly authorized to commit the Bidder. The authorization shall be communicated through a document evidencing such authorization issued by the legal representative of the bidding entity, or a Power of Attorney, accompanying the Bid. There should not be errors</p>
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	<p>and/ or over-writings. Corrections (if any) should be made clearly and initialed with dates.</p> <p>22.6 Bidders must be aware that the mere act of submission of a Bid, in and of itself, implies that the Bidder fully accepts the General Contract Terms and Conditions.</p> <p>22.7 Hard copy submission by courier allowed or as specified in the BDS shall be governed as follows:</p> <p>a) The signed Bid shall be marked "Original", and its copies marked "Copy" as appropriate. The number of copies is indicated in the BDS. All copies shall be made from the signed original only. If there are discrepancies between the original and the copies, the original shall prevail.</p> <p>(b) The Bid Proposals must be sealed and submitted in an envelope, which shall:</p> <ol style="list-style-type: none"> <li>i. Bear the name of the Bidder;</li> <li>ii. Be addressed to PAF - IAST as specified in the BDS; and</li> <li>iii. Bear a warning not to open before the time and date for Bid opening as specified in the BDS.</li> </ol> <p>If the envelope with the Bid is not sealed and marked as required, PAF-IAST shall assume no responsibility for the misplacement, loss, or premature opening of the Bid.</p>
23. Deadline for Submission of Bids and Late Bids	<p>23.1 Complete Bids must be received by PAF-IAST in the manner, and no later than the date and time, specified in the BDS. PAF-IAST shall only recognize the actual date and time that the bid was received by PAF-IAST.</p> <p>23.2 PAF-IAST shall not consider any Bid that is received after the deadline for the submission of Bids.</p>
24. Withdrawal, Substitution, and Modification of Bids	<p>24.1 A Bidder may withdraw, substitute or modify its Bid after it has been submitted at any time prior to the deadline for submission.</p> <p>24.2 A bidder may withdraw, substitute or modify its Bid by sending a written notice to PAF- IAST, duly signed by an authorized representative, including a Power of Attorney. The corresponding substitution or modification of the Bid, must accompany the respective written notice. All notices must be submitted in the same manner as specified for submission of Bids, by clearly marking them as "WITHDRAWAL" "SUBSTITUTION," or "MODIFICATION"</p> <p>24.3 Bids requested to be withdrawn shall be returned unopened to the Bidders, except if the bid is withdrawn after the bid has been opened.</p>
25. Bid Opening	<p>25.1 The Procurement Committee of PAF- IAST will open the Bid in the presence of Bidders' representative(s) who choose to attend.</p> <p>25.2 The Bidders' names, modifications, withdrawals, the condition of the envelope labels/ seals, the number of folders/ files and all other such other details as PAF- IAST may consider appropriate, will be announced at the opening. No Bid shall be rejected at the opening stage, except for late submissions, in which case, the Bid shall be returned unopened to the Bidders.</p> <p>25.3 In case of public holiday on bid opening day, bids will be opened on next working day.</p>

## D. EVALUATION OF BIDS

<p>26. Confidentiality</p>	<p>26.1 Information relating to the examination, evaluation, and comparison of Bids, and the recommendation of contract award, shall not be disclosed to Bidders, even after publication of the contract award.</p> <p>26.2 Any effort by a Bidder to influence PAF-IAST in the examination, evaluation and comparison of the Bids or contract award decisions may, at PAF-IAST's decision, result in the rejection of its Bid and may subsequently be subject to consequences.</p>
<p>27. Preliminary Examination</p>	<p>27.1 PAF-IAST shall examine the Bids to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and whether the Bids are generally in order, among other indicators that may be used at this stage. PAF-IAST reserves the right to reject any Bid at this stage.</p>
<p>28. Evaluation of Eligibility and Technical Qualification</p>	<p>28.1 Eligibility and Technical Qualification of the Bidder will be evaluated against the Minimum Eligibility/ Qualification requirements specified in the Section 4: Evaluation Criteria.</p> <p>28.2 In general terms, Bidders that meet the following criteria may be considered qualified:</p> <ul style="list-style-type: none"> <li>a) They are not included in the list of blacklisted or barred companies published on KPPRA website, any federal or provincial government department;</li> <li>b) They have a good financial standing and have access to adequate financial resources to perform the contract and all existing commercial commitments,</li> <li>c) They have the necessary experience, technical expertise, production capacity, quality certifications, quality assurance procedures and other resources applicable to the supply of goods and/ or services required;</li> <li>d) They are able to comply fully with the General Terms and Conditions of Contract;</li> <li>e) They do not have a consistent history of court/ arbitral award decisions against the Bidder; and</li> <li>f) They have a record of timely and satisfactory performance with their clients.</li> </ul>
<p>29. Evaluation of Bid Proposals</p>	<p>29.1 The evaluation team shall review and evaluate the Bids on the basis of their responsiveness to the schedule of requirements and Technical Specifications and other documentation provided, applying the procedure indicated in the BDS and other ITB documents. When necessary, and if stated in the BDS, PAF- IAST may invite technically responsive bidders for a presentation related to their Bids. The conditions for the presentation shall be provided in the bid document where required.</p>
<p>30. Due diligence</p>	<p>30.1 PAF- IAST reserves the right to undertake a due diligence exercise, aimed at determining to its satisfaction, the validity of the information provided by the Bidder. Such exercise shall be fully documented and may include, but need not be limited to, all or any combination of the following:</p> <ul style="list-style-type: none"> <li>a) Verification of accuracy, correctness and authenticity of information provided by the Bidder;</li> <li>b) Validation of extent of compliance to the ITB requirements and evaluation criteria based on what has so far been found by the evaluation team;</li> <li>c) Inquiry and reference checking with Government entities with jurisdiction on the Bidder, or with previous clients, or any other entity that may have done business with the Bidder;</li> </ul>

	<ul style="list-style-type: none"> <li>d) Inquiry and reference checking with previous clients on the performance on on-going or completed contracts, including physical inspections of previous works, as deemed necessary;</li> <li>e) Physical inspection of the Bidder's offices, branches or other places where business transpires, with or without notice to the Bidder;</li> <li>f) Other means that PAF-IAST may deem appropriate, at any stage within the selection process, prior to declaring the Bidder as Qualified.</li> </ul>
<b>31. Clarification of Bids</b>	<p>31.1 To assist in the examination, evaluation and comparison of Bids, PAF- IAST may, at its discretion, request any Bidder for a clarification of its Bid.</p> <p>31.2 PAF- IAST's request for clarification and the response shall be in writing and no change in the prices or substance of the Bid shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by PAF-IAST in the evaluation of the Bids in accordance with the ITB.</p> <p>31.3 Any unsolicited clarification submitted by a Bidder in respect to its Bid, which is not a response to a request by PAF-IAST, may not be considered during the review and evaluation of the Bids.</p>
<b>32. Responsiveness of Bid</b>	<p>32.1 PAF-IAST's determination of a Bid's responsiveness will be based on the contents of the bid itself. A substantially responsive Bid is one that conforms to all the terms, conditions, specifications and other requirements of the ITB without material deviation, reservation, or omission.</p> <p>32.2 If a bid is not substantially responsive, it may be rejected by PAF-IAST and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>
<b>33. Right to Accept, Reject, Any or All Bids</b>	<p>33.1 PAF-IAST reserves the right to accept or reject any proposal in response to the ITB, to render any or all of the proposals as non-responsive, and to reject all Proposals in response to the ITB at any time prior to award of contract, while assigning the reason(s) thereof.</p> <p>33.2 PAF- IAST shall not be obliged to award the contract to the lowest priced offer.</p>
<b>34. Nonconformities, Repairable Errors and Omissions</b>	<p>34.1 Provided that a Bid is substantially responsive, PAF-IAST may waive any nonconformities or omissions in the Bid that, in the opinion of PAF-IAST, do not constitute a material deviation.</p> <p>34.2 PAF-IAST may request the Bidder to submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial nonconformities or omissions in the Bid related to documentation requirements. Such omission shall not be related to any aspect of the price. Failure of the Bidder to comply with the request may result in the rejection of its Bid.</p> <p>34.3 For the Price Schedule that are submitted, PAF-IAST shall check and correct arithmetical errors as follows:</p> <ul style="list-style-type: none"> <li>a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of PAF-IAST there is an obvious misplacement of the decimal point in the unit price; in which case, the line item total as quoted shall govern and the unit price shall be corrected;</li> <li>b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and</li> </ul>

	<p>c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail.</p> <p>34.4 If the Bidder does not accept the correction of errors made by PAF- IAST, its Bid shall be rejected.</p>
<b>35. Bidder Grievance</b>	<p>35.1 PAF- IAST's grievance readdress procedure provides an opportunity for appeal to those bidders or firms not awarded a contract through a competitive procurement process. In the event that a Bidder believes that it was not treated fairly, the Bidder may lodge a complaint to the PAF-IAST's Grievance Readdress Committee.</p>

## E. AWARD OF CONTRACT

36. Evaluation	36.1 PAF-IAST will conduct the evaluation solely on the basis of response to this tender received from the firms. 36.2 Evaluation shall be undertaken in the following steps: a) Preliminary Examination including Technical Specifications and other compliances b) Arithmetical check and ranking of bidders who passed preliminary examination by price. c) Evaluation of prices 36.3 Price comparison shall be based on the landed price, including transportation, insurance and the total cost of ownership (including spare parts, consumption, installation, commissioning, training, special packaging, etc., where applicable)
37. Integrity Pact	37.1 Bidders will also be required to submit a signed Integrity Pact on a stamp paper of appropriate value as part of their response. The text of Integrity Pact is available at Annex – I.
38. Award Criteria	38.1 Prior to expiration of the period of Proposal validity, PAF-IAST shall award the contract to the Bidder that is found to be responsive to the requirements of the Technical Specifications and has offered the lowest price. 38.2 PAF-IAST shall not be obliged to award the contract to the lowest priced offer, if the response is found deficient to the Technical Specifications and other compliances. 38.3 In case of tie in Financial Bid Value, the Contract will be awarded to the bidder having closest match to the Technical Specifications.
39. Contract Signing	39.1 After the approval of any Work Award, a Contract Agreement on the stamp paper of appropriate value, shall be executed by PAF-IAST with Selected Bidder (i.e. Contractor) within 07 days from the date of issuance of Lol (Letter of Intent)/ Work Order. 39.2 Failure to signing of Contract Agreement by the selected Bidder Firm with PAF-IAST within the stipulated time may constitute sufficient grounds for the annulment of the award, and forfeiture of the Bid Security, if any, and on which event, PAF- IAST may award the Contract to the Second highest rated or call for new Proposals.
40. Right to Vary quantity at the Time of Award	40.1 At the time of award of Contract, PAF-IAST reserves the right to vary the quantity of goods and/ or services, without any change in the unit price or other terms and conditions.
41. Sample draft Contract	41.1 A sample draft Contract to be signed, containing applicable General Terms and Conditions can be found at Annex – II.
42. Performance Security	42.1 A performance security, if required in the BDS, shall be provided in the amount specified in BDS, well prior to the Contract signing by both parties. Where a performance security is required, the receipt of the performance security by PAF-IAST shall be a condition for rendering the contract effective.
43. Bank Guarantee for Advanced Payment	43.1 No Payment will be released in advance.
44. Liquidated Damages	44.1 PAF-IAST shall apply Liquidated Damages for the damages and/ or risks caused to PAF-IAST resulting from the Contractor's delays or breach of its obligations as per Contract.

	<ul style="list-style-type: none"> <li>a) In case of delay, the Procurement Committee, PAF-IAST reserves the right to impose a penalty not exceeding 10% of the total amount of the Contract Value at the rate as referred in the Sample Contract at Annexure – II.</li> <li>b) If the Contractor fails to complete work as per PAF-IAST requirement, the Rector, PAF-IAST reserves the right to reject it altogether or impose a penalty not exceeding 50% of the total amount of the Contract.</li> <li>c) If the Contractor fails to provide supplies/ services as per PAF-IAST requirements, PAF-IAST may forfeit his earnest money as well as Performance Security, and the work will be done at the risk and cost of Contractor.</li> <li>d) In case of any dispute, matter will be referred to Rector, PAF-IAST whose decision will be binding on both the parties.</li> </ul>
45. Force Majeure	45.1 "Force Majeure" means an event which is beyond the reasonable control of a party and which makes a party's performance of its obligations under the Purchase Order/ Work Order/ Contract impossible or so impractical as to be considered impossible under the circumstances, and includes, but is not limited to, War, Riots, Storm, Flood or other industrial actions (except where such strikes, lockouts or other industrial issues are within the power of the party invoking Force Majeure), confiscation or any other action by Government agencies. In all disputes between the parties as to matters arising pursuant to this Purchase Order/ Work Order/ Contract, the dispute will be referred to Project Director, PAF-IAST whose decision will be final.
46. Delivery of Goods	46.1 Contractor will be required to deliver the goods as per the Delivery Schedule referred in BDS without claiming any additional cost to the PAF-IAST at the designated site(s) and in quantities as referred in the Contract.
47. Payment Provisions	<p>47.1 Payment will be made only upon PAF- IAST's acceptance of the goods and/ or services performed. The terms of payment shall be within thirty (30) days, after receipt of invoice, and certification of acceptance of goods and/ or services issued by the proper authority in PAF: IAST. Payment will be affected by bank transfer in the currency of the contract.</p> <p>47.2 The Contractor shall provide all necessary supporting documents along with GST invoice, delivery challan and any other relevant documents as required by the PAF- IAST.</p>

## Section 3. Bid Data Sheet

The following data for the goods and/ or services to be procured shall complement, supplement, or amend the provisions in the Invitation to Bid. In the case of a conflict between the Instructions to Bidders, the Bid Data Sheet, and other annexes or references attached to the Bid Data Sheet, the provisions in the Bid Data Sheet shall prevail.

BDS No.	Ref. to Section.2	Data	Specific Instructions / Requirements
1.		Background of the Project	<p>Pak-Austria Fachhochschule: Institute of Applied Sciences and Technology (PAF: IAST) is novel in its content and holistic in approach. The project concept is based on the slogan of “Skilling Pakistan” to create a high-quality technical education infrastructure. This unique educational institution in Pakistan will closely collaborate with several institutions in Austria and China and award multiple foreign degrees. This is a historic and visionary initiative as it is probably the first time that an institution will be established in Pakistan with many foreign universities giving degrees to students who study in it.</p>
2.		Objective	<p>The growth of technology affects whole aspects of our lives, including the education. PAF-IAST believes that by introducing the solar solution as pilot project will bolster as well as mitigate our on going electricity issues and will provide much robust and secure internet which is indispensable for our sensitive IT equipment. Furthermore, this project will also promote the green energy concept and can be beneficial towards the pristine environment of Rural area of Haripur.</p>
3.		Scope of Work	<p><b>Supply, Installation and Commissioning of Solar Power Solution for Campus Network Equipment</b>                      The required items mentioned in Section – 5 have been sought by PAF-IAST from a reputed Firms/ Companies. The supplier is expected to supply high quality products meeting the specification as stipulated in this ITB, which conforms to the international quality standards. The time specified for delivery in the tender form shall be deemed to be the essence of the contract and the Successful Bidder shall arrange within the specified period.</p> <p><b>Post-Delivery Warranty and Support Services</b>                      It is required that Manufacturer’s Warranty be offered as per standard warranty referred in Section 5b within the quoted price, and Post-deployment Bidder’s Support Services for at least One (01) year from the date of deployment to PAF-IAST be provided by the Supplier within the quoted cost of items.</p> <p>Moreover, Bidder should quote separately the Bidder’s Support Services for additional/ next Four (04) years on annual payment basis. However, it will be at sole discretion of beneficiary to avail additional Support Services in subsequent year(s) or otherwise.</p>
4.	7	Language of the Bid	English

5.	22, 23, 27	Submitting Bids for Parts or subparts of the Schedule of Requirements (partial bids)	The Procurement Committee shall consider the Bids on complete solution basis as referred in Section – 5. Any item not quoted shall have reasonable grounds to reject the Bid.
6.	20	Alternative Bids	<b>Not Allowed.</b>
7.	21	Pre-Bid conference	N/A
8.	16	Bid Validity Period	<b>90 days</b>
9.	13	Bid Security/ Earnest Money (Refundable)	<u>Required in the amount of: 2% of the Bid Value.</u> In case of options, earnest money shall be based on the maximum quoted price.  <u>Acceptable Forms of Bid Security:</u> Denominated in Pak Rupees duly issued by a Pakistani Bank or branch of a Foreign Bank, in the form of <b>CDR</b> in favor of the <b>Rector, PAF-IAST</b>
10.	42	Liquidated Damages	Will be imposed as follows:  <b>Percentage of contract price per day of delay: as referred in Draft Contract Sample in Annexure – II.</b>
11.	40	Performance Security	Within one week of issuance of Lol/ Purchase Order and well prior to the signing of Contract, as <b>10% of the Contract value</b> for the duration of Warranty period referred in RFP.
12.	12	Currency of Bid	Pakistani Rupees (PKR)
13.	31	Deadline for submitting requests for clarifications/ questions	<b>5 days</b> before the submission deadline
14.	31	Contact Details for submitting clarifications/ questions	Focal Person in PAF: IAST: <b>Mr. Maaz Khan</b> <a href="mailto:Maaz.khan@paf-iaast.edu.pk">Maaz.khan@paf-iaast.edu.pk</a> <b>Mr. Adnan Ahmed Malik</b> <a href="mailto:adnan.malik@paf-iaast.edu.pk">adnan.malik@paf-iaast.edu.pk</a> <b>0995-645112</b>
15.	18, 19, and 21	Manner of Disseminating Supplemental Information to the ITB and responses/ clarifications to queries	Direct communication to prospective Bidders by email and/ or Posting on the PAF: IAST website: <a href="mailto:procurement@paf-iaast.edu.pk">procurement@paf-iaast.edu.pk</a> <a href="http://www.paf-iaast.edu.pk/">http://www.paf-iaast.edu.pk/</a>
16.	23	Deadline for Submission	<b>Monday the May 24, 2021 on or before 12:00 noon</b>
17.	22	Number of Set(s) of Bid	<b>Bid Proposal(s)</b> - One (01) Original - One (01) Copy



18.	22	Allowable Manner of Submitting Bids	<input checked="" type="checkbox"/> Courier only									
19.	22	Bid Submission Address	<input checked="" type="checkbox"/> <b>By Courier</b> Convener Procurement Committee, PAF- IAST, Mang, Haripur									
20.	22	Electronic submission (email) requirements	Not Allowed									
21.	25	Date, time and venue for the opening of bid	Date and Time: <b>Monday the May 24, 2021 at 12:30 PM</b> Venue: <b>Conference Room, PAF-IAST, Mang, Haripur</b>									
22.	27, 36	Evaluation Method	Eligible and qualified bids meeting the PAF- IAST requirements and technically responsive as stipulated in this ITB									
23.		Evaluation Method for the Award of Contract	Lowest priced technically responsive.									
24.		Expected date for commencement of Contract	<b>June 2021</b>									
25.		Maximum expected duration of Contract	<b>60 months</b>									
26.	35	PAF: IAST will award the contract to:	<b>One Bidder Only</b>									
27.	39	Type and Contract Terms and Conditions that will apply	PAF-IAST General Terms and Conditions for Contracts for Goods and/ or Services as per Sample at Annex – II.									
28.	46	Delivery, Installation and Testing/ Training	<table border="1"> <thead> <tr> <th></th> <th>Delivery</th> <th>Installation</th> <th>Testing/Training</th> </tr> </thead> <tbody> <tr> <td>Solar Power Solution</td> <td>04 weeks</td> <td>02 weeks</td> <td>02 weeks</td> </tr> </tbody> </table>			Delivery	Installation	Testing/Training	Solar Power Solution	04 weeks	02 weeks	02 weeks
	Delivery	Installation	Testing/Training									
Solar Power Solution	04 weeks	02 weeks	02 weeks									

## Section 4. Evaluation Criteria

### Preliminary Examination Criteria

Bids will be examined to determine whether they are complete and submitted in accordance with ITB requirements as per below criteria on a Yes/ No basis:

- Appropriate signatures
- Power of Attorney
- Minimum Bid documents provided
- Bid Validity
- Bid Security submitted as per ITB requirements with compliant validity period

### Minimum Eligibility Criteria

Eligibility will be evaluated on a Pass/ Fail basis. If the Bid is submitted as a Joint Venture, there should be no more than two (02) companies in the Joint Venture and each company should meet the minimum criteria, unless otherwise specified.

ELIGIBILITY			
S. #	Subject	Criteria	Ref. Returnable Form(s)
1.	<b>Bidder's Status</b>	Participating as <input type="checkbox"/> Individual Company <input type="checkbox"/> JV/ Consortium	Form B: Joint Venture/ Consortium/ Association Information Form
2.	<b>Legal Status</b>	Bidder is a legally registered entity in Pakistan. Bidder is/ are also registered with FBR for Income Tax and Sales Tax	Form C: Bidder Information Form
3.	<b>Location of Offices</b>	Bidder (Lead Bidder) has declared office(s) in Islamabad/ Rawalpindi/ Peshawar/ Abbottabad	Form C: Bidder Information Form
4.	<b>Principal's Authorization</b>	Bidder or at least one member of JV/ Consortium/ Association must be Authorized Partner/ Reseller/ Dealer for the supply and services of quoted goods/ services.	Form C: Bidder Information Form
5.	<b>Company in Operation</b>	Bidder (Lead Bidder) is in operation for at least Five (05) years.	Form C: Bidder Information Form
6.	<b>Financial Strength</b>	Average annual turnover over last 3 years: Rs. 50 million <i>(For JV/ Consortium/ Association, all Parties cumulatively should meet requirement).</i>	Form D: Qualification Form
7.	<b>Relevant Experience</b>	Minimum No. of IT Projects of similar nature, value, and complexity in last 3 years: fifty (50) of 5KW and twenty (20) projects of 10KW,15KW <i>(For JV/Consortium/ Association, all Parties cumulatively should meet requirement).</i>	Form D: Qualification Form Form E: Technical Proposal Form
8.	<b>Satisfactory Project Completion Certificate</b>	In case, the Bidder has dealt with PAF-IAST in the past for any project, Satisfactory Project Completion Certificate must be provided, duly issued by PAF-IAST.	Form D: Qualification Form
9.	<b>Eligibility</b>	Bidder(s) is not suspended, nor debarred, nor otherwise identified as ineligible by any Government/ Semi-government/ Autonomous organization in Pakistan. Non-Blacklisting certificate will be required.	Form A: Bid Submission Form

10.	<b>Bankruptcy</b>	Bidder(s) has not declared bankruptcy, is not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future.	Form A: Bid Submission Form
11.	<b>Certificates and Licenses</b>	<p><b>Bidder(s) related:</b></p> <ul style="list-style-type: none"> <li>i Certificate of Registration of the business</li> <li>ii Certificate of Registration with FBR for both Income Tax and Sales Tax</li> <li>iii Certified Partner Status issued by Principal stating certified competencies for the proposed solution</li> <li>iv A proofing document confirms the offered Warranty &amp; Post-commissioning Support and Services for at least One (01) year within the quoted Unit Price(s), and for Four (04) years as Extended Warranty.</li> <li>v Provide copy of products Certifications compliant to standards as mentioned in Section 5b (7).</li> <li>vi Supporting photos, data sheets, documents depicting usage scenarios of the proposed items.</li> </ul>	Form C: Bidder Information Form

## Section 5a: Technical Specifications of the Required Goods

Solar Module	Base Specifications Qty:120
<b>Module Make</b>	Tier 1
<b>Solar Module Type</b>	Monocrystalline half cut cell Bifacial (500Watt or above)
<b>Cell Quality</b>	A Grade Flash Test Report Required
<b>Module Efficiency</b>	≥19% or higher
<b>Operating Temperature</b>	- -10°C to +55°C
<b>Cell voltage</b>	Each cell voltage must be 0.6V or above
<b>Bus bar</b>	5 or higher on each cell of module
<b>Protection</b>	IP 67 or above
<b>Certification</b>	IEC 61215, IEC 61730, IEC61701 or equivalent
<b>Environmental safety factors</b>	Must Withstand <ul style="list-style-type: none"> <li>• 5400 PA snow Load</li> <li>• 2400 PA wind Load</li> </ul>
<b>Connectors</b>	MC4, or compatible weatherproof
<b>Front Cover</b>	3.2 mm prism type tempered glass or higher
<b>Fill factor</b>	The fill factor should be above 75% at STC.

Inverter	Base Specifications 3KW – Qty (03): 5KW – Qty (01): 10KW – Qty (02): 15KW – Qty (02)
<b>Inverter Type</b>	Pure Sine wave with MPPT Built-in Solar Charger
<b>Inverter Size (KW)</b>	3KW,5KW,10KW,15KW
<b>Grid/ Generator Synchronization</b>	The inverter should have built in capability to auto synchronize both with grid and battery.
<b>Output Voltage Range</b>	230VAC/400 VAC ±5%.
<b>Topology</b>	Inverter Topology (Hybrid)
<b>IP Rating/ Dust Proofing</b>	Preferred IP 67 (IEC 60529)/ outdoor use
<b>Frequency</b>	50Hz ±2%
<b>Standby power consumption</b>	3 ≤ Watt.
<b>Max. efficiency/Euro-eta</b>	~97.8% or above
<b>Protections</b>	<ul style="list-style-type: none"> <li>• Short Circuiting</li> <li>• Surge Protection</li> <li>• Leakage current protection</li> <li>• High Insulation</li> <li>• LVRT protection</li> <li>• Residual current detection.</li> <li>• DC protection must be for over voltage, under voltage, over current, over temperature, surge protection, DC reverse polarity protection</li> <li>• Over voltage at input (PV) (if built-in)</li> <li>• Harmonics Filter at input</li> <li>• Over voltage at output (AC)</li> </ul>
<b>Operating Temperature</b>	0 to 60°C
<b>Humidity</b>	10 ~90%

<b>Input Voltage Range (solar panel)</b>	150V to 900V
<b>Input Voltage Range (Battery)</b>	40 to 48V
<b>Power Factor</b>	0.8 leading/lagging
<b>Communication</b>	RS 485/ RJ45 or Wifi (preferably RJ-45)
<b>Installation of Inverters</b>	At suitable available place, as per the instruction of the Engineer in-charge.
<b>Fault Detection</b>	Remote fault detection supported
<b>Mobile Applications</b>	Application for android and IOS

<b>Batteries</b>	<b>Base Specifications Qty:368</b>
<b>Battery brand</b>	Narada or equivalent
<b>Battery Type</b>	Lithium Ion battery (preferred LiFePO4)-12/24/48 Volt application package.
<b>Maximum Charging current</b>	23Amp or more rapid
<b>Maximum Charging time</b>	Less than 2 hours
<b>Battery Capacity (Ah)</b>	200Ah, 12 V/48V@ 12 hour discharge
<b>Maximum Continuous Discharge</b>	20 Ampere or better
<b>Operating temperature</b>	-10°C ~ 65°C
<b>Self-Discharge</b>	The maximum permissible self-discharge rate is maximum. 4% percent of rated capacity per month at 25°C.
<b>Battery Life</b>	<ul style="list-style-type: none"> <li>• 80 % DoD or better.</li> <li>• Utilizes long life cycles. 2500- 3000 cycles or more</li> </ul>
<b>Tested and Certifications</b>	ISO9001(TUV), DIN43539-T5, IEC61427, DIN40742-773-774,DIN 40736,

<b>Power Cables (Pakistan Cables Or Equivalent)</b>	<b>Base Specifications Qty - Running meter (as per actual)</b>
<b>Cable housing</b>	<ul style="list-style-type: none"> <li>• All exposed wiring (with the possible exception of the module interconnects) must be covered in conduits/duct.</li> <li>• Wiring through roofing, walls and other structures must be protected through the use of bushings.</li> <li>• Wiring through roofing must form a waterproof seal (applicable for wiring only).</li> </ul>
<b>Cables joint, connectors</b>	<ul style="list-style-type: none"> <li>• Cables must be joined by the use of Junction boxes, screw-connectors, and block connectors, MC 4 or equivalent connectors</li> </ul>
<b>Wires termination</b>	<ul style="list-style-type: none"> <li>• All wires must be terminated with proper end sleeves and wire thimbles with different colors for positive and negative polarity</li> </ul>
<b>Cables standards (AC/DC)</b>	<ul style="list-style-type: none"> <li>• Must conform to latest edition / standards.</li> <li>• Temperature Range should be -10°C to +80°C.</li> <li>• Main AC wire (2 Core – 16 mm<sup>2</sup> ) Cable.</li> <li>• Sizes of DC cables between: <ul style="list-style-type: none"> <li>- Array interconnections (6 mm<sup>2</sup> min. or equivalent)</li> <li>- Array to junction boxes (6 mm<sup>2</sup> min. or equivalent)</li> <li>- Junction boxes to Inverter (6 mm<sup>2</sup> min. equivalent)</li> </ul> </li> <li>• The cables should be insulated with a special grade PVC compound.</li> </ul>

<b>Cable verification</b>	Cable voltage drop specifications are as followed that must be verified through software simulation/ Calculations
<b>Cable material</b>	The AC/DC cables should be made of 98% copper strands or more and should be flexible
<b>Solar panels to battery box</b>	6mm <sup>2</sup> or higher, 99.99% pure copper (Stranded and flexible) Make sure that the voltage drop at end node should not be more than 2%
<b>Test Reports</b>	Following test reports must be submitted:
	Copper purity test (at least 99.9% pure)
	Insulation Thickness Test
	DC Resistance Test
	High Voltage Test

<b>Solar Mounting Structure</b>	<b>Base Specifications – As per Design</b>
<b>Structure material</b>	Mild steel
<b>Material Gauge</b>	Gauge 12 or Better
<b>Wind loading</b>	Mounting system should be able to allow air circulation for cooling in high temperature and withstand wind speed of 150Km/hour at 3 sec gust
<b>Adjustable mounting structure</b>	Angle adjustment between 14° to 25 ° or batter according to Mang latitude
<b>Material surface protection</b>	Mounting structure should be Galvanized not less than 80 microns in case of hot dip & 30 microns in case of electroplating. Or batter
<b>Operation and maintenance</b>	Structure should be accessible for personnel to allow regular cleaning of the solar module

<b>Battery Enclosure</b>	<b>Base Specifications – As per Design</b>
<b>Enclosure Material</b>	M.S sheet box or better
<b>Strength</b>	Capable of handing tensile force of batteries proposed
<b>Color</b>	any
<b>Opening and Closing</b>	Must be fixed with durable mailbox (or compatible) lock and key (isolated for Controller and Battery)
<b>Battery housing</b>	Should be in a vented compartment that prevents users from coming in contact with Battery terminals.
<b>Harness</b>	Enclosure should have neat and clean appearance and have good harness even inside.
<b>Dimensions</b>	Should be calculated according to the Battery size for proper and easy operation, maintenance and proper heat vent.
<b>Finishing</b>	The sides of the Enclosure and its compartments must be closed and opened through screws for easy installation and maintenance.
	The sides of enclosure must be strip overlapped for safety and protection from rain.
	There should be a proper arrangement of ventilation especially for Controller.

<b>Earthing/Grounding</b>	<b>QTY – 08 Base Specifications – As per Design</b>
<b>Earth resistance</b>	<ul style="list-style-type: none"> <li>The PV panel frame and structure should be connected by the shortest practical route to an adequate earth contact less than 5 ohms resistance) as per requirement of equipment manufacturer and site earth conditions</li> </ul>
<b>Earthing Standard</b>	As per NEC table 250.122
<b>Earth pit</b>	Grounding /earthing plate should be made of copper plate of 4mm thickness and size 1 feet by 1 feet

<b>Earthing rods</b>	Grounding /earthing conductor should be connected to the plate /rod/GI pipe by proper connector of minimum 6 feet depth
<b>Protection Class</b>	Class 2(Type2) minimum
<b>Discharge voltage</b>	1000 V DC or 1200 VDC (Line to earth) or above (matching the size of inverter)
<b>Ingress Protection</b>	Minimum IP20 (placed in IP 65 Box along with other protections)

<b>System Accessories /Miscellaneous items</b>	<b>Base Specifications – As per Design</b>
	<ul style="list-style-type: none"> <li>Any other additional item to meet the scope (with identification of item(s) and unit cost)</li> </ul>

**Note: Bidders are required to provide/ supplement their claim of “equivalent” product or items with Third Party Report, without which, claim will not be accepted, and Bid is likely to be rejected.**

**Note:**

1. PAF-IAST may re-adjust the quantities as per the provision in KPPRA.
2. The Bidder shall indicate in their offer,
  - a. detailed specifications of their offered product(s),
  - b. standard accessories,
  - c. make and origin, as part of confirming Compliance as per the format given in Form – F.
3. The Unit Price, Total Bid Price, and Additional Warranty Price of the quoted items shall be indicated as per the given format in Form – G.

## Section 5b: Special Terms and Conditions

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### 1. Standard

- The goods supplied must be capable of functioning properly under the climatic conditions of Haripur.
- There shall be no deviation from specification as provided with each item. In case of any ambiguity in specification/ accessories needed for the full functioning of the equipment, the firm must clear it with the Procurement Committee. However, the decision of the Procurement Committee will be final.
- The goods with standard accessories supplied under this tender shall conform to the standard maintenance in the technical specification.

### 2. Calibration of item/ equipment

- The supplier will install the good(s) in the presence and satisfaction of the Procurement Committee, if need be. In case of any defect in the supplied good(s) or if it is not in accordance with the desired specification(s), the goods will be changed at the cost of the supplier.

### 3. Warranty/ Guarantee

- The Supplier will give comprehensive onsite warranty/ guarantee that the goods/ stores/ articles would continue to conform to the description and quality as specified for a period of at least for the duration as stated below against each item within the quoted price, as Standard Warranty;
  1. Solar panels at least 15 years
  2. Inverters at least 08 years, and
  3. Rest of goods at least 3 years

Notwithstanding the fact that the purchaser may have inspected and/ or approved the said goods/ stores/ article, if during the aforesaid period, the said goods/ stores/ articles, be discovered not to conform to the description and quality aforesaid or have determined (and the decision of the Procurement Committee in that context will be final and conclusive), the PAF: IAST will be entitled to reject the said goods/ stores/ articles or such portion thereof as may be discovered not to conform to the said description and quality, on such rejection the goods/ articles/ stores will be at the supplier's risk and all the provisions relating to rejection of goods etc. shall apply.

- The Supplier shall, if so called upon to do, replace the goods etc., or such portion thereof as is rejected by Procurement Committee, otherwise the supplier shall pay such damage as may arise by the reason of the breach of the condition herein contained. Nothing herein contained shall prejudice any other right of the Procurement Committee in that behalf under the contract or otherwise.
- The Supplier shall also replace equipment, in case it is found defective which cannot be put to operation due to manufacturing defect, etc. In case of equipment specified by the Procurement Committee, the supplier shall be responsible from carrying out annual maintenance and repairs on the terms and conditions as may be agreed. The supplier shall also be responsible to ensure adequate regular supply of spare parts needed for a specific type of equipment whether under their annual maintenance and repairs contract or otherwise. In case of change of model, supplier will give sufficient notice to the Procurement Committee who may like to purchase spare parts from them to maintain the equipment in perfect condition.

### 4. Applicable Penalties

- Failure to maintain either of the two conditions as stated above shall be consider as one violation.
- If the situation is not overcome subsequently, every delay of 24 hours shall construed as violation(s) till the Required Service Level is restored.



- Each violation of Required Service Level will result a Liquidated Damage at a rate of 0.10% of the Contract Value plus the cost of items falling short of Required Service Level.

#### **5. Required Service Level**

- Limited performance guarantee each panel power considering standard conditions will not be less than 90 % of nominal power by the end of 10 years of operation and at least 80% at the end of 25 years of operation with 25 year limited power warranty.
- Far or remote monitoring of system performance and faults.
- No charge for site visits in case of any faults in system occurs
- in case of abnormal performance degradation of PV plant Visits will be performed immediately
- The party should also submit a separate Service Level Agreement (SLA) applicable after warranty period in the technical proposal.

#### **6. Training**

The bidder supplying the equipment(s) will demonstrate the design, operation/ working of the supplied goods physically as well as on software used to the satisfaction of PAF-IASST and provide training for atleast one month to power engineer as well as electrician both on-site and curriculum based training at Manufacturer's Certified Training Center, if applicable.

#### **7. Compliance Certifications**

- IEC 61730-1:2016 (safety requirements for construction as well as testing)
- IEC 61215-1, IEC61215-1-1, IEC 61644, EN61215 and IEC61215-1-2 (design qualification)
- IEC 61215 standard for PV module design qualification and type approval
- IEC 61230 standard for earthing and short circuiting.
- IEC60896-21/22(protection against electric shock)
- IEC
- Copper bus bars/terminal blocks housed in the junction box conforming to IEC standard 62208.
- TUV certified.
- IEC60896-21/22 (battery standards)

## Section 6: Returnable Bidding Forms / Checklist

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This section serves as a checklist for preparation of your Bid. Please complete the Returnable Bidding Forms in accordance with the instructions in the forms and return them as part of your Bid submission. No alteration to format of forms shall be permitted and no substitution shall be accepted.

Before submitting your Bid, please ensure compliance with the Bid Submission instructions of the BDS 22.

### **Bid Proposal:**

<b>Have you duly completed all the Returnable Bidding Forms?</b>	
✦ Form A: Bid Submission Form	<input type="checkbox"/>
✦ Form B: Joint Venture/Consortium/ Association Information Form	<input type="checkbox"/>
✦ Form C: Bidder Information Form	<input type="checkbox"/>
✦ Form D: Qualification Form	<input type="checkbox"/>
✦ Form E: Bid Proposal Form	<input type="checkbox"/>
✦ Form F: Specifications Compliance Form	<input type="checkbox"/>
✦ Form G: Price Schedule Form	<input type="checkbox"/>
<b>Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?</b>	<input type="checkbox"/>

## Form A: Bid Submission Form

(To be Submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-SLC-ITB-108-20		

We, the undersigned, submit our Bid for the award of contract to supply the goods and related services required for [Insert Title of goods and services] in accordance with your Invitation to Bid No. [Insert ITB Reference Number]. We hereby submit our Bid, which includes this Bid proposal.

We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/ Consortium/ Association members or subcontractors or suppliers for any part of the contract:

- a) is not under procurement prohibition by any of the Government/ Semi-government/ Autonomous organization;
- b) have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any Organization in Pakistan;
- c) have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against us that could impair our operations in the foreseeable future;
- d) undertake not to engage in proscribed practices, including but not limited to corruption, fraud, coercion, collusion, obstruction, or any other unethical practice, with the PAF: IAST, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the PAF: IAST.

We declare that all the information and statements made in this Bid are true and we accept that any misinterpretation or misrepresentation contained in this Bid may lead to our disqualification and/ or sanctioning by the PAF-IAST.

We offer to supply the goods and related services in conformity with the Bidding documents, including the PAF-IAST General Conditions of Contract and in accordance with the Schedule of Requirements and Specifications.

Our Bid shall be valid and remain binding upon us for the period specified in the Bid Data Sheet.

We understand and recognize that you are not bound to accept any Bid you receive.

I, the undersigned, certify that I am duly authorized by [Insert Name of Bidder] to sign this Bid and bind it should PAF- IAST accept this Bid.

Name: \_\_\_\_\_

Title: \_\_\_\_\_

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

Signature: \_\_\_\_\_

*[Stamp with official stamp of the Bidder]*

## Form B: Joint Venture/ Consortium/ Association Information Form

(To be Submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-SLC-ITB-108-20		

To be completed and returned with your Bid if the Bid is submitted as a Joint Venture/Consortium/Association.

No	Name of Partner and contact information <i>(address, telephone numbers, fax numbers, e-mail address)</i>	Proposed proportion of responsibilities (in %) and type of goods and/or services to be performed
1	[Complete]	[Complete]
2	[Complete]	[Complete]
3	[Complete]	[Complete]

<b>Name of leading partner</b> (with authority to bind the JV, Consortium, Association during the ITB process and, in the event a Contract is awarded, during contract execution)	[Complete]
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We have attached a copy of the below referenced document signed by every partner, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture:

Letter of intent to form a joint venture      **OR**     JV/Consortium/Association agreement

We hereby confirm that if the contract is awarded, all parties of the Joint Venture/Consortium/Association shall be jointly and severally liable to PAF: IAST for the fulfillment of the provisions of the Contract.

Name of partner: \_\_\_\_\_

Name of partner: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

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

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

Name of partner: \_\_\_\_\_

Name of partner: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

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

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

## Form C: Bidder Information Form

(To be Submitted in an envelope duly sealed and marked as Technical Proposal)

<b>Legal name of Bidder</b>	[Complete]
<b>Legal address &amp; Branch Offices</b>	[Complete]
<b>Year of registration</b>	[Complete]
<b>Bidder's Authorized Representative Information</b>	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
<b>Are you a PAF – IAST registered vendor, or have awarded any Contract by PAF-IAST in past?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No    If yes, [insert PAF- IAST vendor number]
<b>Countries of operation</b>	[Complete]
<b>No. of full-time employees</b>	[Complete]
<b>No. of Technical Staff</b>	[Complete]
<b>Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate):</b>	[Complete]
<b>Does your Company hold any accreditation such as ISO 14001 or ISO 14064 or equivalent related to the environment? (If yes, provide a Copy of the valid Certificate):</b>	[Complete]
<b>Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy)</b>	[Complete]
<b>Does your organization demonstrates significant commitment to sustainability through some other means, for example internal company policy documents on women empowerment, renewable energies, education, vocational trainings, social responsibility towards people with Special needs, or membership of trade institutions promoting such issues</b>	[Complete]

**Contact person that PAF: IAST may contact for requests for clarifications during Bid evaluation (Only Lead Bidder)**

Name and Title: [Complete]  
Telephone numbers: [Complete]  
Email: [Complete]

**Please attach the following documents:**

1. Company Profile, which should not exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods and/ or services being procured.
2. Conformance certificate/ letter to the required timetable for delivery to PAF – IAST after the award of Contract.
3. Certificate of Registration of the business.
4. Principal's Authorization Letter in favor of Bidder to participate in this Tender.
5. A proofing document confirms the offered warranty for at least One (01) year and extended warranty for three (03) years, supported by the manufacturer's certificates, if applicable.
6. A proofing document confirming supply of same or similar items of this magnitude to various clients/ customers in Pakistan.
7. Reference documents for no less than the required Projects of similar nature/ value/ complexity in which delivery and services were extended.
8. Full detailed description of the specifications of the proposed items in addition to catalogues clearly showing the proposed specifications responding to the requirements.
9. Supporting photos of the proposed items.
10. Quality certifications: ISO 9001:2015 (if applicable)
11. Latest Audited Financial Statements (Income Statement and Balance Sheet) including Auditor's Report for the past (3 years).

**Note: To be filled in by each partner in case Bid is submitted as a JV/ Consortium/ Association**

## Form D: Qualification Form

(To be submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-SLC-ITB-108-20		

If JV/ Consortium/ Association, to be completed by each partner.

### Previous Relevant Experience

Please list all Projects successfully completed in the last 3 years, covering following aspects;

- Scope of the projects/ assignments.
- Activities performed for the successful completion of the project.
- Support Services Contracts in hand with SLA for the supplied goods.

List only those assignments for which the Bidder was legally contracted or sub-contracted by the Client as a company or was one of the Consortium/ JV partners. Assignments completed by the Bidder's individual experts working privately or through other firms cannot be claimed as the relevant experience of the Bidder, or that of the Bidder's partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Bidder should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by PAF- IAST.

Project name & Country of Assignment	Client & Reference Contact Details	Contract Value	Period of activity and status	Types of activities undertaken

Bidders may also attach their own Project Data Sheets with more details for assignments above.

### History of Non-Performing Contracts

<input type="checkbox"/> Non-performing contracts did not occur during the last 3 years			
<input type="checkbox"/> Contract(s) not performed in the last 3 years			
Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Reason(s) for non-performance:	

### Financial Standing

Annual Turnover for the last 3 years	Year	PKR
	Year	PKR
	Year	PKR

**Latest Credit Rating (if any), indicate the source**

Financial information (in PKR equivalent)	Historic information for the last 3 years		
	Year 1	Year 2	Year 3
	<i>Information from Balance Sheet</i>		
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
	<i>Information from Income Statement</i>		
Total / Gross Revenue (TR)			
Profits Before Taxes (PBT)			
Net Profit			
Current Ratio			

Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

- a) Must reflect the financial situation of the Bidder or party to a JV, and not sister or parent companies;
- b) Historic financial statements must be audited by a certified public accountant;
- c) Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted.



## Form E: Technical Proposal Form

(To be submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-SLC-ITB-108-20		

The Bidder's Bid should be organized to follow this format of the Technical Bid Proposal. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same may be viewed as non-responsive.

### SECTION 1: Qualification, capacity and expertise

- 1.1 Bidder's general organizational capability: management structure, financial stability and project financing capacity, project management controls, extent of work to be subcontracted (if so, provide details).
- 1.2 Bidder's relevance of specialized knowledge and experience on similar engagements done in the region/ country. Bidder should submit a detailed description of the projects executed (quantities, value, beneficiary)
- 1.3 Manufacturer's strengths covering the regional/ global market presence, hi-tech products portfolio, manufacturing capacity, R&D activities resulting in national and international patents, quality control and assurance practices, and international certifications in relevant areas.

### SECTION 2: Management Structure and Key Personnel

- 2.1 Describe the overall management approach toward planning and implementing the project. Include an organization chart for the management of project describing relationship of key positions and designations.
- 2.2 Provide CVs for key personnel that will be provided to support the implementation of this project using the format below. CVs should demonstrate qualifications in areas relevant to scope of goods and/or services.

#### Format for CV of Proposed Key Personnel

<b>Name of Personnel</b>	[Insert]
<b>Position</b>	[Insert]
<b>Nationality</b>	[Insert]
<b>Language proficiency</b>	[Insert]
<b>Education/ Qualifications</b>	<i>[Summarize college/university and other specialized education of personnel member, giving names of schools, dates attended, and degrees/qualifications obtained.]</i> [Insert]
<b>Professional certifications</b>	<i>[Provide details of professional certifications relevant to the scope of goods and/or services]</i> ✦ Name of institution: [Insert] ✦ Date of certification: [Insert]
<b>Employment Record/ Experience</b>	<i>[List all positions held by personnel (starting with present position, list in reverse order), giving dates, names of employing organization, title of position and location of employment.]</i> [Insert]

I, the undersigned, certify that to the best of my knowledge and belief, the data provided above correctly describes my qualifications, my experiences, and other relevant information about myself.

\_\_\_\_\_  
Signature of Personnel

\_\_\_\_\_  
Date (Day/Month/Year)

### **SECTION 3: Scope of Supply, Technical Specifications and Training(s), if applicable**

This section should demonstrate the Bidder's responsiveness to the specification by identifying the specific components proposed, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed bid meets or exceeds the requirements/specifications. All important aspects should be addressed in sufficient detail.

- 3.1 A detailed description of how the Bidder will deliver the required goods and services, keeping in mind the appropriateness to local conditions and project environment. Details how the different service elements shall be organized, controlled and delivered.
- 3.2 Explain whether any work would be subcontracted, to whom, how much percentage of the requirements, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 3.3 Implementation plan including a Gantt Chart or Project Schedule indicating the detailed sequence of activities that will be undertaken and their corresponding timing.
- 3.4 Details on post-deployment trainings on-site hands-on training.

### **SECTION 4: Registration & Certifications**

This section should demonstrate the Bidder's responsiveness towards its registration with the relevant national body and international organizations Certifying the bidder's qualifications with respect to Quality and Project Management.

- 4.1 Provide a copy of valid registration with the Pakistan Engineering Council (if applicable).
- 4.2 Provide a copy of valid Certificate issued by International Organization for Standardization certifying the bidder's compliance and practices towards quality management principles and standards in their offered products/ solutions and services.
- 4.3 Provide a copy of valid Certificate issued by International Organization for Standardization certifying the bidder's compliance and practices towards information security management principles and standards in their offered products/ solutions and services.

### **SECTION 5: Warranty and Support Services**

This section should demonstrate the Bidder's responsiveness to the post-commissioning warranty and support services of the goods supplied, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed bid meets or exceeds the requirements. All important aspects should be addressed in sufficient detail.

- 5.1 A detailed description of how the Bidder will provide the Warranty claims to the users, keeping in mind the span and complexity of the project in context of local conditions and project environment.
- 5.2 Explain whether any services or work would be subcontracted, to whom, how much percentage of the requirements, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 5.3 Details how the post-delivery/ deployment Support Services will be provided to the users keeping in consideration the criticality of IT systems, and dependency of university administration and operations on such systems.

## Form F: Specifications Compliance Form

(To be submitted in an envelope duly sealed and marked as Technical Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-SLC-ITB-108-20		

The Bidder's Bid should be organized to follow this format of the Technical Bid Proposal. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same may be viewed as non-responsive.

Goods and services to be Supplied <i>(based on the <b>Technical Specifications</b> provided in Section 5a &amp; Section 5b)</i>	Your response Compliance with specifications	
	Comply (Yes/ No) <i>(If No, indicate discrepancies)</i>	Quoted Specifications
Required Items	Offered Items	
<b>Solar Module:</b>		
<b>Module Make:</b> Tier 1		
<b>Solar Module Type:</b> Monocrystalline half cut cell Bifacial (500Watt or above)		
<b>Cell Quality:</b> A Grade Flash Test Report Required		
<b>Module Efficiency:</b> ≥19% or higher		
<b>Operating Temperature:</b> -10oC to +55oC		
<b>Cell voltage:</b> Each cell voltage must be 0.6V or above		
<b>Bus bar:</b> 5 or higher on each cell of module		
<b>Protection:</b> IP 67 or above		
<b>Certification:</b> IEC 61215, IEC 61730, IEC61701 or equivalent		
<b>Environmental safety factors:</b> Must Withstand •5400 PA snow Load •2400 PA wind Load		
<b>Connectors:</b> MC4, or compatible weatherproof		
<b>Front Cover:</b> 3.2 mm prism type tempered glass or higher		
<b>Fill factor:</b> The fill factor should be above 75% at STC.		
<b>Inverter:</b>		
<b>Inverter Type:</b> Pure Sine wave with MPPT Built-in Solar Charger		
<b>Inverter Size (KW):</b> 3KW,5KW,10KW,15KW		

<b>Grid/ Generator Synchronization:</b> The inverter should have built in capability to auto synchronize both with grid and battery.		
<b>Output Voltage Range:</b> 230VAC/400 VAC ±5%.		
<b>Topology:</b> Inverter Topology (Hybrid)		
<b>IP Rating/ Dust Proofing:</b> Preferred IP 67 (IEC 60529)/ outdoor use		
<b>Frequency:</b> 50Hz ±2%		
<b>Standby power consumption:</b> 3 ≤ Watt.		
<b>Max. efficiency/Euro-eta:</b> ~97.8% or above		
<b>Protections</b> <ul style="list-style-type: none"> <li>•Short Circuiting</li> <li>•Surge Protection</li> <li>•Leakage current protection</li> <li>•High Insulation</li> <li>•LVRT protection</li> <li>•Residual current detection.</li> <li>•DC protection must be for over voltage, under voltage, over current, over temperature, surge protection, DC reverse polarity protection</li> <li>•Over voltage at input (PV) (if built-in)</li> <li>•Harmonics Filter at input</li> <li>•Over voltage at output (AC)</li> </ul>		
<b>Operating Temperature:</b> 0 to 60oC		
<b>Humidity:</b> 10 ~90%		
<b>Input Voltage Range (solar panel):</b> 150V to 900V		
<b>Input Voltage Range (Battery):</b> 40 to 48V		
<b>Power Factor:</b> 0.8 leading/lagging		
<b>Communication:</b> RS 485/ RJ45 or Wifi (preferably RJ-45)		
<b>Fault Detection:</b> Remote fault detection supported		
<b>Mobile Applications:</b> Application for android and IOS		
<b>Batteries:</b>		
<b>Battery brand:</b> Narada or equivalent		
<b>Battery Type:</b> Lithium Ion battery (preferred LiFePO4)-12/24/48 Volt application package.		
<b>Maximum Charging current:</b> 23Amp or more rapid		
<b>Maximum Charging time:</b> Less than 2 hours		
<b>Battery Capacity (Ah):</b> 200Ah, 12 V/48V@ 12 hour discharge		
<b>Maximum Continuous Discharge:</b> 20 Ampere or better		
<b>Operating temperature:</b> -10oC ~ 65oC		
<b>Self-Discharge:</b> The maximum permissible self-discharge rate is maximum. 4% percent of rated capacity per month at 25°C.		
<b>Battery Life:</b> •80 % DoD or better. •Utilizes long life cycles. 2500- 3000 cycles or more		

<b>Tested and Certifications:</b> ISO9001(TUV), DIN43539-T5, IEC61427, DIN40742-773-774,DIN 40736,		
<b>Power Cables: (Pakistan Cables Or Equivalent)</b>		
<b>Main AC wire:</b> (2 Core – 16 mm <sup>2</sup> ) Cable		
<b>Sizes of DC Cables:</b> 6 mm <sup>2</sup> min. or equivalent		
<b>Temperature Range:</b> -10oC to +80oC.		
<b>Solar panels to battery box:</b> 6mm <sup>2</sup> or higher, 99.99% pure copper (Stranded and flexible) Make sure that the voltage drop at end node should not be more than 2%		
<b>Test Reports</b> Following test reports must be submitted: Copper purity test (at least 99.9% pure) Insulation Thickness Test DC Resistance Test High Voltage Test		
<b>Solar Mounting Structure: Base Specifications – As per Design</b>		
<b>Enclosure Material:</b> M.S sheet box or better		
<b>Strength:</b> Capable of handing tensile force of batteries proposed		
<b>Opening and Closing:</b> Must be fixed with durable mailbox (or compatible) lock and key (isolated for Controller and Battery)		
<b>Battery housing:</b> Should be in a vented compartment that prevents users from coming in contact with Battery terminals.		
<b>Harness:</b> Enclosure should have neat and clean appearance and have good harness even inside.		
<b>Dimensions:</b> Should be calculated according to the Battery size for proper and easy operation, maintenance and proper heat vent.		
<b>Finishing:</b> The sides of the Enclosure and its compartments must be closed and opened through screws for easy installation and maintenance. The sides of enclosure must be strip overlapped for safety and protection from rain. There should be a proper arrangement of ventilation especially for Controller.		
<b>Earthing/Grounding: Base Specifications – As per Design</b>		
<b>Earth resistance:</b> The PV panel frame and structure should be connected by the shortest practical route to an adequate earth contact less than 5 ohms resistance) as per requirement of equipment manufacturer and site earth conditions		
<b>Earthing Standard:</b> As per NEC table 250.122		
<b>Earth pit:</b> Grounding /earthing plate should be made of copper plate of 4mm thickness and size 1 feet by 1 feet		

<b>Earthing rods:</b> Grounding /earthing conductor should be connected to the plate /rod/GI pipe by proper connector of minimum 6 feet depth		
<b>Protection Class:</b> Class 2(Type2) minimum		
<b>Discharge voltage:</b> 1000 V DC or 1200 VDC (Line to earth) or above (matching the size of inverter)		
<b>Ingress Protection:</b> Minimum IP20 (placed in IP 65 Box along with other protections)		
<b><u>System Accessories /Miscellaneous items: Base Specifications – As per Design</u></b>		
<b>•Any other additional item to meet the scope:</b> with identification of item(s)		

## Form G: Price Schedule Form

(To be Submitted in a separate and sealed envelope duly marked as Financial Proposal)

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
ITB reference:	PAF: IAST-SLC-ITB-108-20		

[The Bidder is required to prepare the Price Schedule following the below format. The Price Schedule must include a detailed cost breakdown of all goods and related services to be provided.]

We, the <<Name of Bidder>>, hereby submit our Financial Bid for the Supply of Items as below. We assure you of our full compliance to the required specifications, delivery schedule and other terms without any deviation and/ or reservations. We reiterate our acceptance to the terms and conditions of the RFP. Our Financial proposal as below is submitted for your kind consideration;

Quoted Items in compliance to the Technical Specifications as referred in Section – 5a and Section – 5b	Quantity (a)	Unit Price [in Rs.] (b)	GST [in Rs.] (c)	Total Price [in Rs.] $d=a*[b+c]$
Solar Panel/ Module (540 W each)	120			
Inverter – 3KW	03			
Inverter – 5KW	01			
Inverter – 10KW	02			
Inverter – 15KW	02			
Batteries	368			
Power Cables (DC) – in Mtrs	210			
Power Cables (AC) – in Mtrs	1250			
Solar Mounting Structure -3KW	03			
Solar Mounting Structure -5KW	01			
Solar Mounting Structure -10KW	02			
Solar Mounting Structure -15KW	02			
Battery Enclosure - 3KW	03			
Battery Enclosure - 5KW	01			
Battery Enclosure - 10KW	02			
Battery Enclosure - 15KW	02			
Earthing/Grounding	08			
System Accessories /Miscellaneous items (Any other additional item to meet the scope with identification of item(s) and unit cost)				

**Extended Warranty Price (at discretion of PAF-IAST)**

<b>Annual Warranty &amp; Support Services beyond Standard Warranty of the Quoted Items</b>	<b>2<sup>nd</sup> Year (in PKR)</b>	<b>3<sup>rd</sup> Year (in PKR)</b>	<b>4<sup>th</sup> Year (in PKR)</b>
Solar Module	-	-	-
Inverter – 3KW	-	-	-
Inverter – 5KW	-	-	-
Inverter – 10KW	-	-	-
Inverter – 15KW	-	-	-
Batteries	-	-	
Power Cables (DC) – in Mtrs	-	-	
Power Cables (AC) – in Mtrs	-	-	
Solar Mounting Structure -3KW	-	-	
Solar Mounting Structure -5KW	-	-	
Solar Mounting Structure -10KW	-	-	
Solar Mounting Structure -15KW	-	-	
Battery Enclosure - 3KW	-	-	
Battery Enclosure - 5KW	-	-	
Battery Enclosure - 10KW	-	-	
Battery Enclosure - 15KW	-	-	
Earthing/Grounding	-	-	
System Accessories /Miscellaneous items (Any other additional item to meet the scope (with identification of item(s) and unit cost)	-	-	

Total Bid Value in Figures (including Extended Warranty Price): \_\_\_\_\_

Total Bid Value in words (including Extended Warranty Price): \_\_\_\_\_

Name & Designation of Authorized Person: \_\_\_\_\_

Signature: \_\_\_\_\_ (Please affix company stamp here)

**Note: Quoted price must be inclusive of all taxes and duties.**



## Annex – I: Integrity Pact

The Bidders will be required to submit the below text on stamp paper after filling in the details and duly signed as well as stamped, as part of their Technical Proposal.

### DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC PAYABLE BY THE SUPPLIER OF GOODS, SERVICES & WORK IN CONTRACTS WORTH RS. 10.0 MILLION OR MORE

(To be filled by the bidder as a part of technical proposal)

Contract Number: \_\_\_\_\_ Dated: \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

\_\_\_\_\_ hereby declare 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 partner.

Without limiting the generality of the forgoing, \_\_\_\_\_ represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or 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 nature 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 consultant fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatever from GoP, except that which has been expressly declared pursuant hereto.

\_\_\_\_\_ 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.

\_\_\_\_\_ accept full responsibility and strict liability for making any false declaration, not making full discloser, 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 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, \_\_\_\_\_ agrees to identify 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 time the sum of any commission, gratification, bribe, finder's fee or kickback given by \_\_\_\_\_ as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever from GoP.

\_\_\_\_\_  
[Buyer] [Seller / Supplier]

# Annex – II: Draft Contract Sample

Available at PAF: IAST website at <http://www.paf-iastr.edu.pk/downloads>