# DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI



# BIDDING DOGUMENT

# SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 117kW GRID TIED SOLAR SYSTEM AT DUHS, MAIN CAMPUS KARACHI

NIT # DUHS/P&D/2018/9537 DATED: September 12, 2018

OFFICE OF THE PROJECT DIRECTOR
PLANNING & DEVELOPMENT,
DOW UNIVERSITY OF HEALTH SCIENCES,
BABA-E-URDU ROAD, BESIDES CIVIL HOSPITAL,
KARACHI

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## **NOTICE INVITING TENDER (NIT)**

#### No. DUHS/P&D/2018/9537

Dated: September 12, 2018

Sealed bids are invited by Dow University of Health Sciences, Karachi from reputed, experienced & registered Organizations for "SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 117KW GRID TIED SOLAR SYSTEM AT DUHS, KARACHI".

ELIGIBILITY: Valid Registration with tax authorities (Federal & Provincial), Pakistan Engineering Council and Electric Inspectorates in Sindh.

METHOD OF PROCUREMENT: Single Stage - Two Envelope Procedure for selection of firm accordance with section 46(2) of SPPRA Rules 2010(Amended 2017), single package containing two separate envelopes each envelope should be clearly marked as "FINANCIAL PROPOSAL" and "TECHNICAL PROPOSAL".

BIDDING / TENDER DOCUMENTS: Bidding Documents with detailed specification can be obtained from the Office of Director Planning & Development, Dow University of Health Sciences (DUHS), Karachi during office hours. The Bidding Documents can also be downloaded from the University Website www.duhs.edu.pk and the SPPRA Website www.pprasindh.gov.pk

Tender Fee		Rupees Two Thousand Only) Non-Refundable in Order / Demand Draft in favor of Dow University of ces, Karachi.
Purchasing	Date & Time	17-09-2018 to 10-10-2018 (11 a.m to 02 p.m)
Bids Delivery & Opening Date & Time		11-10-2018 at 11:00 a.m. & 11:30 a.m.
Bid Security		2.5% (Refundable) in favor of Dow University of Health Sciences, Karachi.

In case of any holiday or unforeseen situation or incident, the bids shall be issued, submitted and opened on the next working day as per schedule. Place of issuance, submission, inquires and opening will be at Directorate of Planning & Development, Dow University of Health Sciences, Karachi.

TERMS & CONDITION: Under following conditions bid will be rejected:

- Conditional and telegraphic bids / tenders.
- Bids not accompanied by bid security.
- 3.Bids received after specified date and time.
- 4.Blacklisted firms

The Dow University of Health Sciences, Karachi (DUHS) reserves the right to reject any or all the bids subject to the relevant provisions of SPPRA Rules 2010 (Amended 2017).



#### PROJECT DIRECTOR

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#### **SECTION-II INSTRUCTION TO BIDDERS**

#### **PREPARATION OF BIDS**

#### 1. SCOPE

1.1 Dow University of Health Sciences, Karachi intend to purchase "SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 117kW GRID TIED SOLAR SYSTEM AT DUHS, KARACHI". Through Bidding Single Stage Two Envelope Procedure as per SPPRA Rules-2010 (Amended 2017).

#### 2. LANGUAGE OF BID

2.1 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 English language.

#### 3. DOCUMENTS COMPRISING THE BID

- 3.1 The bid prepared by the Bidder shall comprise the following components:
  - a) Price Schedule completed in accordance with ITB Clauses 4, 5 and 6.
  - b) Bid security furnished in accordance with ITB Clause-9.

#### 4. BID PRICES

- 4.1 The Bidder shall indicate on the appropriate Price Schedule the unit prices (where applicable) and total bid price of the goods it proposes to supply under the contract.
- 4.2 The prices shall be quoted on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location specified in the schedule of Requirements. No separate payment shall be made of the incidental services.
- 4.3 Prices quoted by the 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.
- 4.4 Prices shall be quoted in Pak Rupees unless otherwise specified in the Bid Data Sheet.

#### 5. BID FORM

5.1 The Bidder shall complete the Bid Form and the appropriate Price Schedule furnished in the bidding documents, indicating the goods to be supplied, a brief description of the goods, their country of origin, quantity, and prices.

#### 6. BID CURRENCIES

6.1 Prices shall be quoted in Pak Rupees.

#### 7. DOCUMENTS

- 7.1 The Bidder shall furnish, as part of its bid, documents establishing Bidder's Eligibility to bid and its qualifications to perform the contract if its bid is accepted.
  - 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 good Manufacture or producer to supply the goods in the Islamic Republic of Pakistan.
- b) that the Bidder has the financial ,technical ,and production capability necessary to perform the contract;
- c) that the Bidders meets the qualification criteria listed in the Bid Data Sheet.

# 8. DOCUMENTS ESTABLISHING GOODS' ELIGIBILITY AND CONFORMITY TO BIDDING DOCUMENTS

- 8.1 The documents evidence of conformity of the goods and services to the bidding documents may be in the form of literature, drawings, and Data, and shall consist of:
  - a) a detailed description of the essential technical and performance characteristics of the goods;
  - b) 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 Specification are intended to be descriptive only and not restrictive till stated otherwise in Technical Specifications or Bid Data Sheet. The Bidder may substitute alternative standards, brand names, and /or catalogue numbers in its bid, provided that demonstrates to the Procuring agency's satisfaction that the substitutions ensure substantial equivalence to those designated in the in the Technical Specifications

#### 9. BID SECURITY

- 9.1 The bid security is required to protect the Procuring agency against the risk of Bidder's conduct, which would warrant the security's forfeiture The bid security shall be denominated in the currency of the of the bid:
  - a) at the Bidder's option, be in the form of either demand draft/call deposit or an unconditional bank guarantee from a reputable Bank:
  - b) be submitted in its original form: copies will not be accepted;
  - c) remain valid for a period of at least 14 days beyond the original validity period of bids, or at least 14 days beyond any extended period of bid validity.
- 9.2 Bid security shall release to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.
- 9.3 The successful Bidder's bid security shall be discharged upon the Bidder signing the contract, and furnishing the performance security.
- 9.4 The bid security may be forfeited:
  - a) If a Bidder withdraws its bid during the period of bid validity or
  - b) In the case of a successful Bidder, if the bidder fails:
    - (i) To sign the contract in accordance or
    - (ii) To furnish performance security

#### 10. PERIOD OF VALIDITY OF BIDS

- 10.1 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 shall be rejected by the Procuring agency as non-responsive.
- 10.2 In exceptional circumstances, the Procuring agency may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The bid security shall also be suitable extended. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request will not be required not be required nor per mitted to modify its bid.

#### 11. FORMAT AND SIGNING OF BID

- 11.1 The Bidder shall prepared an original and the number of copies of the bid indicated in the Bid Data Sheet, clearly marking each "ORIGINAL BID" and "COPY OF BID" as appropriate. In the event of any discrepancy between them, the original shall govern.
- 11.2 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 or persons duly authorized to bind the Bidder to the contract. All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.
- 11.3 Any interlineations, erasures, or overwriting shall be valid only if they are initialed by the person or persons signing the bid.

#### SUBMISSION OF BIDS

#### 12. SEALING AND MARKING OF BIDS

- 12.1 The Bidder shall seal the original and each copy of the bid in separate envelopes, duly marking the envelopes as "ORIGINAL BID" and "ONE COPY". The envelopes shall then be sealed in an outer envelope. The inner and outer envelopes shall be addressed to the Procuring agency at the address given in the BDS, and carry statement "Do Not Open Before. 11-10-2018 at 11.30 AM".
- 12.2 If the outer envelope is not sealed and marked as required, the Procuring agency shall assume no responsibility for the bid's misplacement or premature opening.

#### 13. DEADLINE FOR SUBMISSION OF BIDS

- 13.1 Bids must be received by the Procuring agency at the address specified in BDS, not later than the time and date specified in Bid Data Sheet.
- 13.2 The Procuring agency may, at its discretion, extend this deadline for the submission of bids by amending the bidding documents, in such case all rights and obligations of the Procuring agency and bidders previously subject to the deadline will thereafter be subject to the deadline.

#### 14. LATE BIDS

14.1 Any bid received by the Procuring agency after the deadline for submission of bids prescribes by the Procuring agency shall be rejected and returned unopened to the Bidder.

#### 15. MODIFICATION AND WITHDRAWAL OF BIDS

- 15.1 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.
- 15.2 No bid may be modified after the deadline for submission of bids.
- 15.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiry of the period of bid validity withdrawal of a bid during this interval may result in the Bidder's forfeiture of its bid security.

#### **OPENING AND EVALUATION OF BIDS**

#### 16. OPENING OF BIDS BY THE PROCURING AGENCY

- 16.1 The Procuring agency shall open all bids in the presence of bidder's representatives who choose to attend, at the time, on the date, and at the place specified in the Bid Data Sheet. The bidders' representatives who are present shall sign a register/attendance sheet evidencing their attendance.
- 16.2 The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presences or absence of requisite bid security and such other details as the Procuring agency, at its discretion, may consider appropriate, will be announced at the opening.

#### 17. CLARIFICATION OF BIDS

17.1 During evaluation of the bids, the Procuring agency may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the prices or substance of the bid shall be sought, offered, or permitted.

#### 18. PRELIMINARY EXAMINATION

- 8.1 The Procuring agency shall examine the bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the bids are generally in order.
- 8.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multi plying the unit price and quantity, the unit price shall prevail, and the correction of the errors, its bid will be rejected, and its bid security may be forfeited. If there is a discrepancy between words and figures, the amount in words will prevail.
- 8.3 Prior to the detailed evaluation, the Procuring agency will determine the substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. Procuring agency's determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 8.4 If a bid is not substantially responsive, it will be rejected by the Procuring agency and may not subsequently be made responsive by the Bidder by correction of the nonconformity.

#### 19. EVALUATION AND COMPARISON OF BIDS

- 19.1 The Procuring agency will evaluate and compare the bids which have been determined to be substantially responsive.
- 19.2 The Procuring agency's evaluation of a bid will be on delivery to consignee's end inclusive of all taxes, stamps, duties, levies, fees and installation and integration charges imposed till the delivery location and shall exclude any allowance for price adjustment during the period of execution of the contract.

#### 20. CONTACTING THE PROCURING AGENCY

- 20.1 No Bidder shall contact the procuring agency on any matter relating to its bid, from the time of bid opening to the time the announcement of Bid Evaluation Report. If the Bidder wishes to bring additional information to the notice of the procuring agency, it should do so in writing.
- 20.2 Any effort by a Bidder to influence the Procuring agency in its decision on bid evaluation, bid comparison, or contract award may result in the rejection of the Bidder's bid.

#### **AWARD OF CONTRACT**

#### 21. POST – QUALIFICATION

- 21.1 In the absence of prequalification, the procuring agency may determine to its satisfaction whether that selected Bidder having submitted the lowest evaluation responsive bid is qualified to perform the contract satisfactorily.
- 21.2 The determination will take into account the Bidder's financial, technical, and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Claus-7 as well as such other information as the Procuring agency deems necessary and appropriate.
- 21.3 An affirmative determination will be a prerequisite for award of the contract to the Bidder. A negative determination will result in rejection of the Bidder's bid, in which event the Procuring agency will proceed to the next lowest evaluated bid to perform satisfactorily.

#### 22. AWARD CRITERIA

22.1 The Procuring agency will award the contract to the successful Bidder whose bid has been determined to be substantially responsive and has been determined to be the lowest evaluated bid, provided further that the Bidder is determined to be qualified to perform the contract satisfactorily.

# 23. PROCURING AGENCY'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

23.1 Subject to relevant provisions of SPP Rules 2010 (Amended 2017), the Procuring agency reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award.

23.2 Pursuant to Rule 45 of SPP Rules 2010 (Amended 2017), Procuring agency shall hoist the evaluation report on Authority's web site, and intimate to all the bidders seven days prior to notify the award of contract.

#### 24. NOTIFICATION OF AWARD

- 24.1 Prior to the expiration of the period of bid validity, the Procuring agency shall notify the successful Bidder in writing, that its bid has been accepted.
- 24.2 Upon the successful Bidder's furnishing of the performance security pursuant to ITB Clause 26, the Procuring agency will promptly notify each unsuccessful Bidder and will discharge its bid security.

#### 25. SIGNING OF CONTRACT

- 25.1 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.
- 25.2 Within fourteen (14) days, or any other period specified in BDS, of receipt of the Contract Form, the successful Bidder shall sign and date the contract and return it to the Procuring agency.

#### 26. PERFORMANCE SECURITY

- 26.1 Within seven (07) days, or any other period specified in BDS, of the receipt of notification of award from the Procuring agency, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, in the Performance Security Form provided in the bidding documents, or in another form acceptable to the Procuring agency.
- 26.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 25 shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event the Procuring agency may make the award to the next lowest evaluated Bidder or call for new bids.

#### 27. CORRUPT OR FRAUDULENT PRACTICES

- 27.1 The Government of Sindh requires that Procuring agency's (including beneficiaries of donor agencies' loans), as well as Bidders/Suppliers/Contractors under Government-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, the SPPRA, in accordance with the SPP Act, 2009 and Rules made there under:
  - a) "Corrupt and Fraudulent Practices" means either one or any combination of the practices given below;
    - (i) "Coercive Practice" means any 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" means any 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) "Corrupt Practice" means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
- (iv) "Fraudulent Practice" means 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;
- b) "Obstructive Practice" means 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 rights provided for under the Rules.

# SECTION – III 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.
  - (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, which the Supplier is required to supply to the Procuring agency under the Contract.
  - (d) "The Services" means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Supplier covered under the Contract.
  - (e) "GCC" means the General Conditions of Contract contained in this section.
  - (f) "SCC" means the Special Conditions of Contract.
  - (g) "The Procuring agency" means the Sindh Public Procurement Regulatory Authority (SPPRA), Government of Sindh.
  - (h) "The Supplier" means the individual or firm supplying the Goods and Services under this Contract.
  - (i) "SPP Rules 2010" means the Sindh Public Procurement Rules 2010 (Amended 2017).
  - (j) "Day" means calendar day.

#### 2. STANDARDS

2.1 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.

#### 3. PATENT RIGHTS

3.1 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 Islamic Republic of Pakistan.

#### 4. PERFORMANCE SECURITY

4.1 Within seven (07) days, or any other duration as specified in SCC, of receipt of the notification of Contract award, the successful Bidder shall furnish to the Procuring agency the performance security in the amount specified in SCC.

- 4.2 The proceeds of the performance security 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.
- 4.3 The performance security shall be denominated in the Pak rupees and shall be an unconditional bank guarantee, pay order, call deposit as, provided in the bidding documents or another form acceptable to the Procuring agency;
- 4.4 The performance security will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in SCC.

#### 5. INSPECTIONS AND TESTS

- 5.1 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. The Procuring agency shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.
- 5.2 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.
- 5.3 The Procuring agency's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival shall in no way be limited or waived by reason of the Goods having previously been inspected, tested, and passed by the Manufacturer.
- 5.4 Nothing in GCC Clause 5 shall in any way release the Supplier from any warranty or other obligations under this Contract.

#### 6. PACKING

6.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. 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.

#### 7. DELIVERY AND DOCUMENTS

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

#### 8. INSURANCE

8.1 The Goods supplied under the Contract shall be delivered consignee's end under which risk is transferred to the Procuring agency after having been delivered; hence insurance coverage is Supplier's responsibility.

#### 9. TRANSPORTATION

9.1 The Supplier is required under the Contact to transport the Goods to a specified place of destination and shall be arranged by the Supplier, and related costs shall be deemed to have been included in the Contract Price.

#### 10. INCIDENTAL SERVICES

- 10.1 The Supplier may be required to provide any or all of the following services, including additional services, if any, specified in SCC:
  - (a) Performance 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;

#### 11. SPARE PARTS

- 11.1 The Supplier should provide any or all of the notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:
  - (a) such spare parts as the Procuring agency may elect to purchase from the Supplier, provided that this election 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.

#### 12. WARRANTY

- 12.1 The Supplier warrants that the Goods supplied under the Contract are new, unused, of desired models, 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.
- 12.2 This warranty shall remain valid as per BOQ 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.

12.3 If the Supplier, having been notified, fails to remedy 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.

#### 13. PAYMENT

- 13.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in SCC.
- 13.2 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 upon fulfillment of other obligations stipulated in the Contract.
- 13.3 Payments shall be made promptly by the Procuring agency, but in no case later than thirty (30) days after submission of an invoice or claim by the Supplier. The currency of payment is Pak. Rupees.

#### 14. PRICES

14.1 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,

#### 15. CONTRACT AMENDMENTS

15.1 No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

#### 16. DELAYS IN THE SUPPLIER'S PERFORMANCE

- 16.1 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.
- 16.2 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.
- 16.3 Except as provided under GCC Clause 17 a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages unless an extension of time is agreed upon pursuant to GCC Clause 16.2 without the application of liquidated damages.

#### 17. LIQUIDATED DAMAGES

17.1 Subject to GCC Clause 20, 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 18.

#### 18. TERMINATION FOR DEFAULT

- 18.1 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 16; or
  - (b) If the Supplier fails to perform any other obligation(s) under the Contract.
  - (c) If the Supplier, in the judgment of the Procuring agency has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

#### 19. FORCE MAJEURE

- 19.1 Notwithstanding the provisions of GCC Clauses 16, 17 and 18, the Supplier shall not be liable for forfeiture of its performance security, 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.
- 9.2 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.
- 19.3 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.

#### 20. RESOLUTION OF DISPUTES

20.1 Resolution of dispute shall be through Mechanism for Redressal of Grievances as provided in the rules or through Arbitration Act 1942.

#### 21. GOVERNING LANGUAGE

21.1 The Contract shall be written in English language all correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

#### 22. APPLICABLE LAW

22.1 The Contract shall be interpreted in accordance with the SPP Rules 2010 (Amended 2017).

#### 23. TAXES AND DUTIES

23.1 Supplier shall be entirely responsible for all taxes, duties (including stamp duty), license fees, etc., incurred until delivery of the contracted Goods to the Procuring agency.

# 24. OVERRIDING EFFECT OF SINDH PUBLIC PROCUREMENT RULES 2010 (AMENDED 2017)

24.1 In case of conflict or primacy of interpretation the provisions of SPP Rules 2010 (amended 2017) shall have an overriding effect notwithstanding anything to the contrary contained in these bidding documents.

#### SECTION-IV BID DATA SHEET

The following specific data for "SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 117kW GRID TIED SOLAR SYSTEM AT DUHS, KARACHI" to be procured where the solar power has to be inducted in the main LV panel of Academic Block, shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB) Part One. Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

- ITB 1. Name of Procuring Agency: Planning & Development Department, Dow University of Health Sciences, Karachi. Tel / Fax No. 021-99216065.
- ITB 2. Name of Contract: "SUPPLY, FIXING, INSTALLATION & COMMISSIONING OF 117kW GRID TIED SOLAR SYSTEM AT DUHS, KARACHI" Bid Price and Currency
- ITB 3. Prices quoted by the Bidder shall be "fixed" and in" Pak Rupees". Preparation and Submission of Bids
- ITB 4. Selection Criteria / Responsiveness Criteria:
  - 1. The bidder should be authorized dealers or partner for Solar Panels. The authorized dealer will be required to submit manufacturer's authorization letter, on Manufacturer's letter head duly signed by authorized signatory.
  - 2. The bidder should be Exclusive agent for Solar Inverter. The Exclusive agent will be required to submit manufacturer's exclusivity letter, on Manufacturer's letter head duly signed by authorized signatory.
  - The bidder should also have an equipped service center in Karachi, trained engineer from inverter manufacturer from their manufacturing facility. Details of service center i.e. No. of technical persons, list of equipment etc. should be provided.
  - Copy of NTN registration Certificate, AEDB registration certificate for netmetering, Electrical Inspector (Karachi) and PEC Registration Certificate in appropriate category with the specialization following codes EE04, EE11, for the bidder should be submit
  - 5. The Bidder should not have been barred by any of Provincial or Federal Govt. Deptt., Agency, Organization or autonomous body or Private sector organization anywhere in Pakistan. (Submission of undertaking on 100/- legal stamp paper). All the proposed products should be well known for its quality, performance and reliability.
  - 6. The bidder must have turnover/sales exceeding **75 Million** in PKR annually in any of last three years. (Submission of Audited Annual Reports or reputable Bank confirmation letter.
  - 7. In case of any subcontractor, a letter on bidder's letter head should be provided to show the details of subcontractor. Copy of NTN registration Certificate, Electrical Inspector (Karachi) and PEC Registration Certificate in appropriate category with the specialization following codes EE04, EE11, for the subcontractor should be submit.
  - 8. The bidder and/or its subcontractor must have done at least Four (04) Contracts of similar nature. "Similar Nature Means Supply of Grid Tied Solar system greater or equal to 50kW in any Educational Institute" (Please submit copy of PO/Contract Agreement/Notification of Award).

- 9. List of technical staff of bidders and subcontractor must be submit
- 10. Solar panels must have minimum 10 years warranty.
- 11. Solar Inverter must have minimum 5 years warranty.
- 12. Panel fixing mountings must have minimum 5 years warranty.
- 13. Minimum 1 year workmanship warranty should be provided by bidder.
- 14. All the proposed products should be well known, well reputed brands and widely used for its quality, performance and reliability.
- 15. Bidders offering goods in ready stock will be preferred. Copy of available stock list and date of manufacturing of Solar panels should be submitted.

#### NOTE:

Bidder must provide necessary supporting documents as proof in respect of the selection criteria mentioned above.

- ITB 5. Amount of bid Security @ **2.5%** of Bid.
- ITB 6. Bid validity period. **90 days.**
- ITB 7. Number of copies. **One Original** only
- ITB 8. Amount of Performance Guarantee of @ 10% for Bid successful Bidder
- ITB 9. Deadline for bid submission. 11-10-2018 at 11.00 AM
- ITB 10. Bid Evaluation: Lowest bid of the technically qualified bidders

# SECTION-V 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 (g)—The Procuring Agency is: Office of the Director Planning & Development Department, DUHS, Karachi

#### 2. PERFORMANCE SECURITY (GCC CLAUSE 4)

GCC 4. The amount of performance security, as a percentage of the Contract Price, shall be: 10%.

#### 3. INSPECTIONS AND TESTS (GCC CLAUSE 5)

Representative of Procuring Agency or his nominee shall inspect the procured good and ensure that it meets the tender specifications before its acceptance. Representative of Procuring Agency or his nominee shall also inspect the service center.

#### 4. DELIVERY AND DOCUMENTS (GCC CLAUSE 7)

GCC 10. Supplier shall supply and install the good within 90 to 120 Days after signing the contract and shall submit the following.

- (i) Supplier's invoice showing Goods' description, quantity, unit price, and total amount;
- (ii) Packing List identifying the contents of Supply;
- (iii) Delivery note.
- (iv) Warranty and guarantee certificate;

#### 5. WARRANTY (GCC CLAUSE 12)

The equipment shall bear Standard Warranty as mentioned in BID DATA from the date of installation / acceptance.

#### 6. PAYMENT (GCC CLAUSE 13)

Hundred percent (100%) of the Contract Price shall be paid upon delivery, and satisfactory Installation, integration and testing of the products at the Project site (s), subject to the production of installation and Operational Acceptance certificates.

#### 7. LIQUIDATED DAMAGES (GCC CLAUSE 18)

If the Supplier fails to deliver the goods or perform the services within the time period(s) specified in the contract, the Purchaser shall, without prejudice to its other remedies under the contract deduct from the Contract Price, as liquidated damages, a sum equivalent to 0.07 percent of the Contract Price for each day of delay until actual delivery or performance, up to a maximum deduction of 10% of the Contract Price. Once the maximum is reached, the purchaser may consider termination of the contract.

#### 8. RESOLUTION OF DISPUTES (GCC CLAUSE 21)

In the case of a dispute between the Procuring agency and the Supplier, the dispute shall be referred to the dispute resolution mechanism as defined in rule 31, 32 and 34 of the (SPPR 2010) Amended 2017.

#### 9. APPLICABLE LAW (GCC CLAUSE 23)

GCC 29.1 Contract shall be interpreted in accordance with the Sindh Public Procurement law of Sindh.

#### SECTION-VI SCHEDULE OF REQUIREMENTS

The delivery schedule hereafter expressed the date of delivery required.

SR.	DESCRIPTION	QTY	REQUIRED DELIVERY SCHEDULE FROM THE DATE OF CONTRACT AWARD	LOCATION
01.	Supplying, Fixing, Installation & Commissioning of 117kw Grid Tied Solar System to generate green energy. The system must have equipped with option of feed-in power and reverse power control. The system should be available on web for remote monitoring of Solar and 24hours load profile. The System must be compatible with Genset also. (SPECIFICATIONS OF ABOVE ITEMS ARE ATTACHED)	01	Delivery & Installation within 90 to 120 Days or earlier.	Main Campus, DUHS, Karachi

NOTE: SPECIFICATIONS OF ABOVE ITEMS ARE ATTACHED.

#### **SECTION-VII**

#### SAMPLE FORMS

#### FORM-I

#### **LETTER OF ACCEPTANCE**

Date:	
	То:
	PROJECT DIRECTOR Planning & Development Department, Dow University of Health Sciences, Karachi
	Dear Sir:
	Having examined the bidding documents, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to supply and deliver the required item 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, to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements.
	If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to Ten (10) percent of the Contract Price/Pay order for the due performance of the Contract, in the form prescribed by the Purchaser.
	We agree to abide by this Bid for a period of 15 days from the date fixed for Bid opening under Clause 10 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, this Bid, together with your written acceptance thereof and your notification of award, shall constitute a binding Contract between us.
	We understand that you are not bound to accept the lowest or any bid you may receive.
	Dated this day of 2018.
	[signature] [in the capacity of]
	Duly authorized to sign Bid for and on behalf of

#### **ELIGIBILITY CRITERIA**

S.NO	DESCPRITION	TOTAL MARKS	MARKS OBTAINED	REMARKS	ATTACHMEN EVIDENCE II MANDATOR' COMPLIANCE AW	N EACH CA Y.IN CASE (	SE IS OF NON		EVIDENCE ATTACHED AS
	YEARS IN BUSINESS IN THE REQUISITE	10		5 YEAR AND ABOVE	NTN CERTIFICATE REGISTRATION LE				
1	FIELD (AS A SUPPLIER AND INSTALLATION OF	7		3 YEAR AND ABOVE	OR DECLARATION COMMENCEMENT BUSINESS IS REQ	OF OF			
	SOLAR SYSTEMS)	5		2 YEAR	ENCLOSED				
	AEDB CERTIFICATE FOR NET METERING OF	10		Yes	DOCUMENTARY	PROOF	ТО	BE	
2	BIDDER AND/OR SUBCONTRACTOR	0		No	ATTACHED.	PROOF	10	DE	
	ELECTRICAL LICENSE OF BIDDER AND/OR	10		Yes	DOCUMENTARY	PROOF	ТО	BE	
	SUBCONTRACTOR	0		No	ATTACHED.				
4	AVERAGE TURNOVER IN LAST 3	10		ON AN AVERAGE OF 75 MILLION AND ABOVE PER ANUM		R TAX RETURN OF LAST			
	YEARS IN THE BUSINESS OF SOLAR	5		ON AN AVERAGE OF 100 MILLION AND ABOVE PER ANUM	3 YEARS				
	PEC REGISTRATION CATEGORY WITH	10		C5 OR ABOVE WITH MENTIONED CODES					
5	SPECIALIZATION CODES OF EE04, EE11 OF BIDDER AND/OR	5		C6 WITH MENTIONED CODES	DOCUMENTARY ATTACHED.	PROOF	ТО	BE	
	SUBCONTRACTOR	0		C6 WITHOUT MENTIONED CODES					
6	COUNTRY OF ORIGIN OF INVERTERS	10		USA/ EUROUPE	DOCUMENTORY ATTACHED	PROOF	ТО	BE	
	OF INVERTERS	7 10		ANY OTHER	ATTACHED				
/	IMPORTED ITEMS DELIVERY TIME	5		MORE THAN 45 DAYS	DOCUMENTORY ATTACHED	PROOF	ТО	BE	
1 2	SERVICE CENTER AND	10		AVAILABLE IN KARACHI	DOCUMENTORY	PROOF	ТО	BE	
0	TRAINED ENGINEER	5		NOT AVAILABLE	ATTACHED				
9	EXCLUSIVE AGENCY	10		AVAILABLE	DOCUMENTORY	PROOF	ТО	BE	
3	FOR INVERTER	0		NOT AVAILABLE	ATTACHED				
1 10	EXPERIENCE OF	10 5		4 OR MORE	DOCUMENTORY	PROOF	TO	BE	
	SIMILAR PROJECTS			LESS THAN 4	ATTACHED				
	TOTAL MARKS	100		QUALIFIED / DISQUALIFIED					

#### NOTE:

- 1. ATTACHMENT OF RELEVANT EVIDENCE IN EACH ABOVE REQUISITE IS MANDATORY. IN CASE OF NON-PROVISION OF EVIDENCE IN ANYOF THE REQUISITE, NO MARKS WILL BE AWARDED.
- 2. ACQURING OF 70% MARKS OF THE TOTAL SCORE WILL MAKE THE BIDDER QUALIFY IN ELIGILIBITY CRITERIA.

#### FORM-II

#### **PRICE SCHEDULE**

Name of Bidder :

IFB Number :

Components	Make	Model	Spec	Qty	Unit Price	Total
Solar panel			320W or greater	360		
Inverter with reverse power control			25kW, 3P	4		
Cables						
D/C cable Flexible			4mm <sup>2</sup> single core, red	700 m		
D/C cable Flexible			4mm² single core, black	700 m		
D/C cable Flexible			6mm <sup>2</sup> single core, red	600 m		
D/C cable Flexible			6mm² single core, black	600 m		
A/C cable			10mm <sup>2</sup> , 4 core	180 m		
Communication cable			Cat6	200m		
Earthing cable			2.5mm <sup>2</sup> 6mm <sup>2</sup>	1200m 200m		
Breakers		L				
DC breaker for strings			10A, 2Pole, 600V	20 Nos.		
DC fuse for strings			10A, 1000V	20 Nos.		
AC Breaker			63A, 4Pole	4 Nos.		
Mechanical and civil			•			
Panel Mounting			As per Drawing	210 Nos.		
Cement Pedestals			(L x w x h) 10" x 8" x 4"	420 Nos.		
GI Cable tray (18 gauge) with lid and fixing stands			1.5"x 2" x 8ft	100 Nos.		
GI Cable tray (18 gauge) with lid and fixing stands			2" x 3" x 8ft	25 Nos.		
Complete Installation	accessories			1 lot		
Net metering						
Items compulsory for	net meterino	]		1 lot		
Services	•	-		1		
Transportation						
Installation, testing, co	ommissionin	g and net me	tering filing Charges			
Grand Total including tax						

Quote separately charges for 4 years O & M (after 1 year free workmanship warranty)

#### **SIGNATURE OF BIDDER**

Note:

- (i) In case of discrepancy between unit price in figure and words and total price mentioned in words shall prevail.
- (ii) Solar System price should be in CNF / CFR, local items will be quoted in PKR (DDP).

#### FORM-III

#### **EXPERIENCE OF SIMILAR SUPPLY AND INSTALLATION**

S. NO	ASSIGNMENT DESCRIPTION	NAME / CONTACT DETAILS OF CLIENT	соѕт	START DATE	END DATE	REMARKS

#### FORM-IV

#### **CONTRACT FORM**

Scienc	AGREEMENT made the day ces, Karachi. (hereinafter called "tlier] of [city and country of Supplier]	he Procuring agency") of	the one part and [name of
SUPP DUHS	REAS the Procuring agency invited In Ity, INSTALLATION & COMMISSING, KARACHI and has accepted a besin the sum of [contract price in the sum of [contract pri	IONING OF 117kW SOLA bid by the Supplier for the	R GRID TIED SYSTEM AT supply of those goods and
NOW	THIS AGREEMENT WITNESSETH	I AS FOLLOWS:	
1.	In this Agreement words and e respectively assigned to them in the		_
2.	The following documents shall be this Agreement, viz.:	deemed to form and be re	ead and construed as part of
	<ul><li>(a) The Bid Form and the Price So</li><li>(b) The Schedule of Requirements</li><li>(c) The Technical Specifications.</li><li>(d) The General Conditions of Cort</li><li>(e) The Special Conditions of Cort</li><li>(f) The Procuring agency's Notifical</li></ul>	s; ntract; tract; and	idder;
3.	In consideration of the payments the hereinafter mentioned, the Support provide the goods and services respects with the provisions of the	lier hereby covenants wit and to remedy defects	th the Procuring agency to
4.	The Procuring agency hereby coprovision of the goods and service Price or such other sum as may be the times and in the manner prescriptors.	es and the remedying of coecome payable under the	defects therein, the Contract
	ITNESS whereof the parties here dance with their respective laws the		•
	d, sealed, delivered by ring agency)	the	(for the
Signed Suppli	d, sealed, delivered by ier)	the	(for the

#### Form-V

### PERFORMANCE SECURITY FORM

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[date]

THE PROJECT DIRECTOR Planning & Development Department Dow University of Health Sciences, Karachi.
WHEREAS [name of Supplier] (hereinafter called "the Supplier") has undertaken, in pursuance of Contract No. [reference number of the contract] dated 2018 to supply [description of goods and services] (hereinafter called "the Contract").
AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a bank guarantee by a reputable bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.
AND WHEREAS we have agreed to give the Supplier a guarantee:
THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, 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 Supplier to be in default under the Contract and without recourse or argument, any sum or sums 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 the day of2018.
Signature and seal of the Guarantors
[name of bank or financial institution]
[address]

#### FORM-VI

#### **MANUFACTURER'S AUTHORIZATION FORM**

To:

#### THE PROJECT DIRECTOR

Planning & Development Department Dow University of Health Sciences, Karachi

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 sign the Contract with you against NIT No. [Reference of the Invitation to Bid] for the above goods manufactured by us.

We hereby extend our full guarantee and warranty as per Clause 12 of the General Conditions of Contract for the goods offered for supply by the above firm against this Invitation for 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.

#### **SECTION-VIII TECHNICAL SPECIFICATION**

# (BIDDERS TO ENDORSE REPLY/REMARKS AGAINST EACH CLAUSE AND STAMP, SIGN EACH PAGE)

S. No	DETAILED SPECIFICATIONS AND REQUIREMENTS	BIDDER'S REPLY/ REMARKS
01	SOLAR PANEL	
a.	Solar Module of Tier 1 Chinese Company, American, UK or equivalent. The company should come in Top 10 list of Bloomberg's Rankings 2017.	
b.	Photovoltaic module: 320Wp/325Wp (72 cells)	
C.	Technology: Polycrystalline	
d.	Module frame: Non-corrosive aluminum	
e.	Module efficiency: equal to or greater than 16.8%	
f.	Junction box: with minimum three bypass Diodes, IP65 or IP67 enclosure	
g.	Temp power coefficient: equal or less than -0.4%/°C	
h.	Certifications: i. IEC 61215:2005 ii. IEC 61730:2004 iii. UL 1703	
i.	Manufacturer must be certified with: i. ISO 9001 ii. ISO 14001 iii. OHSAS 18001	
j.	Safety & Fire:  i. Application Class "A"  ii. Safety Class "II"  iii. Fire Rating "C"	
k.	Photon test passed	
I.	PID resistance test passed	
m.	Product material & workmanship warranty: 10 years (minimum) Product Linear power output warranty: 25 years	
2.	SOLAR INVERTER	
a.	Solar Inverter should be of USA, Europe or equivalent	
b.	Rated Capacity of three phase solar On-grid Inverters 25Kw	
C.	Operating temperature range: -25~60°C (>50°C derating)	
d.	Inverter enclosure class: IP65	
e.	Efficiency of inverter: >98%	
f.	Night time consumption <1W	
g.	Inverter must have following certifications: i. VDE0126-1-1, ii. VDE ARN 4105, iii. IEC62116, iv. IEC61727, v. G59/3, vi. SI 4777, vii. AS3100	
h.	Inverter Must have following protections:  i. DC Insulation measurement  ii. DC reverse connection protection  iii. DC switch  iv. DC fuse	
i.	Inverter must be equipped with WAN or LAN for remote monitoring the PV plant from any PC or smart phone around the world.	
j.	Inverter must be equipped with option to control reverse power and it should also has option for remote monitoring of solar and 24hrs load profile.	
k.	Warranty of inverter: <b>5 years</b>	

3.	SPV PANEL STRUCTURE: (As per Drawing)	
a.	Mounting must be of 18 gauge GI with rust proof coating.	
b.	Module & structure should be fixed with special rust proof coated fastening bolts.	
C.	Mounting should withstand the wind gust of 30m/s.	
d.	Design life of mountings: 25 years	
e.	Warranty of mountings: <b>5 years</b> against corrosion and other seasonal effects	
4.	CABLES AND DUCTS	
a.	DC cables: Flexible (voltage range 600V-800V) and voltage Losses <1%	
b.	AC cables: Pakistan cables/crescent/fast cable made & Voltage losses < 2%	
C.	Communication cables: CATVI	
d.	GI cable trays with rust proof coating must be used for outdoor installation.	
5.	DC FUSES, BREAKERS AND AC BREAKERS	
5.	All AC & DC breakers and DC fuses should be Schneider, ABB or Terasaki made.	
6.	<u>EARTHING</u>	
	PV Structure, PV modules & inverters should be properly ground.	
7.	<u>CIVIL WORKS</u>	
	Cement pedestals must be prepared to avoid direct drilling in the roof.	
8.	NET-METERING PRE-REQUISITE	
	All the peripheral items necessary for Net-metering should be included in the offer.	

#### **SECTION-IX COMPLAINCE ON HSE**

# (BIDDERS TO ENDORSE REPLY/REMARKS AGAINST EACH CLAUSE AND STAMP, SIGN EACH PAGE)

S. No	DETAILED SPECIFICATIONS AND REQUIREMENTS	BIDDER'S REPLY/ REMARKS
01	Bidder should compliance below HSE Standards according to Article 690 of NEC.	
a.	Medical Fitness of installation team	
b.	Work Permit of site	
C.	Incident investigation & proper reporting (if any)	
d.	Hazard identification & inspection	
e.	Electrical Safety Rules	
f.	Remedy for Snake, Scorpio bite etc.	
g.	Personal Protective Equipment should be used during work  • Safety Shoe  • Helmet  • Gloves  • Safety Glasses  • Mask	
h.	Site will be NO Smoking zone	
i.	Proper Materials Handling	
j.	Maintenance & Construction Safety	
k.	Hand Tools & equipment lifting should be proper	
I.	Emergency Procedures	
m.	Fire Protection & Fire Fighting	
n.	Health Guide for Travel	
0.	Chemical, Physical & Radiation Hazard	
p.	Welding & Flame Cutting	
q.	Waste Management	
r.	Ambient Noise Management	



