

GOVERNMENT OF SINDH

PROJECT DIRECTOR (SCHOOL INFRASTRUCTURE DEVELOPMENT)

EDUCATION & LITERACY DEPARTMENT



TENDER DOCUMENT

FOR

INSTALLATION OF PILOT SOLAR PV SYSTEM IN DIFFERENT
SCHOOL OF VARIOUS DISTRICT OF SINDH

PROJECT DIRECTOR (SCHOOL INFRASTRUCTURE DEVELOPMENT)

SECTION	SUBJECT	PAGE No
I.	INVITATION TO BIDS	04
II.	INSTRUCTIONS TO BIDDERS & BIDDING DATA	05
III.	FORM OF BID & SCHEDULES TO BID	20
IV.	CONDITIONS OF CONTRACT & CONTRACT DATA	41
V.	STANDARD FORMS	57
VI.	ANNEXURES / DRAWINGS	64

**Education & Literacy Department Old KDA Building Sindh Secretariat #
3, Kamal Atta Turk Road, Karachi**

May 2015

SECTION -I

INVITATION

TO

BID

INVITATION TO BIDS

Sealed bids are invited from firms registered in appropriate category for the works with the Pakistan Engineering Council (PEC). A foreign bidder is entitled to bid only in a joint venture with a Pakistani Firm in accordance with the provision of PEC bye-laws. The contractor(s) (Service Provider(s)) will be responsible to provide turnkey installation, of the PV Systems in different school of district that, SINDH and will also be responsible for the Operation and maintenance of below mentioned schemes for a period of one years after completion.

A complete set of bidding document(s) may be purchased by an interested bidder/firm on submission of a written application along with copies of SECP, PEC with Category C3 or above and with Specialization codes EE11 and EE04, GST and NTN certificates to the office of the undersigned up to **May 2015**, upon payment of a non-refundable tender fee **of Rs. /- (Rupees Only)** for each scheme deposited through Cash/green challan receipt in **Account No.** , National Bank of Pakistan located within SINDH Province.

Bids completed in all respect, as per the instructions contained in the Bidding Documents, along with the bid security of 2% of the total bid price (for each scheme) in shape of demand draft, pay order or Bank Guarantee in favor of employer must reach to the address given below at or before 1100 hours on **May 2015**.

Bidder must clearly indicate the “name of scheme” in one sealed envelopes; containing technical and financial proposal. Envelops shall be clearly marked as “Proposal for Scheme” in bold and legible letters. Single stage single envelops procedure shall be followed for evaluation and award of bids. All Bids will be opened **on May 2015** at **1200 hours** in the presence of bidders or their authorized representatives, whosoever, choose to attend.

Employer reserves the right to reject all bids or proposals at any time prior to the acceptance of a bid and the reasons for which will only be communicated on request but will not be obligated to provide any justification.

Project Director (School Infrastructure Development)
Education & Literacy Department, Government of SINDH
Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi

SECTION -II

INSTRUCTIONS TO BIDDERS

&

BIDDING DATA

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

<i>Clause No.</i>	<i>Description</i>	<i>Page No.</i>
A. GENERAL		
IB.1	Scope of Bid & Source of Funds	7
IB.2	Eligible Bidders	7
IB.3	Cost of Bidding	7
B. BIDDING DOCUMENTS		
IB.4	Contents of Bidding Documents	8
IB.5	Clarification of Bidding Documents	8
IB.6	Amendment of Bidding Documents	9
C. PREPARATION OF BID		
IB.7	Language of Bid	9
IB.8	Documents Comprising the Bid	9
IB.9	Sufficiency of Bid	10
IB.10	Bid Prices, Currency of Bid & Payment	10
IB.11	Documents Establishing Bidder's Eligibility and Qualifications	10
IB.12	Documents Establishing WorksConformity to Bidding Documents	10
IB.13	Bidding Security	11
IB.14	Validity of Bids, Format, Signing and Submission of Bid	11
D. SUBMISSION OF BID		
IB.15	Deadline for Submission, Modification & Withdrawal of Bids	12
E. BID OPENING AND EVALUATION		
IB.16	Bid Opening, Clarification and Evaluation	12
IB.17	Process to be Confidential	15
F. AWARD OF CONTRACT		
IB.18	Post Qualification	16
IB.19	Award Criteria & Employers Right	16
IB.20	Notification of Award & Signing of Contract Agreement	16
IB.21	Performance Security	17
IB.22	Integrity Pact	17

INSTRUCTIONS TO BIDDERS

A. GENERAL

IB.1 Scope of Bid and Source of Funds

1.1 Scope of Bid

Education & Literacy Department, Government of SINDH (hereinafter called “the Employer”) wishes to receive bids for the following scope of work of Supply/delivery, installation, commissioning and testing of “installation of Solar PV System in different school of District of SINDH” for the Warranty period up to one year after completion.

Bidders must quote for the complete scope of work, for supply and services separately. Any bid covering partial scope of work will be rejected as non-responsive.

1.2 Source of Funds

The Employer has received funds from the Government of SINDH for the execution of project towards the cost of the above mentioned works for eligible payments under the Contract for which these Bidding Documents are issued.

IB.2 Eligible Bidders

2.1 Bidding is open to all firms and consortiums meeting the following requirements:

- a) Duly licensed by the Pakistan Engineering Council (PEC) with field of specialization (EE11 and EE04) along with appropriate category relevant to the value of the Works (minimum C3 or above); for all local bidders;
- b) For international bidders; registration/affiliation duly enlisted with any such international agency similar to Pakistan Engineering Council (PEC) is required besides the Joint Venture (J.V) with local firm having PEC registration in valid category and specialization;
- c) The bidders must be registered with the SECP, GST and NTN and will provide certificates along with the bidding document.

IB.3 Cost of Bidding

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

B. BIDDING DOCUMENTS

IB.4 Contents of Bidding Documents

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

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

IB.5 Clarification of Bidding Documents

- 5.1 A prospective bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Employer in writing to *Project Director (School Infrastructure Development), Education & literacy Department, Government of SINDH, Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi.*
- 5.2 Employer will examine the request for clarification of the Bidding Documents which it receives not later than five working day (05) days prior to the deadline for the submission of bids and if needed will issue the clarification/amendment of the Bidding Documents at least two (02) days before the date of submission of Bids (without identifying the source of enquiry) to all prospective bidders who had purchased the Bidding Documents.

IB.6 Amendment of Bidding Documents

- 6.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding Documents by issuing addendum.
- 6.2 Any addendum thus issued shall be part of the Bidding Documents pursuant to Sub-Clause 6.1 hereof, and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective bidders shall acknowledge receipt of each addendum in writing to the Employer. The bidder shall also confirm in the Form of Bid that the information contained in such addenda have been considered in preparing his bid.
- 6.3 To afford prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may at its discretion extend the deadline for submission of bids.

C. PREPARATION OF BIDS

IB.7 Language of Bid

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

IB.8 Documents Comprising the Bid

- 8.1 The bid prepared by the bidder shall comprise the following components:
- (a) Covering Letter
 - (b) Form of Bid duly filled, signed and sealed, in accordance with Sub-Clause IB.14.3.
 - (c) Schedules (A to F) to Bid duly filled and signed, in accordance with the instructions contained therein Sub-Clause IB.14.3.
 - (d) Bid Security furnished in accordance with Clause IB.13.
 - (e) Power of Attorney in accordance with Clause IB 14.5.
 - (f) Documentary evidence established in accordance with Clause IB.13 that the bidder is eligible to bid and is qualified to perform the contract if its bid is accepted.
 - (g) Documentary evidence established in accordance with Clause IB.11 that the Goods and ancillary Services to be supplied by the bidder are eligible Goods and Services and conform to the Bidding Documents.

IB.9 Sufficiency of Bid

- 9.1 Each bidder shall satisfy himself before Bidding as to the correctness and sufficiency of his Bid and of the rates and prices entered in the Schedule of Prices, which rates and prices shall except in so far as it is otherwise expressly provided in the Contract, cover all his obligations under the Contract and all matters and things necessary for the proper completion of the Works.
- 9.2 The bidder is advised to obtain for himself at his own cost and responsibility all information that may be necessary for preparing the bid and entering into a Contract for execution of the Works.

IB.10 Bid Prices, Currency of Bid and Payment

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

IB.11 Documents Establishing Bidder's Eligibility and Qualifications

- 11.1 Pursuant to Clause IB.8, the bidder shall furnish, as part of its bid, documents establishing the bidder's eligibility to bid and its qualifications to perform the Contract if its bid is accepted.
- 11.2 Bidder/Manufacturer must possess and provide evidence of its capability and the experience as stipulated in Bidding Data and the Qualification Criteria stipulated in the Bidding Documents.
- (a) that, for supply of Goods under the Contract, the bidder shall provide test report/required international certifications (verifiable) from one of the approved laboratories, listed at Annex-B -Instructions To Bidders.

IB.12 Documents Establishing Works' Conformity to Bidding Documents

- 12.1 The documentary evidence of the Works' conformity to the Bidding Documents may be in the form of literature, drawings and data and the bidder shall furnish documentation as set out in Bidding Data.
- 12.2 The bidder shall note that standards for workmanship, material, equipment, and references to brand names or catalogue numbers, if any, designated by the Employer in the Technical Provisions are intended to be descriptive only and not restrictive.

IB.13 Bid Security

- 13.1 Each bidder shall furnish, as part of his bid, a Bid Security in Pak. Rupees equivalent to 2% of the total bid value.

- 13.2 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 13.3 The bid securities of unsuccessful bidders will be returned upon award of contract to the successful bidder or on the expiry of validity of Bid Security whichever is earlier.
- 13.4 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security, pursuant to Clause IB.21 and signed the Contract Agreement, pursuant to Sub-Clauses IB.20.2 & 20.3.
- 13.5 The Bid Security may be forfeited:
- (a) if a bidder withdraws his bid during the period of bid validity; or
 - (b) if a bidder does not accept the correction of his Bid Price, pursuant to Sub-Clause 16.4 (b) hereof; or
 - (c) in the case of a successful bidder, if he fails to:
 - (i) furnish the required Performance Security in accordance with Clause IB.21, or
 - (ii) sign the Contract Agreement, in accordance with Sub-Clauses IB.20.2 & 20.3.

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

- 14.1 Bid shall comprise a single package clearly indicated "Bid for installation of PV System in Different school of various District SINDH" containing single sealed envelope of technical and financial proposals. Envelope shall be marked as "Proposal" in bold and legible letters.
- 14.2 Bids shall remain valid for **90 days** after the date of bid opening.
- 14.3 All Schedules to Bid are to be properly completed and signed.
- 14.4 No alteration is to be made in the Form of Bid except in filling up the blanks as directed. If any alteration be made or if these instructions be not fully complied with, the bid may be rejected.
- 14.5 Each bidder shall prepare one (1) Original and one (1) Copy of Proposal, of the documents comprising the bid as described in Clause IB.9 and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 14.6 The original and the copy of the bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign (in the case of copies, Photostats are also acceptable). This shall be indicated by submitting a written Power of Attorney authorizing the signatory of the bidder to act for and on behalf of the bidder. All pages of the bid shall be initialed and official seal be affixed by the person or persons signing the bid.
- 14.7 The Bid shall be delivered in person by the address to Employer as given in Bidding Data.

D. SUBMISSION OF BIDS

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

- 15.1 Bids must be received by the Employer at the address/provided in Bidding Data not later than the time and date stipulated therein.
- 15.2 Bids submitted through telegraph, telex, fax or e-mail shall not be considered.
- 15.3 Any bid received by the Employer after the deadline for submission prescribed in Bidding Data will be returned unopened to such bidder.
- 15.4 Any bidder may modify or withdraw his bid after bid submission provided that the modification or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.
- 15.5 Withdrawal of a bid during the interval between the deadline for submission of bids and the expiration of the period of bid validity specified in the Form of Bid may result in forfeiture of the Bid Security pursuant to Sub-Clause IB.13.5 (a).

E. BID OPENING AND EVALUATION

IB.16 Bid Opening, Clarification and Evaluation

- 16.1 The Bid opening committee will open the technical bids, in the presence of bidders' or their representatives who choose to attend, at the time, date and location stipulated in the Bidding Data.
- 16.2 The bidder's name, the presence or absence of Bid Security, and such other details as the Employer at its discretion may consider appropriate, will be announced by the Employer at the bid opening. The Employer will record the minutes of the bid opening. Representatives of the bidders who choose to attend shall sign the attendance sheet.
- 16.3 To assist in the examination, evaluation and comparison of Bids the Employer may, at its discretion, ask the bidder for a clarification of its technical proposal. The request for clarification and the response shall be in writing.
- 16.4 Prior to the detailed evaluation, pursuant to Sub-Clauses IB.16.7 to 16.10, the Employer will determine the substantial responsiveness of each technical proposal to the Bidding Documents. For purpose of these Clauses, a substantially responsive bid is one which conforms to all the terms and conditions of the Bidding Documents without material deviations. It will include determining the requirements listed in Bidding Data.
- 16.5 A Bid determined as substantially non-responsive will be rejected and will not subsequently be made responsive by the bidder by correction of the non-conformity.
- 16.6 Any minor informality or non-conformity or irregularity in a Bid which does not constitute a material deviation may be waived by Employer, provided such waiver does not prejudice or affect the relative ranking of any other bidders.

16.7 Technical Evaluation

The Engineer/Employer will evaluate and compare only the technical bids previously determined to be substantially responsive pursuant to Sub-Clauses IB.16.4 to 16.6 as per requirements given hereunder. Bids will be evaluated for complete scope of works and compliance with the specifications. It will be examined in detail whether the Works offered by the bidder complies with the Technical Provisions of the Bidding Documents. For this purpose, the bidder's data submitted with the bid in Schedule B to Bid will be compared with technical features/criteria of the Works detailed in the Technical Provisions. Other technical information submitted with the bid regarding the Scope of Work will also be reviewed.

16.8 Financial Evaluation

The financial proposal will be opened for only the technically qualified bids for which the date will be communicated to the technically qualified bidders inviting them to attend. The prices will be compared on the basis of the Evaluated Bid Price pursuant to Sub-Clause 16.9 herein below. It will be examined in detail whether the bids comply with the commercial/contractual conditions of the Bidding Documents. It is expected that no material deviation/stipulation shall be taken by the bidders.

16.9 Evaluated Bid Price

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

- (i) making any correction for arithmetic errors pursuant to following method:

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

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

- (ii) Making an appropriate price adjustment for any other acceptable variation or deviation.
- (iii) Making an appropriate price adjustment for Deviations in terms of Payments (if any and acceptable to the Employer).
- (iv) Discount, if any, offered by the bidders as also read out and recorded at the time of bid opening.

16.10 Evaluation Methods

Pursuant to Sub-Clause 16.9, Para (ii), and (iii) following evaluation methods for price adjustments will be followed:

- a. Before opening of financial proposal, the technical proposal of each bidder will be evaluated based on following evaluation criteria:
- b. Marks between 0.0 and 10.0 will be given to the technical proposals and to the financial proposals.
- c. The final mark given to a bidder will be composed of 80% weightage of the technical mark and 20% weightage of the financial mark.
- d. The financial mark given will be proportional to the difference between the lowest bid and the bid considered. The formula to calculate the financial marks is $20 \times (1 - (\text{bid price} - \text{lowest bid price}) / \text{lowest bid price})$.
- e. The technical proposal will be given marks (0.0 to 1.0) weighted as the table below. A minimum of 70% marks would be required for qualification of technical offer. Difference in price has to commensurate with the difference in quality.

Description and quality criteria	Coefficient
(i) Understanding of TORs and Technicalities of the Project, (ii) Company MUST not be Blacklisted, provide certificate(s) and details through Affidavit and related documents, and (iii) Quality of the project management plan (<i>proposed work plan</i>).	15
Quality of staff	10
Financial stability showing and submitting through; <ol style="list-style-type: none"> i. Bank Statements for the last One years, ii. Professional Tax certificates of last five (03) years, iii. Audited Financial Statements of last five (03) Years, and iv. Annual income tax returns for minimum period of last five (03) years. <i>NOTE: Every required financial document has specific points (05 marks per year) to be calculated for evaluation of the firm, therefore attach all required documents.</i>	15
Previous experience in similar solar projects of last five (05) years particularly – Must submit the Acceptance Letters, Work Orders, Purchase Orders, EPC Agreements, Performance certificates of installed solar systems issued from departments and all clients MUST be attached.	15
PV Panels	10
Solar Pure Sine Wave Inverter (Hybrid)	10
Solar Charge Controllers (MPPT)	10
Battery Bank (VRLA AGM)	10
Quality of Operations & Maintenance strategy and also submit user information strategy showing the offered PV system and services are robust and reliable.	5

- f. If the bid of the successful bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analyses for any or all items of the Schedule of Prices to demonstrate the internal consistency of those prices with the supply methods and schedule proposed. After evaluation of the price analyses, the Employer may require that the amount of the Performance Security set forth in Clause IB.33 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.

IB.17 Process to be Confidential

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

F. AWARD OF CONTRACT

IB.18. Post Qualification

- 18.1 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not: Provided that such qualification shall only be laid down after recording reasons there off in writing. They shall form part of the records of that bid evaluation report.
- 18.2 The determination will take into account the bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the bidders' qualifications submitted under Clause IB.11, as well as such other information required in the Bidding Documents.

IB.19 Award Criteria & Employer's Right

- 19.1 Subject to Sub-Clause IB.19.2, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, as per technical and financial evaluation criteria, provided that such bidder has been determined to be qualified to satisfactory perform the Contract in accordance with the provisions of Clause IB.18.
- 19.2 Notwithstanding Sub-Clause IB.19.1, the Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidders or any obligation to inform the affected bidders of the grounds for the Employer's action except that the grounds for its rejection of all bids shall upon request be communicated, to any bidder who submitted a bid, without justification of the grounds. Notice of the rejection of all the bids shall be given promptly to all the bidders.

IB.20 Notification of Award & Signing of Contract Agreement

- 20.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder in writing ("Letter of Acceptance") that his bid has been accepted.

- 20.2 Within seven (7) days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Form of Contract Agreement provided in the Bidding Documents, incorporating all agreements between the parties.
- 20.3 The formal Agreement between the Employer and the successful bidder shall be executed within seven (7) days of the receipt of Form of Contract Agreement by the successful bidder from the Employer.

IB.21 Performance Security

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

IB.22 Integrity Pact

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

BIDDING DATA

1.1 Name of Employer

Project Director,
Education & Literacy Department,
Government of SINDH

2.1 Brief Description of Works

Installation of Solar PV System in Different schools of Various Districts of SINDH for the warranty period which is *one years* after completion.

2.1 (a) Employer's Representative / Engineer Address:

Project Director,
Education & Literacy Department,
Government of SINDH
Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi.

2.2 Bid shall be quoted entirely in Pak. Rupees and the price will not be subject to any foreign exchange variations. The payment shall be made in Pak. Rupees.

2.3 The bidder/manufacture has the financial, technical and production capability necessary to perform the Contract as follows: "installation of PV System in different schools of district Thar, SINDH for the warranty period of one years after completion".

2.4 (a) A detailed description of the Works, essential technical and performance characteristics.

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

3.1 **Amount of Bid Security**

Bids must be accompanied by a Bid Security in form of Payment Order / Demand Draft / Bank Guarantee of 2% of the quoted bid and must be delivered to Project Director (School infrastructure Development) Education & Literacy Department, Government of SINDH, Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi.

4.1 **Period of Bid Validity**

Bids shall remain valid for **90 days** after the date of bid opening.

5.1 **Number of Copies of the Bid to be submitted (in separated envelopes)**

Technical Bid: - One original plus one copy;

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

Project Director (School infrastructure Development)
Education & Literacy Department,
Government of SINDH,
Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi.

7.1 **Deadline for Submission of Bids**

Time: 1100 hours

Date: 12.01.2015

8.1 **Venue, Time, and Date of Bid Opening**

Venue: Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi

Time: 1200 hours

Date: 12.01.2015

9.1 **Responsiveness of Bids**

- (i) the Bid must be valid for ninety (90) is valid till required period,
- (ii) the Bid prices are firm during currency of contract (if it is a fixed price bid)
- (iii) filled in Bid forum duly signed / stamped by the Authorized Entity of the firm.
- (iv) the Bidder/Manufacturer is eligible to Bid and possesses the requisite experience, capability and qualification.
- (v) the Bid does not deviate from basic technical requirements and
- (vi) the Bids are generally in order, etc.

SECTION -III

**FORM OF
BID**

&

**SCHEDULES TO
BID**

FORM OF BID
(LETTER OF OFFER)

Bid Reference No. _____

Name of the work: INSTALLATION OF SOLAR PV SYSTEM IN DIFFERENT SCHOOL OF VARIOUS DISTRICT OF SINDH.

To:

Project Director (School Infrastructure Development)
Education & literacy Department,
Government of SINDH,
Old KDA Building Sindh Secretariat # 3, Kamal
Atta Turk Road, Karachi.

Gentlemen,

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

¹ Total bid price shall only be mentioned in the Financial proposal and shall be left blank in technical proposal.

6. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
7. We undertake, if our Bid is accepted, to execute the Performance Security referred to in Clause 10 of Conditions of Contract for the due performance of the Contract.
8. We understand that you are not bound to accept the lowest or any Bid you may receive.
9. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other person or persons making a Bid for the Works.
10. We confirm, if our Bid is accepted, that all partners of the joint venture shall be liable jointly and severally for the execution of the Contract and the composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer. (Please delete in case of Bid from a single firm).

Dated this _____ day of _____ 20____

Signature _____ in the capacity of _____ duly

authorized to sign bids for and on behalf of _____

(Name of Bidder in Block Capitals)
(Seal)

Address _____

Witness:

(Signature) _____

(Name) _____

Address: _____

Occupation _____

SCHEDULES TO BID

INCLUDE THE FOLLOWING:

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

SCHEDULE – A TO BID

Schedule Of Prices

Sr. No.	Description	Page No.
1.	Preamble to Schedule of Prices	25
2.	Detailed Schedule of Prices	27

PREAMBLE TO SCHEDULE OF PRICES

1. General

- 1.1 The Schedule of Prices shall be read in conjunction with the Conditions of Contract, Contract Data together with the Specifications and Drawings, if any.
- 1.2 The Contract shall be for the whole of the Works as described in these Bidding Documents. Bids must be for the complete scope of works.

2. Description

- 2.1 The general directions and descriptions of works and materials are not necessarily repeated nor summarized in the Schedule of Prices. References to the relevant sections of the Bidding Documents shall be made before entering prices against each item in the Schedule of Prices.

3. Units & Abbreviations

- 3.1 Units of measurement, symbols and abbreviations expressed in the Bidding Documents shall comply with the System International Units (SI Units).
(Note: The abbreviations to be used in the Schedule of Prices to be defined by the Employer).

4. Rates and Prices

- 4.1 Except as otherwise expressly provided under the Conditions of Contract, the rates and amounts entered in the Schedule of Prices shall be the rates at which the Contractor shall be paid and shall be the full inclusive value of the works set forth or implied in the Contract; except for the amounts reimbursable, if any to the Contractor under the Contract.
- 4.2 Unless otherwise stipulated in the Contract Data, the rates and prices entered by the bidder shall not be subject to adjustment during the performance of the Contract.
- 4.3 All duties, taxes and other levies payable by the Contractor shall be included in the rates and prices. If foreign components that are part of the Solar PV System are exempted from Customs Duties and Sales Tax in accordance with respective SRO of FBR/Finance Bill 2014-2015 as amended from time to time and in light of amendments made in the SRO/Finance Bill through Notification. The Contractor shall request to the employer and obtain a certificate in this respect issued by the concerned Department at the time of claiming exemption, if required.
- 4.4 The whole cost of complying with the provisions of the Contract shall be included in the items provided in the Schedule of Prices, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the Works and no separate payment will be made for those items. The rates, prices and amounts shall be entered against each item in the Schedule of Prices. Any item against which no rate or price is entered by the bidder will not be paid for by the Employer when executed and shall be deemed covered by the rates and prices for other items in the Schedule of Prices.
- 4.5 (a) The bidder shall be deemed to have obtained all information as to and all requirements related thereto which may affect the bid price.

- (b) The Contractor shall be responsible to make complete arrangements for the transportation of the Equipments and Materials to the Site.

4.6 The Contractor shall provide for all parts of the Works to be completed in every respect. Notwithstanding that any details, accessories, etc. required for the complete installation and satisfactory operation of the Works, are not specifically mentioned in the Specifications, such details shall be considered as included in the Contract Price.

5. Bid Prices

5.1 Break-up of Bid Prices

The various elements of Bid Prices shall be quoted as detailed by the Employer in the format of Schedule of Prices.

The bidder shall recognize such elements of the costs which he expects to incur the performance of the Works and shall include all such costs in the rates and amounts entered in the Schedule of Prices.

5.2 Total Bid Price

The total of bid prices in the Schedule of Prices shall be entered in the Summary of Bid Prices.

6. Provisional Sums

6.1 Provisional Sums, if any, included and so designated in the Schedule of Prices if any, shall be expended in whole or in part at the direction and discretion of the Employer. The Contractor will only receive payment in respect of Provisional Sums if he has been instructed by the Engineer/Employer to utilize such sums.

Schedule-A, to BID

DETAILED SCHEDULE OF PRICES

CONTRACT PRICE:

- | | | |
|----|---|-----------|
| 1. | The Price of imported items (including taxes, if any) | Rs. _____ |
| 2. | The Price of local items (including taxes) | Rs. _____ |
| 3. | The GST Cost (to be claimed GST invoice) | Rs. _____ |
| 4. | The Total contract Cost including all taxes | Rs. _____ |

BREAKDOWN OF COSTS INCLUDED IN THE CONTRACT PRICE

S. No.	WORK DETAILS	Value in PAK Rupees				
		Foreign items (Rs.)	Local items (Rs.)	Services (Rs.)	Taxes (Rs.)	Total (Rs.)
1	Delivery & Installation of Solar PV System in Different Schools of Various District of Sindh					
Total Bid Price (Rs.)						

BREAKDOWN OF ITEM WISE COST (INCLUDING TAXES)

Cost Breakup for 2 Room School, incase a school has more rooms additional systems will be installed according to below BOQ in increment of 2 room Quantity. I.e. a 10 Room School will install 5 of Below Systems.

“Installation of Solar PV System in Different Schools of Various District of SINDH”.

Sr. #	Description of Items	Unit	Size	Total Quantity	Total Cost (Rs.)
1	Solar Panels “Crystalline” (IEC 61215:2005 certified from TUV/VDE laboratory from Germany)	Watt	255 Watt	6	
2	Sealed Maintenance Free, VRLA AGM Solar Dry Battery Bank (IEC 61056-1/2: 2002 and JIS C8702-1/2 : 2009, UL and CE)	Ah	245Ah	4	
3	Lockable Single Box for Battery Bank & Inverter	Set	1	1	
4	High Efficiency Pure Sine Wave Inverters (Hybrid) with built-in MPPT Charge Controller	kW	2 kW - 48V	1	
5	Iron made, powder coated mounting structure for solar panels (roof/ground mounted) & Earthing kit	Set	1	1	
6	Ceiling Fan – 4 pcs	Pcs		4	
7	LED Tube Light 4 Ft - 4 Pcs	Pcs	18-20Watt	4	
8	Multi-strand wire 6-mm ² (1-core) for balance of system, inverters and to main distribution boxes (turnkey wiring scheme).	Ft	25	25	
9	Multi-strand electric wire 2.5-mm ² (2-core) for Room Wiring.	Ft	160	160	
10	Multi-strand electric wire 4-mm ² (1-core) for PV panels interconnections and combiner box (turnkey wiring scheme).	Ft	85	85	
11	Multi-strand electric wire 25-mm ² (1-core) from PV combiner box to CC (turnkey wiring scheme).	Ft	25	25	
12	PVC pipe (2" perforated channel) for indoor electrification and battery cables isolation (turnkey).	Ft	120	120	
13	Channel Patti for electrification/load	Ft	95	95	
14	Glands for Sealing	Pcs	35	35	
15	Circuit Breaker 32 Amps Double pole for PV Panels	Pcs	1	1	

16	Circuit Breaker 32 Amps Battery Bank Single Pole	Pcs	1	1	
17	Circuit Breaker 10A Amps double pole for AC Load	Pcs	1	1	
18	Change Over Switches 15/32 Amp	Sets	1	1	
19	Junction Boxes	Pcs	1	1	
20	All standard accessories for safe installation of solar power system and electrification including (cable ties, nuts/bolts, screws, nails, tape etc.)	Set	1	1	
21	Multiple pole circuit breakers for protection and Lighting / surge protection 16Amp	Set	1	1	
22	Main Power distribution cabinet	Set	1	1	
23	Installation, testing and commissioning of Solar PV System (Hybrid)				
Total Amount (Rs.)					

Schedule-B, to BID**SPECIFIC WORKS DATA**

The contractor will provide following equipments for this solar PV project “**installation of Solar PV System in Different Schools of Various District of SINDH**”.

Sr. #	Description of Items	Unit	Size	Total Quantity	Brand	Model
1	Solar Panels “Crystalline” (IEC 61215:2005 certified from TUV/VDE laboratory from Germany)	Watt	255 Watt	6		
2	Sealed Maintenance Free, VRLA AGM Solar Dry Battery Bank (IEC 61056-1/2: 2002 and JIS C8702-1/2 : 2009, UL and CE)	Ah	245Ah	4		
3	Lockable Single Box for Battery Bank & Inverter	Set	1	1		
4	High Efficiency Pure Sine Wave Inverters (Hybrid) with built-in MPPT Charge Controller	kW	2 kW - 48V	1		
5	Iron made, powder coated mounting structure for solar panels (roof/ground mounted) & Earthling kit	Set	1	1		
6	Ceiling Fan – 4 pcs	Pcs		4		
7	LED Tube Light 4 Ft (18-20Watt) - 4 Pcs	Pcs	18-20 Watt	4		
8	Multi-strand wire 6-mm ² (1-core) for balance of system, inverters and to main distribution boxes (turnkey wiring scheme).	Ft	25	25		
9	Multi-strand electric wire 2.5-mm ² (2-core) for House Wiring.	Ft	160	160		
10	Multi-strand electric wire 4-mm ² (1-core) for PV panels interconnections and combiner box (turnkey wiring scheme).	Ft	85	85		
11	Multi-strand electric wire 25-mm ² (1-core) from inverter to Battery Bank.	Ft	25	25		
12	PVC pipe (2" perforated channel) for indoor electrification and battery cables isolation (turnkey).	Ft	120	120		
13	Channel Patti for electrification/load	Ft	95	95		
14	Glands for Sealing	Pcs	35	35		
15	Circuit Breaker 32 Amps Double pole for PV Panels	Pcs	1	1		

16	Circuit Breaker 32 Amps Battery Bank	Pcs	1	1		
17	Circuit Breaker 10A Amps double pole for AC Load	Pcs	1	1		
18	Change Over Switches 15/32 Amp	Sets	1	1		
19	Junction Boxes	Pcs	1	1		
20	All standard accessories for safe installation of solar power system and electrification including (cable ties, nuts/bolts, screws, nails, tape etc.)	Set	1	1		
21	Multiple pole circuit breakers for protection and Lighting / surge protection 16Amp	Set	1	1		
22	DB Boxes for inter-components' staking	Sets	1	1		
23	Main Power distribution cabinet	Set	1	1		

TECHNICAL SPECIFICATIONS

1. Solar Photovoltaic Modules

- a. The Crystalline Solar Panels shall meet the requirements set in IEC 51639 class 1, IEC 62716 IEC 61215:2005 (Certified from approved laboratory of TUV/VDE Germany - attach all certified/verifiable certificates) VL1703PID (*Potential Induced Degradation*) certificate,
- b. Each module must be labeled indicating at a minimum: Manufacturer, Model Number, Serial Number, Peak Watt Rating, Voltage and Current at peak power, Open Circuit Voltage and Short Circuit Current of each module.
- c. Solar panels shall have framed module with type A junction box (rain tight) accepting PG 13.5 conduit/cable fitting.
- d. Manufacturer of solar panels along with date of manufacture must be stated in current production.
- e. Solar panels have to be packaged for safe transportation on non-metallic roads.
- f. The solar panel shall have a certificate of compliance with IEC 61215:2005, issued by any of listed approved laboratories.
- g. Performance guarantee has to cover at least **25** years of operation. (*90% for 10 years & 80% for 25 years output*)
- h. Flash test report with bar code of solar panels.

2. Hybrid Pure Sine wave Inverter with Transformer

- a. Pure Sine Wave Technology.
- b. Typical Efficiency 85%+ along with Grid-Interactive Voltage Range 170 to 290 VAC
- c. The performance guarantee shall cover at least **01** years of operation
- d. Standards
 - I. EN62040-2:2006, EN61000-3-2:2006; EN61000-3-3:2008

3. MPPT Photovoltaic Charge Controller

- a. The MPPT charge controller protects the battery against overcharge and excessive discharge, besides giving information to users on the general state of the system (battery voltage, charging current and load current).
- b. The charge controller MUST have the best MPPT efficiency at 48 VDC System.
- c. The MMPT charge controller has remote display and controller system through communication port.
- d. The MMPT charge controller MUST have minimum data logging system/record for 3 months and has Remote Temperature Sensor (RTS) options.
- e. The charge controller ensures safe and reliable operation in the whole range of ambient temperatures from -5° C to + 40° C.
- f. The “load voltage disconnect” (LVD) respects the established limits for the maximum discharge depth (PDmax) of the battery.
- g. The improved algorithms of load regulation (for example of controlled overcharge followed by a flotation phase) are time controlled.
- h. The connection terminal easily admits cables with a section of minimum 6 mm².
- i. The regulator is protected from polarity inversions in the lines of the generator and of the battery.
- j. The charge controller prevents reverse current into the PV module during night
- k. The regulator is protected from excessive tensions induced by atmospheric discharges through transitory suppression devices.
- l. The regulator includes the following signs:

- I. Charging mode
- II. State of battery: charged, half full and empty
- m. The model number, serial number, rated voltages and currents should be noted on the charge controller case
- n. The load regulator must have a certificate of compliance, issued by any of the listed laboratories one of the following standards:
- o. The performance guarantee shall cover at least **01** years of operation

4. Deep Cycle, VRLA, and AGM 12V Solar Battery

- a. The 12V battery **MUST** be VRLA AGM.
- b. The 12V Battery Cells meet the requirements and standard Quality: ISO9001:2000, ISO14001 certified. Battery complies with EUROBAT (IEC 896-2) standards.
- c. The maximum permissible self-discharge rate is 5 percent of rated capacity per month at 20°C.
- d. **MUST** have certifications of IEC 896-2 and IEC 60896-2, DIN40742 Standards Certified. The 12V Battery shall have a certificate of compliances issued by approved laboratories EUROBAT (IEC 896-2).
- e. 12V Battery should be packaged in order to withstand transportation on non-metallic road.
- f. The performance guarantee shall cover at least **01** year.

5. Installation/Cables/Wires

- a. Installation including wiring meets the requirements and recommendations of IEC.
- b. Stranded and flexible insulated copper wires and cables must be used for all outdoor and indoor installations
- c. The wiring that leads into the building is protected in a conduit.
- d. External cables are specifically adapted to outdoor exposure (see IEC 60811). Especially the outer insulation is sunlight (UV)-resistant, weatherproof and designed for underground installation.
- e. The temperature resistance of all interconnecting wires and cables is $> 75^{\circ}$
- f. All Wiring is sized to keep line voltage drop to less than 3% between PV generator and battery, less than 1% between battery and charge regulator, and less than 3% between battery and load, all of them at the maximum current conditions.
- g. All exposed will be in UV-resistant conduits and firmly fastened to the building and/or support structure. Cable binders, clamps and other fixing material will also be UV-resistant, preferably made of polyethylene.
- h. Holes through roofing materials will be avoided wherever possible. Cables through roofing will be contained in purpose-made roof-entry boxes, or proper UV-resistant glands, which shall form a weatherproof seal to prevent leakages. In corrugated roofs, holes for cables will be drilled at the top of corrugations. All holes in roofing will be thoroughly sealed and made waterproof with UV-resistant silicone sealant or an equivalent method.
- i. Holes that penetrate external walls will slope slightly upward to prevent the ingress of water and suitably sealed.
- j. Conduits to battery boxes or battery enclosures will not provide a route through which hydrogen gas may escape, leading to any area or device (relays, etc.) where there is a danger of sparks.
- k. Cables will be joined by the use of junction boxes, screw-connectors, block-connectors. All stranded wires will be terminated with proper end-sleeves. Soldering in the field and the use of wire nuts are not allowed. The rated current-carrying capacity of each joint will not be less than the circuit current rating.
- l. DC rated circuit breakers will be used between the panel and the charge controller and between the charge controller and the battery. Either a switch or a circuit breaker will be used between the charge controller and the load. Circuit breakers and connectors will be inserted in a junction box

in order to make possible the inspection of the system without physical disconnection of components

- m. Junction boxes or enclosures will be dust- and waterproof, non-corrosive and electrically insulated (no metal boxes).
- n. Careful attention will be given to entries into enclosures and junction boxes, to provide good sealing, proper strain relief to ensure that the wiring connections themselves are not under tension and to prevent chafing and damage to the insulation.
- o. Surface-mounted cabling will be installed using appropriate fasteners at suitable intervals (15 to 20 cm) to prevent sagging.
- p. The system will be grounded.

6. Installation/Switches/Fuses/Circuit Breakers

- a. Connectors, fuses and circuit-breakers will meet the IEC specifications.
- b. Fuses and circuit-breakers will be
 - I. Rated for DC service.
 - II. Having voltage ratings greater than the maximum circuit voltage.
 - III. Having current ratings between 125% and 150% of the maximum design current for the circuit.
 - IV. Marked with the rated capacity and circuit voltage.
- c. Fuses or any other components which can cause sparking will not be installed in a battery enclosure where there is a chance of explosion of hydrogen. No fuses or circuit breakers will be installed in a grounded conductor.
- d. Light switches will be installed next to the entrance door of each room at approximately 1.2 m above finished floor level.
- e. They will be rated for the current and voltage of the circuit they disconnect.
- f. All switches will include a clear visual indication of their state (ON/OFF or I/O).
- g. Every current circuit connected to the battery will be equipped with a melting fuse or a circuit breaker to protect it against short circuit and overload.
- h. In a grounded two-conductor system, the fuses will be installed in the not-grounded path as close as possible to the battery.
- i. Fuses will be suitable for direct current and must be designed for the maximum occurring operating voltage; they will trigger between 125% and 150% of the maximum operating current that occurs.
- j. Switches will be installed at a place in accordance with user's preference

7. Installation/Panel Mounting Structure

The PV Solar Panel Mounting Structure will comprise of;

- a. The angle iron will be used in mounting structure that must be corrosion free and powder coated or galvanized to micron.
- b. Module will be fixed with the frame through bolt and then concrete foundation either would be ground mounted or/and roof mounted.
- c. The entire mechanical structure will be powdered painted for longer life of the structure.
- d. The orientation and tilt angle of module will be optimized to the place of installation.
- e. Shading will be avoided the all year around from 90mn after sunrise to 90mn before sunset.
- f. To allow for regular cleaning of the solar module, they will be accessible for personnel.
- g. All nuts bolts must be S.S
- h. Suitable to with stand wind pressured 80 Km/h

8. Installation Rack for Inverter & Battery Bank

- a. The Inverter & Battery Bank will be placed on a powder coated stand with a lock to prevent theft.
- b. This compartment will be strong enough to accommodate the weight up to 300 KG..
- c. The Rack will be constructed to last at least twenty years without maintenance and protected against corrosion. The Rack will have a clean and neat appearance.

9. LED Lights

- a. LED Lights MUST be of Cree / EPISTAR / Bridgelux
- b. Color temperature will be 650 K of each LED.
- b. LED's will ensure cool day light effect.
- c. Color rendering index (CRI) of each LED will be ≤ 80 .
- d. Light output lumens of each LED will be ≤ 84 lumens/Watt.

WORK TO BE PERFORMED BY SUBCONTRACTORS

The bidder will carryout the work with his own forces but if he wants to sub-let some portion of work, then he is to provide the following information:

<u>Items of Work to be Sub-Contracted</u>	<u>Name and address of Sub-Contractor</u>	<u>Statement of similar works previously executed (attach evidence)</u>
---	---	---

Note:

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

PROPOSED WORK PLAN

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.

METHOD OF PERFORMING WORKS

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

- A list of all major items of constructional and erection tools and vehicles proposed to be used in carrying out the Works at Site, including number of each kind, make, type, capacity of all equipment, working condition, which shall be deployed by him for installation Testing and Commissioning of the Works, in sufficient detail to demonstrate fully that the equipment duly certified by the approved laboratories will meet all the requirements of the Technical Provisions.
- The procedure for installation of equipment and transportation of PV system and materials to the site.
- Details regarding mobilization in Project area, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.

Organization chart indicating head office & field office personnel involved in management, supervision and engineering of the Works to be done under the Contract.

(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 SINDH (GoS) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoS 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 from GoS, 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 GoS 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 GoS under any law, contract or other instrument, be voidable at the option of GoS.

Notwithstanding any rights and remedies exercised by GoS in this regard, [name of Supplier] agrees to indemnify GoS for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoS 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 GoS.

Name of Buyer:

Name of Seller/Supplier:

Signature:

Signature:

[Seal]

[Seal]

SECTION -IV

CONDITIONS OF CONTRACT

&

CONTRACT DATA

CONDITIONS OF CONTRACT

TABLE OF CONTENTS

<i>Clause No.</i>	<i>Description</i>	<i>Page No.</i>
1.	General Provisions	43
2.	The Employer	46
3.	Engineer's/Employer's Representatives	46
4.	The Contractor	47
5.	Design by Contractor	47
6.	Employer's Risks	48
7.	Time for Completion	48
8.	Taking Over	49
9.	Remedying Defects	49
10.	Variations And Claims	50
11.	Contract Price And Payment	51
12.	Default	51
13.	Risks And Responsibilities	53
14.	Resolution of Disputes	53
15.	Integrity Pact	54

CONDITIONS OF CONTRACT

1. GENERAL PROVISIONS

1.1 Definitions

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

The Contract

1.1.1 “Contract” means the Contract Agreement and the other documents listed in the Contract Data.

1.1.2 “Specifications” means the document as listed in the Contract Data, including Employer’s requirements in respect of design to be carried out by the Contractor (if any), and any Variation to such document.

1.1.3 “Drawings” means the Employer’s drawings of the Works as listed in the Contract Data, and any Variation to such drawings.

Persons

1.1.4 “Employer” means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Contractor) any assignee.

1.1.5 “Contractor” means the person named in the Contract Data and the legal successors in title to this person, but not (except with the consent of the Employer) any assignee.

1.1.6 “Party” means either the Employer or the Contractor.

1.1.7 “Sponsor” means the Public Representative / Member Provincial Assembly.

Dates, Times and Periods

1.1.8 “Commencement Date” means the fourteen (14) days after the date the Contract comes into effect or any other date mention in the Contract Data.

1.1.9 “Day” means a calendar day

1.1.10 “Time for Completion” means the time for completing the Works as stated in the Contract Data (or as extended under Sub-Clause 7.3), calculated from the Commencement Date.

Money and Payments

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

Other Definitions

1.1.12 “Contractor’s Equipment” means all machinery, apparatus and other things required for the execution of the Works but does not include Materials or Plant intended to form part of the Works.

1.1.13 “Country” means the Islamic Republic of Pakistan.

- 1.1.14 “Employer’s Risks” means those matters listed in Sub-Clause 6.1.
- 1.1.15 “Force Majeure” means an event or circumstance which makes performance of a Party’s obligations illegal or impracticable and which is beyond that Party’s reasonable control.
- 1.1.16 “Materials” means things of all kinds (other than Plant) to be supplied and incorporated in the Works by the Contractor.
- 1.1.17 “Plant” means the machinery and apparatus intended to form or forming part of the Works.
- 1.1.18 “Site” means the places provided by the Employer where the Works are to be executed, and any other places specified in the Contract as forming part of the Site.
- 1.1.19 “Variation” means a change which is instructed by the Engineer/Employer under Sub-Clause 10.1.
- 1.1.20 “Works” means any or all the works whether Supply, Installation, Construction etc. and design (if any) to be performed by the Contractor including temporary works and any variation thereof.
- 1.1.21 “Engineer” means the person notified by the Employer to act as Engineer for the purpose of the Contract and named as such in Contract Data.

1.2 **Interpretation**

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

1.3 **Priority of Documents**

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

1.4 **Law**

The law of the Contract is the relevant Law of Islamic Republic of Pakistan.

1.5 **Communications**

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

1.6 **Statutory Obligations**

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

2. **THE EMPLOYER**

2.1 **Possession of Site**

The Employer shall handover the Site and right of access thereto within the period specified in the Contract Data.

2.2 Permits etc.

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

2.3 Engineer's/Employer's Instructions

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

2.4 Approvals

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

3. ENGINEER'S/EMPLOYER'S REPRESENTATIVES

3.1 Authorized Person

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

3.2 Engineer's/Employer's Representative

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

4. THE CONTRACTOR

4.1 General Obligations

The Contractor shall carry out the Works properly and in accordance with the Contract. The Contractor shall provide all supervision, labor, Materials, Plant and Contractor's Equipment which may be required.

4.2 Contractor's Representative

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

4.3 Subcontracting

The Contractor may subcontract up to 30% of the total contract cost of Works. The Contractor shall not subcontract any part of the Works without the consent of the Employer.

5. DESIGN BY CONTRACTOR

5.1 Contractor's Design

The Contractor shall carry out design to the extent specified, as referred to in the Contract Data. The Contractor shall promptly submit to the Engineer/Employer all designs prepared by him. The Engineer/Employer shall notify any comments or, if the design submitted is not in accordance with the Contract, shall reject it stating the reasons. The Contractor shall not construct any element of the Works designed by him. Design that has been rejected shall be promptly amended and resubmitted. The Contractor shall resubmit all designs commented on taking these comments into account as necessary.

5.2 Responsibility for Design

The Contractor shall remain responsible for his submitted design and the design under this Clause, both of which shall be fit for the intended purposes defined in the Contract, if contractor is asked to do so. And he shall also remain responsible for any infringement of any patent or copyright in respect of the same. The Engineer/Employer shall be responsible for the Specifications and Drawings.

6. EMPLOYER'S RISKS

6.1 The Employer's Risks

The Employer's Risks are:-

- a) ionizing radiations, or contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such an assembly, except to the extent to which the Contractor/Sub-Contractors may be responsible for the use of any radio-active material;
- b) Pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;
- c) use or occupation by the Employer of any part of the Works, except as may be specified in the Contract;
- d) late handing over of sites, anomalies in drawings, late delivery of designs and drawings of any part of the Works by the Employer's personnel or by others for whom the Employer is responsible;
- e) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure; and
- f) physical obstructions or physical conditions other than climatic conditions, encountered on the Site during the performance of the Works, for which the Contractor immediately notified to the Employer and accepted by the Employer.

7. TIME FOR COMPLETION

7.1 Execution of the Works

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

7.2 Program

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

7.3 Extension of Time

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

7.4 Late Completion / Liquidated Damages

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

8. TAKING-OVER

8.1 Completion

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

8.2 Taking-Over Notice

After the receipt of the said notice of completion from the Contractor the Employer/Engineer shall carryout an inspection of the executed works and subject to satisfactory performance of the systems shall issue a Certificate of Completion to that effect. While issuing the Certificate of Completion as aforesaid, the Employer/Engineer may identify any outstanding items of work which the Contractor shall undertake during the Maintenances Period.

9. REMEDYING DEFECTS

9.1 Remedying Defects

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

Employer/Engineer shall issue a Maintenance Certificate whereupon all obligations of the Contractor under this Contract shall come to an end.

Failure to remedy any such defects or complete outstanding work within a reasonable time shall entitle the Employer to carry out all necessary works at the Contractor's cost. However, the cost of remedying defects not attributable to the Contractor shall be valued as a Variation.

9.2 Uncovering and Testing

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

10. VARIATIONS AND CLAIMS

10.1 Right to Vary

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

10.2 Valuation of Variations

Variations shall be valued as follows:

- a) at a lump sum price agreed between the Parties, or
- b) where appropriate, at rates in the Contract, or
- c) in the absence of appropriate rates, the rates in the Contract shall be used as the basis for valuation, or failing which
- d) at appropriate new rates, as may be agreed or which the Engineer/Employer considers appropriate, or /and Contractor's Equipment, and of Materials, used.

10.3 Early Warning

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

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

10.4. **Valuation of Claims**

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

10.5 **Variation and Claim Procedure**

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

11. **CONTRACT PRICE AND PAYMENT**

11.1 a) **Terms of Payments**

The payment shall be made as per payment schedule given in the contract data.

11.2 **Final Payment**

The Contractor shall submit a final account to the Engineer to verify the work and the Engineer shall verify the same and forward the same to the Employer together with any documentation reasonably required to enable the Employer to ascertain the final contract value.

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

11.3 **Currency**

Payment shall be in the currency stated in the Contract Data.

12. **DEFAULT**

12.1 **Defaults by Contractor**

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

If the Contractor has not taken all practicable steps to remedy the default within fourteen (14) days after receipt of the Employer's notice, the Employer may by a second notice given within a further twenty one (21) days, terminate the Contract. The Contractor shall then demobilize from the Site leaving behind any Contractor's Equipment which the

Employer instructs, in the second notice, to be used for the completion of the Works at the risk and cost of the Contractor.

12.2 Defaults by Employer

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

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

12.3 Insolvency

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

12.4 Payment upon Termination

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

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

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

13. RISKS AND RESPONSIBILITIES

13.1 Contractor's Care of the Works

Subject to Sub-Clause 9.1, the Contractor shall take full responsibility for the care of the Works from the Commencement Date until the date of the Employer's/Engineer's issuance of Certificate of Completion under Sub-Clause 8.2. Responsibility shall then pass to the Employer. If any loss or damage happens to the Works during the above period, the Contractor shall rectify such loss or damage so that the Works conform with the Contract.

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

13.2 **Force Majeure**

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

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

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

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

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

14. **RESOLUTION OF DISPUTES**

14.1 **Engineer's Decision**

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

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

14.2 **Notice of Dissatisfaction**

If a Party is dissatisfied with the decision of the Engineer or if no decision is given within the time set out in Sub-Clause 15.1 here above, the Party may give notice of dissatisfaction referring to this Sub-Clause within fourteen (14) days of receipt of the decision or the expiry of the time for the decision. If no notice of dissatisfaction is given within the specified time, the decision shall be final and binding on the Parties. If notice of dissatisfaction is given within the specified time, the decision shall be binding on the Parties who shall give effect to it without delay unless and until the decision of the Engineer is revised by an arbitrator.

14.3 **Arbitration**

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

15 INTEGRITY PACT

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

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

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

CONTRACT DATA

Sub-Clauses of Conditions of Contract

1. Employer's Drawings, if any
2. **The Employer** means
Project Director
Education & literacy Department,
Government of SINDH,

The Employer Representative means
Project Director (School Infrastructure Development),
Education & Literacy Department,
Government of SINDH,
Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road,
Karachi
3. **The Contractor** means
M/s _____

4. **Commencement Date** means the date of issue of Engineer's Notice to Commence which shall be issued after the signing of the Contract Agreement and/or issuance of Acceptance Letter.
5. **Time for Completion:** Project Completion before 30th June 2015.
6. **Engineer**
Project Director (School Infrastructure Development)
Education & Literacy Department,
Government of SINDH,
Old KDA Building Sindh Secretariat # 3, Kamal Atta Turk Road, Karachi.
7. **Documents forming the Contract listed in the order of priority:**
 - (a) The Contract Agreement
 - (b) Letter of Acceptance
 - (c) The completed Form of Bid
 - (d) Contract Data
 - (e) Conditions of Contract
 - (f) The completed Schedules to Bid including Schedule of Prices
 - (g) The Drawings, if any
 - (h) The Specifications
(The Employer may add, in order of priority, such other documents as form part of the Contract. Delete the document, if not applicable)
8. **Possession of Site:** Within fifteen (15) days after issuance of works commencement order
9. **Authorized person:**
Project Director
Education & Literacy Department,
Government of SINDH,

Name and address of Engineer's/Employer's representative _____

10. **Performance Security:** 10% of the contract value in the shape of Demand Draft / Pay Order / Bank Guarantee.
11. **Requirements for Contractor's design (to be submitted along with bidding documents to meet the technical evaluation criteria):**
 - a. Technical feasibility as per tender requirements detailed above.
 - b. One line/schematic diagram of system.
 - c. Battery Rack.
 - d. Mounting Structure (AutoCAD).
12. **Program:**
Time for submission: Immediately after the Commencement Date.
Form of program: Implementation plan in the form of Bar Chart/CPM/PERT or other.
13. Amount of liquidated damages shall be 0.1% per day up to a maximum of (10%) of sum stated in the Letter of Acceptance
14. **Period for remedying defects** – Warranty Period is two years after completion
15. **Terms of Payments**

Payment of Contract Price shall be made in the following manners:
 - (i) Advance up to 10 % of the Contract Price stated in the Letter of Acceptance shall be paid by the Employer to the Contractor upon submission by the Contractor of a Mobilization Advance Guarantee in shape of pay order/demand draft/Bank Guarantee for the full amount of the Advance in the specified form. This advance will be deducted from three equal instalments and the guarantee will be released after of all advance amounts.
 - (ii) Sixty percent (40%) of payment on actual prices of items will be made on arrival of imported items i.e. (PV Panels, Solar Dry Batteries, Solar Inverter, Solar Charge Controller and LED Lights and/or as the case may be) at the Karachi/ Store / Site. Partial payment upon delivery of partial imported items may also be made in foreign components reached at Store / Site in different phases / times.
 - (iii) Sixty percent (20%) of payment on actual Prices of items will be made on arrival of local materials (wiring, switches, mounts etc.) at / Store / Site.
 - (iv) Thirty percent 30% Balance final payments, will be paid upon completion on project.
 - (vi) The performance security will also be released upon completion of Contract.
16. **Currency of payment:** Pak. Rupees
17. **Arbitration at:** Karachi, SINDH

SECTION -V

STANDARD FORMS

Note:

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

FORM OF BID SECURITY

(Bank Guarantee)

Bank Guarantee No. _____

Executed on _____

(Letter by the Guarantor to the Employer)

Name of Guarantor with address: _____

Name of Principal (Bidder) with address: _____

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

Bid Reference No. _____ Date of Bid _____

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

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the accompanying Bid numbered and dated as above for _____ (Particulars of Bid) to the said Employer; and

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

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

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

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

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

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

(Guarantor)

Witness:

1. _____

Corporate Secretary (Seal)

2. _____

(Name, Title & Address)

1. Signature _____

2. Name _____

3. Title _____

Corporate Guarantor (Seal)

FORM OF PERFORMANCE SECURITY

(Bank Guarantee)

Bank Guarantee No. _____

Executed on _____

(Letter by the Guarantor to the Employer)

Name of Guarantor with address: _____

Name of Principal (Contractor) with address: _____

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

Letter of Acceptance No. _____ Dated _____

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

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

NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of the said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 9, Remedying Defects, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (Guarantor), waiving all objections and defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract, for which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall be the sole and final judge for deciding whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the

amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

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

(Guarantor)

Witness:

1. _____

Corporate Secretary (Seal)

2. _____

(Name, Title & Address)

1. Signature _____

2. Name _____

3. Title _____

Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the ____ day of _____ 201 ____ between _____ (hereinafter called the "Employer") of the one part and _____ (hereinafter called the "Contractor") of the other part.

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

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda, if any except those parts relating to Instructions to Bidders, shall be deemed to form and be read and construed as part of this Agreement, viz:
 - (a) The Letter of Acceptance;
 - (b) The completed Form of Bid along with Schedules to Bid;
 - (c) Conditions of Contract & Contract Data;
 - (d) The priced Schedule of Prices;
 - (e) The Specifications; and
 - (f) The Drawings
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects within the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

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

Signature of the Contactor

Signature of the Employer

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

(Name, Title and Address)

(Name, Title and Address)

FORM OF GUARANTEE FOR ADVANCE PAYMENT

Bank Guarantee No. _____

Executed on _____

(Letter by the Guarantor to the Employer)

WHEREAS the _____ (hereinafter called the Employer) has entered into a Contract for _____ (Particulars of Contract), with _____ (hereinafter called the Contractor).

AND WHEREAS the Employer has agreed to advance to the Contractor, at the Contractor's request, an amount of Rs. _____ Rupees _____) which amount shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS the Employer has asked the Contractor to furnish Guarantee to secure the advance payment for the performance of his obligations under the said Contract.

AND WHEREAS _____ (hereinafter called the Guarantor) at the request of the Contractor and in consideration of the Employer agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

NOW THEREFORE the Guarantor hereby guarantees that the Contractor shall use the advance for the purpose of above mentioned Contract and if he fails, and commits default in fulfillment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Employer for payment not exceeding the aforementioned amount.

Notice in writing of any default, of which the Employer shall be the sole and final judge, as aforesaid, on the part of the Contractor, shall be given by the Employer to the Guarantor, and on such first written demand payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Contractor and without any objection.

This Guarantee shall come into force as soon as the advance payment has been credited to the account of the Contractor.

This Guarantee shall expire not later than _____

by which date we must have received any claims by registered letter, telegram, telex or telefax.

It is understood that you will return this Guarantee to us on expiry or after settlement of the total amount to be claimed hereunder.

(Guarantor)

Witness: 1. _____

Corporate Secretary (Seal)

2. _____

(Name, Title & Address)

1. Signature _____

2. Name _____

3. Title _____

Corporate Guarantor (Seal)