



Higher Education Commission Pakistan

Request for Proposals

Hiring of Firms/Companies/Contractors for: Solarization of HEC Head Office and its Regional Centres on EPC Basis with O&M (02 Years)

Tender No.: 3(4)/1/2023/Services/Engg/HEC-420

The Higher Education Commission (HEC) invites proposals from eligible firms, licensed by the Pakistan Engineering Council (PEC) in the appropriate category and registered with the Income Tax & GST Departments for the Works, to provide the following contracting services for solarization of HEC Head Office and its Regional Centres as per packages mentioned below:

Package	Site	Capacity
Package 1	HEC Head Office at Sectors H-9 and H-8 Islamabad	175 KW +350 KW
Package 2	HEC Lahore Centre	135 KW
Package 3	HEC Karachi Centre	85 KW
Package 4	HEC Peshawar Centre	100 KW

The tender documents for each Package can be downloaded from the HEC/PPRA websites after payment of a non-refundable fee of Rs. 1000/- to be deposited in HEC Account No. 17427900133401 of Habib Bank Limited, SRC Branch, Sector H-9, Islamabad (online or physically). Please note that a separate fee of Rs. 1000/- will have to be deposited, and a separate RFP be used for each Package.

The bidder can apply for either or all Packages as desired. The bidder shall purchase separate RFP for each Package as indicated and shall prepare and submit Physical Bids to Engineering Section, Auditorium Block, Higher Education Commission, Islamabad, clearly mentioning the Name of Project as well as the Package being applied for, as well as apply to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) for each Package separately as per instructions provided in the bidding document. All bids must be accompanied by a Bid Security (Package-wise) as specified in the bidding document.

It is mandatory for a bidder to submit bid for each applied for Package to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) as well as submit the physical bid on or before the submission Deadline, i.e., Tuesday, May 28, 2024 in sealed envelopes at 1330 hours. Technical bids will be opened at 1400 hours on the same day at Lecture Hall, Auditorium Block, HEC H-9 Islamabad in the presence of bidders' representatives who choose to attend at the same address. No bid for any Package will be accepted without evidence of Tender Fee Submission and Earnest Money. Bids for any Package will be rejected if not received in Physical Form before the submission deadline. Furthermore, bids for any Package will be rejected if not applied for on PPRA-EPADS system as well before the submission deadline.

Director/In-charge (Services)
Services Division, Higher Education Commission,
Auditorium Block, H-9, Islamabad, Ph.: 051-9040-1526 & -1528 & -1575

REQUEST FOR PROPOSAL

FOR

SELECTION OF FIRMS/COMPANIES/CONTRACTORS
FOR

“SOLARIZATION OF HEAD OFFICE AND REGIONAL CENTERS
OF HIGHER EDUCATION COMMISSION (HEC) ON EPC BASIS
AND O&M (02 YEARS)”



HIGHER EDUCATION COMMISSION
ISLAMABAD

APRIL, 2024



TABLE OF CONTENTS

SECTION-I: INVITATION TO BIDS	1
1.1 INVITATION TO BIDDERS	1
SECTION-II: INSTRUCTIONS TO BIDDERS (ITB)	4
2.1. Introduction	4
2.1.1 Scope of Bid	4
2.1.2 Source of Funds	4
2.1.3 Eligible Bidders.....	4
2.1.4. Eligible Goods and Services	5
2.1.5. Cost of Bidding	6
2.1.6. One person one bid	6
2.2. The Bidding Documents	6
2.2.1. Content of Bidding Documents	6
2.2.2. Clarification of Bidding Documents	7
2.2.3. Amendment of Bidding Documents	8
2.3. Preparation of Bids	8
2.3.1. Language of Bid	8
2.3.2. Bid Form	8
2.3.3. Bid Prices	8
2.3.4. Bid Currencies.....	9
2.3.5. Documents Establishing Bidder’s Eligibility and Qualification.....	9
2.3.6. Documents Establishing Goods’ Eligibility and Conformity to Bidding Documents	10
2.3.7. Bid Security.....	11
2.3.8. Period of Validity of Bids	12
2.3.9. Format and Signing of Bid	12
2.4. Submission of Bids	13
2.4.1 Sealing and Marking of Bids	13
2.4.2 Deadline for Submission of Bids	14
2.4.3. Late Bids.....	14
2.4.4. Modification and Withdrawal of Bids.....	14
2.5. Opening and Evaluation of Bids.....	15
2.5.1. Opening of Bids by the Procuring Agency	15
2.5.2. Confidentiality	15
2.5.3. Clarification of Bids	15
2.5.4. Preliminary Examination.....	16
2.5.5. Examination of Terms and Conditions; Technical Evaluation	17
2.5.6. Correction of Errors	17



2.5.7. Conversion to Single Currency.....	18
2.5.8. Post-Qualification & Evaluation of Bids	18
2.5.9. Contacting the Procuring Agency	19
2.5.10. Grievance Redressal.....	19
2.6. Award of Contract	19
2.6.1. Notification of Award	19
2.6.2. Performance Guarantee	19
2.6.3. Signing of Contract/ Issuance of Purchase Order	20
2.6.4. Award Criteria.....	20
2.6.5. Procuring Agency’s Right to Vary Quantities at Time of Award	20
2.6.6. Procuring Agency’s Right to accept or Reject All Bids	21
2.6.7. Re-Bidding.....	21
2.6.8. Corrupt or Fraudulent Practices	21
2.6.9. Quantity and volume of the goods to be considered in mind	26
APPENDIX A TO INSTRUCTIONS TO BIDDERS	27
SECTION-III. BOQ AND TECHNICAL SPECIFICATIONS.....	28
3.1 TECHNICAL COMPLIANCE SHEET/BILL OF QUANTITY (BOQ)	28
Please Refer to Annexure A for BOQ, and technical details of all packages	28
3.2 Minimum Technical Specifications	29
Solar PV Panels.....	29
On-Grid Solar Smart Inverter	30
PV MOUNTING Structure.....	31
SECTION-IV: BID DATA SHEET	32
A. Introduction.....	32
B. Bidding Documents	32
C. Bid Price, Currency, Language and Country of Origin	33
D. Preparation and Submission of Bids	33
E. Opening and Evaluation of Bids	35
F. Bid Evaluation Criteria	35
G. Award of Contract.....	38



SECTION-VII. SCHEDULE OF REQUIREMENTS	40
SCHEDULE – A TO BID	40
SCHEDULE – B TO BID	42
SCHEDULE – C TO BID	43
SCHEDULE – D TO BID	44
SECTION-VIII: SAMPLE FORMS	45
8.1 Bid Form.....	45
8.2 Bidder’s JV Members Information Form.....	47
8.3. Manufacturer’s Authorization Form.....	48
8.4. Bidder Profile Form.....	49
8.5. General Information Form	50
8.6. Affidavit	51
8.7. Performance Guarantee Form.....	52
8.8. Technical Bid Form (As per Section III Annexure A).....	53
8.9. Contract Form.....	54
8.10. Financial Bid Form/Price Schedule.....	55
SCHEDULE OF PRICES – SUMMARY OF BID PRICES.....	55
Financial Bill of Quantity (BOQ) / Item Wise BOQ.....	56
8.11. Bid Security Form.....	57
8.12. Company’s Experience	58
SECTION-V: GENERAL CONDITIONS OF CONTRACT	60
1. Definitions.....	60
2. Application.....	61
3. Country of Origin	61
4. Standards	61



5. Use of Contract Documents and Information; Inspection and Audit by the procuring agency.....	61
6. Patent Rights.....	62
7. Performance Guarantee	62
8. Inspections and Tests.....	63
9. Packing.....	63
10. Delivery and Documents.....	64
11. Insurance	64
12. Transportation.....	64
13. Incidental Services.....	65
14. Spare Parts.....	65
15. Warranty.....	66
16. Payment.....	67
17. Prices	67
18. Change Orders.....	67
19. Contract Amendments.....	68
20. Assignment	68
21. Sub-contracts	68
22. Delays in the Supplier's Performance.....	68
23. Liquidated Damages	69
24. Termination for Default.....	69
25. Force Majeure	71
26. Termination for Insolvency	71
27. Termination for Convenience	71
28. Resolution of Disputes.....	72
29. Governing Language	72



30. Applicable Law	72
31. Notices.....	72
32. Taxes and Duties	73

SECTION-VI. SPECIAL CONDITIONS OF CONTRACT 74

Special Conditions of Contract	74
1. Definitions (GCC Clause 1).....	74
2. Country of Origin (GCC Clause 3)	74
3. Performance Guarantee (GCC Clause 7)	74
4. Inspections and Tests (GCC Clause 8).....	74
5. Packing (GCC Clause 9).....	74
6. Delivery and Documents	74
7. Insurance.....	75
8. Incidental Services (GCC Clause 13)	75
9. Spare Parts	75
10. Warranty	76
11. Sample provision	76
12. Payment (GCC Clause 16).....	77
13. Prices (GCC Clause 17)	78
14. Liquidated Damages (GCC Clause 23)	78
15. Resolution of Disputes (GCC Clause 28).....	78
16. Governing Language (GCC Clause 29).....	79
17. Applicable Law (GCC Clause 30).....	79
18. Notices (GCC Clause 31).....	79

ANNEXURE A..... 80

Package 1.....	80
Package 2.....	105
Package 3.....	116
Package 4.....	130



Section-I: Invitation to Bids

1.1 INVITATION TO BIDDERS

Bid Ref No./Tender No.: 3(4)/1/2023/Services/Engg/HEC-420

SUBJECT: SELECTION OF CONTRACTOR FIRMS FOR SOLARIZATION OF HEAD OFFICE AND REGIONAL CENTERS OF HIGHER EDUCATION COMMISSION (HEC) ON EPC BASIS with 2 years O&M

1. The Higher Education Commission (HEC) (here-in-after called the “Procuring Entity”) invites proposals to provide the following contracting services for solarization of its Head office and regional centers, as per packages mentioned below.
2. The Procuring Entity invites sealed bids from eligible firms licensed by the Pakistan Engineering Council in the appropriate category for the Works. A foreign bidder is entitled to bid only in a joint venture with a Pakistani Contractor in accordance with the provisions of PEC bye-laws. Sealed Bids for complete scope of work are invited from prospective Bidders to bid for the mentioned project. The Bids shall be received as per single stage two envelope procedures (SSTE), as per Rule 36(b) of PPRA Rules.
3. The proposals shall be in **book binding form**, properly page numbered (**Loose, Ring and spring binding not acceptable**).
4. This Bidding Document has been addressed to all the interested Contractors/Suppliers.
5. A firm will be selected, under **Single Stage-Two Envelopes (SSTE) Bidding** and procedures described in this Bidding Document.
6. The Bidding Document includes:
 - i. INVITATION FOR BIDS
 - ii. INSTRUCTIONS TO BIDDERS
 - iii. TECHNICAL SPECIFICATIONS/SCOPE OF WORK/TECHNICAL COMPLIANCE SHEET
 - iv. BID DATASHEET
 - v. PARTICULAR/SPECIAL CONDITIONS OF CONTRACT
 - vi. SCHEDULE OF REQUIREMENTS (SCHEDULE A TO D)
 - vii. SAMPLE FORMS
7. The Tender Documents for **each Package can be downloaded from the HEC/PPRA websites** after payment of a non-refundable fee of PKR-1000/- to be deposited in HEC Account No. 17427900133401 of Habib Bank Limited, SRC Branch, Sector H-9, Islamabad (online or physically).



Please note that a separate fee of Rs. 1000/- will have to be deposited, and a separate RFP be purchased for each Package separately. Any Proposal without proof of submission of Fee Submission of Rs. 1000/- for each Package applied for will be rejected.

8. The bidder can apply for either or all packages as desired. The bidder shall purchase separate RFP for each package as indicated by below table, and shall prepare and submit bids for each package separately as per instructions provided in bid document. The bidder shall clearly mention the "Package No" on the covering letter, financial bid form and outer envelope for which bid is submitted.

The preliminary details are as follows:

Package	Site	Capacity	Bid security (Rs.)
Package 1	HEC Islamabad Offices (H9Sector) (H8 sector)	175 KW 350 KW	1,932,000/-
Package 2	HEC Lahore Office	135 KW	542,500/-
Package 3	HEC Karachi Office	85 KW	342,500/-
Package 4	HEC Peshawar Office	100 KW	390,000/-

Note: Fixed Bid security is mentioned for each package which should be accompanied with the technical proposal. Detailed BoQ of each Package is mentioned in respective section.

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

9. All bids must be accompanied by a Bid Security (package wise as specified) in the amount stated above in the shape of Bank Draft/Pay Order in the Name of "**DG (Finance), HEC, H-9, Islamabad**".
10. The bids for Each Applied Package must be delivered at Address: **Engineering Section, Auditorium Block, Higher Education Commission, Islamabad** on or before **Tuesday 28-May-2024** in sealed envelopes at **13:30 hrs**. Technical Bids will be opened at **14:00 hrs** on the same day in the presence of bidders' representatives who choose to attend at: **Lecture Hall, Auditorium Block, HEC H-9 Islamabad** the same address.
11. It is **mandatory** for the bidders to submit the **bid for each applied Package** to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System **as well** before the Submission Deadline, i.e.: **Tuesday 28-May-2024 at 13:30 hours**. **Bids for any Applied Package received physically after the Submission Deadline, and without Application to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System for each package before the submission deadline will be rejected.**
12. Bids received for any Applied Package without proof of submission of Tender Fee (of Rs. 1000/- per Package), or without Earnest Money **will be rejected**. Bids for any Package will be rejected **if not**



received in Physical Form before the submission deadline. Furthermore, **Bids for any Package will be rejected if not applied for on PPRA-EPADS system as well.**

13. Proposals for any Package received by HEC after the deadline for submission of proposal prescribed in the document will be returned unopened to such applicant. Delays in the mail or courier, delays of person in transit, or delivery of a proposal to the wrong office **shall not be accepted** as an excuse for failure to deliver a proposal at the proper place and time. It shall be the applicant's responsibility to determine the manner in which timely delivery of his proposal will be accomplished either in person, by messenger or by mail. The same applies to submission **PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System** for each package as well. Any bid received without submission to PPRA-EPADS before the deadline will be rejected. It is mandatory to submit the Physical Bid for Each Package **as well as to** apply for each Package on PPRA-EPADS before the deadline. Failure **to do both simultaneously** will result in rejection of the Bid for the Package applied for.
14. The works will be done to the complete satisfaction of the Executive Director as well as the authorized Engineer by the HEC, whose judgement with regard to quality of the material and workmanship will be final and binding. In case the contractor fails to complete the work in the stipulated time, the HEC shall be free to award the balance incomplete work to another contractor at his risk and cost.
15. The Pre-Bid Conference for the said Project will be scheduled on **Tuesday 14-May-2024 at 11:00 hrs.** The Client's representative is **Assistant Engineer (Electrical), Address: Engineering Section, Auditorium Block, Higher Education Commission, Islamabad,** Telephone: **051-9040-1575-26,** E-mail: **sazahid@hec.gov.pk**

The Director/In-charge (Services)
Services Division, Higher Education Commission,
Auditorium Block, H-9, Islamabad, Ph.: 051-9040-1575-26



Section-II: Instructions to Bidders (ITB)

2.1. Introduction

2.1.1 Scope of Bid

Higher Education Commission (HEC) wishes to receive bids for the following scope of work:

“Supply, Installation, Commissioning and Net-metering of On-Grid Solar System for Head office and Regional centers of HEC on EPC basis with 2 years O&M”.
(For each package as mentioned).

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

Package	Site	Capacity	Bid Security (Rs.)
Package 1	HEC Islamabad Offices (H9 sector)	175 KW	1,932,000/-
	(H8 sector)	350 KW	
Package 2	HEC Lahore Office	135 KW	542,500/-
Package 3	HEC Karachi Office	85 KW	342,500/-
Package 4	HEC Peshawar Office	100 KW	390,000/-

Details BoQ of Each Package is mentioned in respective section

The Bidders are required to submit the Technical and Financial Bid separately for each package. The Bid Security shall be enclosed in the Technical Bid for each proposal.

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

2.1.2 Source of Funds

The above scope of work is funded by **Higher Education Commission, Islamabad.**

2.1.3 Eligible Bidders

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

1. AEDB registration
2. Pakistan Engineering Council (PEC) Registration in C3 or above Category with relevant codes e.g. (EE04, EE06, EE11)
3. SECP,
4. Registration with Provincial Revenue department (e.g. PRA, SRA etc.) whichever is



- applicable.
5. NTN / STRN
 6. For international partner company only, they have to provide registration/affiliation/ authorization certificate with any such international agency located in relevant country of origin
 7. JV/Consortium Agreement in case of Joint Venture partners, or in case of any international applicant/bidder JV with registered local firm is mandatory as per PEC byelaws.
 8. Undertaking that the Company / Firm/by individual JV members is/are not blacklisted by Provincial or Federal Government Department, Agency, Organization or autonomous body anywhere in Pakistan. Affidavit on stamp paper shall be provided.
 9. Valid evidence showing the Company / Firm/by individual JV members has/has never been litigated, will allow participating in the bidding process. Affidavit on stamp paper shall be provided.
 10. Audited Financial Statements of last three years shall be provided. Annual average turnover shall be more than 100 Million PKR verifiable from audited statements.
 11. Must provide details and evidence of 03 Nos. relevant experiences during last three years for projects having capacity of greater than 300kWp (each).
 12. Manufacturer's Authorizations for Solar Modules, and Inverters
 13. Warranty declarations.
 14. The bidder should have their presence/office in respective location as applicable package.
E.g. if an Islamabad based company willing to apply for Package 3 (Karachi), then it should have its office in Karachi as well.

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

Eligibility Requirement is to be fulfilled for all packages.

Please see BDS Clause 13 (2.1.3) for details.

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

- a) Mandatory Criteria:
Please see BDS clause 24 (2.5.8) for details

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

2.1.4. Eligible Goods and Services

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



- ii) The origin of goods and services is distinct from the nationality of the Bidder.

2.1.5. Cost of Bidding

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

2.1.6. One person one bid

- i) A Bidder shall submit only one Bid in the same bidding process, either individually as a Bidder or as a member in a joint venture or any similar arrangement.
- ii) No Bidder can be a sub-contractor while submitting a Bid individually or as a member of a joint venture in the same Bidding process.
- iii) A Bidder, if acting in the capacity of sub-contractor in any Bid, shall not submit bid for the same.

2.2. The Bidding Documents

2.2.1. Content of Bidding Documents

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

Bid Forms include

 - h. bid form
 - i. Manufacturer’s authorization form
 - j. Bidder profile form
 - k. General information form
 - l. Affidavit



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

2.2.2. Clarification of Bidding Documents

- i) A prospective Bidder requiring any clarification of the Bidding Documents may notify the Procuring Agency in writing or in electronic form that provides record of the content of communication at the Procuring Agency's address indicated in the **BDS**.
- ii) The Procuring Agency will within three (3) working days after receiving the request for clarification, respond in writing or in electronic form to any request for clarification provided that such request is received not later than seven (7) days prior to the deadline for the submission of Bids. As prescribed in **ITB 2.2.2 (i), above**. However, this clause shall not apply in case of alternate methods of Procurement.



- iii) Should the Procuring Agency deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under **ITB 2.2.3.**

2.2.3. Amendment of Bidding Documents

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

2.3. Preparation of Bids

2.3.1. Language of Bid

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

2.3.2. Bid Form

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

2.3.3. Bid Prices

- i) The Bidder shall indicate on form 8.10 the unit prices (where applicable) and total Bid price of the goods it proposes to supply under the contract.
- ii) Prices indicated on the Price Schedule shall be item wise/ package wise



- iii) The Bidder's separation of price components in accordance with ITB Clause 2.3.3(ii) above will be solely for the purpose of facilitating the comparison of Bids by the Procuring Agency and will not in any way limit the Procuring Agency's right to contract on any of the terms offered.
- iv) Prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account, unless otherwise specified in the Bid Data Sheet. A Bid submitted with an **adjustable price quotation** will be treated as non-responsive and may be rejected.

2.3.4. Bid Currencies

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

2.3.5. Documents Establishing Bidder's Eligibility and Qualification

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



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

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

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

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



- vii) **Pursuant to the requirements as indicated in ITB 2.3.6, the Bidder shall furnish, as part of its Bid, all those documents establishing the eligibility in conformity to the terms and conditions specified in the Bidding Documents for all goods and related services which the Bidder proposes to deliver.**
- viii) The Bidder shall also furnish a list giving full particulars, including available sources and current prices of goods, spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BIDS** following commencement of the use of the goods by the Procuring Agency.
- ix) The required documents and other accompanying documents must be in English. In case any other language than English is used the pertinent translation attested by the embassy in country of manufacturer into English shall be attached to the original version.

2.3.7. Bid Security

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



pursuant to ITB Clause 2.3.8 (ii) or along with unopened financial proposal.

- vi) The successful Bidder's Bid security will be discharged upon the Bidder signing the contract, pursuant to ITB Clause 2.6.1, and furnishing the Performance Guarantee, pursuant to ITB Clause 2.6.2.
- vii) The Bid security may be forfeited:
 - a. If a Bidder withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or
 - b. In the case of a successful Bidder, if the Bidder:
 - i. Fails to sign the contract in accordance with ITB Clause 2.6.3; **or**
 - ii. Fails to furnish Performance Guarantee in accordance with ITB Clause 2.6.2; or
 - iii. If the blacklisting proceedings under Section-17A of PPRA Act, 2009 read with the Appropriate PPRA Rule are initiated and the bidder is declared blacklisted after due process of law.

2.3.8. Period of Validity of Bids

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

2.3.9. Format and Signing of Bid

- i) The Bidder shall prepare and submit bid for each package separately. The bidder will submit an original and the two (02) numbers of copies of the Bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID," as appropriate. In the event of any discrepancy between them, the original shall prevail.
- ii) The Bidder shall authorize person/persons for signing, submission and further correspondence with Procuring Agency on behalf of bidder. Authority letter must be part of



bid. However, in case of any issue bidder shall be responsible for all consequences.

- iii) The original and the copy or copies of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the **BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid shall be signed and stamped by the authorized person.

2.4. Submission of Bids

2.4.1 Sealing and Marking of Bids

- i) In case of Single Stage Two Envelope Procedure, The Bid shall comprise two envelopes submitted simultaneously, one called the Technical Proposal and the other Financial Proposal. Both envelopes to be enclosed together in an outer single envelope called the Bid. Each Bidder shall submit his bid as under:
 - a) Bidder shall submit his TECHNICAL PROPOSAL and FINANCIAL PROPOSAL in separate inner envelopes and enclosed in a single outer envelope.
 - b) ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
 - (c) The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in BDS.
- ii) The inner and outer envelopes shall:
 - a) be addressed to the Procuring Agency at the address provided in the BDS;
 - b) bear the name and identification number of the contract as defined in the BDS; and provide a warning not to open before the time and date for bid opening, as specified in the BDS, pursuant to ITB 2.4.2;



c) In addition to the identification required in Sub- Clause (b) hereof, the inner envelope shall indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared “late” pursuant to ITB.2.4.3.

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

2.4.2 Deadline for Submission of Bids

i) Bids for each Package must be received by the Procuring Agency at the address specified under BDS no later than the time and date specified in the Bid Data Sheet.

ii) Proposals for any Package received by HEC after the deadline for submission of proposal prescribed in the document will be returned unopened to such applicant. Delays in the mail or courier, delays of person in transit, or delivery of a proposal to the wrong office **shall not be accepted** as an excuse for failure to deliver a proposal at the proper place and time. It shall be the applicant’s responsibility to determine the manner in which timely delivery of his proposal will be accomplished either in person, by messenger or by mail. The same applies to submission **PPRA-EPADS** (e-Pak Acquisition and Disposal Systems) System for each package as well. Any bid received without submission to PPRA-EPADS before the deadline will be rejected.

iii) It is mandatory to submit the Physical Bid for Each Package as well as to apply for each Package on PPRA-EPADS before the deadline. Failure to do both simultaneously will result in rejection of the Bid for the Package applied for.

2.4.3. Late Bids

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

2.4.4. Modification and Withdrawal of Bids

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



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

2.5. Opening and Evaluation of Bids

2.5.1. Opening of Bids by the Procuring Agency

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

2.5.2. Confidentiality

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

2.5.3. Clarification of Bids

- i) The Procuring Agency may, at its discretion, ask any Bidder for a clarification of its Bid including breakdown of prices to determine its reasonability, to assist in the examination, evaluation and comparison of Bids and post-qualification of the Bidders. Any clarification submitted by a Bidder that is not in response to a request by the Procuring Agency shall not be considered.
- ii) The request for clarification and the response shall be in writing or in electronic forms that provide record of the content of communication. In case of Single Stage Two



Envelope Procedure, no change in the prices or substance of the Bid shall be sought, offered, or permitted.

- iii) The alteration or modification in The Bid which in any way affect the following parameters will be considered as a change in the substance of a bid:
 - a) Evaluation & qualification criteria;
 - b) Required scope of work or specifications;
 - c) All securities requirements;
 - d) Tax requirements;
 - e) Terms and conditions of bidding documents.
 - f) Change in the ranking of the Bidder

2.5.4. Preliminary Examination

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



e) Is responsive to the requirements of the Bidding Documents.

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

2.5.5. Examination of Terms and Conditions; Technical Evaluation

- i) The Procuring Agency shall examine the Bid to confirm that all terms and conditions specified in the **GCC** and the **SCC** have been accepted by the Bidder without any material deviation or reservation.
- ii) The Procuring Agency shall evaluate the technical aspects of the Bid submitted to confirm that all requirements specified in **Section III-Technical Specifications, Section VII – Schedule of Requirements & Evaluation Criteria as provided in BDS**, have been met without material deviation or reservation.
- iii) If after the examination of the terms and conditions and the technical evaluation, the Procuring Agency determines that the Bid is not responsive in accordance, it shall reject the Bid.

2.5.6. Correction of Errors

- i) Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -
 - a) If there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected, unless in the opinion of the Procuring Agency there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;
 - b) If there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail and the total shall be corrected; and
 - c) Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.
 - d) Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bid, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.



- ii) The amount stated in the Bid will, be adjusted by the Procuring Agency in accordance with the above procedure for the correction of errors. The concurrence of the Bidder shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, its Bid will then be rejected, and the Bid Security may be forfeited or the Bid Securing Declaration may be executed in accordance with **ITB 2.3.8**.

2.5.7. Conversion to Single Currency

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

For the purposes of comparison of bids quoted in different currencies, the price shall be converted into a single currency specified in the bidding documents. The rate of exchange shall be the selling rate, prevailing on the date of opening of bids specified in the bidding documents, as notified by the State Bank of Pakistan on that day, in case of holiday in State Bank of Pakistan on the day of opening financial bids, then previous working day's ex-change rates will prevail.

2.5.8. Post-Qualification & Evaluation of Bids

- i) The determination will take into account the Bidder's financial, technical, and production/ supplying capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 2.3.6, as well as such other information required for eligibility/qualification expressed in Bid Data Sheet as the Procuring Agency deems necessary and appropriate.
- ii) The Procuring Agency will **technically evaluate** and compare the Bids which have been determined to be responsive, pursuant to ITB Clause 2.5.5, as per Technical Specifications required.
- iii) The **financial evaluation** of a Bid will be on the basis of form of Price Schedules/Financial Bid Form 8.10 to be decided by the Procuring Agency which must include clear cut instruction regarding item wise or package wise evaluation inclusive of prevailing taxes, duties, fees etc.



2.5.9. Contacting the Procuring Agency

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

2.5.10. Grievance Redressal

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

2.6. Award of Contract

2.6.1. Notification of Award

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

2.6.2. Performance Guarantee

- i) Within fifteen (15) days of the receipt of notification of award from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in accordance with the Conditions



of Contract, in the Performance Guarantee Form provided in the Bidding documents, or in another form acceptable to the Procuring Agency.

- ii) Failure of the successful Bidder to comply with the requirement of ITB Clause (i) above or ITB Clause 2.6.3 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid security along with other remedies available under PPRA/PEC byelaws. After that, the Procuring Agency may decide to award the contract to the next lowest evaluated Bidder, keeping in view the Bid validity time, or call for new Bids keeping in view the concept of value for money as defined under rule-2(AE) read with Principles of Procurement as enunciated in PPRA Rules.

2.6.3. Signing of Contract/ Issuance of Purchase Order

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

2.6.4. Award Criteria

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

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

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



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

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

2.6.7. Re-Bidding

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

2.6.8. Corrupt or Fraudulent Practices

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

“Corrupt practices” in respect of procurement process, shall be as given in S-2 (d) of PPRA, Act, 2009, which is as follows:

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

- i. Coercive practice by impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;*
- ii. Collusive practice by arrangement between two or more parties to the procurement process or Contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;*
- iii. Offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;*



- iv. *Any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;*
- v. *Obstructive practice by harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a Contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit process.”*

ii) Blacklisting & Debarment:

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

Requirements & Procedure for Blacklisting & Debarment:

As per S-17A of PPRA, Act, 2009:

“17A. Blacklisting.– (1) *A procuring agency may, for a specified period and in the prescribed manner, debar a bidder or Contractor from participating in any public procurement process of the procuring agency, if the bidder or Contractor indulges in corrupt practice or any other prescribed practice.*

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

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



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

As per Appropriate Rule of PPRA Rules.

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

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

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

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

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

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

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



(6) The mechanism or process for barring a bidder or Contractor from participating in procurement process of a procuring agency, procuring agencies and a representation under this rule is specified in the Schedule appended to these rules.

As per Schedule appended with appropriate PPRA Rules.

SCHEDULE

see sub-rule (6) of rule 21

BLACKLISTING MECHANISM OR PROCESS

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



7. *The procuring agency shall decide the matter on the basis of the available record and personal hearing of the bidder or Contractor, if available.*
8. *The procuring agency shall decide the matter within fifteen days from the date of personal hearing unless the personal hearing is adjourned to a next date and in such an eventuality, the period of personal hearing shall be reckoned from the last date of personal hearing.*
9. *The procuring agency shall communicate to the bidder or Contractor the order of debarring the bidder or Contractor from participating in any public procurement with a statement that the bidder or Contractor may, within thirty days, prefer a representation against the order before the Managing Director of the Authority.*
10. *The procuring agency shall, as soon as possible, communicate the order of blacklisting to the Authority with the request to upload the information on its website.*
11. *If the procuring agency wants the Authority to debar the bidder or Contractor from participating in any public procurement of all procuring agencies, the procuring agency shall specify reasons for such dispensation.*
12. *The Authority shall immediately publish the information and decision of blacklisting on its website.*
13. *In case of request of a procuring agency under para 11 or representation of any aggrieved person under rule 21, the Managing Director shall issue a notice for personal hearing to the parties and call for record of proceedings of blacklisting. The parties may file written statements and documents in support of their contentions.*
14. *In case of representation of any aggrieved person or procuring agency under rule 21, the Chairperson shall issue a notice for personal hearing to the parties and may call for the record of the proceedings. The parties may file written statements and documents in support of their contentions.*
15. *In every order of blacklisting under rule 21, the procuring agency shall record reasons of blacklisting and also reasons for short, long or medium period of blacklisting.*
16. *The Authority shall upload all the decisions under rule 21, available with it, on its website. But the name of a bidder or*



Contractor shall immediately be removed from the list of blacklisted persons on expiry of period of blacklisting or order of the competent authority to that effect, whichever is earlier.

17. *An effort shall be made for electronic communication of all the notices and other documents pursuant to this mechanism or process.”*

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

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

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



Appendix A to Instructions to Bidders

NAME OF ELIGIBLE COUNTRIES

[As per list allowed by Government of Pakistan]



Section-III. BOQ and Technical Specifications
3.1 TECHNICAL COMPLIANCE SHEET/BILL OF QUANTITY (BOQ)

Please Refer to Annexure A for BOQ, and technical details of all packages



3.2 Minimum Technical Specifications

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

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

Solar PV Panels

Parameters	Min. Specifications required
Module Make	Brand should be verifiable for the procurement year
PV Module Capacity	590 Watts or above (as per design)
PV Module Type	HJT Mono (Only)
Cell Quality	A Grade (verifiable)
Module Efficiency	22% or higher
Power Tolerance	Must be + 3% or more
Operating cell Temperature	minus 40C to positive 85C
Temperature coefficient	Minus 40 %/ C or less
bypass diode	AS per design
Certification	IEC 61215, IEC 61730, IEC 61439, IEC 60947-3 as amended to date, PID FREE
Frame	Must withstand 5400 PA impulse Load
Junction box	IP 67 or better
Cable	4mm ² (IEC),300mm or higher (As per design)
Connectors	MC4 or comparable weather proof
Cover Glass	Double Glass, Minimum 2 mm
Product Warranty and Guarantee	15 years product replacement warranty power output within 15 years shall not fall below 90%Power output within 25 years shall not fall below 85%
	12 years full replacement of module, if the major components malfunctioning PV module performance guarantee 25 years or more Type of performance guarantee shall be final after 1st year



On-Grid Solar Smart Inverter

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



PV MOUNTING Structure

S/N	Parameters	Min. Specifications required
Tentative outlines, the design will be site-dependent and may vary		
1	Structure material	Mild steel / Aluminum or material with more than 15 years of proven life
2	Wind loading	The mounting system should be able to allow air circulation for cooling in high temperatures and withstand wind speed of 130 Km/hour at 3-sec gust
3	Material surface protection	The mounting structure should be Galvanized, not less than 90 microns (in the case of Hot-dip ASTM compliant). Ground Slope should be adequately maintained to allow access to water drainage
4	Civil work	Ground Slope should be adequately maintained to allow access to water drainage Civil design should comply with ACI code /IBC codes All civil work must be included SAP analysis report of civil work should be submitted In the case of Ground, the Slope should be adequately maintained to allow access to water drainage.



Section-IV: Bid Data Sheet

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

A. Introduction		
BDS Clause Number	ITB Number	Amendments of, and Supplements to, Clauses in the Instruction to Bidders
1.	2.1.1	Name of Procuring Agency: Higher Education Commission (HEC) The subject of procurement is: <u>SELECTION OF CONTRACTOR FIRMS FOR SOLARIZATION OF HEAD OFFICE AND REGIONAL CENTERS OF HIGHER EDUCATION COMMISSION (HEC) ON EPC BASIS” with 2 years O&M.</u> <u>Package 1 (HEC Islamabad H8, H9),</u> <u>Package 2 (HEC Lahore)</u> <u>Package 3 (HEC Karachi)</u> <u>Package 4 (HEC Peshawar)</u> <u>(Separate bidding for each package is applicable)</u>
2.	2.1.2	Financial year for the operations of the Procuring Agency: 2024 Name of financing institution: HEC
3.	2.1.3 (iv)	Maximum number of members in the joint venture, consortium or association shall be: [<i>insert the number</i>]. J.V. form 8.2 should be followed. (NOT APPLICABLE)
4.		Ineligible country(s) As per Appendix A to Instructions to Bidders
5.	2.3.6(iii)	Demonstration of authorization by manufacturer: [<i>required/not required</i>] form 8.3 should be followed. (Required for each package)
B. Bidding Documents		
6.	2.2.2	The address for clarification of Bidding Documents is <u>Engineering Section, Auditorium Block, Higher Education Commission, Islamabad</u>
7.	2.2.2	Pre-bid meeting: will be scheduled on <u>14-May-2024</u> at <u>11:00 hrs.</u> The Client’s representative is: <u>Assistant Engineer (Electrical)</u> Address: <u>Engineering Section, Auditorium Block, Higher Education Commission, Islamabad</u>



		Telephone: 051-9040-1575-26 Fax: N/A E-mail: sazhid@hec.gov.pk
8.	2.3.9	The number of bidding documents to be completed and returned is one original and 02 Copies . The bidder will also submit the bid for each applied Package to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System as well before the Submission Deadline. Note: Bid shall be prepared and submitted separately for each package, the indication of package number for which bidder is submitting bid, shall be clearly mentioned on covering letter, bid form and outer envelope.
C. Bid Price, Currency, Language and Country of Origin		
9	2.3.1	Language of Bid: English
10	2.3.4	The price quoted shall be in <u>local currency</u> PKR
11.	2.3.4	The price shall be fixed
12.	2.1.4 (ii)	Country of origin _____
D. Preparation and Submission of Bids		
13.	2.1.3	Qualification Criteria/Knock down criteria. Eligibility as per following: Eligibility Requirement: (to be fulfilled for all packages) 1. AEDB registration 2. Pakistan Engineering Council (PEC) Registration in C3 or above Category with relevant codes e.g. (EE04, EE06, EE11) 3. SECP, 4. Registration with NTN, GST and any Provincial Revenue department (e.g. PRA, SRA etc.) whichever is applicable. 5. NTN / STRN /GST Registration 6. For international partner company only, they have to provide registration/affiliation/ authorization certificate with any such international agency located in relevant country of origin 7. JV/Consortium Agreement in case of Joint Venture partners, or in case of any international applicant/bidder JV with registered local firm is mandatory as per PEC byelaws. 8. Undertaking that the Company / Firm/by individual JV members is/are not blacklisted by Provincial or Federal Government Department, Agency, Organization or autonomous body anywhere in Pakistan. Affidavit on stamp



		<p>paper shall be provided.</p> <p>9. Valid evidence showing the Company / Firm/by individual JV members has/has never been litigated, will allow participating in the bidding process. Affidavit on stamp paper shall be provided.</p> <p>10. Audited Financial Statements of last three years shall be provided. Annual average turnover shall be more than 100 Million PKR verifiable from audited statements.</p> <p>11. Must provide details and evidence of 03 Nos. relevant experiences during last three years for projects having capacity of greater than 300kWp (each).</p> <p>12. Manufacturer's Authorizations for Solar Modules, and Inverters</p> <p>13. Warranty declarations.</p> <p>14. The bidder should have their presence/office in respective location as applicable package. E.g. if an Islamabad based company willing to apply for Package 3 (Karachi), then it should have its office in Karachi as well.</p> <p>The Eligible Bidders will be evaluated further as per mandatory evaluation criteria BDS clause 24 (2.5.8) below</p>
14.	2.3.6&2.3.7	Spare parts required for ____ <i>[number]</i> of years of operation.
15.	2.2.2	<p>Bid shall be submitted to:</p> <p>Address: <u>Engineering Section, Auditorium Block, Higher Education Commission, Islamabad</u></p> <p>Telephone: 051-9040-1526 &-1528 & -1575</p> <p>Fax: N/A</p> <p>E-mail: sazahid@hec.gov.pk</p> <p>Note: It is mandatory for the bidders to submit the bid for each applied Package to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System <u>as well as</u> submit the Physical Bid before the Submission Deadline, i.e.: <u>Tuesday 28-May-2024 at 13:30 hours</u>. Bids for any Applied Package received physically after the Submission Deadline, <u>and without Application to PPRA-EPADS (e-Pak Acquisition and Disposal Systems) System for each package before the submission deadline will be rejected.</u></p>
16.	2.4.2	<p>The deadline for Bid submission is</p> <p><u>Tuesday 28-May 2024, at 13:30 hrs</u></p>



17.	2.5.1	Time, date/ Month/ Year, and place for Bid opening. Tuesday 28-May 2024 at 14:00 hrs at Lecture Hall, Auditorium Block, HEC H-9 Islamabad.
18.	2.6.2	Amount of Performance Guarantee is: 10 % (for each package)
19.	2.3.8	Estimated Contract Price is: As mentioned in Section II 2.1.1 Scope of Work Amount of Bid security is: As mentioned in Section II 2.1.1 Scope of Work
20.	2.3.9	Bid validity period after opening of the Bid is: 120 Days
21.	2.3.9	Numbers of copies (hard) of the Bid to be provided are: 02. (for each package bid)
E. Opening and Evaluation of Bids		
22.	2.5.1	The Bid opening shall take place at: Address: Lecture Hall, Auditorium Block, HEC H-9 Islamabad. Telephone: 051-9040-1526 Fax: - E-mail: - Tuesday 28-May 2024 at 14:00 hrs.
23.	2.3.5	The currency that shall be used for Bid evaluation and comparison purposes to convert all Bid prices expressed in various currencies is: <i>Pakistani Rupees</i>
F. Bid Evaluation Criteria		
24.	2.5.8	Criteria to Bid evaluation: Eligibility of Bidders will be determined as per BDS 13 (ITB 2.1.3): Eligible bidders will be evaluated further following mandatory evaluation criteria as given below:

Sr.#	Description
1	Technical Form of Bid and Schedule to Bids (A to D) provided in Section VII and Forms provided in Section VIII accordingly to be filled and submitted in the technical proposal. Detail attached in the bidding documents.



Sr.#	Description
2	Filled Technical Compliance Sheet (BOQ) in Section III of the quoted products as provided in the Bidding Documents, all the products quoted by the firm should be in compliance with the Technical Specifications / Employer's Requirement Section III and Schedule of Requirements Section VII.
3	Bidders are required to submit the bid security within the Technical Proposal for an amount mentioned in 2.1.1 of Section II Scope of Bid.
4	In case of a JV Firm, a complete Joint Venture Agreement on Non-Judicial Affidavit duly signed by all the Partner Firms clearly mentioning the name of the Lead Firm and JV Partners including details of shareholding of each Partner and/or Power of Attorney from all the Partners for Authorized Signatory.
6	Duly signed and stamped by original RFP document should be submitted by firm/bidder.
7	Technical datasheet, SLDs, literature, brochures, and relevant technical documentations as per Minimum requirements shall be submitted to support the BOQ.

Marking Criteria

Following marking criteria will be followed for each package:

Parameters	Detail	Total Marks	Applicable Package
Past Experience with similar full scope of supply, installation, commissioning and net metering (On-Grid at least 03 Nos. relevant experiences during last three years for projects having capacity of greater than 300kWp (each) <u>The experience will be considered respective of package site location for which bidder is applying.</u>	Full marks will be given for 03 or more projects. Please provide completion certificates and generation licenses as proof. <u>For net-metering evidence the generation license with the respective DISCO will be considered only for each package</u>	30	Package 1,2,3,4



Parameters	Detail	Total Marks	Applicable Package
Operational History	Full marks will be given for operational history of equal or more than 5 years (≥ 5)	10	Package 1,2,3,4
Energy Yield Commitment (Mandatory)	Bidder will provide the affidavit for committing the minimum Guaranteed Energy generation along with acceptable simulation. Below this energy, a penalty shall be imposed as per GCC clause 16 (SCC clause 12).	10	Package 1,2,3,4 Highest marks will be awarded to Maximum Energy yield among bidders.
Presentation on Execution plan (Mandatory)	Brief Presentation on understanding of project, design and execution plan along with O&M strategies.	10	Package 1,2,3,4 Each bidder will present their plan, and marks will be awarded accordingly.
Technical System details	All datasheets, documentations, certificates, simulations to support the technical design and specifications SHALL be provided. The minimum specifications criteria in Section III shall meet for evaluation/marking: Time line of Project (02) SLDs (01) Complete BOQ as per design (05) O&M Manual draft (02)	10	Package 1,2,3,4



Parameters	Detail	Total Marks	Applicable Package
Human Resource Strength/Experience of Technical Staff (Provide detailed CVs)	<p><u>Project Manager:</u> Masters in Electrical Engineer with 10 years of relevant experience (Qty: 01, Marks (08))</p> <p><u>Junior Engineers (Electrical):</u> Bachelors in Electrical Engineering with 08 years of relevant experience (Qty: 02, Marks (3+3))</p> <p><u>Junior Engineer (Mechanical/Civil):</u> Bachelors in Mechanical/Civil Engineering with 08 years of relevant experience (Qty: 02, Marks (3+3))</p>	20	Package 1,2,3,4 For Bidder applying in one or more packages shall provide team for each package location.
Financial Status	<p>Latest Audited Financial Statements of last three years (Marks: 02)</p> <p>Annual average turnover shall be more than 200 Million PKR verifiable from audited statements. (Marks: 08)</p>	10	
		100	

Note: Minimum passing marks for is 70 marks. The evaluation criteria is: Quality Cost-Based Selection (QCBS) with 40% Technical and 60% Financial weightage to the final score. Contractor/Firm obtaining highest combined rank of Technical & Financial Score will be declared as most Advantageous Bidder for each Package of the Work in line with PPRA Rule 36(b).

G. Award of Contract

2.6.5	Percentage for quantity increase or decrease is: 15 %.
2.6.2	The Performance Guarantee shall be: 10 % (ten percent) for each package.



2.6.2	The Performance Security (or guarantee) shall be in the form of: <u>Bank Guarantee from schedule bank of Pakistan.</u>
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Section-VII. Schedule of Requirements

SCHEDULE – A TO BID

The scope of work covers Design, Supply, Installation, Testing, Commissioning and net-metering and O&M (02 year) of Grid interactive solar photovoltaic system for HEC Main and Regional offices.

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

- The scope of services includes PV modules, on-grid inverters, junction boxes, AC, DC distribution boards and cables, DC/AC earthing, lightning arrestors with complete scope, net metering, communication interface, remote monitoring, security and surveillance, electrical up-gradation where required and any other equipment necessary for safe and efficient operation of the system. The scope of services also includes inter-connection of installed PV system with the national grid, and synchronization with existing generator sets.
- The successful bidder must submit shop drawing with layout out plan and Single Line Drawing (SLD), design calculation for PV mounting structure for approval from the Engineer before the commencement of the work. As built drawing should be provided by the contractor after the completion of work.
- The successful bidder must install Genset Synchronized Compatible Inverters.
- The civil works for the installation of the complete system is included in the scope of the successful bidder.
- The scope of services includes Operation and Maintenance (O&M) of the Solar Power Generation System for the period of two years. (Guaranteed energy must be equaling or more than Committed, equaling deductions should be made in end of year if energy generation is low, on applicable grid rate
- Prior to installation, **2%** quantity of Solar PV Panels supplied by the successful bidder will be tested by the Client's approved laboratory.
- The equipment offered should conform in all respects to high standards of engineering, design and workmanship and be capable of performing in commercial operation.
- The supply includes essential spares necessary for operation, routine maintenance and testing of equipment supplied for the agreed time period.



- Any and all fittings and accessories that may not have been mentioned specifically in the specifications but are necessary for the solar PV plant, should be deemed to be included in the specifications and shall be supplied and furnished by the successful bidder without incurring any extra charges.
- The successful bidder must comply with guidelines provided by the concerned management.
- The successful Bidder shall ensure that all work necessary for the safe and efficient working of the system is in compliance with applicable standards.
- The Employer/Engineer shall verify equipment, and detailed drawings and ensure that all technical specifications are complied with. It reserves its right to reject any work or material, which in its judgment is not in full accordance therewith. The Employer can further ask the successful bidder to provide samples at any stage for clarification.
- The successful bidder must provide a remote monitoring system, all execution and cloud data continuity will be bidder responsibility.
- The successful bidder must install a zero export device during the net-metering process. The net-metering process includes all charges/fees, approvals, sanction load up-gradation (if required), bi-directional meter, related equipment and inspection.
- The successful bidder must provide a 4-core AC wire from Meter to Inverter Distribution Box (DB) if required.
- The successful bidder must ensure that any scrap material on site shall be handed over to the concerned management.
- The Time for Completion is 06 months starting from the date of commencement of the project mentioned in the Letter of Commencement followed by Two (02) years of Operation and Maintenance (O & M).

Bidder will provide delivery schedule and timeline as required by scope of project.

Number	Description	Quantity	Delivery schedule in weeks



SCHEDULE – B TO BID

PROPOSED PROGRAMME OF WORKS

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



SCHEDULE – C TO BID

PROPOSED ORGANISATION

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

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

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



SCHEDULE – D TO BID

(INTEGRITY PACT)

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

Contract No. Dated Contract Value: Contract Title: _

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

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

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

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

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

Name of Buyer:

Name of Seller/Supplier:

Signature:

Signature:

[Seal]

[Seal]



Section-VIII: Sample Forms

8.1 Bid Form

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

Date: _____

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

Gentlemen and/or Ladies:

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

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

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

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

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

Technical bid includes the following:-

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



Financial bid includes the following:-

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

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

Name and address of goods provider

Amount and Currency

(if none, state "none")

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

Dated this _____ day of _____ 20_____.

[signature]

[in the capacity of]

Duly authorized to sign Bid for and on behalf of _____



8.2 Bidder's JV Members Information Form

{To be reproduced and signed & stamped by the lead partner and all JV members on their letter Pad, to be attached with Technical Bid in addition to the JV agreement}

{The Bidder shall fill in this Form in accordance with the instructions indicated below. The following table shall be filled in for the Bidder and for each member of a Joint Venture}.

Date: *[insert date (as day, month and year) of Bid submission]*

RFB No.: *[insert number of RFB process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

Page _____ of _____ pages

1. Bidder's Name: <i>[insert Bidder's legal name]</i>
2. Bidder's JV Member's name: <i>[insert JV's Member legal name]</i>
3. Bidder's JV Member's country of registration: <i>[insert JV's Member country of registration]</i>
4. Bidder's JV Member's year of registration: <i>[insert JV's Member year of registration]</i>
5. Bidder's JV Member's legal address in country of registration: <i>[insert JV's Member legal address in country of registration]</i>
6. Bidder's JV Member's authorized representative information Name: <i>[insert name of JV's Member authorized representative]</i> Address: <i>[insert address of JV's Member authorized representative]</i> Telephone/Fax numbers: <i>[insert telephone/fax numbers of JV's Member authorized representative]</i> Email Address: <i>[insert email address of JV's Member authorized representative]</i>
7. Attached are copies of original documents of <i>[check the box(es) of the attached original documents]</i> <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4. <input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Purchaser, in accordance with ITB 4.6.
8. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership.



8.3. Manufacturer's Authorization Form

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

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

To: *[name of the Procuring Agency]*

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

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

[Signature for and on behalf of Manufacturer]

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



8.4. Bidder Profile Form

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

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

a) Audited Financial Statement Attachment/Income Tax Returns (Last ____ years)

Yes	No
-----	----

b) Details of Experience (Last ____ Years)

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

c) Staff Detail and last month Payroll

Yes	No
-----	----



8.5. General Information Form

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

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

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

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



8.6. Affidavit

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

Name: _____
(Applicant)

I, the undersigned, do hereby certify that all the statements made in the Bidding document and in the supporting documents are true, correct and valid to the best of my knowledge and belief and may be verified by employer if the Employer, at any time, deems it necessary. The undersigned hereby authorize and request the bank, person, company or corporation to furnish any additional information requested by the *[name of Procuring Agency]* deemed necessary to verify this statement regarding my (our) competence and general reputation. The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the *[name of Procuring Agency]*. The undersigned further affirms on behalf of the firm that:

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

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

Signed by an authorized Officer of the company

Title of Officer: _____

Name of Company: _____

Date: _____



8.7. Performance Guarantee Form

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

To,

[name and address of the Procuring Agency]

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

1. *[Please insert details].*

(Here in after called "the Contract").

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

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

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

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

[NAME OF GUARANTOR]

Signature

Name

Title

Address

Seal

Date



8.8. Technical Bid Form (As per Section III Annexure A)

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

Sr. No.	Item name	Brand name with Country of Manufacturer	Make & model	Quantity	Country of Origin	Specifications dimensions

Stamp & Signature of Bidder _____



8.9. Contract Form

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

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

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

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

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

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

Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Signed, sealed, delivered by _____ the _____ (for the Supplier)



8.10. Financial Bid Form/Price Schedule

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

SCHEDULE OF PRICES – SUMMARY OF BID PRICES

Name of Project including package:

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

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

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



Financial Bill of Quantity (BOQ) / Item Wise BOQ

SCHEDULE OF PRICES – ITEM WISE BID PRICES

ITEMWISE COSTS BREAKDOWN

No.	ITEM(s)	Description	QTY	Unit Cost	Total Cost (Excluding Taxes)	Total Cost (including Taxes)
1						

Note:

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

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

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

Note:

In case of difference between unit price and total price, unit price shall prevail and total price shall be “final”. *(Please refer ITB clause 2.5.6).*

In case of difference between amount in “words” and amount in “figures”, amount in “words” shall be considered final.

Stamp & Signature of Bidder _____



8.11. Bid Security Form

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

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

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

THE CONDITIONS of this obligation are:

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

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

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

[Signature of the bank]



8.12. Company's Experience

A- GENERAL EXPERIENCE

Evidence of the experience mentioned is mandatory.

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

More rows can be added as required.



B- PARTICULAR EXPERIENCE

Each copy of the form must be accompanied by evidence.

<p><i>Name of Applicant or Partner of a Joint Venture</i></p>

Use a separate sheet for each contract.

Contract No:

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



Section-V: General Conditions of Contract

1. Definitions

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

- (a) “The Contract” means the agreement entered into between the Procuring Agency and the Supplier, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein for complete scope of work in pursuant to ITB clause 2.1.1.
- (b) “The Contract Price” means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.
- (c) “The Goods” means all of the equipment, machinery, and/or other materials, and services which the Supplier is required to supply to the Procuring Agency under the Contract in pursuant to scope of work ITB clause 2.1.1.
- (d) “The Services” means obligations of the Supplier covered under the Contract in pursuant to scope of work ITB clause 2.1.1. “Supply, installation, commissioning and net-metering of On-Grid Solar System for Head office and regional centers of HEC on EPC basis with 2 years of O&M”.
- (e) “GCC” mean the General Conditions of Contract contained in this section.
- (f) “SCC” means the Special Conditions of Contract.
- (g) “The Procuring Agency” means the organization purchasing the Goods & Services, as named in SCC.
- (h) “The Procuring Agency’s country” is the country named in SCC.
- (i) “The Supplier” means the Bidder or firm supplying the Goods and Services under this Contract.
- (j) “The Project Site,” where applicable, means the place or places named in SCC.
- (k) “Day” means calendar day.



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

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

[where applicable]

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

3.3. The origin of Goods and Services is distinct from the nationality of the Supplier. In any case, the requirements of Appropriate Rules of PPRA, shall be followed.

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

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

5.2. The Supplier shall not, without the Procuring Agency’s prior written consent, make use of any document or information



enumerated in GCC Clause 5.1 except for purposes of executing the Contract.

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

5.4. The Supplier shall permit the Procuring Agency to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by the donors, if so required by the donors.

6. Patent Rights

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

7. Performance Guarantee

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

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

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

- (a) A bank guarantee issued by a reputable bank located in the Procuring Agency's country, in the form provided in the Bidding documents or another form acceptable to the Procuring Agency.

7.4. The performance guarantee will be discharged by the Procuring Agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, i.e. **after the completion of the O&M**



Period, including any warranty obligations, unless specified otherwise in SCC.

8. Inspections and Tests

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

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

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

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

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

9. Packing

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



Goods' final destination and the absence of heavy handling facilities at all points in transit.

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

10. Delivery and Documents

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

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

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

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

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

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

11. Insurance

[If required and decided by the Procuring Agency]

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

12. Transportation

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



13. Incidental Services

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

[If required and decided by the Procuring Agency]

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

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

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

14. Spare Parts

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

[If required and decided by the Procuring Agency]

- (a) such spare parts as the Procuring Agency may choose to purchase from the Supplier, provided that this choice shall not relieve the Supplier of any warranty obligations under the Contract; and



-
- (b) in the event of termination of production of the spare parts:
 - (i) advance notification to the Procuring Agency of the pending termination, in sufficient time to permit the Procuring Agency to procure needed requirements; and
 - (ii) following such termination, furnishing at no cost to the Procuring Agency, the blueprints, drawings, and specifications of the spare parts, if requested.

15. Warranty

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

15.2. This warranty shall remain valid as per the Conditions mentioned in Clause 10 of the Special Conditions of the Contract, after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, after the date of shipment from the port or place of loading in the source country, whichever period concludes earlier, unless specified otherwise in SCC.

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

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

15.5. If the Supplier, having been notified, fails to rectify the defect(s) within the period specified in SCC, within a reasonable period, the Procuring Agency may proceed to take such remedial action as may



be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Procuring Agency may have against the Supplier under the Contract/relevant provision of PPRA Rules including Blacklisting.

16. Payment

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

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

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

16.4. The currency of payment is Pakistani Rupees

17. Prices

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

18. Change Orders

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

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Procuring Agency;
- (b) the method of shipment or packing;
- (c) the place of delivery; and/or
- (d) the Services to be provided by the Supplier.

18.2. If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the



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

19. Contract Amendments

19.1. Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by the mutual consent through written amendment signed by the parties. No variation in finalized brands/ makes/models shall be allowed except in special conditions where the manufacturer has stopped producing or suspended that model or the latest model of similar series or version has been launched by the manufacturer or non-availability due to international mergers of the manufacturers or similar unavoidable constraints.

20. Assignment

20.1. The Supplier shall not assign the whole of contract to anybody else. However, some parts of contract or its obligations may be assigned to sub-contractors with the prior written approval of the procuring agency.

21. Sub-contracts

21.1. The Supplier shall notify the Procuring Agency in the Bid of all subcontracts to be assigned under this Contract. Such notification, in the original Bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2. Subcontracts must comply with the provisions of GCC Clause 20.

22. Delays in the Supplier's Performance

22.1. Delivery of the Goods and performance of Services shall be made by the Supplier in accordance with the time schedule prescribed by the Procuring Agency in the Schedule of Requirements-

22.2. If at any time during performance of the Contract, the Supplier or its subcontractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify the Procuring Agency in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, the Procuring Agency shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of Contract.



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

23. Liquidated Damages

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

24. Termination for Default

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

- (a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Procuring Agency pursuant to GCC Clause 22;
- (b) if the Supplier fails to perform any other obligation(s) under the Contract; or
- (c) if the Supplier, in the judgment of the Procuring Agency has engaged in corrupt practices in competing for or in executing the Contract. For the purpose of this clause, corrupt practices will be defined as per Section-2 (d) of The PPRA Act, 2009.

“Corrupt practices” in respect of procurement process, shall be as given in S-2 (d) of PPRA, Act, 2009:

(d) “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official, bidder or Contractor in the procurement process or in Contract execution to the detriment of the procuring agency; or



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

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

24.2. In the event the Procuring Agency terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Procuring Agency may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Procuring Agency for any excess costs



for such similar Goods or Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

25. Force Majeure

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

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

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

26. Termination for Insolvency

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

27. Termination for Convenience

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



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

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

28. Resolution of Disputes

28.1. After signing the contract or issuance of purchase order, The Procuring Agency and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

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

29. Governing Language

29.1. The Contract shall be written in the language specified in SCC. Subject to GCC Clause 30, the version of the Contract written in the specified language shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

30. Applicable Law

30.1. The Contract shall be interpreted in accordance with the laws of Pakistan unless otherwise specified in SCC.

31. Notices

31.1. Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by any information technology mean for the time being in use and acceptable in ordinary course of business to the other party's address specified in SCC.



31.2. A notice shall be effective when delivered or on the notice's effective date, whichever is later.

32. Taxes and Duties

32.1. Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods & Services to the Procuring Agency. In case of imposition of new taxes/duties or concession thereof after the deadlines for the submission of bids the effect thereof shall be borne or availed by the procuring agency as the case may be.



Section-VI. Special Conditions of Contract

Special Conditions of Contract

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

1. Definitions (GCC Clause 1)

GCC 1.1 (g)—The Procuring Agency is: Higher Education Commission, Islamabad

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

GCC 1.1 (i)—The Supplier is:

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

2. Country of Origin (GCC Clause 3)

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

3. Performance Guarantee (GCC Clause 7)

GCC 7.1—The amount of Performance Guarantee, as a percentage of the Contract Price, shall be: **10 % (ten percent) for each package.**

GCC 7.4—the Performance Guarantee shall be retained for to cover the Supplier's warranty obligations, i.e. till the end of the O&M Period in accordance with Clause GCC 15.2

4. Inspections and Tests (GCC Clause 8)

GCC 8.6—Inspection and tests prior to shipment of Goods and at final acceptance are as follows: 2% sample to be tested by approved laboratory and test report to be reviewed by Consultant, i.e. Al-Khwarizmi Institute of Computer Science (KICS) at the University of Engineering & Technology (UET) Lahore.

5. Packing (GCC Clause 9)

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

6. Delivery and Documents

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

(GCC Clause 10)

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

- (i) Design/drawings of system for approval



-
- (ii) Work/Execution Plan, Team details, Focal person
 - (iii) copies of the Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
 - (iv) original and two copies of the usual transport document (for example, a negotiable bill of lading, a non-negotiable sea waybill, an inland waterway document, an air waybill, a railway consignment note, a road consignment note, or a multimodal transport document) which the buyer may require to take the goods;
 - (v) copies of the packing list identifying contents of each package;
 - (vi) insurance certificate;
 - (vii) Manufacturer's or Supplier's warranty certificate;
 - (viii) Where applicable (Pre shipment/ port/ Procuring Agency Delivery site, inspection certificate), issued by the Procuring Agency nominated inspection agency, and the Supplier's factory inspection report (Inspection type depends on the nature of procurement and volume of procurement); and
 - (ix) Certificate of origin (if applicable).

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

7. Insurance

(GCC Clause 11) [where applicable]

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

8. Incidental Services (GCC Clause 13)

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

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

9. Spare Parts

(GCC Clause 14) NOT APPLICABLE

GCC 14.1—Additional spare parts requirements are:

GCC 14.1—Supplier shall carry sufficient inventories to assure ex-stock supply of consumable spares for the Goods. Other spare parts and components shall be supplied as



promptly as possible, but in any case, within six (6) months of placing the order and opening the letter of credit.

10. Warranty

(GCC Clause 15)

- i. **Solar Panels: 10 Years**
- ii. **Inverter: 05 Years**
- iii. **All other allied accessories and Equipment: 02 Years**

11. Sample provision

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

(a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4,

or

(b) pay liquidated damages to the Procuring Agency in case of failure to meet the contractual guarantees. The rate of these liquidated damages shall be

- a. In case of failure to comply with the work order, penalty will be imposed on defaulting Supplier as under:
- b. 1% of the cost of entire order or of such work as remains uncompleted for every day upto maximum of 10% for 10 days exceeding the completion period.
- c. If the job is not done even after payment of penalty for 10 consecutive days, the Commission reserves the right to cancel the work order and to obtain the required job from elsewhere at risk & cost of the defaulting Contractor.
- d. If the qualifying bidder refuses to sign the contract after giving acceptance then HEC reserves the right to select second lowest bidder for the award of work.
- e. If the firm failed to execute the required work within extended period, the Commission has the right to forfeit the amount of performance guarantee and black list the firm, for which no appeal will be entertained.



- f. Any job/maintenance work given to the contractor must be finished/rectified within One (01) Week of identification/HEC instructions, failing which a penalty upto 10% may be imposed on non-compliance.

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

GCC 15.4 & 15.5—The period for correction of defects in the warranty period is: 05-07 days.

12. Payment (GCC Clause 16)

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

Payment for Goods supplied:

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

Payment Mechanism		
Sr. #	Milestone/Deliverables	Percentage %
1	Site Survey & Approval of Design	10%
2	Site Preparation (Clearance of Roof, Civil work for PV Mounting Structure)	5%
3	Supply and Installation of PV Mounting Structure	5%
4	<ul style="list-style-type: none"> • Supply of Solar PV Modules at Site. • Submission of approved test reports from Designated Laboratory 	15%
5	Supply of Equipment at Site. <ul style="list-style-type: none"> • Inverters • Cables (AC & DC) • Earthing Equipment • Allied Accessories 	15%
6	Installation of Solar Modules at Site	10%
7	Installation of <ul style="list-style-type: none"> • Invertors • Cabling • Earthing Equipment and • Allied Accessories 	10%
8	<ul style="list-style-type: none"> • Complete Installation Commissioning of Solar System • Genset Synchronization along • Real time online monitoring access 	5%
9	Upon installation of Bi-Directional Meter (Net Metering) after following due process with DISCO, NEPRA and other stakeholders	10%



Payment Mechanism		
10	Training of Designated Official (s) for Operation and Maintenance (O & M)	5%
11	Submission of Final Report after successful completion of the Project and submission of performance guarantee at the start for O&M period.	10%
	Total	100 %

Note:

- Payment (s) of all Deliverables shall be made following verification from the Consultant. The 10% of payment against each deliverable shall be deducted; which shall be released at the closure of the project.
- The performance Security of 10% of the contract value, shall be submitted again by the Contractor against the O&M period for 02 years; which shall be released after successful completion and submission of report at the end of 02 years of O&M. Payment will be made in Pak. Rupees.
- The scope of services includes Operation and Maintenance (O&M) of the Solar Power Generation System for the period of two years. Guaranteed energy must equal or more than committed, equaling deductions should be made in end of year if energy generation is low, on applicable grid rate. Energy Generation ledger will be settled at the end of each year. The value of units will be calculated on average grid price of 12 months since date of inception, for each year. If the energy generation is less than 5% of committed energy, the contractor will be responsible for installation of additional modules on site to satisfy the energy commitment at his own cost. Performance Guarantee will be forfeited if unable to comply.

13. Prices (GCC Clause 17)

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

14. Liquidated Damages (GCC Clause 23)

GCC 23.1—Applicable rate: One percent (1 %) per week

Maximum deduction: 10%

15. Resolution of Disputes (GCC Clause 28)

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

In the case of a dispute between the Procuring Agency and the Supplier, the dispute shall be referred for arbitration in accordance with the Arbitration Act 1940. Any unsolved



dispute may be referred by either party to an arbitrator. Executive Director HEC shall be sole arbitrator whose decision shall be binding on both parties.

16. Governing Language (GCC Clause 29)

GCC 29.1—The Governing Language shall be: English

17. Applicable Law (GCC Clause 30)

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

18. Notices (GCC Clause 31)

GCC 31.1—Procuring Agency’s address for notice purposes: Assistant Engineer (Electrical), Engineering Section, Services Division, Higher Education Commission, Auditorium Block, H-9, Islamabad, Ph.: 051-9040-1526 &-1528 &-1575.

—Supplier’s address for notice purposes:



Annexure A

Package 1

Solar PV System Details

HEC

H8 Sector Islamabad



The table below is providing the comprehensive details about the system.

System Type	Solar Detail	On-Grid/Grid Tied
PV System with Customized mounting structure	System Rating	350 kWp
	Annual Energy Generation (kWh)	~ 471,739 kWh

The report provides a comprehensive analysis of the viability of PV systems for the HEC H-8 Islamabad. The subsequent sections cover the PV potential, PV system generation and its financial analysis. PV system Simulation report that provides the detailed overview PV system parameters, Sites pictures, lay out plan for each building are annexed to the report.

1. Electrical Details

The details of the electrical meter, generator, and transformer are essential considerations in solar PV system designing because they help ensure that the system is designed to meet the specific energy needs of the property, and that the system is safely and effectively integrated into the existing electrical infrastructure.

2. Meter Details

Sr.	Reference No.	Share Load	Associated Blocks
1	27 14124 1776850 U	94	Hijra Manzil
2	27 14124 1776900 U	240	C & T Building & Guest House
3	27 14124 1777000 U	326	HRD Building
4	15 14124 2153700 U	45	P & D Building



3. Transformer Details

Sr.	Rating (KVA)	Associated Blocks
1	400	Hijra Manzil
2	200	C & T Building & Guest House
3	630	HRD Building
4	100	P & D Building

Generator Details

Sr.	Rating (KVA)	Fuel type	Associated Blocks
1	150	Diesel	Hijra Manzil
2	100	Diesel	C & T Building & Guest House
3	300	Diesel	HRD Building
4	50	Diesel	P & D Building

4. Proposed Solar PV System:

An **On-Grid or Grid-tied solar system** is proposed which will be connected to the power grid. Any surplus power will be supplied into the grid through net metering.

Building	Structure Type	PV (kWp)
HEC H-8 Islamabad	Elevated roof mounted	~230 KW
HEC H-8 Islamabad	High rise Parking sheds	~120 KW
Total		350 KW

5. BOQ

Description (350 KW PV)	Qty.	UOM
PV Modules and Power Generation System		
Solar Modules: 590 W or above (Tier One)	594	Pcs



Package 1 (HEC H8 and H9 Sector, Islamabad)

Description (350 KW PV)	Qty.	UOM
On-grid Inverter (1:1- or above)	1	Pcs
Gen set Controller	1	Job
Cable for Interconnection (DC)(UV Protected XLPE)	1	Job
PV Combiner Boxes with DC Breakers / Fuses, external SPD's etc. for string protections	1	Job
AC Termination & Accessories		
LT Termination	1	Job
Secondary Comprehensive Protection Cabinet	1	Set
Low Voltage Switchgear Cabinet	1	set
Fabricated Items		
Mounting Structure-Elevated Hot Dip Galvanized / Parking sheds for minimum SUVs	1	Job
Cable Tray (GI and UPVC where needed)	1	Job
Distribution Boxes (Powder Coated) as per system design	1	Job
Cable & Accessories		
AC Cables for Inverter Interconnection <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cable for Combined Output <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cables from meter to main DB <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end),	1	Job
Installation Material (cable Ducts etc (GI and UPVC where needed))	1	Job
Earthing / Grounding System / ATS Panels		
<u>Earthing System For Inverter / Wapda / Generator Set</u> Neutral Complete independent earthing system for inverter / Wapda / Generator Set Neutral must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Earthing for PV SOLAR SYSTEM</u> complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job



Package 1 (HEC H8 and H9 Sector, Islamabad)

Description (350 KW PV)	Qty.	UOM
<u>Surge protection device</u> of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.	1	Job
Grounding Flat Iron, Grounding Network for the plant Area, Power distribution Room, HV power Distribution room	1	Job
Remote Monitoring Data Acquisition System		
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging Security and Surveillance The Bidder shall provide the required set of CCTV Camera Installed on roof top for surveillance of PV Modules and Control Room Equipment with complete indoor hardware (LED TV 49 inches , Laptop Core i9 Complete in All respect, NVR have a capacity of at least last 10 days video recording) along with the internet facility for remote monitoring for the period of 2 years O&M.	1	Job
Services		
Project Design & Execution	1	Job
Erecting of Mechanical Mounting Structure	1	Job
Installation, testing and Commissioning of Solar System	1	Job
Operations and Maintenance "O&M Services (02 Years)	1	Job
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)	1	Job



6. SITE MAP



Coordinates: [33.675852, 73.057663](#)



Package 1 (HEC H8 and H9 Sector, Islamabad)



Coordinates [33.675150](#), [73.056249](#)



Coordinates: [33.674501](#), [73.057458](#)



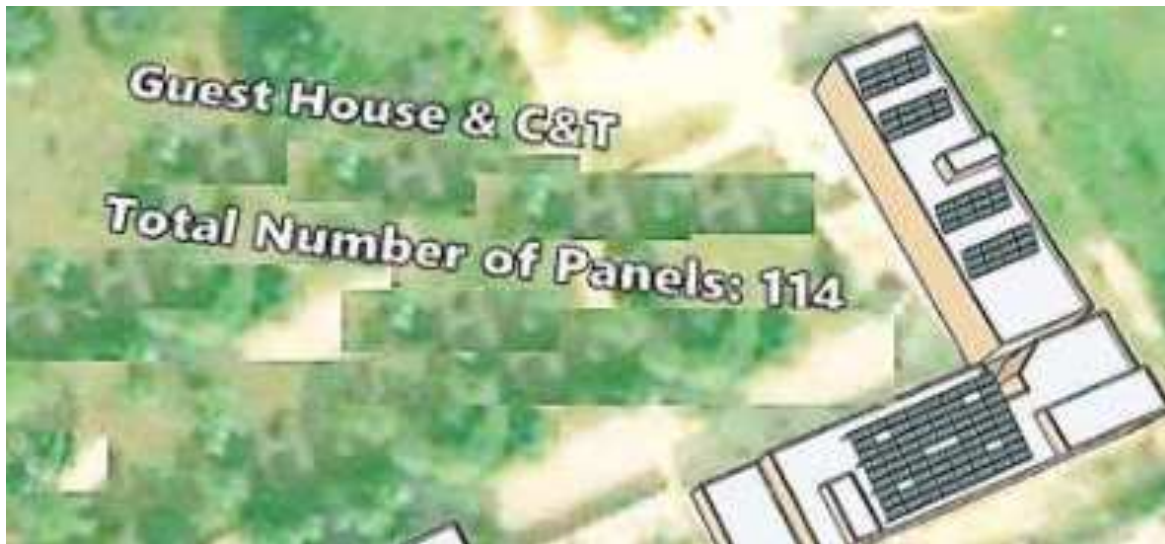
Site Images





Package 1 (HEC H8 and H9 Sector, Islamabad)

Images for Proposed Solution





Package 1 (HEC H8 and H9 Sector, Islamabad)

HEC H-8 Islamabad Electricity Bill

ISLAMABAD ELECTRIC SUPPLY COMPANY ELECTRICITY CONSUMER BILL - (MDI)										
www.iesco.com.pk										
IESCO GST # 30-06-2716-881-01										
CONSUMER NO	AMR NO	NO OF PH	TYPE	WLT STATUS	ISSUANCE DATE	ISSUE DATE	DUE DATE			
271424187340	46			None	19 MAR 23	20 MAR 23	24 MAR 23			
CONSUMER ID / UNIQUE KEY	TARIFF	MAX LOAD	OLD AC NUMBER	FEEDER NAME		PHASE				
271424187340 / 1401071300	A-20W7	50	271424187340	SAWTH	WEL	2000	10750	10750	10750	
REFERENCE NO	CHUCK	ISLAMABAD		Mar22	10	3120	10750	10750	10750	
271424187340	Sub 100/20	14 SECTOR		Apr22	11	3400	10750	10750	10750	
NAME & ADDRESS		Prog. 01 Paid =	Prog. 02 Paid =	Prog. 03 Paid =	EMET LOAD =	WCO Date =	WEB GENERATED BILL			
118/16N-G-C-1420A-AMAZI PLT NO. 30/SEC-14 80		33914	11200	11200	44	01 Jun 2019	Total PPA 4886			
PREVIOUS	PREVIOUS	SECT NO	MONTHLY ROUNDED	POWER FACT	Fuel Price Adjustment for Jan-23 @ 0.1470000					
23.280	23.280	46	0	1	BT PPA = 80.00	CT PPA = 542.00	Total PPA = 622.00			
14.000	14.000	46	0	1	1440 PPA = 2175.00	1507 PPA = 139.00	Total PPA = 2314.00			
TEXT Reference No. is 8118 at Cell 118					Total PPA 4886 WATTAGE LINE LENGTH					
MTR		MTR METER READING			MTR METER READING			MTR METER READING		METER STATUS
MR100	MR110	MR120	MR130	MR140	MR150	MR160	MR170	MR180	MR190	OK
208128	2080	2080	2080	2080	2080	2080	2080	2080	2080	OK
208128	247	247	247	247	247	247	247	247	247	OK
IESCO CHARGES				GOVT CHARGES				AMOUNT		ISSUE DATE
0.00				0.00				0.00		19/03/23



Package 1 (HEC H8 and H9 Sector, Islamabad)

ISLAMABAD ELECTRIC SUPPLY COMPANY ELECTRICITY CONSUMER BILL - (MOI)										
WWW.IESCO.COM.PK										
IESCO GEN # 36-66-271A-001-01										
CONTRACT	WPT'S ID	WEP AC	SDG	SAL MONTH	READING DATE	DUPLICATE	DUPLICATE	DUPLICATE	DUPLICATE	
17 SEP 22	48			MAR 22	19 MAR 22	20 MAR 22	28 MAR 22			
CONSUMER ID / METER NO	TAMER	WMC LOAD	CD.A/C NUMBER	FEEDER NAME		H-82				
21400001 / 140100100	4-54001	100	27410410000	MONTH	WPT	WPT UNITS	WPT	WPT	WPT	
REFERENCE NO	DISPATCH	DISPATCH	DISPATCH	Mar22	0	1200	479112	479112		
27 1404 177000 (J)	018 000000	018 000000	H-9 SECTOR	Apr22	0	1800	62044	62044		
NAME & ADDRESS				SAY NO TO CORRUPTION		WBS GENERATED BILL				
MR. BILAL ALI KHAN CD UNIVERSITY GRANT COMMISSION PLT NO. 10 SECTOR H-9/1 ISLAMABAD				ENCL LOAD = 32K MIS Date : 11-Jan-2019		GOVT CONNECTION				
PRELUMBER	PRELUMBER	METER NO	MONTHLY RENTAL	POWER FACT						
			0							
TEXT Reference No to 0118 or Call 119				Fuel Price Adjustment for Jan-22 @ 5.41700001 ST FPA = 00 ST FPA = 00 GRN FPA = 022821 GST FPA = 1000.00 SD FPA = 00 IT FPA = 00 STAS FPA = 00 Total FPA = 42014 MATTAGE : LINE LENGTH:						
WPT		WPT METER READING			KWH METER READING			WPT METER READING		WPT STATUS
SECTION NO	PREVIOUS	PRESENT	DIFF	PREVIOUS	PRESENT	DIFF	PREVIOUS	DIFF		
20470	760	760	100	0	0	0	0	0		
20470	420	433	100							



Package 1 (HEC H8 and H9 Sector, Islamabad)

CONNECTOR DATE		CONNECTED LOAD		SIZE	BILL MONTH	READING DATE	ISSUE DATE	DATE DUE
05 JUN 07		45		30%	FEB 23	07 MAR 23	02 MAR 23	10 MAR 23
CONSUMER ID	TYPED	LOAD	OLD AC NUMBER	DIVISION	ISLAMABAD-8			
114243298	A-3690	40	031428187000	SUB DIVISION	H-8 SECTOR			
REFERENCE NO	LOCK KEY	NO OF PHS	NO BILL KEY	FEDER NAME	H-82			
15 14124 218290 U		70		Web Generated Bill				
Govt Connection					MONTH	UNITS	BL	REMARKS
NAME & ADDRESS 1300 SOHAN UNIVERSITY CAMPUS CCMB PLOT NO H-8 SEC (HEC) ISLAMABAD معزز صارف: یہ بل میں ایندھن کی قیمت کا فرق (PPV) دو ماہ بعد شامل کیا جاتا ہے۔ اس بل میں DEC 22 کے صرف شدہ 2729 یونٹس کی ایندھن کی قیمت کے 7393.55 یونٹس ہونے شامل ہیں					Feb23	258	54076	54076
Say No To Corruption 3-11-2019 1300 SOHAN UNIVERSITY CAMPUS CCMB PLOT NO H-8 SEC (HEC) ISLAMABAD معزز صارف: یہ بل میں ایندھن کی قیمت کا فرق (PPV) دو ماہ بعد شامل کیا جاتا ہے۔ اس بل میں DEC 22 کے صرف شدہ 2729 یونٹس کی ایندھن کی قیمت کے 7393.55 یونٹس ہونے شامل ہیں					Mar23	357	45863	45863
					Apr23	14 022.0	38612	38612
					May23	525	3094	3094
					Jun23	89 019.0	132889	132889
					Jul23	2385	73230	73230
					Aug23	2623	104076	104076
					Sep23	2622	110950	110950
					Oct23	1240	51524	51524
					Nov23	1643	67623	67623
					Dec23	2729	110325	110325
Jan23	3388	133021	133021					
ESCO CHARGES		GOVT CHARGES			TOTAL CHARGES			
UNITS CONSUMED	1812	ELECTRICITY AMTY	0		AMREARAGES		0	
COST OF ELECTRICITY	54216	Tax FEE	0		CURRENT BILL		73629	
METER RENT								



Solar PV System Details
Package 1,
HEC Islamabad
H9



The table below is providing the comprehensive details about the system.

System Type	Solar Detail	On-Grid/Grid Tied
PV System with Customized mounting structure	System Rating	175 kWp
	Annual Energy Generation (kWh)	~ 236,000kWh

1. Electrical Details

The details of the electrical meter, generator, and transformer are essential considerations in solar PV system designing because they help ensure that the system is designed to meet the specific energy needs of the property, and that the system is safely and effectively integrated into the existing electrical infrastructure.

2. Meter Details

Sr.	Reference No.	SANC. LOAD
1	27 14124 1784850 U	271
2	27 14124 1784750 U	160

3. Transformer Details

Sr.	Rating (KVA)	Associated Blocks
1	630	Complete Building except CTC & Data Centre
2	200	CTC & Data Center

4. Generator Details

Sr.	Rating (KVA)	Fuel type	Associated Blocks
1	200	Diesel	Complete Building except CTC & Data Centre
2	150	Diesel	CTC & Data Centre
3	400	Diesel	Out of service

5. Proposed Solar PV System:



Package 1 (HEC H8 and H9 Sector, Islamabad)

An **On-Grid or Grid-tied solar system** is proposed which will be connected to the power grid. Any surplus power will be supplied into the grid through net metering.

Building	Structure Type	PV (kWp)
HEC H-9 Islamabad	Elevated	175 KW
Total		175 KW

6. BOQ

Description (175 KW PV)	Qty.	UOM
PV Modules and Power Generation System		
Solar Modules: 590 W or above (Tier One)	298	Pcs
Ongrid Inverter (1:1- or above)	1	Pcs
Gen set Controller	1	Job
Cable for Interconnection (DC)(UV Protected XLPE)	1	Job
PV Combiner Boxes with DC Breakers / Fuses, external SPD's etc. for string protections	1	Job
AC Termination & Accessories		
LT Termination	1	Job
Secondary Comprehensive Protection Cabinet	1	Set
Low Voltage Switchgear Cabinet	1	set
Fabricated Items		
Mounting Structure-Elevated Hot Dip Galvanized	1	Job
Cable Tray (GI and UPVC where needed)	1	Job
Distribution Boxes (Powder Coated) as per system design	1	Job
Cable & Accessories		
AC Cables for Inverter Interconnection <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job



Package 1 (HEC H8 and H9 Sector, Islamabad)

Description (175 KW PV)	Qty.	UOM
AC Cable for Combined Output <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cables from meter to main DB <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end),	1	Job
Installation Material (cable Ducts etc)	1	Job
Earthing / Grounding System / ATS Panels		
<u>Earthing System For Inverter / Wapda / Generator Set Neutral Complete</u> independent earthing system for inverter / Wapda / Generator Set Neutral must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Earthing for PV SOLAR SYSTEM</u> complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Surge protection device</u> of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.	1	Job
Grounding Flat Iron, Grounding Network for the plant Area, Power distribution Room, HV power Distribution room	1	Job
Remote Monitoring Data Acquisition System		
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging Security and Surveillance The Bidder shall provide the required set of CCTV Camera Installed on roof top for surveillance of PV Modules and Control Room Equipment with complete indoor hardware (LED TV 49 inches , Laptop Core i9 Complete in All respect, NVR have a capacity of at least last 10 days video recording) along with the internet facility for remote monitoring for the period of 2 years O&M.	1	Job
Services		
Project Design & Execution	1	Job
Erecting of Mechanical Mounting Structure	1	Job
Installation, testing and Commissioning of Solar System	1	Job



Package 1 (HEC H8 and H9 Sector, Islamabad)

Description (175 KW PV)	Qty.	UOM
Operations and Maintenance "O&M Services (02 Years)	1	Job
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)	1	Job



Package 1 (HEC H8 and H9 Sector, Islamabad)

SITE MAP





Package 1 (HEC H8 and H9 Sector, Islamabad)

Site Images and roof tops





Package 1 (HEC H8 and H9 Sector, Islamabad)





Package 1 (HEC H8 and H9 Sector, Islamabad)





Package 1 (HEC H8 and H9 Sector, Islamabad)



Images for Proposed Solution





Package 1 (HEC H8 and H9 Sector, Islamabad)





Package 1 (HEC H8 and H9 Sector, Islamabad)

HEC Islamabad (H-9) Electricity Bill

CONF. DISC.		WPPC. CD	NO. OF AC	EDG	BILL MONTH	ISSUING DATE	DUPLICATE DATE	DUE DATE		
		46			FEB 24	19 FEB 24	26 FEB 24	26 FEB 24		
CONSUMER ID / METER NO.		NAME	INST. LOAD	OLT AC NUMBER	PERIOD		BILL			
2714241090		AZIZUL	271	2714241090	MONTH	DAY	PERIOD	AMOUNT		
REFERENCE NO		DISRICT	ISLAMABAD		Feb	15	15 FEB 24	15000		
2714241090 (1)		TOWN COUNCIL	H-9 SECTOR		Mar	21	21 FEB 24	18000		
NAME & ADDRESS		UNIVERSITY GRAND COMMISSION BLDG ISLAMABAD		BILL GENERATED BY		HEC				
		Prog. 1st Part = 282500 Prog. 2nd Part = 50000 Extra Tax Bearing @ 1		SAY NO TO CORRUPTION						
		CNET LOAD = 180 M/D Date = 26-Aug-2023		GOVT CONNECTION						
PREVIOUS BIL	PREVIOUS DED	METER NO	MONTHLY REV BILL	POWER FACT	Fuel Price Adjustment for Dec 23 @ 4.547166%					
1540	1580	26	0	0.9	FT FPA = 02 BT FPA = 00					
2710	1590	26	0	0.9	LMP FPA = 20002.40-DST FPA = 10171.00					
TEST Reference No. is 8038 or Call 118					STL FPA = 00 3rd FPA = 00 STAL FPA = 00 Total FPA = 20172					
					METER / LINE LENGTH					
ISSUE	METER TEST READING			METER READING			METER TEST READING			METER STATUS
RE-TEST NO	PREVIOUS	PRE-CURT	AT	PREVIOUS	PRESENT	AT	PREVIOUS	AT	RE-TEST NO	STATUS
02702	840	658	1000	1007	1794	1000	71	1000		
02700	124	100	1000	313	500	1000	00	1000		
ESCO CHARGES			GOVT CHARGES			SUMMARY				
DATE CHARGED	5000	0.0				CURRENT BILL	271873.4			
METER CHARGED	141670	77430				BILL BALANCE				
TAX CHARGES	57730	507	41020			PREVIOUS				
LPP PENALTY	30000	10000.00				TOTAL FPA	20172			
SEASONAL CHARGES		0.00				DUPLICATE AFTER DUE DATE	20170			
WATER METER	800	10000.00				L.P. CHARGES	20270			
SERVICE METER		0.00				DUPLICATE AFTER DUE DATE	07100			
MSL FPA	20002.40	0.00	0.00							
3RD PARTY ADL	20150	0.00	0.00							
TOTAL	270204.4	84400.00								
BILL CALCULATION			1ST BURNCH	7180						
GCP			2ND BURNCH							
20000 + 2000			TAXES ON FPA	10171						
17000 + 1000			TOTAL	41020						
18000			NET BILL	10171						
			DISCOUNT AMOUNT							
			STANDARDIZED AMOUNT							
					 					
					For Complaint Contact					



Package 2

Solar PV System Details

HEC Lahore



The table below is providing the comprehensive details about the system.

System Type	Solar Detail	On-Grid/Grid Tied
PV System with Customized mounting structure	System Rating	135 kWp
	Annual Energy Generation (kWh)	~ 182,000kWh

The report provides a comprehensive analysis of the viability of PV systems for the HEC Lahore. The subsequent sections cover the PV potential available at each building, PV system generation and its financial analysis. PV system Simulation report that provides the detailed overview PV system parameters, Sites pictures, lay out plan for each building are annexed to the report.

1. Electrical Details

The details of the electrical meter, generator, and transformer are essential considerations in solar PV system designing because they help ensure that the system is designed to meet the specific energy needs of the property, and that the system is safely and effectively integrated into the existing electrical infrastructure.

2. Meter Details

Sr.	Reference No.	SANC. LOAD
1	24 11516 9007300U	300

3. Transformer Details

Sr.	Rating (KVA)	Associated Blocks
1	400	Complete Building

4. Generator Details

Sr.	Rating (KVA)	Fuel type	Associated Blocks
1	100	Diesel	Data Center
2	100	Diesel	Main Building
3	50	Diesel	Non-Operational



5. Proposed Solar PV System:

An **On-Grid or Grid-tied solar system** is proposed which will be connected to the power grid. Any surplus power will be supplied into the grid through net metering.

Building	Structure Type	PV (kWp)
HEC Lahore	Elevated	135 KW
Total		135KW

6. System Parameters

System Details	
Solar PV System Type	On-Grid/Grid Tied
System Rating	135 kWp
Annual Energy Generation (kWh)	~ 182,000 kWh

7. BOQ

Description	Qty.	UOM
PV Modules and Power Generation System		
Solar Modules: 590 W or above (Tier One)	230	Pcs
Ongrid Inverter (1:1- or above)	1	Pcs
Gen set Controller	1	Set
Cable for Interconnection (DC)(UV Protected XLPE)	1	Job
PV Combiner Boxes with DC Breakers / Fuses, external SPD's etc. for string protections	1	Job
AC Termination & Accessories		
LT Termination	1	Job
Secondary Comprehensive Protection Cabinet	1	Set
Low Voltage Switchgear Cabinet	1	set
Fabricated Items		



Description	Qty.	UOM
Mounting Structure-Elevated Hot Dip Galvanized	1	Job
Cable Tray (GI and UPVC where needed)	1	Job
Distribution Boxes (Powder Coated) as per system design	1	Job
Cable & Accessories		
AC Cables for Inverter Interconnection <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cable for Combined Output <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cables from meter to main DB <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end),	1	Job
Installation Material (cable Ducts etc)	1	Job
Earthing / Grounding System / ATS Panels		
<u>Earthing System For Inverter / Wapda / Generator Set</u> Neutral Complete independent earthing system for inverter / Wapda / Generator Set Neutral must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Earthing for PV SOLAR SYSTEM</u> complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Surge protection device</u> of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.	1	Job
Grounding Flat Iron, Grounding Network for the plant Area, Power distribution Room, HV power Distribution room	1	Job
Remote Monitoring Data Acquisition System		
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging Security and Surveillance The Bidder shall provide the required set of CCTV Camera Installed on roof top for surveillance of PV Modules and Control Room Equipment with complete indoor hardware (LED TV 49 inches , Laptop Core i9 Complete in All respect, NVR have a capacity of at least last 10 days video recording) along with the internet facility for remote monitoring for the period of 2 years O&M.	1	Job



Package 2 (HEC Lahore Office)

Description	Qty.	UOM
Services		
Project Design & Execution	1	Job
Erecting of Mechanical Mounting Structure	1	Job
Installation, testing and Commissioning of Solar System	1	Job
Operations and Maintenance "O&M Services (02 Years)	1	Job
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)	1	Job



Package 2 (HEC Lahore Office)

SITE MAP

Latitude: 31.510679581112875, 74.35281694995332





Site Images and roof tops



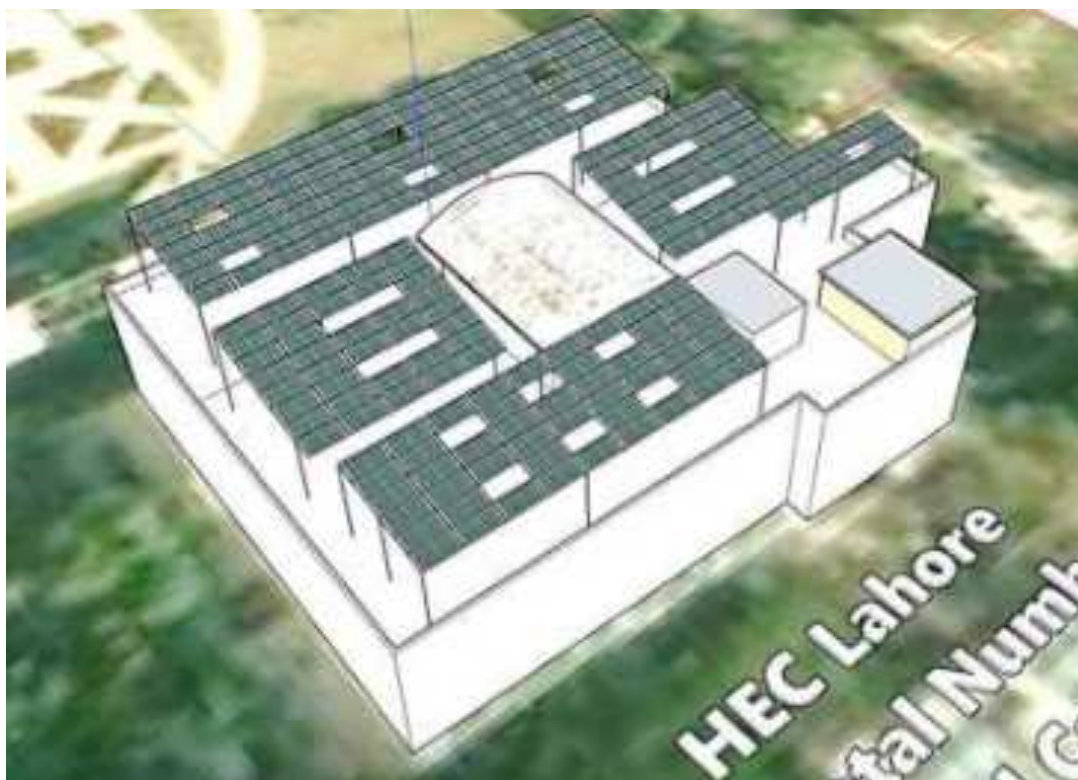


Images for Solution





Package 2 (HEC Lahore Office)





Transformer Image





HEC Lahore Electricity Bill

LAHORE ELECTRIC SUPPLY COMPANY - ELECTRICITY CONSUMER BILL (M04)									
www.lseccl.gov.pk					WEB BILL				
G.S.T # 500271620091									
750815		1.5%		Feb 24	03 MAR 24	05 MAR 24	18 Mar 24		
24 11516 9007300U		A-11(03)T	300	24151690073007					
14 OCT 90		Feb 24 - 24 11516 9007300U - 04110030 04 Mar 24 - 4							
DIRECTOR IASC 55 82 GULBERG II LHR					500 04115764308/03200521516 KEN (04289290513/03200521510 LIBERTY GULBERG N BLOCK (037524)				
F-TAX PAID 2023-2024 153324		Prs. C. HSE		Prs. C. MBI		Prs. C. S		Prs. C. T	
21.58		21.19		34					
CATEGORIES OF SUPPLIES									
706031 0758 18074 100		706032 0487 1455 100		706033 0507 1514 100		706034 0517 162 100		706035 0527 160 100	
(028168 P)7080		(02926 P)1130		(0274 P)654		371505.35			
3630726.45						81034.88		411970.735	
278405.20									
510340*		329584							
CURRENT BILL		5138039.02							
APPEARS A/D		-01							
PAYABLE TO SOCIETY									
NET FTA									
GST + SALES DEDUCT									
PAYABLE WITHIN DUES DATE		5138039							
L.P SURCHARGE		367307							
PAYABLE AFTER DUE DATE		5505346							
MONTH	YEAR	FAVOURABLE	UNFAVOURABLE	DIFFERENCE	MONTH	YEAR	FAVOURABLE	UNFAVOURABLE	DIFFERENCE
FEB23	05	60560	2576184	2576184	AUG23	123	62969	2900989	2900989
MAR23	06	47080	3254274	3254274	SEP23	128	60529	3114188	3114188
APR23	29	37760	1832817	1832817	OCT23	99	47866	2768485	2768485
MAY23	131	73440	3166824	3166824	NOV23	86	62299	2515481	2515481
JUN23	138	68480	2991408	2991408	DEC23	96	70400	4982168	4982168
JUL23	136	68800	3360728	3360728	JAN24	120	80160	4899234	4899234

11814/MBL 6118

CUT HERE



Package 3

Solar PV System Details (HEC Karachi)

The table below is providing the comprehensive details about the system.

System Type	Solar Detail	On-Grid/Grid Tied
PV System with Customized mounting structure	System Rating	85 kWp
	Annual Energy Generation (kWh)	~ 114,000kWh

The report provides a comprehensive analysis of the viability of PV systems for the HEC Karachi. The subsequent sections cover the PV potential, PV system generation and its financial analysis. PV system Simulation report that provides the detailed overview PV system parameters, Sites pictures, lay out plan for each building are annexed to the report.

1. Electrical Details

The details of the electrical meter, generator, and transformer are essential considerations in solar PV system designing because they help ensure that the system is designed to meet the specific energy needs of the property, and that the system is safely and effectively integrated into the existing electrical infrastructure.

2. Meter Details

Sr.	Account No.	Tariff
1	0400002085567	A3-G

3. Transformer Details

Sr.	Rating (KVA)	Associated Blocks
1	250	Complete Campus

4. Generator Details

Sr.	Rating (KVA)	Fuel type	Associated Blocks
1	100	Diesel	Complete Building
2	100	Diesel	Backup Generator
3	50	Diesel	Not in use



5. Proposed Solar PV System:

An **On-Grid or Grid-tied solar system** is proposed which will be connected to the power grid. Any surplus power will be supplied into the grid through net metering.

Building	Structure Type	PV (kWp)
HEC Karachi	Elevated	85
Total		85 kW

6. System Parameters

System Details	
Solar PV System Type	On-Grid/Grid Tied
System Rating	85 kWp
Annual Energy Generation (kWh)	~ 114,000 kWh

7. BOQ

Description (85 KW PV)	Qty.	UOM
PV Modules and Power Generation System		
Solar Modules: 590 W or above (Tier One)	145	Pcs
Ongrid Inverter (1:1- or above)	1	Pcs
Gen set Controller	1	Set
Cable for Interconnection (DC)(UV Protected XLPE)	1	Job
PV Combiner Boxes with DC Breakers / Fuses, external SPD's etc. for string protections	1	Job
AC Termination & Accessories		
LT Termination	1	Job
Secondary Comprehensive Protection Cabinet	1	Set
Low Voltage Switchgear Cabinet	1	set
Fabricated Items		
Mounting Structure-Elevated Hot Dip Galvanized	1	Job



Description (85 KW PV)	Qty.	UOM
Cable Tray (GI and UPVC where needed)	1	Job
Distribution Boxes (Powder Coated) as per system design	1	Job
Cable & Accessories		
AC Cables for Inverter Interconnection <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cable for Combined Output <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cables from meter to main DB <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end),	1	Job
Installation Material (cable Ducts etc)	1	Job
Earthing / Grounding System / ATS Panels		
<u>Earthing System For Inverter / Wapda / Generator Set</u> Neutral Complete independent earthing system for inverter / Wapda / Generator Set Neutral must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Earthing for PV SOLAR SYSTEM</u> complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Surge protection device</u> of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.	1	Job
Grounding Flat Iron, Grounding Network for the plant Area, Power distribution Room, HV power Distribution room	1	Job
Remote Monitoring Data Acquisition System		
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging Security and Surveillance The Bidder shall provide the required set of CCTV Camera Installed on roof top for surveillance of PV Modules and Control Room Equipment with complete indoor hardware (LED TV 49 inches , Laptop Core i9 Complete in All respect, NVR have a capacity of at least last 10 days video recording) along with the internet facility for remote monitoring for the period of 2 years O&M.	1	Job



Package 3 (HEC Karachi Office)

Description (85 KW PV)	Qty.	UOM
Services		
Project Design & Execution	1	Job
Erecting of Mechanical Mounting Structure	1	Job
Installation, testing and Commissioning of Solar System	1	Job
Operations and Maintenance "O&M Services (02 Years)	1	Job
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)	1	Job



SITE MAP



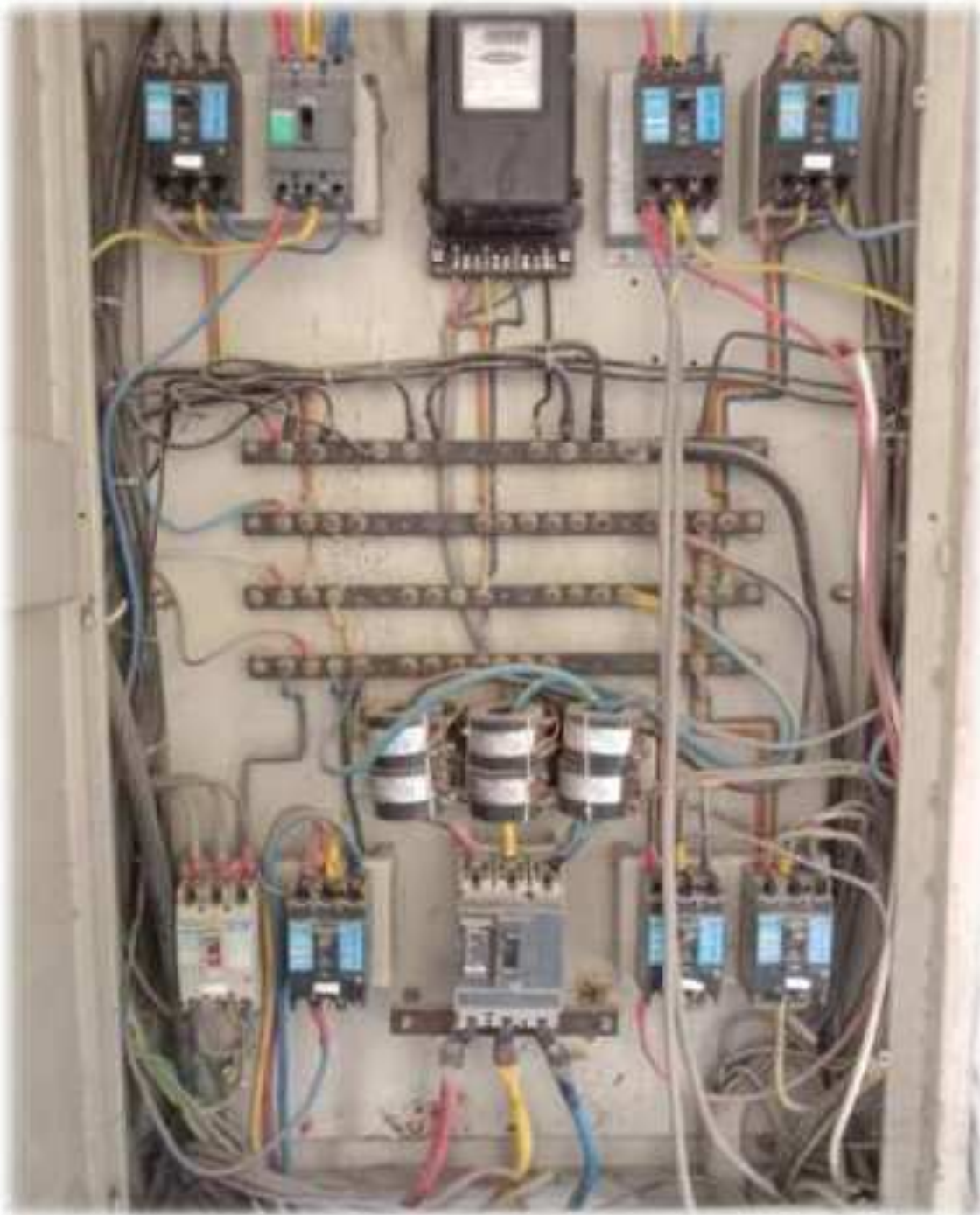
Site Images and roof tops





Package 3 (HEC Karachi Office)







Package 3 (HEC Karachi Office)





Package 3 (HEC Karachi Office)



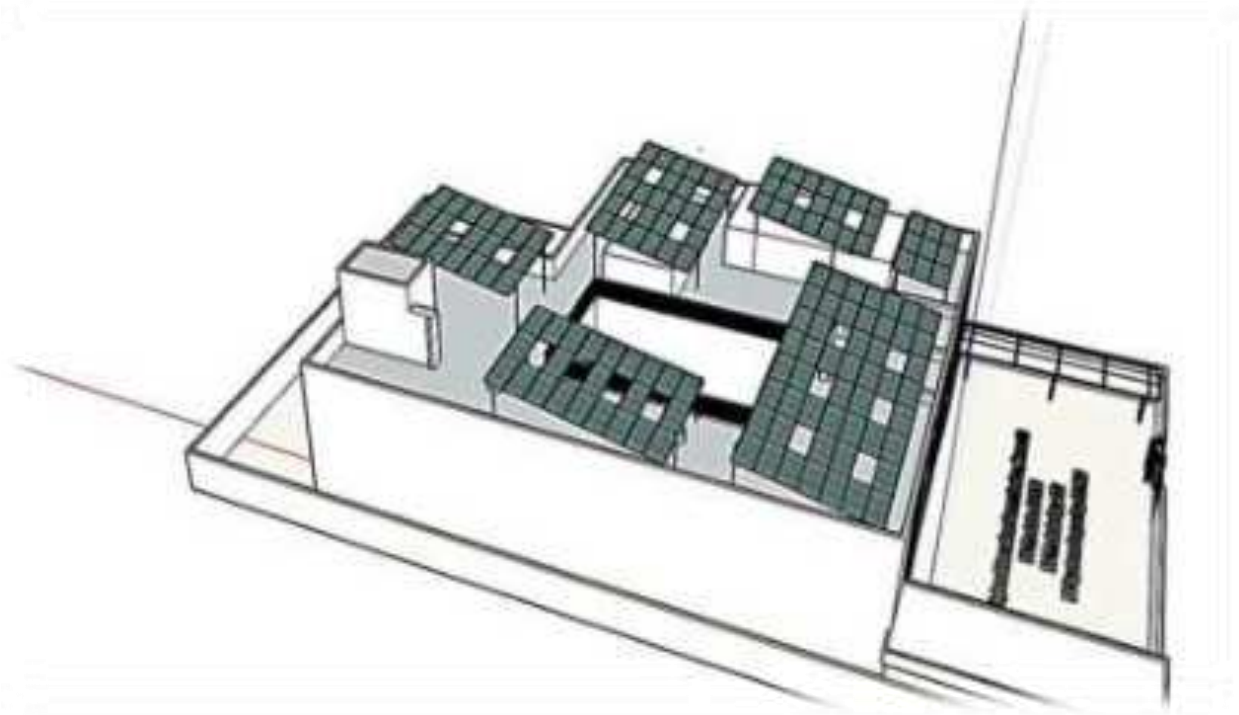


Images for Proposed Solution





Package 3 (HEC Karachi Office)





Package 4

Solar PV System Details

(HEC Peshawar)



The table below is providing the comprehensive details about the system.

System Type	Solar Detail	On-Grid/Grid Tied
PV System with Customized mounting structure	System Rating	100 kWp
	Annual Energy Generation (kWh)	~ 135,000kWh

The report provides a comprehensive analysis of the viability of PV systems for the HEC Peshawar. The subsequent sections cover the PV potential, PV system generation and its financial analysis. PV system Simulation report that provides the detailed overview PV system parameters, Sites pictures, lay out plan for each building are annexed to the report.

1. Electrical Details

The details of the electrical meter, generator, and transformer are essential considerations in solar PV system designing because they help ensure that the system is designed to meet the specific energy needs of the property, and that the system is safely and effectively integrated into the existing electrical infrastructure.

2. Meter Details

Sr.	Reference No.	SANC. LOAD
1	30 26214 0027000 U	300

3. Transformer Details

Sr.	Rating (KVA)	Associated Blocks
1	200	Complete Building

4. Generator Details

Sr.	Rating (KVA)	Fuel type	Associated Blocks
1	100	Diesel	Complete Building



5. Proposed Solar PV System:

An **On-Grid or Grid-tied solar system** is proposed which will be connected to the power grid. Any surplus power will be supplied into the grid through net metering.

Building	Structure Type	PV (kWp)
HEC Peshawar	Elevated	100
Total		100

6. System Parameters

System Details	
Solar PV System Type	On-Grid/Grid Tied
System Rating	100 kWp
Annual Energy Generation (kWh)	~ 135,000 kWh

7. BOQ

Description (100 KW PV)	Qty.	UOM
PV Modules and Power Generation System		
Solar Modules: 590 W or above (Tier One)	170	Pcs
Ongrid Inverter (1:1- or above)	1	Pcs
Gen set Controller	1	Set
Cable for Interconnection (DC)(UV Protected XLPE)	1	Job
PV Combiner Boxes with DC Breakers / Fuses, external SPD's etc. for string protections	1	Job
AC Termination & Accessories		
LT Termination	1	Job
Secondary Comprehensive Protection Cabinet	1	Set
Low Voltage Switchgear Cabinet	1	set
Fabricated Items		



Description (100 KW PV)	Qty.	UOM
Mounting Structure-Elevated Hot Dip Galvanized	1	Job
Cable Tray (GI and UPVC where needed)	1	Job
Distribution Boxes (Powder Coated) as per system design	1	Job
Cable & Accessories		
AC Cables for Inverter Interconnection <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cable for Combined Output <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end)	1	Job
AC Cables from meter to main DB <u>xx sqmm, 4 core</u> , (Voltage drop should not be more than 1.5% end to end),	1	Job
Installation Material (cable Ducts etc)	1	Job
Earthing / Grounding System / ATS Panels		
<u>Earthing System For Inverter / Wapda / Generator Set</u> Neutral Complete independent earthing system for inverter / Wapda / Generator Set Neutral must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Earthing for PV SOLAR SYSTEM</u> complete independent earthing system for PV solar system, must be separated of the main earthing system to obtain 2 ohm max resistance.	1	Job
<u>Surge protection device</u> of appropriate short circuit capacity to secure the overall AC system (data and power) against lightning and surges strikes, including connecting the device to earthing system and all needed accessories.	1	Job
Grounding Flat Iron, Grounding Network for the plant Area, Power distribution Room, HV power Distribution room	1	Job
Remote Monitoring Data Acquisition System		
Contractor Shall Provide the access of Remote Monitoring Mobile App and Server from the Inverter Manufacturer for real time monitoring, Data Logging Security and Surveillance The Bidder shall provide the required set of CCTV Camera Installed on roof top for surveillance of PV Modules and Control Room Equipment with complete indoor hardware (LED TV 49 inches , Laptop Core i9 Complete in All respect, NVR	1	Job



Package 4 (HEC Peshawar Office)

Description (100 KW PV)	Qty.	UOM
have a capacity of at least last 10 days video recording) along with the internet facility for remote monitoring for the period of 2 years O&M.		
Services		
Project Design & Execution	1	Job
Erecting of Mechanical Mounting Structure	1	Job
Installation, testing and Commissioning of Solar System	1	Job
Operations and Maintenance "O&M Services (02 Years)	1	Job
Net-Metering Process (Including Equipment, Fee, Approvals, Bi-Directional Meters Documentation, Inspection)	1	Job



SITE MAP





Site Images and roof tops





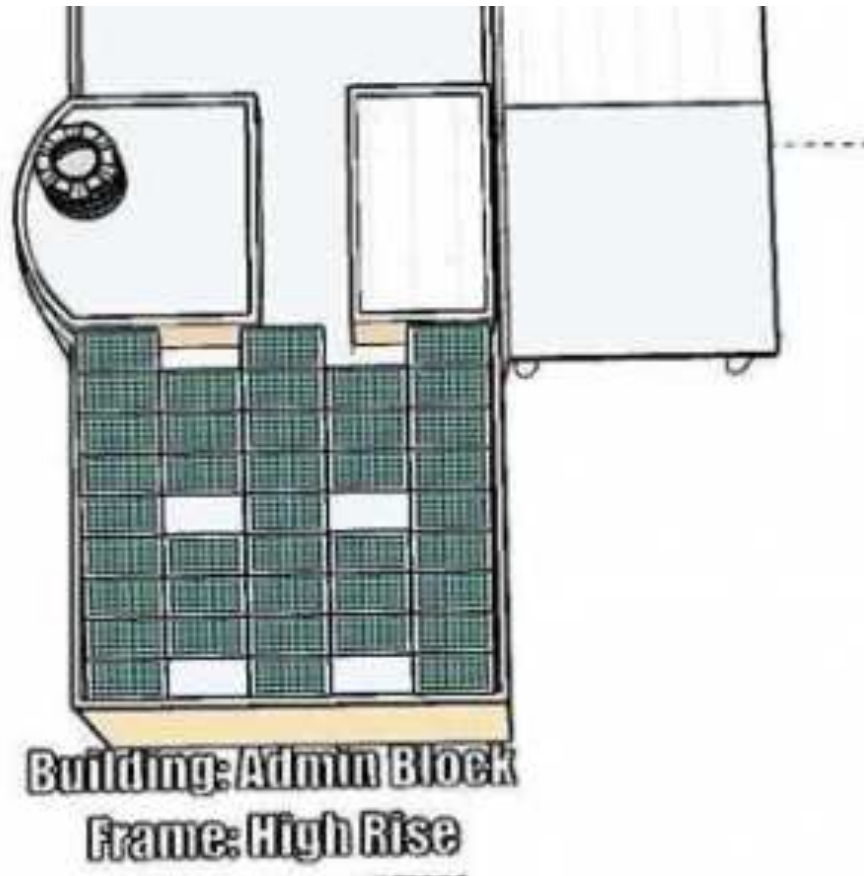
Package 4 (HEC Peshawar Office)






Images for Proposed Solution







HEC Peshawar Electricity Bill

 PESHAWAR ELECTRIC SUPPLY COMPANY ELECTRICITY CONSUMER BILL - (MD) <small>WWW.PESCO.COM.PK PESCO GST # 21-02-2718-001-02</small>																																																																																																																																
CONV. DATE	MPFC. CD	NO OF AC	LINE	METER NO	READING DATE	BILL DATE	DUO DATE																																																																																																																									
01 JUN 20	07				01 MAR 20	14 MAR 20	28 MAR 20																																																																																																																									
CONSUMER ID / METER NO	TARIFF	SERVICE LOAD	DIS. AC NUMBER	CONSUMER NAME		METER ABNO: 1 FOR 120V (AMM)																																																																																																																										
220044961 / 261000020	A-3000	125	3002140007000	MONTH	REV	REV UNITS	BILL	REV UNITS																																																																																																																								
METER SERIAL NO: 0210001				Jan20	0	0070	27040	27040																																																																																																																								
METER BRAND: SIEMENS				Apr20	0	7020	30700	30700																																																																																																																								
METER TYPE: 31 JMD14 007000 0				May20	0	6794	34470	34470																																																																																																																								
				Jun20	0	12047	40000	40000																																																																																																																								
				Jul20	0	17000	46940	46940																																																																																																																								
				Aug20	0	20121	51940	51940																																																																																																																								
				Sep20	0	23080	58280	58280																																																																																																																								
				Oct20	0	26064	64570	64570																																																																																																																								
				Nov20	0	11800	61040	61040																																																																																																																								
				Dec20	0	6580	67600	67600																																																																																																																								
				Jan21	0	10000	68600	68600																																																																																																																								
				Feb21	0	10000	78600	78600																																																																																																																								
NAME & ADDRESS				AM METER		SAY NO TO CORRUPTION		WEB GENERATED BILL																																																																																																																								
DIRECTOR HIGHER EDUCATION COMM SECTION HAS C SECTOR B1 PHASE 1 HANAD PESH				METER LOAD = 125 MOC Date: 01 Jun 2020		GOVT CONNECTION																																																																																																																										
PREVIOUS METER NO:	METER COMPANY:	METER NO:	MONTHLY AMOUNT:	POWER FACT:		Fuel Price Adjustment for Jan 21 @ 1.000000		METER LEAD TIME:																																																																																																																								
			0			FY FPA = 0% DT FPA = 0%																																																																																																																										
						VALR FPA = 75444.30-GST FPA = 12000.00																																																																																																																										
						ED FPA = 0% FT FPA = 0%																																																																																																																										
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0210001	000000	270000	40	0	0	0	0	0	ACTIVE																																																																																																																							
<table border="1"> <thead> <tr> <th colspan="3">PESCO CHARGES</th> <th colspan="2">GOVT CHARGES</th> <th colspan="2">AMOUNT</th> </tr> </thead> <tbody> <tr> <td>DATE CONSUMED</td> <td>9999</td> <td>00</td> <td>00</td> <td></td> <td>CURRENT BILL</td> <td>86444.30</td> </tr> <tr> <td>ENERGY CONSUMED</td> <td>35370.40</td> <td>75 FEE</td> <td></td> <td></td> <td>BILL ADJUSTMENT</td> <td></td> </tr> <tr> <td>FIX CHARGES</td> <td></td> <td>000</td> <td>75000</td> <td></td> <td>REPAYMENT</td> <td></td> </tr> <tr> <td>LIFT FEE</td> <td></td> <td></td> <td></td> <td></td> <td>TOTAL FPA</td> <td>86444.30</td> </tr> <tr> <td>SECTORIAL CHARGE</td> <td></td> <td></td> <td></td> <td></td> <td>AVAILABLE WITHIN 30 DAYS</td> <td>00000</td> </tr> <tr> <td>METER RENT</td> <td></td> <td></td> <td></td> <td></td> <td>LONGTERM</td> <td>00000</td> </tr> <tr> <td>SERVICE FEE</td> <td></td> <td></td> <td></td> <td></td> <td>REPAY AFTER 30 DAYS</td> <td>00000</td> </tr> <tr> <td>VALR FPA</td> <td>75444.30</td> <td>STAR - 000</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GST (Current Act)</td> <td>41900.00</td> <td>W / SURCHARGE</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td>47000.00</td> <td>SALES TAX</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3">BILL CALCULATOR</td> <td colspan="2">FC SURCHARGE</td> <td colspan="2">30000.00</td> </tr> <tr> <td colspan="3">GOVT</td> <td colspan="2">75 SURCHARGE</td> <td colspan="2">10000.00</td> </tr> <tr> <td colspan="3">Total</td> <td colspan="2">TOTAL</td> <td colspan="2">47000.00</td> </tr> <tr> <td colspan="3"></td> <td colspan="2">GOVT BILL</td> <td colspan="2">10000.00</td> </tr> <tr> <td colspan="3"></td> <td colspan="2">DISBURSEMENT</td> <td colspan="2"></td> </tr> <tr> <td colspan="3"></td> <td colspan="2">REPAYMENT AMOUNT</td> <td colspan="2"></td> </tr> </tbody> </table>										PESCO CHARGES			GOVT CHARGES		AMOUNT		DATE CONSUMED	9999	00	00		CURRENT BILL	86444.30	ENERGY CONSUMED	35370.40	75 FEE			BILL ADJUSTMENT		FIX CHARGES		000	75000		REPAYMENT		LIFT FEE					TOTAL FPA	86444.30	SECTORIAL CHARGE					AVAILABLE WITHIN 30 DAYS	00000	METER RENT					LONGTERM	00000	SERVICE FEE					REPAY AFTER 30 DAYS	00000	VALR FPA	75444.30	STAR - 000					GST (Current Act)	41900.00	W / SURCHARGE					TOTAL	47000.00	SALES TAX					BILL CALCULATOR			FC SURCHARGE		30000.00		GOVT			75 SURCHARGE		10000.00		Total			TOTAL		47000.00					GOVT BILL		10000.00					DISBURSEMENT							REPAYMENT AMOUNT			
PESCO CHARGES			GOVT CHARGES		AMOUNT																																																																																																																											
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LIFT FEE					TOTAL FPA	86444.30																																																																																																																										
SECTORIAL CHARGE					AVAILABLE WITHIN 30 DAYS	00000																																																																																																																										
METER RENT					LONGTERM	00000																																																																																																																										
SERVICE FEE					REPAY AFTER 30 DAYS	00000																																																																																																																										
VALR FPA	75444.30	STAR - 000																																																																																																																														
GST (Current Act)	41900.00	W / SURCHARGE																																																																																																																														
TOTAL	47000.00	SALES TAX																																																																																																																														
BILL CALCULATOR			FC SURCHARGE		30000.00																																																																																																																											
GOVT			75 SURCHARGE		10000.00																																																																																																																											
Total			TOTAL		47000.00																																																																																																																											
			GOVT BILL		10000.00																																																																																																																											
			DISBURSEMENT																																																																																																																													
			REPAYMENT AMOUNT																																																																																																																													